

THE OUTCOME OF CHILD PSYCHOANALYSIS:  
A RETROSPECTIVE INVESTIGATION

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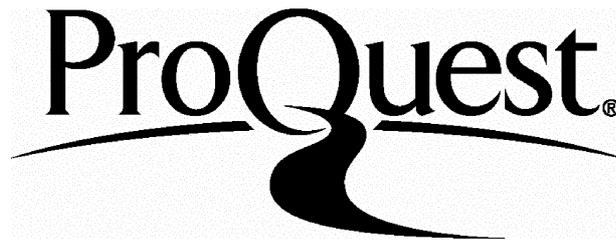
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## ABSTRACT

This thesis concerns the measurement and prediction of outcome in psychodynamic child psychotherapy.

The literature on the outcome of child psychiatric treatments is reviewed, with emphasis on the outcome of psychosocial and psychodynamic therapies. Reasons are presented for assessing the outcome of child psychoanalytic treatment initially using a chart review. Three major forms of measure of child adaptation and symptomatology are described, and their usefulness for the planned study is discussed.

The study sample is introduced: 763 cases of child psychoanalysis and psychotherapy treated over 40 years at the Anna Freud Centre. Predictor variables are chosen in the light of existing literature on natural history and therapeutic outcome. The operationalisation of these variables is described, and its success in terms of the reliability of information collected is presented. The choice of outcome measures is then considered further. The rationale for and development of a new global adaptation scale for children and adolescents are outlined, and preliminary data on its psychometric properties are reported. Four major outcome criteria are presented, based on clinically significant improvement. The organisation, reduction and aggregation of predictor variables is then described; this produced a manageable number of key variables for further analysis. The sample is characterised in terms of these key variables, and some difficulties in generalising from the present sample are considered.

Outcome results are reported for the full sample, and then for those children whose treatment continued for at least six months. Variables associated with either attrition or improvement are identified. Diagnostic group and child age emerge as key predictors, and further analyses are performed contrasting groups matched on these variables. In the final chapter, a theoretical model is presented which integrates the results, and a plan is described for a prospective study which will rigorously test the hypotheses generated by the present investigation.

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## TABLE OF CONTENTS

ABSTRACT .....	2
ACKNOWLEDGEMENTS .....	3
LIST OF FIGURES AND TABLES .....	9
CHAPTER 1. RESEARCH ON THE EFFICACY OF TREATMENT FOR CHILD PSYCHIATRIC DISORDERS .....	15
1.1. Forms of child psychiatric treatment and their assessment to date .....	15
1.2. Reviews and meta-analytic studies of individual therapy with children .....	22
1.3. Studies of the outcome of psychoanalysis and psychodynamic psychotherapy with children .....	35
1.4. Investigations of the psychoanalytic treatment of adults .....	38
1.5. Conclusion: the need for evaluation of the outcome of child psychoanalysis, and the methodological issues involved .....	43
CHAPTER 2. ALTERNATIVE WAYS OF DESCRIBING CHILDHOOD FUNCTIONING AND CHANGES DURING TREATMENT .....	47
2.1. The categorical approach: psychiatric diagnosis .....	47
2.2. The dimensional approach .....	61
2.3. The global approach .....	69
2.4. Conclusion .....	74
CHAPTER 3. AIMS AND PROCEDURES IN THE ANNA FREUD CENTRE RETROSPECTIVE STUDY .....	75
3.1. The selection of the Anna Freud Centre archive as a basis for the study of child psychoanalytic outcome .....	75
3.2. Possible predictors and measures of outcome in a retrospective study of treatment .....	79
3.3. Procedure for data collection .....	91

3.4. Inter-rater reliability of data collected . . . . .	97
3.5. Discussion . . . . .	101
3.6. Conclusion . . . . .	110
CHAPTER 4. DEVELOPMENT OF THE HAMPSTEAD CHILD ADAPTATION MEASURE AND THE COMPREHENSIVE ASSESSMENT OF THERAPEUTIC OUTCOME . . . . .	111
4.1. The Hampstead Child Adaptation Measure . . . . .	111
4.2. Selection of outcome measures for the retrospective study . . . . .	125
4.3. Discussion . . . . .	129
4.4. Conclusion . . . . .	131
CHAPTER 5. DERIVATION OF NEW VARIABLES, AND DIVISION OF THE SAMPLE INTO BROAD DIAGNOSTIC GROUPS . . . . .	132
5.1. Introduction . . . . .	132
5.2. Method . . . . .	134
5.3. Results . . . . .	142
5.4. Discussion . . . . .	157
5.5. Conclusion . . . . .	161
CHAPTER 6. THE OUTCOME OF TREATMENT ACROSS THE FULL RETROSPECTIVE STUDY SAMPLE . . . . .	162
6.1. Introduction . . . . .	162
6.2. Method . . . . .	163
6.3. Results . . . . .	164
6.4. Discussion . . . . .	176
6.5. Conclusion . . . . .	186
CHAPTER 7. THE OUTCOME OF CHILD PSYCHOANALYSIS: THE EFFECT OF AGE ON IMPROVEMENT OF TREATMENT . . . . .	188
7.1. Introduction . . . . .	188
7.2. Method . . . . .	190
7.3. Results . . . . .	193

7.4. Discussion .....	203
7.5. Conclusion .....	211
CHAPTER 8. THE PREDICTION OF OUTCOME IN CHILDREN WITH DISRUPTIVE DISORDERS .....	212
8.1. Introduction .....	212
8.2. Method .....	214
8.3. Results .....	218
8.4. Discussion .....	228
8.5. Conclusion .....	232
CHAPTER 9. THE OUTCOME OF TREATMENT FOR CHILDREN WITH EMOTIONAL DISORDERS .....	234
9.1. Introduction .....	234
9.2. Method .....	238
9.3. Results .....	241
9.4. Discussion .....	251
9.5. Conclusion .....	256
CHAPTER 10. DISCUSSION, CONCLUSIONS AND FUTURE DIRECTIONS .....	258
10.1. Overall results of the retrospective study .....	258
10.2. Limitations and strengths of the study design .....	262
10.3. A theoretical model of change in child psychoanalysis .....	267
10.4. A prospective study of the effectiveness of psychoanalytic therapy for children with severe anxiety disorders .....	280
10.5. Conclusions .....	306
 REFERENCES .....	 308

## APPENDICES

Appendix 3.1. Pro-forma for Anna Freud Centre files . . . . .	353
Appendix 3.2. Variables extracted from case records in retrospective study . . . . .	373
Appendix 3.3. Additional variables derived from original variables in appendix 3.2. . . . .	390
Appendix 4.1. Raters' Manual for the Hampstead Child Adaptation Measure . . . . .	401
Appendix 5.1. Structure of the retrospective study databases . . . . .	422
Appendix 5.2. Correlation matrix of major predictor variables . . . . .	423
Appendix 5.3. Proportion of total variance accounted for in principal components analysis of major predictors . . . . .	450
Appendix 5.4. Sorted rotated factor loadings of major predictors . . . . .	451
Appendix 5.5. Child psychiatric diagnoses assigned to each broad category . . . . .	469
Appendix 5.6a Sorted rotated factor loadings for CBCL items (2-3 year olds) . . . . .	472
Appendix 5.6b Sorted rotated factor loadings for CBCL items (4 years and over) . . . . .	474
Appendix 10.1: A prospective investigation of the effectiveness of psychodynamic psychotherapy for children with severe anxiety disorders . . . . .	476

## LIST OF FIGURES AND TABLES

Table 3.1. Guidelines for rating parental symptoms, treatments, marital conflict . . . . .	96
Table 3.2. Reliability of emotional disorder diagnoses among 139 cases . . . . .	99
Table 3.3. Reliability of disruptive disorder diagnoses among 139 cases . . . . .	100
Table 3.4. Reliability of pervasive developmental disorder diagnoses among 139 cases . . . . .	100
Table 3.5. Reliability of diagnoses of other common disorders among 139 cases . . . . .	101
Table 3.6. Reliability of common diagnoses of parents among 43 cases . . . . .	101
Table 4.1. Parameters of adaptation . . . . .	121
Table 4.2. Inter-rater reliability of CGAS ratings and HCAM ratings . . . . .	123
Table 4.3. Intraclass correlation coefficients between HCAM scores & five variables reflecting symptomatology & psychiatric status . . . . .	124
Figure 4.1. Distribution of CGAS/HCAM scores in the functional and dysfunctional populations . . . . .	128
Table 5.1. Family variables derived by combining separate information on each parent . . . . .	134
Table 5.2. Variables derived by combining psychiatric history information on each parent . . . . .	135
Table 5.3. New variables for recording school-reported difficulties . . . . .	136
Table 5.4. New variables for recording medical problems . . . . .	137
Table 5.5. Diagnostic categories most commonly used to assign children to each broad diagnostic subgroup . . . . .	140
Table 5.6. Inter-rater reliability of assignments to diagnostic groups among 139 cases . . . . .	142

Table 5.7. Family or living situation of children entering treatment .....	143
Table 5.8. Reasons for children living with one parent .....	144
Table 5.9. Social class distribution of patients' families .....	144
Table 5.10. Age distribution of children treated .....	145
Table 5.11. Distribution of general intelligence among children receiving treatment .....	145
Table 5.12. Frequencies of psychological problems among parents of children entering treatment .....	147
Table 5.13. Parents' histories of psychiatric or psychotherapeutic treatment .....	147
Table 5.14. Psychiatric diagnoses of children entering treatment .....	148
Table 5.15. Items loading on first six factors for CBCL items among children under 4 years old .....	150
Table 5.16. Items loading on first eight factors for CBCL items among children 4 years old and over .....	151
Table 5.17. Distribution of HCAM (adjustment) scores at assessment .....	152
Table 5.18. Distribution of children assigned to one of Miss Freud's diagnostic categories .....	152
Table 5.19. Frequency of causes of concern at school .....	153
Table 5.20. Frequency of significant medical conditions .....	153
Table 5.21. Forms of treatment already experienced by children treated at Anna Freud Centre .....	154
Table 5.22. Sources of referral of treated children .....	154
Table 5.23. Starting and highest frequency of sessions per week for each child .....	155
Table 5.24. Distribution of length of treatment .....	155
Table 5.25. % of children whose relatives were also seen regularly or treated at the Anna Freud Centre .....	156
Table 5.26. Reasons for termination of treatment .....	157

Table 6.1. % of cases showing improvement by different criteria, in non-intensive or intensive treatment . . . . .	166
Table 6.2. % of cases showing improvement by different criteria, in non-intensive or intensive treatment, cases terminating within six months excluded . . . . .	166
Table 6.3. % of children showing reliable improvement, divided by social class groupings . . . . .	168
Table 6.4. % of children showing reliable improvement, according to whether the family remained intact . . . . .	168
Table 6.5. % of children showing reliable improvement, according to whether mothers had experience of psychoanalysis . . . . .	169
Table 6.6. % of children showing reliable improvement in each of three age groups . . . . .	169
Table 6.7. % of children showing reliable improvement in each of seven diagnostic groupings . . . . .	170
Table 6.8. % of children showing reliable improvement according to the presence or absence of specific diagnoses . . . . .	171
Table 6.9. Frequency of reliable improvement according to psychoanalytic diagnosis . . . . .	172
Table 6.10. Frequency of reliable improvement according to length of treatment . . . . .	172
Table 6.11. % of children showing reliable improvement, according to whether parents were seen regularly . . . . .	173
Table 6.12. % of children showing reliable improvement, according to whether mother was given psychotherapy . . . . .	173
Table 6.13. Prediction of improvement in adaptation by stepwise multiple regression analysis for cases continuing beyond six months . . . . .	175
Table 7.1. Distribution of cases by three age groups in full sample . . . . .	191
Table 7.2. Criteria used to match cases in three age groups . . . . .	191

Table 7.3. Correspondence between the three matched groups on variables used for matching .....	192
Table 7.4. Some further demographic & treatment characteristics of children in each matched age group .....	192
Table 7.5. Frequency of each diagnostic category in each age group .....	194
Table 7.6. Percentage of children in each age group showing improvement, or negative outcome .....	195
Table 7.7. Percentage of children in each age group showing improvement, or negative outcome excluding children terminating within 6 months .....	196
Table 7.8. Mean changes in HCAM score within each age group, for whole groups & for those who remained in treatment for at least 6 months .....	196
Table 7.9. Percentage of children no longer cases on diagnostic grounds at termination, divided by age group & diagnostic group (Cases terminating within 6 mths excluded) .....	197
Table 7.10. Mean change in HCAM during non-intensive & intensive treatment, after excluding cases terminating within 6 months .....	197
Table 7.11. % showing reliable improvement in HCAM during non-intensive & intensive treatment after excluding cases terminating within 6 months .....	198
Table 7.12. Prediction of improvement in adaptation by stepwise multiple regression analysis for matched cases in all age groups, excluding those terminating within 6 months .....	200
Table 7.13. Percentage of variance in outcome ratings accounted for by different groups of variables, for cases continuing in treatment for at least 6 months .....	201

Table 7.14. Significant predictors of improvement in HCAM ratings during treatment, for each matched age group (cases terminating within 6 months excluded) .....	202
Table 8.1. Criteria used to match cases in disruptive & emotionally disordered groups .....	215
Table 8.2. Demographic characteristics of matched groups of disruptive & emotionally disordered children in psychoanalytic & psychotherapeutic treatments at the AFC .....	216
Table 8.3. Reasons for termination of treatment among disruptive & emotionally disordered children .....	217
Table 8.4. Duration of treatment among disruptive & emotionally disordered children .....	217
Table 8.5. Improvement rates in each group according to different criteria .....	219
Table 8.6. Mean change in HCAM in disruptive & emotionally disordered children, according to intensity & duration of treatment .....	221
Table 8.7. Prediction of improvement in adaptation, disruptive group, continued treatment beyond 1 year .....	224
Table 8.8. Variables predicting whether a disruptive disordered child showed reliable improvement in HCAM .....	226
Table 8.9. Variables predicting whether a child in the emotional (control) group showed reliable improvement in HCAM .....	226
Table 8.10. Mean change in HCAM among disruptive & emotional group children, according to the presence or absence of anxiety disorder (Cases terminating within 1 yr excluded) .....	227
Table 8.11. % showing reliable improvement in HCAM among disruptive & emotional group children according to the presence or absence of anxiety disorder (cases terminating within 1 yr excluded) .....	227

Table 9.1. Some demographic & clinical characteristics of children in each diagnostic group .....	240
Table 9.2. Rates of improvement in each diagnostic group according to different outcome criteria .....	242
Table 9.3. Percentage of cases with initial diagnoses of emotional disorder with diagnosable disorders at the end of treatment (children terminating within 6 months excluded) .....	243
Table 9.4. Mean HCAM change in intensive & non-intensive treatments for children with different diagnoses of emotional disorder (children terminating within 6 months excluded) .....	245
Table 9.5. Mean HCAM change for moderately & severely disturbed children in non-intensive or intensive treatment, adjusted for initial HCAM level .....	247
Table 9.6. Prediction of improvement in adaptation by stepwise multiple regression analysis for cases continuing beyond 6 months .....	248
Table 9.7. Percentage of variance in HCAM changes accounted for by different groups of variables, within the whole emotional group & each subgrouping .....	249
Table 10.1. Measures to be used, their rationale and administration schedule .....	299
Table 10.2. Provisional timetable for the investigation .....	490

## **CHAPTER 1. RESEARCH ON THE EFFICACY OF TREATMENT FOR CHILD PSYCHIATRIC DISORDERS**

This chapter has two main aims. The first is to outline what is known of the effectiveness of major forms of treatment in child psychiatry and psychology<sup>1</sup>. A second aim is to examine some general considerations in studies of the treatment of children's psychiatric disorders. In a separate section, more pertinent research on child psychoanalysis and psychoanalytically-orientated psychotherapy will be discussed. The literature on the outcome of psychoanalytic treatment of adult patients is also reviewed, as this shares the methodological difficulties which make research on child analysis problematic, but much more progress has been made in evaluating work with adults. In a final section, some of the methodological implications of this review for studies of outcome are discussed, together with the obstacles to psychoanalytic outcome research.

### **1.1. FORMS OF CHILD PSYCHIATRIC TREATMENT AND THEIR ASSESSMENT TO DATE**

This brief survey is based on a recent review by Graham (1993), and covers treatments commonly provided in the outpatient setting and does not include home, school or inpatient treatments.

#### **1.1.1. Medication**

A thorough review of the psychopharmacology of child psychiatric disorders is provided by Campbell and Spencer (1988). The main findings are summarised below.

There is some evidence for the efficacy of antidepressant drugs in children and adolescents, but it is far less convincing than the research and clinical evidence for their use with adult patients. The medication most commonly evaluated for childhood depression is imipramine. Most studies (e.g. Ambrosini et al., 1993; Ryan et al., 1986) have shown no significant benefit,

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<sup>1</sup>Throughout this thesis, children and adolescents will be referred to collectively as children, unless a distinction is specifically made.

but others have found some support for the use of tricyclics (e.g. Puig-Antich et al., 1987), although at follow-up 70% of the children in this sample suffered further episodes after treatment was discontinued. Despite suggestions (Ryan et al., 1986) that adolescents may be less responsive than either pre-pubertal children or adults to tricyclic treatment (imipramine), its use is usually regarded as justified in depressed adolescents with biological signs and symptoms.

There is better evidence, from a double-blind, controlled study, for the use of clomipramine in the treatment of children with obsessive-compulsive disorder (Flament et al., 1985). Studies of drug treatment in other childhood emotional disorders are inconclusive. Tricyclics have been used with separation anxiety disorder and school phobia (Rabiner & Klein, 1969; Berney et al., 1981), but with conflicting findings.

There is some evidence that lithium carbonate is a useful prophylactic treatment for adolescents with bipolar disorder (DeLong & Aldersdorf, 1987). A double-blind, cross-over trial comparing selective serotonin uptake inhibitors (fluoxetine) and placebo has suggested that these drugs are effective in the treatment of childhood obsessive-compulsive disorder (Riddle, Scahill & King 1992), and may also be useful in treating depressive disorders.

Anxiolytics have been found to show paradoxical effects in many children (McDermott et al., 1989; Klein & Last, 1989), although there are inconsistent reports of good results with alprazolam and clonazepam (Bernstein et al., 1987; Simeon & Ferguson, 1987; Kutcher, 1990).

Some psychostimulant drugs have a paradoxical sedating effect in children. Methylphenidate (Ritalin) is widely used in the treatment of ADHD in North America (Taylor et al., 1991). Its effectiveness has been confirmed in a number of well-designed, controlled trials (reviewed by Barkley, 1977). Childhood schizophrenia can be effectively treated with a range of major tranquillisers (Graham, 1993). Haloperidol or Pimozide are often used in Tourette Syndrome, in which they have been shown to reduce symptom severity (Shapiro, Shapiro & Fulop 1989).

### 1.1.2. Behavioural and Cognitive Therapies

Behavioural psychotherapies are treatments based on the idea that certain psychological symptoms are a result of learned (conditioned) emotional responses and behaviour patterns (e.g. Wolpe, 1958; Lazarus & Abramowitz, 1962; Hatzenbuehler & Schroeder, 1978). Cognitive therapists aim to modify ways of thinking that are hypothesised to underlie a patient's mood or characteristic behaviour (e.g. Beck, 1967; Bandura, 1977; Kendall et al., 1988). Most practitioners of these treatments believe that, in general, both behaviour and thinking need to alter, although this may be achieved by focusing only on one aspect. The clinician usually works with both the child and the parents (or teachers). Research on behavioural therapies with children have been reviewed by Werry and Wollersheim (1989) and McCauley (1992). These suggest that behavioural management techniques can be useful in a variety of conditions. However, although there are many single case studies of behavioural and cognitive treatment of emotional disorders (see Kendall et al., 1988, and Silverman & Kearney, in press, for reviews), there are few reports of series of cases, fewer still with any control condition.

Some of the main techniques are outlined below, together with examples of the research findings on their effectiveness with different disorders.

Operant treatment. This is based on the assumption that the frequency of a behaviour is influenced by the consequences of it, whether positive (rewarding) or negative (aversive). In contingency management, the consequences of symptoms or troublesome behaviour are altered in an attempt to change the likelihood of the behaviour. Desirable behaviour (such as cooperation, or self-care skills) is rewarded, while undesirable behaviour (such as aggression, obsessional rituals) is ignored or, in some programmes, punished (Hersen, 1970; Vaal, 1973). These techniques have been very widely used in many disorders and contexts, generally with some success, although generalization to other settings tends to be a problem. Examples include using parents as therapists with autistic individuals; this has been found helpful in promoting verbal and non-verbal communication skills, and in reducing behaviour such as stereotypies (Howlin & Rutter, 1987; Ollendick, 1986). Aggressive behaviour can be reduced in both home and school by contingency management programmes (Baum & Forehand 1981). "Bell and pad" treatment has been shown to be quite effective in the treatment of nocturnal enuresis;

70-80% of well-motivated children aged at least 5 years become dry after one or two periods of this training (Dische, Yule, Corbett & Hand 1983).

Anxiety reduction methods. These include relaxation training and exposure to a phobic stimulus. Systematic desensitisation or graded exposure, perhaps with relaxation or cognitive coping strategies, can be conducted in imagination or in real life. Younger children experience difficulties in acquiring the muscular relaxation response and in producing a clear image of the fear-producing stimuli (Kissel, 1972; Rosenstiel & Scott, 1977). Accordingly, *in vivo* desensitisation has been found to be more effective than imaginal desensitisation with five to ten year olds (Ultee et al., 1982).

Imaginal and *in vivo* desensitization have been used to treat a variety of childhood disorders including school refusal, tics, anorexia nervosa, dog phobia, etc. (see Hatzenbuehler & Schroeder, 1978). The most systematic study (Miller et al., 1972) unfortunately gave inconclusive results; children with a variety of phobias (mostly school phobia) were randomly assigned to either systematic desensitization, psychotherapy or a waiting list control condition. Parental ratings of improvement showed that both active treatments were superior to the control condition, with no significant difference between them. However, ratings by a clinician (other than the therapist) showed no difference between the three groups.

Other studies have used single-case designs (van Hasselt et al., 1979; Ross et al., 1971; Frame et al., 1982) or series of treated cases without controls (e.g. Kearney & Silverman, 1990). There is some evidence that exposure treatments, involving rapid return to school, can be successful in managing at least recently developed cases of school refusal (e.g. Blagg & Yule 1984). The treatment of generalised anxiety states in children has not been shown to be effective using behavioural or cognitive methods.

Response prevention, or persuasion to relinquish an activity, is a technique mainly used to reduce rituals (and, ultimately, the anxiety driving them) in patients with obsessive-compulsive disorders (Bolton, Collins & Steinberg, 1983). There are uncontrolled trials suggesting this can be successful in the home (Stanley, 1980), but there are no satisfactory controlled trials with children or adolescents.

Social skills training is based on Bandura's (1977) social learning theory. Modelling, role play, self instruction and other techniques are used to improve social behaviour. This has become widely used to help children deal with feared social situations, find alternatives to aggression, and so on (Michelson & Wood, 1980; Bornstein, Bellack & Hersen, 1977; Ladd & Mize, 1983). Again, it is found to be a good deal more effective if attention is paid to generalization and maintenance of the newly acquired skills.

Cognitive therapies are mainly used in two ways. First they are used to identify and modify pervasive negative thinking in depression (the "cognitive triad", Beck, 1976, 1987). Second they can be focused on (usually more specific) negative expectations in anxiety states (Graziano & Mooney, 1982; Mansdorf & Lukens, 1987). Again, although cognitive behavioural techniques have been shown to have modest success in the treatment of adult depression, and are certainly used with children, their use has not been systematically evaluated to a satisfactory degree (Kazdin 1990a). A few studies have been carried out demonstrating the efficacy of such treatment compared to waiting list cases (Stark, Reynolds & Kaslow 1987; Kahn et al., 1988), and much work is currently being done in this area.

### 1.1.3. Family Therapy

In family therapy the child's symptoms are seen as a reflection of disturbance in family relationships and / or as best treated through intervention in the whole family. There are various schools of family therapy (Dare 1992). Strategic family therapy emphasises selecting goals for change, and helping the family to reach these. A variety of strategies are used, including exploring the possible value of the symptom in the family system. Structural family therapy, as its name suggests, focuses on the ways in which a family functions organisationally. Characteristic styles of communication and control are highlighted. Systemic family therapy challenges the family members to think about their functioning by considering the repercussions of possible changes and how each family member perceives the attitude of others in the family. These different schools have much common ground. Family therapists, whichever type of treatment they use, tend also to use techniques derived either from psychoanalysis or from behavioural theories, or, commonly, from both of these. Family therapy is usually a relatively brief and focused intervention, perhaps six to twelve sessions.

Gurman et al (1986) reviewed a large number of mostly uncontrolled studies of family therapy, and Markus et al (1990) conducted a meta-analysis of 19 controlled studies. This evidence suggests that it can be effective, especially if reinforced by behavioural strategies. Disorders in which it had been shown to be useful include psychosomatic conditions such as asthma (Lask & Mathew 1979), anorexia nervosa (Russell, Szmukler, Dare & Eissler 1987) and sometimes conduct disorders (Markus, Lange & Pettigrew 1990).

#### **1.1.4. Child Psychotherapy and Psychoanalysis**

Child psychoanalysis and psychoanalytically-orientated child psychotherapy are methods of treatment in which the child is worked with individually over a relatively long period (normally years), with the aim of understanding and modifying aspects of his inner world which seem to be interfering with his emotional adaptation and development. The impact of external factors is not dismissed; traditionally child psychotherapists have required evidence that the environment is not currently damaging the child before they can feel any optimism about embarking on treatment. Increasingly, this requirement is being replaced by work with parents and sometimes teachers to minimise current external stresses. Nevertheless, the psychotherapist contends that modifying the external situation, family relationships, the child's behaviour, or even his conscious thinking, may not be adequate to help him. In this case, what needs to be uncovered are the unconscious meanings of his experience, which shape his current relationships, underpin the child's sense of himself, and may produce symptoms or the distortion of psychological development.

The child psychotherapist observes and, in due course, interprets the child's verbal and non-verbal communications, in an attempt to piece together these unconscious meanings, and if necessary tries to modify them. In many cases, it is also necessary to foster the development of aspects of the child's thinking or affective capacities, which may have been blocked (for instance, in the context of constitutional or environmental deprivation). This part of the child psychotherapist's work has been called "developmental help" (A. Freud, 1965; Kennedy & Moran, 1991), and without this groundwork, the interpretation of more neurotic processes (defence against unconscious conflict, for example) may be unhelpful (Fonagy et al., 1993).

Very few studies have systematically evaluated the effectiveness of psychoanalytic psychotherapy for children. Heinicke & Ramsey-Klee (1986) compared the outcome of both intensive and non-intensive dynamic treatment for learning disordered children, and showed that for this group intensive treatment appeared to have a better result. Moran and his colleagues (Moran et al., 1991) reported a series of studies of the efficacy of psychoanalytic treatment for children with poorly controlled diabetes, which not only showed that their diabetic control improved substantially more with treatment, but also began an exploration of the therapeutic processes involved. These studies are described more fully in section 1.3.

#### **1.1.5. Parent Counselling**

Most professional help for childhood psychiatric problems includes or consists of parent counselling.

Parents are encouraged to describe the problems as they perceive them, express feelings associated with them and discuss whatever steps they may already have taken to deal with them. Parents are helped to see connections, e.g. between stress and somatic symptoms, between marital strains and emotional symptoms in children. Some stresses can be removed, others not, but even here ways of limiting damage may be found. It may be necessary to improve communication, both within the family and perhaps more widely, such as between home and school. Techniques borrowed from other approaches may be added, such as informal behaviour modification for dealing with oppositional behaviour, enuresis or occasional school refusal, or psychodynamic ideas for helping parents to understand the child's behaviour and their own part in the difficulties.

There is no research on the efficacy of parent counselling, although there are studies evaluating more formal training programmes which incorporate some elements of the above methods. For instance, parent training programmes have been shown to be effective in improving oppositional behaviour in children (e.g. Patterson, 1982). Cullen (1976) has also reported a controlled trial which suggested that child centred parental counselling in infancy can prevent some later emotional problems, though not aggressive behaviour disorders.

### **1.1.6. Conclusion**

This brief review indicates that no single treatment for child psychiatric disturbance has substantial or unequivocal support from the treatment outcome literature. The review also highlights the limitations of considering treatment outcome for a whole class of treatments on the basis of individual studies. The sample size of individual studies, as well as their focus on specific psychiatric problems, places severe limitations upon the generalizability of the findings. In order to obtain a more comprehensive picture of the outcome field, we have to turn to systematic reviews which have attempted to arrive at an integration of the literature through both qualitative and quantitative methods. The next section will present a comprehensive survey of review studies from 1957 to 1993.

## **1.2. REVIEWS AND META-ANALYTIC STUDIES OF INDIVIDUAL THERAPY WITH CHILDREN**

In this section, the literature on individual psychosocial treatments for childhood disorders is reviewed in more detail, drawing particularly on meta-analyses of groups of outcome studies. This review is drawn on the excellent survey by Barnett et al (1991).

Historically, the vast majority of child psychotherapy literature has taken the form of case reports. There are fewer published reports of empirical assessments of child therapy and its effects. Some of these are reports of work with systematic single-subject research designs; others employ groups of treated children or adolescents. In the latter category, we can distinguish three types of studies: a) those that include only one group of children, all of whom receive treatment, where the study is designed to identify predictors of improvement during treatment; b) those that include multiple treatment groups and that are designed to assess the relative efficacy of different forms of therapy; and c) those that include one or more comparisons of treated versus untreated (or minimally treated) children and that are designed to test whether some form of treatment is superior to no treatment.

Since the 1950s, ten general reviews or meta-analyses of child and adolescent therapy have been published. Each made suggestions of scientific refinements and reached differing conclusions regarding the efficacy of therapy. Some of these reviews are described below; the treatments

included varied, and results apply not primarily to psychodynamic psychotherapy, but to a variety of forms of individual child treatment. In the small number of cases where psychoanalytically oriented psychotherapy was specifically studied, this is made clear.

### 1.2.1. Levitt's work

The first major effort to assess child psychotherapy was Levitt's (1957) examination of 18 child psychotherapy outcome studies. Levitt contrasted the total percentage of treated children who improved with the total percentage of untreated children who improved. He estimated that 78% of the treated children had improved at follow-up, while 72.5% of the untreated children had improved. This was similar to the findings of Eysenck's (1952) review of studies of adult psychotherapy. Levitt concluded, as had Eysenck, that his results did not support the hypothesis that psychotherapy facilitated recovery from emotional disorders.

Levitt's studies have been criticized for the following reasons:

1. The studies he reviewed were from the 1930s to 1950s, and the therapeutic techniques and clinical populations differed in many ways from later techniques and patient populations (Barrett et al., 1978).
2. Levitt's estimate of improvement among untreated children may not have been valid because it was based on two studies with nonrepresentative samples (Barrett et al., 1978). The two studies were old (Witmer & Keller, 1942; Lehrman et al., 1949), and the untreated groups were children who either refused or withdrew from treatment. It is unclear whether these children were in fact comparable to those who accepted treatment, and whether some of them did receive a period of treatment before dropping out (Kolvin et al., 1988).
3. It is very possible that there were systematic differences between those who did not participate beyond the assessment and those who continued in treatment. For example, those children who did not continue may have had a greater ability to cope, found some other help for their problems, or found the initial assessment sufficient treatment (Heinicke and Strassman, 1975; Barrett et al., 1978; Chess and Thomas 1979). Thus, these untreated subjects could have had a better prognosis in any case.

4. All of the studies that Levitt used had serious methodological flaws (Saxe et al. 1986). For example, the outcome measures were crude and probably not adequate to reflect clinical differences, if any.

5. A further serious difficulty with the Levitt studies, one which was unavoidable at the time, is that the presenting symptomatology of the children treated is described in very vague terms, as 'neurotic'. This description does suggest that these were children relatively likely to respond to any treatment, or to improve without treatment (Levitt, 1963), so that it is not surprising that improvement rates in both treated and untreated groups were high. However, it has become increasingly clear that it is crucial to specify diagnostic variables carefully, as even apparently similar clinical pictures (e.g. anxiety states with or without depression, or disruptive behaviour in an four year old as opposed to a ten year old) can have very different natural histories and responses to treatment. Diagnostic description has become increasingly sophisticated and systematised since the time of Levitt's reviews (see Chapter 2), and some of these differences are becoming incorporated in formal diagnostic descriptions. Clearly, pooling results from a very heterogeneous group tends to obscure important differences between disorders which may well respond differently to treatment; more recent meta-analyses of treatment outcome have tried to take these complications into account.

In 1971, Levitt again reviewed the status of the literature of psychotherapy with children. In addition to summarizing his previous arguments and conclusions regarding outcome and child psychotherapy, he considered a variety of studies of alternative therapeutic approaches and methodological issues. He concluded that: child psychotherapists should involve the parents in treatment; outcome is related to treatment intensity; permissiveness of the expression of negative feelings is a desirable treatment procedure, while punishment is not; living with a family is more therapeutic than institutionalization; and successful therapy required adequate therapist training. In his closing remarks, Levitt continued to express concern that child psychotherapists were spending much of their time with patients who might improve with or without intervention, and called for additional long-term follow-up studies for examining therapy outcome and process.

### 1.2.2. Methodological advances, reviews from 1975 to 1980

Heinicke and Strassman (1975) reevaluated the question, "Does child psychotherapy do any good?". They reviewed the research regarding conditions or variables that might affect the outcome of children in psychotherapy. They pointed to the inadequacy of the global question of the effectiveness of psychotherapy and stressed the need to assess the specific variables that affect process and outcome in therapy. They also delineated key methodological issues in psychotherapy research evaluation. These issues included: inclusion and exclusion criteria; careful baseline assessment; the need to control for a variety of variables, such as age, sex and IQ; the need for homogeneity among the treatment groups; the requirement for control and contrast groups that are appropriate to the initial questions asked; the nature of the therapist and how therapists are assigned to children; and the need to have follow-up assessments made longitudinally to evaluate "sleeper" effects. Lastly, they recommended that study populations and design be constructed in a way that would allow replication.

The need to follow children up after termination of treatment deserves to be stressed. Levitt (1957) found, as others have since, that treated children may continue to improve considerably at least for some months after the end of treatment, so that comparisons between treated and untreated children may look very different depending on the point of assessment. A notable example of this is a study of various school-based treatments for emotional and disruptive disorders in children (Kolvin et al., 1981). At termination, it appeared that neither group of children had benefitted substantially from treatment with group therapy or behaviour therapy. However, at an 18 month follow-up assessment, both groups showed definite improvement in relation to others. Similarly, as Kazdin (1990b) demonstrated, it can also happen that 'the treatment that appeared more or most effective at post-treatment did not retain this status at follow-up'. Furthermore, it can appear from follow-up assessment that therapy may not give a long-term advantage: 'treatments that appear effective or differentially effective in the short run may not surpass the impact of developmental changes' (Kazdin, 1990b). Smith, Glass & Miller (1980) in their very extensive review of adult and child therapy found that many more studies showed substantial improvement at termination than at follow-up.

Wright et al (1976) reviewed the outcome literature on individual child psychotherapy and paid particular attention to studies where the assessments distinguished between termination

and follow-up. They argued that there was demonstrated improvement in outcome from the end of therapy to follow-up and that this improvement was positively correlated with the number of psychotherapy sessions. They advocated including follow-up assessments as a requirement in the examination of outcome in child psychotherapy.

Several years later, Barrett et al. (1978) also surveyed this field. They argued that little was to be gained by reworking the data that Levitt examined because the critical question was not "does psychotherapy work?". Instead, they felt, with Heinicke & Strassman (1975), that it was critical to disentangle the therapy, therapist, demographic and clinical variables which might affect the outcome of any intervention. Barrett and his colleagues reviewed a variety of methodological issues, including: the differential response to treatment in different diagnostic categories; the lack of control in much of the literature for developmental stages of the patient; the high degree of responsiveness of children to their environment; and the need to specify and define the intervention employed.

Tramontana (1980) reviewed 33 studies of individual, group and family therapy with adolescents, from 1967 to 1977. Only five were regarded as showing adequate methodological scope and rigour. Tramontana concluded that the available evidence did suggest that these forms of psychotherapy were beneficial with these patients. He echoed the plea for better specification of patient, therapist, and process variables thought to be relevant to adolescent therapy outcome. Tramontana also made the point that "spontaneous remission", which in the methodologically sound studies he included was estimated at 42%, is in itself an interesting, systematic and complex process, not simply a random phenomenon which interferes with outcome evaluation.

### **1.2.3. Smith, Glass & Miller meta-analysis**

Also in 1980, Smith, Glass & Miller examined 500 controlled studies using the statistical technique of meta-analysis (Smith et al., 1980). Meta-analysis is a method of statistically summarizing and integrating information from a variety of different studies. It entails calculating a measure called the effect size. The effect size is obtained by dividing the mean difference in outcome scores between the treatment and control groups by the standard deviation (usually) of the control group. The resulting figure is essentially a difference in standard (z) score means. The effect size is thus comparable for outcome measures originally expressed in different

units. The effect size yields an estimate of the percentile of the control group distribution at which the average treated patient (that is, the patient at the 50th percentile of the experimental group) would fall. This method has been used in a variety of different areas such as the assessment of the effect of social class on achievement, the effect of class size on attainment and the effect of sex differences on conformity.

Meta-analysis has been criticised on a number of grounds: nonindependence of effect sizes resulting from including multiple effect sizes from a single study, inherent confounding of independent variables, and the inclusion of methodologically weak studies in meta-analysis data bases. Weisz & Weiss (1993) have discussed the issues affecting meta-analyses particularly thoroughly, and believe that the advantages considerably outweigh the problems inherent in this method. (The survey of meta-analytic studies below follows their recent comprehensive review.) Regarding the decision on whether to include several effect sizes from a single study (using different outcome criteria or groups of patients), they suggest that this is sometimes appropriate, on other occasions effect sizes can be averaged within each study or treatment group. For certain analyses, it is desirable to select a single effect size value from each study.

Of the 500 studies included in the Smith, Glass & Miller meta-analysis, approximately 50 assessed the treatment of children and adolescents. The overall analysis revealed significantly better outcome for patients who were being treated versus controls. Unfortunately, however, the approximately 50 children and adolescent studies were not analyzed separately from the original 500 studies, and thus no effect size can be reported. In addition, some of the studies on children and adolescents contained treatments other than individual psychotherapy. They did report, however, in a correlational analysis, that the patient's age had little effect on treatment outcome. Critics of this study have indicated that these authors included studies of very mixed quality (Eysenck, 1978).

#### **1.2.4. Casey & Berman's study**

Casey and Berman (1985) published a review of 75 studies on child psychotherapy outcome, dating from 1952 to 1983. Their review focused on studies with children with a mean age below 13 years at the time of treatment. It included behavioral and cognitive-behavioral treatments together with non-behavioural psychotherapies, and was restricted to those studies that used control groups of untreated children from the same general population. The same meta-analytic

techniques used by Smith et al. (1980) were used in this review. A positive effect size of 0.71 was found across outcome measures for the 64 studies. An effect size of 0.40 was obtained for nonbehavioral psychotherapy (0.49 for client centred and 0.21 for dynamic psychotherapy). Overall, it was found that those children who had received treatment were better adapted than two-thirds of the control children.

Characteristics of treatment were examined as possible predictors of effect size, but most showed no significant differences. The authors also examined effect size in relation to child characteristics. The highest effect sizes were found where children were presenting with phobic symptoms (1.16), or somatic problems (1.66). Among the various outcome measures, those which assessed anxiety (1.08) and cognitive performance (0.96) showed significantly larger effects than measures of self-concept (0.06) and personality characteristics (0.11). More general assessments showed intermediate effect sizes: measures of global adjustment (0.56), social adjustment (0.48), or achievement (0.35). There was an effect of source of these assessments: ratings from independent observers were highest (1.14), followed by therapists (1.05), parents (0.80), child performance measures (0.74), and peers (0.47), which were all significantly higher than effect sizes obtained from teachers ratings (0.19) and child self-report (0.16). However, none of these categories was significantly different in mean effect size from those drawn from expert judges (0.53). Importantly, effect size did not differ as a function of whether the informant knew that the child had received treatment.

A limitation of the Casey & Berman study is that only 24% of the total 75 studies reviewed used samples of children referred for treatment. Thus, it is not clear how representative these results actually are of clinical practice (Saxe et al., 1986).

#### **1.2.5. Weisz, Weiss, Alicke & Klotz review**

Another important meta-analytic study was conducted by Weisz, Weiss, Alicke & Klotz (1987). These authors examined 163 therapy studies involving children aged 4 to 18 years of age, from 1970 to 1985. Psychotherapy was defined as "any intervention designed to alleviate psychological distress, reduce maladaptive behaviour or enhance adaptive behaviour through counselling, structured or unstructured interaction, a training program or a predetermined treatment plan." In contrast to the Casey and Berman (1985) review, effect size was calculated

for each individual comparison by dividing the treatment-control mean differences by the control group standard deviation, rather than by the pooled standard error of the combined treatment and control groups. The rationale for this was that variability in the treatment group might be expected to increase during treatment more than that in the control group (this was in fact found to be the case, Weiss & Weisz, 1990).

Four domains were defined: age group (children aged 4-12 vs adolescents (age 13 - 18), therapy type (behavioural vs non-behavioural), target problem (overcontrolled vs. undercontrolled), and therapist training (trained professional therapists, paraprofessionals, or graduate students). The main effect of each variable on effect size was tested first, then each main effect for robustness. Across the 163 treatment-control comparisons, a mean effect size of 0.79 was found. Across the various outcome measures used, the average treated child after treatment scored at the 79th percentile of the control group. Only 6% of the treatment-control comparisons yielded negative effect sizes. The effect sizes from behavioural methods (126 treatment-control comparisons) were significantly higher than those from non-behavioural treatments (27 comparisons) (means: 0.88 vs. 0.44;  $p > .05$ ). However, withdrawing comparisons in which outcome measures were similar to treatment procedures eliminated 63% of studies, and reduced behavioral-non-behavioural differences to nonsignificance. Only 3 studies involved insight-oriented psychodynamic therapy, and the mean effect size here was minimal (0.01).

Focusing on child characteristics, there was a main effect of age of the child, with children under 12 showing larger effects than adolescents ( $p < .05$ ). Age did not interact significantly with therapy type or problem type, but there was a significant age x therapist training interaction ( $p < .05$ ): age and effect size were uncorrelated among professional therapists ( $r = .11$ ) but were significantly correlated among graduate students ( $r = .31$ ,  $p < .05$ ) and paraprofessionals ( $r = -.43$ ,  $p < .05$ ). The difference in mean effect size between studies treating mostly girls (1.11) and studies treating mostly boys (0.80) was nonsignificant.

Focusing on target problems, no significant mean effect size difference was found between the broad categories of overcontrolled and undercontrolled problems. This finding held when age level, therapy type, and therapist training were controlled for. However, there was a marginal interaction with therapist training ( $p < 0.06$ ). The three therapist types did not differ in their mean effect size with undercontrolled problems; however with overcontrolled problems,

mean effect size did increase with level of professional training (0.53 to 1.03). This suggests the possibility that advanced training makes a bigger difference with overcontrolled problems than with undercontrolled problems.

#### **1.2.6. Kazdin, Bass, Ayers, and Rodgers meta-analysis**

As a part of a broader survey, Kazdin, Bass, Ayers, and Rodgers (1990) offered a meta-analysis of 108 studies of children from 4 to 18, between 1970 and 1988. The majority of the children had been referred for disruptive behaviour. Behaviour modification was used in 50% of the studies, cognitive-behavioral approaches in 22%, group therapy in 9%, client-centred therapy in 5%, play therapy in 5%, family therapy in 4% and other approaches in fewer than 4% of the studies. The effect sizes were computed similarly to the method used by Casey and Berman (1983). For each study, an effect size was computed for each pair of groups compared, and classified into 3 categories: treatment versus no-treatment, treatment versus active control group, and treatment versus treatment. For the 64 studies involving treatment versus no-treatment comparisons, a mean effect size of 0.88 was found. For the 41 studies involving treatment versus active control comparisons, the mean effect size was 0.77.

#### **1.2.7. The most recent survey: Weisz, Weiss, Morton, Granger and Han**

In 1991, Weisz, Weiss, Morton, Granger and Han (unpub.) surveyed all the studies that had not been included in the Casey and Berman (1985) meta-analysis or the Weisz, Weiss, Alick, and Klotz (1987) meta-analysis. This meta-analysis included 178 treatment groups, and behaviour problems divided between undercontrolled, undercontrolled, and other. 85% of the treatment groups involved behavioural treatment, 11% non-behavioural, and the remaining were either a combination of both or difficult to classify. Effect size was calculated by dividing treatment group-control differences by the standard deviation of the control group.

The mean posttreatment effect size was 0.71. Comparing behavioural to non-behavioural treatment produced an average effect size of 0.8 for behavioural interventions and 0.32 for non-behavioural treatment ( $p < .03$ ). When they excluded from the analysis outcome measures that were unnecessarily similar to the treatment, the difference remained significant ( $p < .01$ ). A significant correlation was found ( $r = -.23$ ,  $p < .05$ ) between the percentage of boys in a

sample and the effect size, indicating that the greater the proportion of boys in the sample, the worse the outcome of treatment. No other significant main effects were found.

#### **1.2.8. General considerations in outcome studies, and implications of meta-analytic reviews**

Research on the effectiveness of treatment in child psychiatry and psychotherapy has lagged very much behind evaluations of adult treatment, and clinical management of distressed children and adolescents is still influenced more by personal preference and experience than by scientific evidence (see Graham, 1993). Kazdin (1988) listed over 230 forms of treatment available for childhood disturbance, few of which had been subjected to any evaluation.

As is the case with adults, the treatment of choice for child psychiatric disorders is much clearer in some circumstances than in others. There may, for instance, be agreement on the management of severe disorders, but less for mildly disturbed children with the same condition. Because fewer children suffer from major psychiatric disorders, there is more uncertainty about the treatment of children. One implication of this is that it is important to investigate the outcome of treatments for a variety of disorders and degrees of impairment.

In evaluating the outcomes of child psychiatric treatment, there are some general considerations which need to be mentioned:

a) Child psychiatric disorders differ in their natural history. In general, autism and other pervasive developmental disorders have a very poor prognosis (e.g. Dahl, Cohen & Provence, 1986), conduct disorders and attention deficit hyperactivity disorders (ADHD) have an intermediate outcome, while children suffering from depressive and anxiety disorders do relatively well, although these conditions often recur. (The literature on the natural histories of disruptive and emotional disorders is described in more detail in Chapters 8 and 9.) The efficacy of treatment, especially long-term treatment, is more difficult to evaluate in conditions with a high spontaneous remission rate and, naturally, there is a danger that therapists dealing mainly with such disorders will attribute improvements to their treatment, when the disorders might well have improved in any case. However, it is important to bear in mind that treatment may accelerate improvement, provide other benefits (such as improved family functioning),

or help to reduce the risk of recurrence - this may be very worthwhile, even for a disorder which would generally remit spontaneously over a few years.

b) Child psychiatric disorders often change predictably over time; some symptoms recede and others emerge. For instance, children with attention deficit hyperactivity disorder (ADHD) usually show gross hyperactivity at three years; by five or six years this is commonly much less troublesome, the emphasis having shifted to attention deficit. Assessment of treatment outcome needs to take into account these likely changes in the symptom picture with age: a child whose overactivity has improved is not necessarily less impaired.

c) The presence of concurrent conditions ('co-morbidity') can crucially influence the expected course of a disorder. For example, a child showing ADHD will have a considerably worse prognosis if he also shows symptoms of a conduct disorder (e.g. Taylor et al, 1991). This is a complex area with many possible patterns of disorders, and additional diagnoses may not always make the outlook more gloomy. This must be investigated empirically, and it is encouraging that treatment outcome studies increasingly take comorbidity into account, at least to the extent of describing it. In some studies, children with additional diagnoses have been excluded. This clarifies the focus of the study, but unfortunately makes it much less clinically useful, in that many disturbed children present with symptoms of more than one disorder (Kazdin, 1990b). In other studies, the principal diagnosis of the child is used in selection for treatment, and the results are interpreted without regard to other coexisting disorders. Unfortunately, this could obscure interpretation of treatment efficacy, which may be crucially affected by, for instance, the presence of a conduct disorder or developmental disorder alongside an anxiety state.

d) What can be learned from any outcome study depends on its design. In the case of psychosocial treatments for children, few studies have used the most informative methodology: the blind, randomised controlled trial (RCT) (Hulley & Cummings 1988). Alternative experimental designs are available, such as non-blind between-group comparisons, time-series analysis and cross-over experiments, but each has drawbacks in comparison with an RCT. There are many reasons for the rarity of RCT investigations, arising from ethical objections to random allocation, and from the choice of an appropriate control condition (especially for long-term or intensive treatment). An untreated (waiting list) control raises the ethical problems of withholding

treatment, particularly from clinical samples, as opposed to children recruited from the community specifically for the study. It also does not control for the impact of non-specific effects of therapy, such as the much greater attention received by children in the experimental group. It does, however, offer a comparison with the untreated course of the condition under study. A 'placebo' therapy comparison group attempts to match the impact of non-specific effects without offering active treatment to the control group. A best available treatment comparison means that the control group children receive an alternative therapy already established as effective. This method provides a stringent test of the usefulness of any 'rival' treatment, while being ethically unexceptionable (provided that the therapy under test appears to have sufficient merit, or is sufficiently widely practised already, to justify applying it to the experimental group). It may be less helpful than a 'placebo' control in identifying the active ingredients in a treatment package. These issues are considered further, in relation to psychodynamic treatment, in section 1.5.

Barnett et al (1991), in a sympathetic but gloomy review of 43 controlled outcome studies of individual child psychotherapy conducted over 27 years, concluded that the magnitude of flaws in these studies made it impossible to draw reliable conclusions. More positively, they listed desirable features of clinical trials, based on recommendations of previous reviewers (Levitt, 1963; Heinicke and Strassman, 1975; Wright et al., 1976; Barrett et al., 1978; Casey and Berman, 1985; Shaffer, 1984; Williams and Spitzer, 1984). These features were as follows.

Inclusion and exclusion criteria: Specific diagnostic criteria or standardized objective measures are required to identify the signs, symptoms or problem areas of the sample subjects. Exclusion criteria eliminate inappropriate candidates for psychotherapy, such as psychosis, brain damage, etc., or eliminate subjects that might bias the results. A homogeneous sample will allow conclusions regarding that specific group. Alternatively, there should be clear description of variation within the sample, particularly of patterns of comorbidity (concurrent diagnoses in addition to the syndrome being studied). It is necessary to have a sample size adequate to demonstrate significant differences between groups.

Specification of therapy: Duration, and frequency of treatment sessions should be stated. A detailed description should be given of treatment techniques in each condition, not just a heading (such as analytic or client-centred). Delineation of the characteristics, background,

and training of therapists is desirable. There should be control (or monitoring) of other forms of simultaneous treatment that might influence the results. Similarly, the degree of parent involvement should be standardized if possible. There must be some measurement of treatment integrity: the extent to which therapy was delivered as specified in the description of technique.

Matching procedures and control groups: Control groups should be used, and clearly specified (i.e. 'placebo', other treatment, or no treatment). Assignments to experimental and contrasting groups should be made randomly. There should as far as possible be matching of groups for age, sex, IQ and other relevant variables to reduce the effect of these pretreatment variables on the study's findings.

Measurements and outcome evaluations: Standardized and objective ratings of dependent or outcome measures is desirable, rather than reliance on clinical judgment. Where clinical judgments are made, there must be measurement of interrater reliability to ensure replicability and comparability with other studies. Outcome ratings should be blind to the treatment, group assignment, and pretreatment assessments. Outcome measures need to be relevant to (but not exclusive to) the subject of study.

#### **1.2.9. Shirk & Russell's review of meta-analytic findings on non-behavioural treatment**

Shirk & Russell (1992), in a recent comprehensive review, have pointed out the under-representation of non-behavioural treatments (and specifically psychodynamic therapy) in meta-analyses of child treatment outcome. As psychodynamic therapy forms the subject of this thesis, their review is worth describing in detail. The neglect of psychodynamic approaches with children is despite the fact that this therapy is the form of non-behavioural treatment most frequently used and most highly regarded amongst child psychiatrists and psychologists, at least in the USA (Kazdin et al., 1990; Koocher & Pedulla, 1977; Silver & Silver, 1983; Snow & Paternite, 1986).

Shirk & Russell (1992) also offered some cautions about the negative findings in the few studies addressing this issue. 69% of the 27 non-behavioural outcome studies examined by Shirk & Russell (1992) concerned treatment administered in groups, whereas several surveys of clinicians have found that they do not regard group therapy as generally useful (Kazdin

et al., 1990; Koocher & Pedulla, 1977), and themselves use individual treatment (Silver & Silver, 1983). They demonstrate that the average effect size for non-behavioural group treatment is significantly smaller than that for individual therapy (0.27 and 0.56 respectively). They also showed that the majority of evaluations of non-behavioral treatment had used less than 20 shortened sessions, which was not representative of what is normally provided in practice (Kazdin et al., 1990).

Furthermore, Shirk & Russell (1992) found that over two-thirds of the studies evaluating non-behavioural treatment had been conducted by investigators with an allegiance to behaviour therapy, and that investigator allegiance had a very strong effect on effect sizes obtained (0.17 with behavioural allegiance, 0.56 with non-behavioural allegiance). Thus far, then, psychodynamic therapy has been judged mostly (for want of better evidence) on studies of non-psychodynamic, brief group therapy conducted by behaviourally-oriented clinicians. Outcome research is therefore out of line with the pattern of current clinical practice, and certain child therapies (such as intensive psychodynamic psychotherapy) have in fact never been evaluated in a way which would allow them to be included in meta-analytic surveys of treatment effectiveness.

#### **1.2.10. Conclusion**

On the basis of the two previous sections, we may arrive at a number of conclusions. One is that no therapy has been established as clearly effective across age groups and referral problems. A second is that many therapies have not been examined at all, and evidently dynamic therapies (as normally practised) fall into this category. The third is that estimates of effect size on the basis of meta-analysis are confounded by the population of studies which, as we have seen, are skewed at present. In order to get a clearer idea of the studies which have been done on dynamic psychotherapy, it is necessary to examine these in more depth.

### **1.3. STUDIES OF THE OUTCOME OF PSYCHOANALYSIS AND PSYCHODYNAMIC PSYCHOTHERAPY WITH CHILDREN**

There has never been a large-scale study of the effectiveness of child psychoanalysis, or of psychoanalytic psychotherapy (which is based on the same principles - see section 1.1.4 - and employs similar techniques but less intensively, usually in weekly sessions). Two smaller-scale

investigations have been carried out, and are described below. A study of psychoanalytically-orientated psychotherapy is also described, because of the attempt to grapple with some of the methodological difficulties. The literature on evaluation of psychoanalysis with adult patients is then briefly reviewed in section 1.4, and in conclusion the particular issues to be addressed in an outcome study of child psychoanalysis are discussed.

### **1.3.1. The work of Heinicke**

Heinicke (1965) reported a study of a small sample of children, with learning problems linked to psychological disturbances. These children received psychoanalytic psychotherapy, either one or four sessions per week. Greater improvement was found in the group receiving more frequent therapy. However, although this study was an impressive attempt which broke new ground, there were some difficulties with it. The population was poorly characterized, the therapy was only described as analytically oriented and only delineated in terms of the frequency of contact. Outcome assessments were nonstandardized interviews and intelligence, achievement, and projective psychological testing. There was no measure of reliability for the interpretative tests.

### **1.3.2. The Anna Freud Centre diabetes studies**

Moran and Fonagy have reported three studies of psychoanalytic treatment with children suffering from so-called brittle diabetes. The first study (Moran & Fonagy, 1987) explored the relationship between metabolic control and the process of psychoanalysis in a single case study of a diabetic adolescent girl. Process reports were rated for the presence of dynamic themes (symptomatic and conflictual). The association of these themes with independently obtained measures of diabetic control was examined using time-series analysis. The study revealed a close statistical relationship between week to week fluctuations of metabolic control and the presence of key themes in the patient's analytic material. Most significantly, the analytic narrative predicted the child's subsequent diabetic control: the presence of conflict in the analytic material was reliably followed by an improvement in diabetic control one to three weeks later.

The second study by these authors (Fonagy et al., 1989) compared two equivalent groups of 11 diabetic children with grossly abnormal blood glucose profiles necessitating repeated admissions to hospital. Patients in the treatment group were offered an intensive inpatient treatment programme which included three to four times weekly psychoanalytic psychotherapy. Treatment was relatively brief, lasting on average 15 weeks. Patients in the comparison group were offered only inpatient medical treatment. The children in the treatment group showed considerable improvements in diabetic control, maintained at one year follow-up. The comparison group children, in contrast, returned to pre-treatment levels of metabolic control within three months of discharge from hospital.

The third of these studies (Fonagy & Moran, 1990) was an independent series of experimental single case investigations. This assessed the impact of treatment on growth rate (measured by changes in height and bone age) in three children whose height had fallen below the 5th percentile for age. In all three cases, treatment was associated with an acceleration of growth and a substantial increase in predicted adult height.

Taken together, these studies illustrate one important method of verifying the clinical efficacy of psychoanalysis. The crucial components of this approach are: 1) a readily definable client group which tends to respond poorly to alternative treatments; 2) a clinically relevant outcome variable which is robust to contamination from the treatment process; 3) complementary process studies which offer suggestive evidence of the effective component of the treatment.

### 1.3.3. Work at the Tavistock Centre

Lush, Boston & Grainger (1991) compared 35 children in psychotherapy who were fostered or adopted with 13 similar children for whom psychotherapy had been recommended but did not start. The study was naturalistic, and measures were developed specially for the study, without evidence of established reliability or validity. However, there are some indications that psychotherapy did benefit these (mostly) very deprived children. Preliminary results have been reported on the first 20 children to be treated. The children were aged 2 to 18 years, over half were girls and they mostly received weekly sessions for at least one year. 16 of the 20 psychotherapy cases made 'good progress', as judged by therapists' ratings and confirmed in most cases by parents' and external clinicians' opinions. An informal comparison

was made with seven similar (but not matched or randomly allocated) children who were regarded as suitable for therapy, but did not receive it for external reasons; none of these children had improved during the same period.

#### **1.3.4. Conclusion**

There has been even less systematic research on the outcome of psychodynamic treatment with children than on other forms of psychosocial treatment. A small number of researchers, such as those above, have found solutions to some of the methodological problems involved in this form of evaluation, but each study has dealt with small, highly unusual groups of children using very specialised outcome measures. There is clearly a need to evaluate dynamic treatment across a range of common childhood disorders, using widely used methods for assessing childhood functioning.

Although so few studies have been conducted to evaluate the outcome of psychoanalytic treatment of children, a number of large-scale investigations have been carried out with adult patients. These will be briefly described to set the scene for a discussion of the methodological issues and possible models for the evaluation of child psychoanalysis.

### **1.4. INVESTIGATIONS OF THE PSYCHOANALYTIC TREATMENT OF ADULTS**

#### **1.4.1. The Menninger study**

Probably the best-known systematic study of adult psychoanalysis is the Menninger Foundation Psychotherapy Research Project (Kernberg et al., 1972; Wallerstein, 1989). Forty-two patients were studied, without therapists or patients being aware of their inclusion in the sample. Very detailed information was gathered throughout treatment and over a follow-up period of decades. 22 of the cases were treated in full psychoanalysis, and 20 in less intensive psychoanalytic psychotherapy. The therapists were mostly candidates in training, and the patients were an especially unpromising group, in terms of severity of pathology and lack of response to previous treatment. Some would be regarded as offering only 'heroic' indications for therapy. The only advantage they appeared to have was relatively high socio-economic status, which may

have improved their prognoses. Patients were not randomly assigned to intensive or non-intensive treatment; the design was naturalistic in this and in other respects (e.g. length of treatment was open-ended, and modifications of technique were allowed - and occurred in most cases - but were clearly recorded).

The outcome of treatment was assessed and related to numerous possible predictors from the start of therapy. It was found that situational factors such as environmental stress were poor predictors, and that patient variables were much more telling than indications of the skill or approach of the analyst. The most important positive characteristic of the patient turned out to be ego-strength, a superordinate variable derived from a number of related ratings, e.g. anxiety tolerance. A further significant predictor was the patient's level of anxiety at assessment. Curiously, motivation to change and psychological-mindedness did not emerge as important indicators of response to treatment. Overall, patients treated non-intensively appeared to have better outcome, but it is difficult to evaluate this result because of the non-random allocation to treatment conditions and because of the small number of patients treated.

#### **1.4.2. The Boston study**

A different type of study has been conducted at the Boston Psychoanalytic Society (Sashin et al., 1975); this was a retrospective review of 183 cases treated in psychoanalysis between 1959 and 1966. A group of analysts compiled information on the histories and symptomatologies of patients at intake, and this was compared with ratings of outcome (reason for termination, global improvement, six scales covering changes in different areas of the patient's life). There were a number of difficulties with this study, particularly that ratings of intake information were of poor reliability, and that the statistical tests applied were not always appropriate. Family history of social problems was the most important predictor found; other variables related to outcome included obsessional symptomatology and poor object-relationships; however, none of the findings was statistically significant.

#### **1.4.3. The Columbia study**

Another major study of the outcome of adult psychoanalytic treatment was conducted at the Columbia Psychoanalytic Center (Weber et al., 1985a,b). This was a retrospective study

of 700 cases of supervised psychoanalysis, and a further 885 cases of supervised psychotherapy, treated between 1945 and 1971. Most patients were judged to have improved and to have been satisfied with the results of their treatments. The degree of improvement was greater in longer treatments and where termination had been mutually agreed. There was some indication that supervisors' ratings of candidates' competence predicted outcome. Beyond this, there were few positive results to suggest demographic, clinical or treatment factors which might predict therapeutic benefit. This is perhaps less surprising and disappointing than it might seem, as in fact most of the 'psychoanalytic' cases were not treated in full analysis, and in many cases detailed information was lacking. In addition, the analysts' characteristics were not documented as fully as would have been desirable.

#### 1.4.4. The work of Kantrowitz

Kantrowitz and her colleagues have reported a series of studies of changes in psychological functioning during and after psychoanalytic treatment (Kantrowitz et al., 1987a,b; 1990a,b,c). 22 adult patients were treated in 4-5 times weekly analysis by candidates under supervision. Following their diagnostic assessment, a committee of senior analysts rated the patients on reality testing, level and quality of object relations, motivation, and affect availability and tolerance. The patients were also given a battery of projective tests before treatment, which formed the basis of parallel ratings by the researcher of the same qualities as had been assessed by the committee. These projective tests were repeated one year after termination (the length of treatment varied from 2½ to 9 years, so that the interval between assessments was very variable also). In addition, both the patients and the treating analysts were interviewed about the analytic process and outcome.

There was fairly low agreement between the ratings of change based on projective testing, and those derived from patient or analyst interviews. This was probably partly because projective tests purport to measure an "under-structure" (Kantrowitz, 1987a), rather than the observable signs of adaptation which both patient and analyst tended to give as evidence for their assessments. In addition, the analysts' assessments were based on their knowledge of the patients up to the time of termination, while both the patients' assessments and the psychological tests would also have been affected by events and experiences in the year before the interview.

Four categories of analytic outcome were then defined, based on whether or not an analytic process had been experienced and resolved; this assessment was intended to be independent of the ratings of changes in symptomatology and psychological functioning ("therapeutic result"). The therapeutic gains were assessed in terms of changes in such characteristics as reality testing, object relations and expression and regulation of affect. In general, around half of the patients were assessed as showing analytic success (partial or full establishment and resolution of an analytic process), and this was difficult to predict from the information available at assessment. However, there was some evidence that it depended on the "match", in terms of psychopathology, between patient and analyst (Kantrowitz et al., 1990c). Where there was a fit between the patient's central problems and a blind spot or limitation in technical style in the analyst, it was less likely that the transference neurosis would be successfully established and resolved.

In terms of therapeutic results, most patients showed better object relations, affect availability, etc., at follow-up than they did at assessment, although (as the authors acknowledge) these changes cannot be confidently attributed to the treatment, in the absence of control conditions or knowledge of the likely prognosis of these patients' difficulties.

The improvements over the time of treatment were not significantly related to judgements of the analytic result, and nor was the therapeutic result predictable from the patients' state at assessment (it would be expected that poor reality testing or object relations, for instance, would predict relatively little benefit from analysis; Bachrach & Leaf, 1978). Kantrowitz and her colleagues (Kantrowitz et al., 1987a) point out that this negative finding may be a result of the relatively restricted range of pathology in their small sample (all patients were regarded as neurotic and suitable for treatment by candidates). It is also a possibility that worse functioning allowed greater room for improvement, and that this balanced any effect of greater "analysability". However, the findings in this study supported those of the Menninger investigation (Kernberg et al., 1972), in which improved adjustment was not strongly related to the establishment of an analytic process.

Kantrowitz and her colleagues followed up the patients in their study five to ten years after termination (Kantrowitz et al., 1990a,b,c). Just under half were considered to have maintained their improvement following the end of analysis, and these patients could not be predicted

from the degree of analytic success (resolution of a transference neurosis), the changes in adaptation noted one year after termination, or the development of a capacity for 'self-analysis'.

#### 1.4.5. The Chestnut Lodge study

An interesting follow-up study of inpatients treated psychoanalytically has been reported by McGlashan (1984a,b; 1986a,b,c). This investigation reported on 446 former inpatients, who had mainly been suffering from affective, psychotic and borderline personality disorders. The study used measures (5-point rating scales) which were more clearly operationalised and precise than those used in previous studies. It also used unusually thorough follow-up assessments, carried out many years after the hospital admission. It emerged that patients with depressive or personality disorders improved more during treatment than did those suffering from schizophrenia or bipolar affective illnesses. These trends were still more marked at follow-up (which covered several years), with depressed and borderline patients improving further, while schizophrenic patients tended to deteriorate. This study illustrates the importance of considering psychiatric diagnosis in looking at treatment effectiveness; the same treatment may have much more impact on some forms of disorder than on others. Of course, without strict control groups it is difficult to know how much improvement may be attributed to treatment effects in any case, and how much to the natural history of the disorder. However, it is easier to disentangle this when diagnostic distinctions have been made, allowing what is known of the normal course of different conditions to be taken into account.

#### 1.4.6. Conclusions

These investigations of psychoanalytically-oriented treatment of adult patients include examples of a number of different methodologies. The Menninger and Kantrowitz studies show how much can be achieved through rigorous naturalistic designs, although the results must be disappointing to psychoanalysts; there was little evidence, if any, that intensive psychoanalytic treatment was more beneficial than non-intensive, or that improvement (in the short or long term) was related to the establishment of an analytic process. A number of studies were retrospective, notably the Boston and Columbia investigations. These failed to identify variables strongly related to therapeutic outcome, and there were some methodological flaws which made them less informative than could have been the case. McGlashan's Chestnut Lodge study gives

an impressive illustration of what can be done with a design combining retrospective and follow-up assessment, both of which were comprehensive and careful. This study also showed the crucial importance of distinguishing between diagnostic groups in outcome assessment. To an extent, this Chestnut Lodge study provided a model for the retrospective investigation of child therapy outcome to be reported in this thesis.

## **1.5. CONCLUSION: THE NEED FOR EVALUATION OF THE OUTCOME OF CHILD PSYCHOANALYSIS, AND THE METHODOLOGICAL ISSUES INVOLVED**

Psychoanalytic theory and therapy has, in spite of its far-reaching influence on theories of development and psychopathology and on methods of treatment, proved an exceptionally difficult subject for empirical research. This is partly because psychoanalysts themselves, by the nature of their subject, have traditionally been interested in microanalytic explorations of individual unconscious meanings, which do not lend themselves to empirical demonstrations of group effects.

While child analysts have a variety of views, based on clinical experience, on what makes a child a good analytic case, there exists no definite evidence as to which groups of children, at what age, with what pathology, and in what kind of family circumstances are most suitable for child analysis. These questions are important, particularly if one considers the uniqueness and demands of dynamic treatment which takes place four or five sessions per week over the course of several years. Is there a group of children, for example, who are unlikely to be helped by other forms of treatment, but remain accessible to this intensive intervention? Psychoanalysis is the only psychological treatment which sets itself the ambitious goal of restructuring the components of the individual's adaptation, and aims to address all aspects of the patient's personality. Perhaps because of the scope of its ambitions, attempts at operationalizing the process and outcome of child analysis are at very early stages of development. Yet knowledge gained from work in child analysis remains the primary source of information about the nature of all types of dynamic psychotherapies with children, as well as the foundation of psychodynamic understanding of developmental processes in childhood, adolescence and adulthood.

Most psychoanalysts do not feel that their work could or should be evaluated by the methods of clinical trials discussed above. Furthermore, very few of them have enough knowledge of such methods to attempt a study of this type. Apart from these powerful 'cultural' factors, it is also undeniable that the evaluation of psychoanalytic treatment poses unusual methodological challenges, in the light of the desirable features of clinical trials described in section 1.2.8 above. The major difficulties are outlined below.

One obstacle to outcome research in this area is the specification of treatment technique, or manualisation. Although there is a vast literature on technique in adult and child psychoanalytic treatment, this is not written in the explicit, 'operational' terms that are required to define a treatment approach in studies of efficacy. In addition, the analytic literature, in contrast to that on, say, behavioural methods, relishes exploring individual diversity and unusual cases - exceptions that prove the rules - rather than on prescribing generally applicable procedures. Furthermore, treatment technique in psychoanalysis is guided by the analyst's judgement of subtle, often obscure, signs of unconscious conflicts, defences, and so on, which are very difficult to capture in a manual of technique or in a scale to monitor treatment integrity.

A second difficulty for the researcher in this field is the choice of experimental design. Evaluation of the outcome of psychotherapeutic treatment can be done in a number of ways, each with advantages and disadvantages. The major methods are: a) formal randomised controlled trials (RCTs), b) systematically accumulated clinical information, and c) locally administered performance measures.

There are considerable difficulties in using RCTs to evaluate long-term therapies, not the least of which is to devise an appropriate control condition. If the comparison is to be with untreated cases, then random allocation to a waiting-list or to some 'placebo' therapy raises particular ethical problems in a design which has to allow for treatment to continue for years. Using "defectors" from treatment (patients who drop out or refuse the treatment offered) avoids the ethical problems, but raises important new ones concerning the differences between those who accept and those who reject treatment. It is plausible to argue (see, for instance, Kolvin et al., 1988) that dropouts may be less disturbed, or less motivated, or may have discovered an alternative treatment which appeals more. It is also quite possible that the defectors or their families may be more disturbed or deviant. What is unlikely is that they are adequately

comparable at the outset to the treated group. If the non-specific effects of treatment are to be controlled for by offering "placebo" therapy - a treatment similar except in analytic content (e.g. non-directive counselling for adults or play therapy for children), then this presents formidable costs due to the length and frequency of contact required for comparability with the experimental group.

This is closely related to a second objection to RCTs in this context, which many practitioners would regard as the most serious: that of ethical objections to randomised assignment. In the case of analytic treatment this would involve children being refused treatment or offered an alternative therapy for a period much longer than that required in studies of briefer therapies. Many feel that for children (who could not give informed consent), even more than for adult patients, it is unacceptable to keep patients on a waiting list or to offer them a 'placebo' therapy for a prolonged period while their development may continue to be disturbed. Of course, there is a risk (from the research perspective) that children in the control group would find psychotherapeutic treatment elsewhere during the years of the study, thus invalidating the intended comparison. A prospective study of treatment which takes place over several years is also extremely costly to conduct, particularly as a long-term follow-up investigation would need to be part of the design. For these and other reasons, there have been no attempts to conduct realistic RCTs using clinical populations and child psychotherapy as it is normally practised (Fonagy & Higgitt, 1989).

A further problem is the design of suitable outcome assessments for analytic treatment. Naturally, measures applied in the evaluation of other therapies, such as change in symptoms, can and should be used to assess the outcome of psychodynamic treatment. However, if a fair test is to be made of analysts' claims to do more than other therapies, more than reduce observable symptoms, then if possible some attempt must be made to measure the intrapsychic functioning of the individuals in the study: quality of object relationships, adaptiveness of defences, range of affect, and so forth.

These obstacles to using the most desirable methodology underscore the importance of clinic-based studies using other designs, in an attempt to assess the efficacy of long-term psychotherapeutic treatment, and to identify the diagnostic groups for whom it may be most appropriate. The study to be described used retrospective chart review methodology to this end. It is a step

towards the establishment of a prospective study of child psychoanalysis, which involves finding solutions to the difficulties in using RCT methodology. There are many considerations in establishing such a study for which a retrospective investigation of outcome is valuable. These include most of the fundamental questions of design and procedure, such as where to focus the investigation (e.g. the age group to be included); how to assess the effects of treatment; how to describe the nature of the treatment; which characteristics of the patients and families need to be measured, and how; which variables may predict important aspects of outcome, and therefore need to be controlled for within the research design, and so on. In the concluding chapter, a plan for such a study is outlined, based on the findings of the chart review to be described.

The next chapter considers alternative methods of measuring symptomatology and changes in adaptation in a study of the effectiveness of treatment for childhood disorders. The following chapter introduces a large-scale retrospective, chart-review study of child psychotherapy and psychoanalysis, which forms the subject of the remainder of this thesis.

## **CHAPTER 2. ALTERNATIVE WAYS OF DESCRIBING CHILDHOOD FUNCTIONING AND CHANGES DURING TREATMENT**

In this chapter, three major methods of describing childhood psychological disturbance are described, because they offer alternative measures of the outcome of treatment. The difficulties in assessment of child therapy outcome were considered in the previous chapter. In section 1.2.8 issues relating to assessment of childhood functioning in general were addressed, and in section 1.5 some specific challenges for research on psychodynamic therapy were discussed. It is very important that any study of child therapy outcome should include measures used in the wider field of child psychiatric treatment evaluation described in the previous chapter, in order to permit comparisons of samples and improvement rates. It is also important that different types of measure of childhood functioning should be used, particularly so that adaptive behaviour as well as symptomatology can be described.

The three most widely used types of measure of child adaptation and treatment outcome are categorical classification (psychiatric diagnosis), dimensional description and global ratings of adaptation. There are many controversial issues relating to the diagnosis and description of psychiatric problems, particularly those arising in childhood and adolescence. These will be discussed below, initially in relation to the two major categorical systems of classification, DSM-III-R and ICD-10, although many of them are equally relevant to the other systems of classification to be discussed here. In the remainder of the chapter, the strengths and weaknesses of the two main alternatives to the categorical system, the dimensional and global approaches, will be discussed.

Finally, the usefulness of each approach will be considered in the context of the present study: a large-scale, retrospective investigation of psychodynamic child therapy.

### **2.1. THE CATEGORICAL APPROACH: PSYCHIATRIC DIAGNOSIS**

In medicine, both clinical decision-making and research into aetiology and treatment rely on an effective system for classifying illnesses. Following Quay (1986) and Werry (1992), we may say that the effectiveness of such a system depends upon: (a) its reliability (between

different diagnosticians, across time, and across reporting sources); (b) its internal consistency, i.e. the extent to which different symptoms or aspects defining the syndrome covary, even though they may not always be seen together in an agreed episode of the illness; (c) its specificity, that is the extent to which syndromes are distinguished from one another as well as from a healthy state; (d) its external validity, which refers to its consistent relationship with aspects of aetiology, prognosis, treatment, and associated epidemiological and clinical features; (e) its usefulness in research and clinical practice.

There are two major categorical systems of classification of mental disorders which have been developed in parallel, and are being brought closer together with each revision. The first is the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, first published in 1952 and revised several times since; the most recent revision is abbreviated to DSM-III-R (American Psychiatric Association, 1987). The other system forms one section (Chapter V) of the World Health Organization's International Classification of Diseases, the latest revision of which, ICD-10, has been published in draft form (World Health Organization, 1988).

Both the DSM and ICD systems are categorical (based on the disease model) rather than dimensional, and, for the most part, phenomenological (descriptive) rather than based on hypothesized causal processes (Cantwell, 1988). Most diagnostic categories in both DSM-III-R and ICD-10 are defined intuitively from clinical experience. Groups of signs and symptoms are listed, and the number of these required to meet the criterion for diagnosis is decided by consensus among clinicians.

### **2.1.1. Development of the psychiatric diagnostic classification schemes for childhood disorders.**

Subdivision of child psychiatric syndromes was not attempted until the drafting of ICD-9 (WHO, 1978), and then of DSM-III (American Psychiatric Association, 1980). In DSM-III and DSM-III-R (and to a lesser extent in ICD-10), attempts have been made to improve reliability by specifying Research Diagnostic Criteria for each category, although this has been rather arbitrary in relation to disorders of childhood and adolescence, where

the empirical basis for such criteria is much less substantial than it is in adult psychiatry (Cantwell, 1988; American Psychiatric Association, 1987, Introduction).

Both ICD-9 and DSM-III were accompanied and followed by systematic research to determine their strengths and weaknesses (see, for instance, Rutter, Tuma & Lann, 1988). It is interesting to note that the problems found with DSM-III closely mirrored those shown for ICD-9. However, a criticism that is specific to the DSM is that it is directed towards a much smaller and less diverse audience than the ICD, and as such it reflects national trends and opinions. Its producers are sometimes charged with being too influenced by currently fashionable ideas, and recent research which has not been consolidated (Cooper, 1988). The approach to an international system, the ICD, has been relatively cautious and conservative.

Both of these systems have sections which list disorders, such as autism or separation anxiety disorder, which are generally first or only seen in childhood or adolescence. DSM-III-R describes each psychiatric disorder under the following major headings: essential features, associated features, age of onset, course, impairment, complications, predisposing factors, prevalence, sex ratio, familial pattern, and differential diagnosis. For some disorders, each heading is followed by a substantial amount of information, for others there is little or no information available.

There is a great deal of overlap between the ICD and DSM systems, the major differences lying in the ways in which they use diagnostic criteria, the emphasis on multi-axial description, and the approach to additional diagnoses (comorbidity).

### **2.1.2. Specific Issues in Child Psychiatric Diagnosis**

There are several issues that are particularly relevant to the psychiatric assessment of children. Many of these apply not only to categorical description of disorders, but also to dimensional or global ratings.

Information Sources. Very few children are likely to be self-referred. Presenting complaints usually come from parents, school, community or professionals. As a result, the clinician must evaluate not only the child but also the sources of referral, and the information each

has provided, which may not be consistent with that of others. Agreement between the interviewer, interview data (particularly self-report by young children) and information from other sources, is often minimal (Stephens et al., 1980; Welner et al., 1987; Kashani et al., 1985).

Recently, this problem of agreement among sources has received a lot of attention. It has become apparent that there are some disorders, such as depression, where the child's report may reveal more "positive" information than the parents' (Kashani et al., 1985), while other symptoms, particularly "externalizing" behaviours, are more fully reported by the parents (Welner et al., 1987). Subjective states may not be seen or understood by the parents, while the child may be unaware of how aggressive or inattentive he seems.

Another difficulty in child assessment is the patient's ability to communicate with the examiner. Self-report skills can be limited by a child's social, cognitive and language development, as well as by the anxiety or excitement which may be generated by the unfamiliar situation. This is a particular concern when assessing expression of mood in young children. Rutter (1988c) has, for instance, discussed the difficulty of assessing certain key features of clinical depression, such as background affect separate from specific contexts, the appropriateness of guilt feelings, and other depressive cognitions to do with the self, the future, and so on. Children below the age of 8 years have not usually got the metacognitive capacity to understand and express these experiences, and some criteria cannot be assessed from child report before adolescence. This is confirmed by the observations of Kovacs (1986) in her extensive research on childhood depression. She concluded that valuable information on subjective states could be provided by children, but certain diagnostic criteria could not be assessed from self-report. It is worth considering whether these criteria apply to children of this age at all (Rutter, 1988c). Edelbrock et al. (1986) studied the interview reliability of using the Diagnostic Interview Schedule for Children and found that test-retest agreement for children six to nine years old was lower than for any other age group. They therefore suggested that reports of children in this age group may be too unreliable to be taken at face value.

A diagnostician working with children also needs to take into account possible referral bias, and weaknesses in the child's support system that may occur in periods of family, social, and educational turmoil. Similar considerations can apply to adult diagnosis, but are more central with children because of the route to referral and because of the child's greater dependence

on his environment. It may be that some external circumstances, an unsatisfactory school or family situation, are handicapping the child, and are being presenting as a problem within the child. In these cases, often no diagnosis is given. (The V Codes in DSM-III-R are for situations that are a focus of concern but are not attributable to mental disorder.) When a mental disorder *is* diagnosed in the child, Axis IV of DSM-III-R can also be used to identify and code the severity of the social stresses that are contributing to the child's difficulties.

For the purposes of the present study, it is clearly important to include information from multiple sources, and relating to a variety of contexts in the child's life. It is also necessary to keep in mind the possibility that a child's referral might primarily reflect strains in the child's social environment. Here, the explicit diagnostic criteria in current schemes (ICD-10 and DSM-III-R) are helpful in anchoring descriptions to the child's behaviour, rather than to the level of anxiety, rejection, etc., of those around him, which of course has many meanings.

Developmental Issues. All psychiatrists address the problem of distinguishing normality from abnormality. However, child psychiatrists have the added problem of defining normality for different ages and developmental levels. Thus, child psychiatric systems must attempt to have a developmental framework. This is at present an important weakness of both existing categorical diagnostic systems.

In some instances, developmental stage is taken into account in diagnostic criteria. For example, frequent enuresis is not diagnosable as a disorder at age three or four, but is after five years of age (chronological or mental age). Similarly, characteristics of many two-year-olds, such as obstinacy and tantrums, would be considered pathological symptoms if they persisted to age five or six (although in fact they would not fit very comfortably into the diagnostic categories, which do not cover immature emotional development adequately). Criteria in the DSM and ICD systems are in most instances supposed to apply generally to children, adolescents, and in many disorders also to adults. Sometimes indications are given of differences in presentation at different ages, but these are rarely spelt out in any detail, and, as Rutter (1988a) has pointed out, may go beyond the meagre empirical data available on clinical presentation at different developmental levels. (Neurotic, psychotic and mood disorders are all described with little reference to age-related differences.)

Another difficulty with the present diagnostic systems is that there is no adequate scope for diagnosing disorders in very young children (with the exception of severe disorders such as autism). Although the categories of attachment disorder have filled a small part of this gap, most common referral problems in infancy are not covered (Rutter & Tuma, 1988).

These shortcomings of current diagnostic schemes are quite serious in the current context, assessment of outcome of psychodynamic treatment. Many children are referred for treatment because of unsatisfactory early emotional development, e.g. a seven year old of normal intelligence and adequate environment whose behaviour would be more typical of a four year old, or a child who is unhappy and unskilled in relating to peers and therefore has no real friends at 8 years old, but is not suffering from an anxiety, depressive or attachment disorder as currently defined. These children are hard to classify in the diagnostic systems available, and may in some cases end up with a diagnosis for a relatively minor problem (such as enuresis), which misrepresents the overall picture and causes of concern.

Multiple Diagnoses and Comorbidity. There is considerable disagreement over the best diagnostic approach when children show signs of more than one disorder such as a mixture of anxiety and depressive symptoms, or either of these in combination with conduct disorder. DSM departs from ICD here, the former encouraging multiple diagnoses whilst the latter favours the most prominent or entrenched disorder (specific codes can be used for certain mixed disorders, e.g. "Mixed Disturbance of Emotions and Conduct"). The majority of common combinations of syndromes, such as specific developmental disorders with disruptive or depressive disorders, are not represented by such mixed categories, which were introduced to improve the accurate reporting of mixed conditions. Despite the fact that comorbidity within the disruptive disorders appears to be the rule rather than the exception (Sandberg et al., 1980; Taylor, 1988; Biederman et al., 1991), and that symptoms of depression usually occur in association with other disorders (Kovacs et al., 1984a; Bernstein & Garfinkel, 1986), the DSM-IV Work Group has decided not to adopt the combination diagnoses that are used in ICD-10.

DSM-III-R does, however, allow multiple diagnoses (except when a specific differential diagnosis is required, such as between certain disorders of childhood and corresponding personality disorders). The lack of validating information regarding diagnostic categories for children has led some to argue that using multiple diagnoses for the same child only adds to the confusion.

In their critique of the childhood section of DSM-III, Rutter and Shaffer (1980) argued that the inclusion of combination disorders, such as a mixed disturbance of conduct and emotions, would have been more practical and more fruitful than the use of separate diagnostic categories. The utility of multiple Axis I diagnoses is particularly questioned, with concern that this might lead to the avoidance of crucial clinical decisions as to the primary presenting problem. On the other hand, proponents of multiple diagnoses argue that their use makes it possible to answer questions about patterns of comorbidity, about the validity of distinctions and categories, and about prognostic factors which may emerge, for instance in the natural history of attention-deficit hyperactivity disorder with or without conduct disorders (McGee et al., 1984; Szatmari et al., 1989).

There is evidence that the overlap between disorders matters; the co-occurrence of conduct disorder and depression, for instance, is associated with a substantially increased risk of antisocial behaviour and criminality in adult life that is not found with "pure" depression in childhood (Kovacs et al., 1988). However, the adoption of multiple diagnoses does not always mean that this complexity is represented; the literature is full of papers describing findings on one syndrome (such as depression or attention deficit disorder) when many of the features may be associated with a concurrent condition, referred to in passing or not at all (Rutter & Sandberg, 1985). Allowing multiple diagnoses does avoid the requirement to make arbitrary decisions on which syndrome should have precedence. However, this can lead to a blurring of diagnostic distinctions because the same children can appear in several supposedly different diagnostic groupings.

As Rutter & Tuma (1988) point out, it makes intuitive sense to assume, with the ICD, that a mixed clinical picture is more likely to mean a single disorder with various aspects than that the child has three or four separate disorders at the same time. However, in many cases a mixed syndrome is not provided for, and there may be no clear grounds for deciding which syndrome should take precedence. This is likely to lead to considerably reduced reliability in using the categories. Furthermore, the need to diagnose on the basis of the clinical features that are most prominent at the time means that the diagnosis for any individual with a long-term, complex disorder may well change over time, even though the disorder probably does not (Zeitlin, 1986).

Although the authors of ICD-10 and DSM-IV have not resolved their differences on this issue, they have recognised the merits of both approaches. ICD-10 concedes that for research purposes it is desirable to code each condition separately, and to use a statistical system that enables the various specific comorbidity patterns to be retrieved and investigated. The DSM-IV Work Group has proposed that the revised text will highlight frequently co-occurring conditions. The DSM system also allows for the identification of a principal diagnosis, with other conditions coded as additional diagnoses. This seems perhaps the best solution, certainly for a chart review study, where the interest is in the whole spectrum of disorders presented by any child, rather than in selecting a major problem to take priority in treatment (which is the more usual purpose of clinical diagnosis). Identification of a principal diagnosis allows assignment to a single category where this is appropriate, whilst retaining full information on concurrent disorders.

Polythetic vs Monothetic Models. Making diagnostic criteria more explicit has highlighted a feature of both the categorical systems: they are polythetic rather than monothetic. This means that they require a subset of the possible features of a disorder to be present, rather than stating that all pathognomic symptoms and signs are necessary (and together sufficient) for a diagnosis. Jablensky (1988) has argued that psychiatric classification cannot be monothetic. Given our incomplete knowledge, it is impossible to make judgements about the "primary essences" that might underlie the various mental disorders. Jablensky argues that a polythetic approach to classification that takes into account "... the largest number of shared characteristics between phenomenologically identifiable disorders and between groups of individuals with such disorders, would provide a better ground for further research and for practical work with patients than any ambitious scheme based on a single criterion" (p.19).

The major problem associated with monothetic models is that their criteria are too strict and large numbers of patients will remain undiagnosed. However, polythetic models may lead to overinclusiveness. For example, there is concern that the 16 criteria listed for Pervasive Developmental Disorder (PDD) in DSM-III-R do not distinguish these children sufficiently from (other) intellectually retarded children (Rutter & Schopler, 1988). The absence of necessary or sufficient criteria could also result in excessive clinical heterogeneity. For example, a diagnosis of attention deficit hyperactive disorder (ADHD) requires the presence of 8 out of 14 symptoms

covering motor hyperactivity, inattention, distractibility, impulsivity and intrusiveness. Children receiving the same diagnosis may have very different clinical pictures.

The "Splitter" vs "Lumper" Approach. Epidemiological work has provided evidence that most childhood psychiatric disorders fall into two broad categories, behavioural and emotional, or externalising and internalising (Achenbach & Edelbrock, 1978; Quay, 1979; Dreger, 1982). However, there is still much controversy over how and whether to subdivide these umbrella categories (Boyle & Jones, 1985). DSM-III-R has taken a "splitter" rather than a "lumper" approach to this problem.

There is concern among some that the specificity of the categories in DSM-III-R might make diagnosis difficult because too many patients will elude classification after all the criteria are applied (Cantwell, 1988). However, it has also been argued that if categories are too broad the patient will meet criteria but the diagnosis will not be clinically useful (Rutter & Tuma, 1988). In fact, although the "splitter" approach has been widely criticized, studies using DSM-III with both research and clinician raters found that detailed criteria rarely presented difficulties, and that differential diagnosis and the handling of mixed syndromes were the source of most problems (Cantwell et al., 1979a,b; Prendergast et al., 1988).

The proliferation of subdivisions has, however, led to concerns about reliability and validity (Gould et al., 1988). DSM-III and ICD-9 included several new subdivisions of disorders despite the fact that there was evidence from previous studies that there tended to be better agreement on broad categories of disturbance than on the finer subdivisions of emotional disorder and conduct disorder (Rutter & Shaffer, 1980; Werry et al., 1983; Gould et al., 1988; Remschmidt, 1988). Conditions were included largely on the basis of face validity, with little or no evidence of their predictive or descriptive validity. On the other hand, it is obviously easier to study the descriptive and predictive validity of these disorders, once they have been differentiated in widely-used diagnostic schemes.

Despite concern about proliferation, lack of differentiation in some sections of DSM-III-R has also led to criticism. For example, a large number of disorders are lumped together under the label of "pervasive developmental disorder not otherwise specified" (Rutter, 1988a). It looks as though DSM-IV, like ICD-10, will introduce many finer distinctions in this area.

Validity & Reliability. Validity refers to the extent to which a procedure measures what it purports to measure. The approach taken to validation of diagnostic systems was founded on the papers of Robins & Guze (1970), who pointed out the need to show reliability and validity of diagnostic categories, and proposed a five-stage model for achieving this. Spitzer and Williams (1980) outlined the four types of validity relevant to the usefulness of a psychiatric diagnostic classification:

- (a) face validity (correspondence with clinician's intuitive picture of a disorder);
- (b) descriptive validity (discreteness of each category);
- (c) predictive validity (ability to predict correlates and outcome);
- (d) construct validity (relationship to theories).

Cantwell (1975) expanded the Robins & Guze (1970) model to a six-stage procedure for validation of childhood psychiatric disorders: (1) description of the clinical picture; (2) physical and neurological factors; (3) laboratory studies; (4) family studies; (5) natural history studies; (6) treatment studies. Few disorders have in fact been systematically assessed in this way; the most thoroughly investigated, ADHD, is still far from established as a valid category (Cantwell, 1983, 1988). Some other disorders have been well studied using some of the stages of the above validation procedure. The work of Kovacs and her colleagues on childhood depressive disorders (Kovacs et al., 1984a,b) is a good example of this.

Since the publication of DSM-III, the validity of almost all the major disorders has been assessed to some degree. However, because many of the childhood diagnostic categories were described for the first time in DSM-III, the descriptions lack information on long-term natural history and response to treatment. DSM-III-R still contains a mix of well established diagnostic categories, such as autism and conduct disorder, along with more controversial sections and categories.

There is little debate about the face validity of diagnostic categories, although certain of the DSM-III-R diagnoses (eg. avoidant disorder, and oppositional disorder) have been criticized (e.g. Achenbach, 1980; Quay, 1983). Autism appears to constitute a valid category by all criteria, but there are still questions concerning its boundaries and heterogeneity (Rutter & Schopler, 1988).

Hyperactivity/attention deficit disorders are probably a valid syndrome but current evidence suggests that the definitions employed by DSM-III-R or ICD-9 may need further revision (Taylor, 1988). The concept of depressive disorder in adult life has received substantial validation, and it seems that a distinctive syndrome also occurs in childhood. However, there is much debate on the definition of affective disturbances in young children, and on the relationship between anxiety and depressive disorders (see, for example, King, Ollendick & Gullone, 1991, who cite compelling empirical grounds for preferring the umbrella concept of negative affectivity). Quay (1986) has pointed out that the distinction between anxiety and depression in children has not been supported by the multivariate literature, in which they consistently load on one factor. On the other hand, in addition to the work of Kovacs mentioned above, Puig-Antich and colleagues (Puig-Antich, 1983; Puig-Antich et al., 1983) have shown good evidence that childhood depression is distinct from other childhood disorders, but similar to adult depression in phenomenology, clinical course, drug response, and other biological correlates. There may indeed be categories of disorder which cannot be validated or invalidated by current dimensional systems.

There have been several studies concerning the reliability of DSM-III-R. Mellsop et al. (1991) found high interrater agreement for schizophrenic and mood disorders, although raters disagreed more often than they agreed on both the subcategories and the severity of these disorders. For neurotic, stress-related and somatoform disorders, the level of agreement between raters was poor ( $\kappa < 0.3$ ). In their study of the reliability of DSM-III-R and DSM-III childhood anxiety disorder diagnoses, Silverman et al (1988) found moderate to high interrater reliability (with the exception of overanxious disorder). Volkmar et al (1988) also found a moderately high reliability of specific DSM-III-R criteria for autism. Hiller et al (1990) examined the test-retest reliability of DSM-III-R diagnoses for affective and anxiety disorders and found acceptably high levels of agreement for most disorders. Reduced agreement was found only for dysthymia, agoraphobia, and social phobia. The major causes for this lowered agreement were information variance and weaknesses of operationalization.

A study by Costello (1982) has important implications for any reliability study of the DSM-III or other systems. She found that a sample of highly trained clinicians acted in line with DSM assumptions on differential diagnosis in less than 50% of cases. Rather than the diagnostic criteria they were supposed to be checking, they were likely to use "impression matching",

where the patient's symptoms were not compared with DSM-III criteria, but with a clinical picture of a typical child with, say, conduct disorder, even though that clinical picture might not meet the DSM-III criteria. Thus, in the study of any diagnostic system, what may be revealed are not only qualities of the system itself, but also differences in the way clinicians use available data, and choose to follow or to disregard the known rules.

In the current study, as in those reported above, it was found that inter-rater reliability was considerably better for broad diagnostic categories than for specific disorders (the data for the present study are given in Chapter 3). However, reliability is somewhat less of a problem in the context of a retrospective, chart review study, because each rater is using identical case material from a variety of information sources, rather than (as is often the case in studies of current clinical diagnosis) separate interviews with a single informant.

Problems Relating to Criteria. Some of the criteria in DSM-III are arbitrary and based on poorly substantiated literature. Rutter and Shaffer (1980) objected that the precise diagnostic criteria in DSM-III failed to acknowledge this ignorance. Millon (1983, 1986) also criticized the DSM criteria as being insufficiently explicit, excessively concrete, and insufficiently comprehensive.

Goodwin and Guze's research (1979) found that, for adults, categorical psychiatric diagnosis using strict diagnostic criteria generally resulted in at least 25% of the psychiatrically ill receiving a diagnosis of "undiagnosed mental disorder". It is likely that very young children, for whom a more limited range of diagnoses is available, will show an even higher proportion of disorders that do not fulfil the specific criteria for any single syndrome (Cantwell, 1988). As stated above, this is particularly true of children referred for psychodynamic treatment, whose major difficulties often lie in areas of emotional and social development or personality problems, neither of which is well covered by current diagnostic criteria. This situation does not occur under a dimensional classification system where all individuals can be described.

Typically, studies evaluating diagnostic criteria or correlates have compared a clinical group with normal children, not with children with other diagnoses. Such comparisons (arguably) demonstrate abnormality, not characteristics of a specific diagnosis (Werry, 1992). Studies have shown that, in ADHD for example, only some of the putative characteristics were specific

to ADHD and many defined being a patient, not any particular disorder (Sandberg et al., 1980; Reeves et al., 1987; Werry et al, 1987).

Multiaxial Issues. The multiaxial approach is the source of other disputes in the field of diagnosis. Both ICD-10 and DSM-III-R have five axes, intended to be used in all cases where relevant information is available. In the case of DSM-III-R, the first two axes comprise mental disorders, Axis II being used to code those which are developmental disorders, mental retardation and personality disorders. These two axes have been separated because research has shown that if acute psychiatric and personality disorders are on the same axis, the latter tend to be overlooked when coding (Cantwell, 1988). Axis III allows the clinician to code all physical disorders and conditions that are current and potentially relevant (such as epilepsy or diabetes). Axis IV codes severity of psychosocial stressors. Axis V codes the highest level of adaptive functioning that the patient has experienced in the past year, for at least a few months' duration. The system also includes "V" Codes (such as "parent-child problem" or "marital problem") which can be used for children who are presented for evaluation with conditions that do not warrant a diagnosis of a mental disorder.

DSM-IV may code all mental disorders on Axis I, leaving Axis II for another dimension, such as intellectual level or family functioning. Many clinicians and researchers (e.g. Cantwell et al., 1979; Rutter & Tuma, 1988) feel that intellectual level should be on a separate axis, partly because that has been shown to lead to more reliable coding of mental retardation. Another reason for separating developmental disorders from mental retardation is that there is a danger that if both are on Axis II, only one will be coded although both are present, and intellectual level has been shown to be a strong prognostic factor in pervasive developmental disorders (Lotter, 1978).

Axis V deals with the highest level of adaptive functioning within the past year. Cantwell (1988) argued that this axis should have carried a dual coding - one code for impairment level produced by the current episode of illness and one for the highest previous level of adaptive functioning ever reached by the individual. If the period is restricted to within a year it may not reflect premorbid functioning, and the coding will have a different meaning for individuals whose disorder lasts for longer than a year than for those whose disorder is episodic or of a shorter duration.

Cantwell (1988) is also critical, as others have been, of Axis IV of the DSM-III-R system, which indicates the severity of psychosocial stresses on the individual. The rating system fails to use methodological advances in stress research which allow scores to be adjusted for the individual's circumstances, and the designation of some of the stressors as acute or chronic is questionable. Parental divorce or death, for instance, are regarded as acute stresses although there is considerable evidence of the long-term effects of these events, including a lasting impact on psychiatric risk (e.g. Hetherington et al., 1982).

Rutter and colleagues have provided a multi-axial schema for child and adolescent disorders within ICD-9 and ICD-10 (Rutter et al., 1969; Rutter et al., 1979; Remschmidt, 1988), which overcomes many of the difficulties of the DSM-III-R schema. However, there are still problems in achieving adequate reliability on Axes I (clinical psychiatric syndrome) and V (abnormal psychosocial situations) (see Remschmidt et al., 1983; Goor-Lambo, 1984). The proposed schema described by Mezzich (1988) to cover adults as well as children is closer to (difficult to distinguish from) that already incorporated in DSM-III-R, than it is to the schema developed by Rutter and colleagues for use with children and adolescents.

For the present purpose, Axes IV and V (psychosocial stressors and global functioning, respectively) may not be worth including in their existing forms. Axis IV, as well as having the shortcomings referred to above, is very difficult to judge reliably from case records with uneven amounts of detail and unknown gaps (e.g. if father was not seen, or a school report was not obtained, what information was missed?). Axis V, on which overall adjustment or impairment is rated, seems suitable for rating adults (parents, in the present study), but not very well-adapted for children. The CGAS scale (see section 2.3.2), which has the same structure but is specifically designed for rating childhood functioning, gives a better starting point for this important assessment.

### **2.1.3. Implications for the present study**

The present systems of psychiatric diagnosis are the products of decades of accumulated clinical experience and systematic research. They have also provided a system of classification and description which was much needed in child psychiatric epidemiology and outcome research (section 1.2.8 made clear the need for samples in different studies to be described using commonly-used

criteria). However, it is clear that psychiatric diagnosis has certain limitations in the measurement of treatment outcome.

One limitation is that inter-rater reliability of certain categories (such as anxiety disorders) remains unsatisfactory, and some categories appearing for the first time in DSM-III-R have unproven reliability and validity. A further problem is that many types of childhood difficulty commonly presenting for treatment are not represented in the available diagnostic categories. Another difficulty, particularly in the evaluation of psychodynamic treatment which is not primarily aimed at removing symptoms, is that diagnoses indicate only areas of dysfunction, giving no picture of the child's overall development, or of any areas of good adjustment.

These considerations together suggest that it is essential to record diagnostic categories in a study of treatment outcome, but that some further measures are needed to capture the important information not covered by these classifications.

## **2.2. THE DIMENSIONAL APPROACH**

Quay (1986) points out that in categorical systems "often hypotheses are directly transmuted into dogma, with authority rather than proof as the benchmark". He advocates dimensional descriptive methods, which use empirical multivariate statistical techniques, such as factor analysis, to identify groups of symptoms corresponding to clinical syndromes. The symptoms are indicated by scores on scales covering both normality and pathological functioning, so that all children can be placed on all axes. These measures can provide an index of overall severity from the total score, but their main purpose has been to provide a comprehensive symptom-dimensional profile derived from factor and cluster analyses.

The scales are usually completed by parents or teachers; widely-used examples are the Child Behaviour Checklist (CBCL; Achenbach & Edelbrock, 1983) and the Conners Teacher and Parent Questionnaires (Conners, 1969, 1970). In the case of the CBCL, for example, clinically significant disorders can be defined as those where scores fall above the 98th percentile for each symptom group (derived by factor analysis). These disorders are divided into broad

band syndromes (externalizing or internalizing) and narrow band patterns with more specific diagnostic meaning.

### **2.2.1. Advantages of a dimensional approach**

Dimensional systems offer numerous advantages over other methods and are frequently used in child psychopathology research. For example, categorical systems can be seen as labelling children as abnormal early in life which may result in social stigma. The dimensional approach, on the other hand, is based on a model of normal functioning and records both the strengths and weaknesses of any patient. Proponents of the dimensional approach to classification of psychiatric disorders consider the absence of operational criteria to be among the major failings of both ICD-9 and DSM-III. These systems do not define the instruments to be used when gathering relevant diagnostic information, and they rarely specify the precise cut-off points to be used. Under the dimensional system, definitions of disorders are tied to specific assessment instruments. General population norms for children of each sex at different ages make it possible to link findings from diverse clinical samples with each other and with findings from nonreferred children, a strength not yet shared by other approaches.

Several other advantages have been claimed for a dimensional system of description: it avoids the loss of information involved in categorical classification; it avoids the arbitrariness of many cut-off criteria for categorical diagnoses (e.g. how severe depression needs to be to indicate a clinical case); it represents mixed syndrome pictures more easily (see discussion of comorbidity above), it permits the collection of data on behaviours that occur extremely infrequently and may be missed by clinical interviews and behavioural tests, it is able to filter out situational variation, thereby focusing on the most stable and enduring characteristics of the child.

Rating scales for description of childhood disorders generally offer versions for recording the views of significant people in a variety of settings (particularly home and school) who are responsible for the care, management, and ultimately the therapeutic treatments a child will receive. Rutter et al. (1970) found that psychiatric diagnoses that were made without systematic information from the school are likely to be skewed. There are children whose

disorder primarily manifests itself in school and exclusive reliance on information from the child and/or the parent may produce a distorted picture.

Continuous variables are often more useful than categorical descriptions for screening purposes, for giving a comprehensive picture of the child's functioning and for measuring the effects of treatment (Werry, 1992). Because rating scales are readily standardized, are quantifiable, can be completed by many kinds of informants without special training, and can include diverse attributes over a variety of time periods, they lend themselves well to psychometric models of assessment. Norms can be obtained for large representative samples of particular classes of informants, such as parents and teachers.

### **2.2.2. Disadvantages of dimensional description**

However, there are difficulties: the dimensional approach assumes that variables have the same meaning throughout their distribution, which may be misleading. There is evidence, for instance, that severe mental handicap is qualitatively as well as quantitatively different from normal intelligence, and the same is likely to apply to certain developmental disorders (both pervasive and specific) (Yule & Rutter, 1987; Rutter & Tuma, 1988). In addition, dimensional classification can be more time-consuming and less easily understood, in describing a child clinically, than diagnostic categories.

The validity or reliability of child behaviour rating scales can be compromised by various conceptual or practical problems in their construction, use or interpretation. Scale findings are normally interpreted on the implicit assumption that they accurately reflect the behaviour of the children being rated. Yet characteristics of the informant, such as their intelligence, emotional status at the time the ratings were conducted, and their tendency toward response biases all contribute to some degree to the particular ratings on a scale (Bond & McMahon, 1984).

The construct validity of a scale can be reduced by these considerations. Many scale developers have employed various types of factor analyses to develop subscales reflecting dimensions of child psychopathology. However, Barkley (1988) points out that those interpreting such subscale scores or dimensions must consider that they only partially reflect the child behaviours

they are meant to represent. Factors derived from these analyses are strongly influenced by the type of items entering the analysis, their situation specificity, and the informant making the ratings, as well as the nature of the sample from which the ratings were taken. As a result, such factors may or may not represent real dimensions of child behaviour (Mischel, 1973).

With respect to interrater reliability, parent and teacher ratings of problems generally have low or non-significant correlations (McConaughy & Achenbach 1985; Rutter et al 1970) and have been shown to be affected by the parent's own psychopathology (Friedlander, Weiss and Trayler 1986). The informant and investigator may or may not share the same perception of the base rates of the behaviour being rated and hence what constitutes such scale anchor points as "just a little" or "very much". Interrater reliability of scales depends greatly upon this shared understanding of scale reference points. Ross and Ross (1982) found substantial variation in the number of times a mother felt that a behaviour had to be shown for her to use each point on the response scale.

Another problem with rating scales is that they are sensitive to practice and regression effects over repeated administrations. Those few scales where the issue has been studied confirm the likelihood of such effects. This has obvious importance for research on developmental trends or treatment effects.

It has been suggested that multivariate systems can be used to validate categorical systems such as DSM-III-R or ICD-9. However, it is clear that some well-recognized syndromes such as infantile autism and childhood psychoses do not emerge in dimensional studies (Quay, 1986). This is because most of the symptoms that describe the syndrome are not present on the parent and teacher rating scales used in the analyses, and because these disorders are rare. Even in much more common disorders, dimensional systems do not always find syndromes corresponding to diagnostic categories validated by evidence from other sources. For instance, there is little in the multivariate literature to support a distinction between syndromes of anxiety and depression, but (as described earlier in this chapter) the work of Koyacs and of Puig-Antich has done much to validate this distinction empirically.

### 2.2.3. Relationship between Categories & Dimensions

Recent studies (Costello et al., 1984; Edelbrock, 1984; Weinstein et al., 1990) have shown that there is quite a close similarity between many of the diagnostic categories based on clinical experience, and the syndromes derived from factor analysis of questionnaire data (except in the case of psychotic illnesses and pervasive developmental disorders, neither of which have been much studied using the dimensional approach). McConville & Steichen-Asch (1990), for example, give a table showing quite close correspondence between DSM-III-R categories and multivariate disorders. As well as an approximate equivalence between narrow-band syndromes, both systems divide disorders into internalizing and externalizing types, and this has recently been given added credence by epidemiological research, such as the Ontario Child Health Study (Offord, 1986). As Rutter & Sandberg (1985) have pointed out, the categorical DSM-III-R system (and one could add the ICD-10) has incorporated many features of dimensional systems. Syndrome severity, principal and additional diagnoses and, in particular, the multi-axial approach, give the categorical systems some of the features and advantages of a dimensional description.

Below, a description is given of the two major dimensional rating scales in use, which might be suitable in assessment of treatment outcome.

### 2.2.4. The Child Behaviour Checklist

Scale structure. The Child Behaviour Checklist (CBCL) was developed by Achenbach and Edelbrock (1983). The CBCL is made up of 138 items which are broken down into 20 items that assess social competence and 118 items that comprise the behaviour problems scale. The social competence scale generates three scores: activities (sports, hobbies, etc.); social (organizations, friendships, etc.); and school (performance, problems, etc.). These are then plotted on one of six profiles, depending on the age (4-5 years, 6-11 years, and 12-16 years) and sex of the child. The behaviour problems scale is rather more complicated; factor analyses of the responses to the items on this scale revealed a different set of factors for males and females in the three age groups.

Reliability and validity. Achenbach and Edelbrock's 1983 manual reports high test-retest reliability on both the behaviour problems and social competence scales over a 1-week and a 3-month interval. Interparent agreement was also high on both scales and this was confirmed by Mash and Johnston (1983). Concurrent validity has been demonstrated. Significant correlations of like factors exist between CBCL and Conners scales and the Revised Behaviour Problem Checklist (Achenbach & Edelbrock, 1983; Kazdin & Heidish, 1984; Mash & Johnston, 1983), the Werry-Weiss-Peters Activity Rating Scale (Mash & Johnston, 1983), and a semistructured psychiatric interview, the Diagnostic Interview Schedule for Children-Parent Report (DISC-P) (Costello & Edelbrock, 1985).

The CBCL has also shown discriminant validity. It has been found to distinguish between clinic-referred and nonreferred children (Achenbach & Edelbrock, 1983), hyperactive and normal children (Barkley, 1981; Edelbrock & Rancurello 1985; Mash & Johnston, 1983), and many other comparison groups. The instrument has also been shown to be useful in assessing changes during treatment, e.g. in conduct problems following a parent training program in child management skills (Webster-Stratton, 1984).

The CBCL is the probably the best developed, standardized, empirically derived behaviour rating scale currently available for assessing psychopathology and social competence in children. The item content is sufficiently broad to capture the majority of internalizing or externalizing disorders, to assess social competence, and to evaluate diverse clinical syndromes. However, the CBCL is not useful in assessing rare disorders such as autism, childhood psychosis, or Tourette's syndrome. Its item coverage for these disorders is minimal. Similarly this test may not be ideal in studies of short-term treatment outcome, due to its length, changes in ratings with repeated administrations, and possible lack of specificity for the desired treatment effects.

#### **2.2.5. The Behaviour Problem Checklists**

The Original Behaviour Problem Checklist (BPC) was devised by Quay and Peterson in 1975, and was modified (1983, 1984) to form the Revised Behaviour Problem Checklist (RBPC). Although only the RBPC is used nowadays, most of the research on the development, validity and reliability has been carried out using the BPC. However, the similarities between the

two scales means that many of the BPC findings can be taken to apply approximately to the revised version also.

Scale structure. The Behaviour Problem Checklist was one of the most commonly used behaviour rating scales in research. The scale consists of 55 items and identifies broad dimensions of psychopathology based on four orthogonal factors (conduct problems, personality problems, inadequate-immature, socialized delinquency) arrived at through factor analysis of the ratings on different clinic populations. The Revised Behaviour Problem Checklist is an expanded version of the original scale and consists of 89 items. It has permitted a broader assessment of commonly identified dimensions of psychopathology than did the BPC. The addition of several items for assessing psychotic behaviour has increased its utility when dealing with more severely disturbed children.

Reliability and validity. There is evidence to support the reliability of the original version of the scale. Test-retest reliability over a 2-week period was demonstrated by Evans (1975) and Kelley (1981). Stability of the factors over a 2-year interval with normal children was relatively high using teacher ratings (Victor & Halverson, 1976). Interparent agreements between .43 and .83 were noted in several studies (Jacob, Grounds, & Haley, 1982; Quay, Sprague, Schulman, & Miller, 1966) depending on the factor score and the population being used. Lower agreements were found for clinic-referred than for normal children, and for the inadequate-immature scores than for the other factors. Ratings have been found to vary as a function of age, sex, race and social class of the children (Eaves, 1975; Speer, 1971; Touliatos & Lindholm, 1975).

The validity of the BPC is also well documented. BPC scales have been found to correlate significantly with many measures including activity level (Victor, Halverson, Inoff, & Buczkowski, 1973); peer and teacher ratings of classroom behaviour (Harris, Drummond, & Schultz, 1977; Victor & Halverson, 1975); equivalent scales on the Conners scales (Arnold et al., 1981; Campbell & Steinert, 1978); the Davids Hyperkinesis Index (Arnold et al., 1981); the Bower-Lambert procedures for identifying emotionally handicapped children (Schultz, Manton, & Salvia, 1972).

The BPC has been shown to discriminate significantly between various groups of children, including clinic-referred and normal children (Speer, 1971; Sultana, 1974); aggressive, hyperactive, and withdrawn children (Proger et al., 1975); and epileptic, hyperactive, learning-disabled, and normal children (Campbell, 1974). The RBPC has also been shown to differentiate clinic-referred and normal children (Aman & Werry, 1984), and attention deficit disorders with and without hyperactivity (Lahey, Shaughency, Strauss, & Frame, 1984). Several studies have used the scale to evaluate changes following psychotherapy (Aksamit, 1974; Brown, 1975; Zold & Speer, 1971) and stimulant medication (Knights & Hinton, 1969; Millichap, Aymat, Sturgis, Larsen, & Egan, 1969).

Although less information exists on the validity and reliability of the RBPC because of its recent development, the evidence suggests that it will prove satisfactory in these respects, as did the BPC, and as has the CBCL. The CBCL seems preferable on the whole because of the larger body of research which has amassed data on it, and because of its capacity to assess prosocial adaptation as well as symptoms.

#### **2.2.6. Implications for the present study**

Dimensional rating scales have clear advantages in a study which aims to evaluate psychotherapeutic treatment. They allow assessment of both good and poor adaptation, and of change in all areas of functioning. They also permit gathering of information from more than one source, particularly from both parent and teacher. Of the various scales available, the CBCL seems to offer the best combination of coverage of symptoms and established psychometric properties.

The study to be described was a retrospective study, which unfortunately means that it was not possible to obtain concurrent ratings from either parent or teacher. However, some of the strengths of the dimensional approach to description of childhood functioning could be retained by coding information retrospectively, from a combination of parent and teacher reports, using the rating scale protocol. This permits recording of a comprehensive set of aspects of a child's behaviour, both positive and negative. The extent to which this information corresponds to that collected concurrently, and directly from a parent or teacher, then needs to be assessed empirically. This clearly determines whether the item and scale scores can legitimately be compared to those reported for other samples.

### 2.3. THE GLOBAL APPROACH

Measures of overall psychological adjustment and levels of functioning take two forms: multi-dimensional measures (discussed above in section 2.2), which are commonly used to describe patterns of symptomatology, and global ratings of the level of health or impairment. These approaches have complementary advantages: the first retains more detailed information and can therefore reflect changes in different areas of functioning separately; however, global measures have the advantage of providing a single summary figure, and appear to be more sensitive to change than overall figures derived from multidimensional measures (McGlashan, 1973; Endicott et al., 1976). A global assessment scale allows the rater to assimilate and synthesize his or her knowledge about many different aspects of the patient's social and psychiatric functioning. The child's prosocial functioning is considered alongside any impairment, and the information is condensed into a single clinically meaningful index of severity of disturbance. Some widely used global rating scales are described below, followed by a discussion of the advantages and disadvantages of this form of assessment.

#### 2.3.1. The Health Sickness Rating Scale

The first global scale of psychiatric impairment, the Health-Sickness Rating Scale (HSRS; Luborsky, 1962) was developed as part of the work of the Menninger Foundation's Psychotherapy Research Project.

Scale structure. The HSRS is a 100-point scale, on which a person's condition may be ranked from "an ideal state of complete functioning integration, resiliency in the face of stress, and social effectiveness" to "any condition in which, if unattended, would quickly result in the patient's death, but not necessarily by his own hand". Assignment to an exact point on the scale entails comparing the case with specimen case descriptions for that range (34 specimen cases are provided, at least one for each five-point interval), then deciding on the most appropriate rating for the current case in relation to those of specimen cases. This global rating of health-sickness represents a reconciliation by the clinician of seven separate dimensions, originally devised from actual practice. A rating can also be made for each of the following factors: (1) the patient's need to be protected and/or supported vs the ability to function autonomously;

(2) the seriousness of the symptoms; (3) the degree of subjective discomfort and distress; (4) the patient's effect on his environment (eg danger, discomfort); (5) the degree to which the patient can utilize his abilities, especially in work; (6) the quality of his interpersonal relationships; (7) the breadth and depth of his interests.

Reliability and validity. A review of 18 studies using this scale (Luborsky & Bachrach, 1974) concluded that the HSRS had been found to be both reliable and valid, showing expected relationships with a variety of other measures of adjustment, symptomatology, capacity for relationships and improvement in psychotherapy. Several studies have demonstrated both the inter-rater reliability of the HSRS (Distler et al., 1964; Rogers et al., 1967; Watterson, 1962) and test-retest reliability (Stone & Dellis, 1960; Robbins, 1962). The HSRS has also been shown to be highly correlated with several other factors including: adequacy of personal functioning (Kernberg et al., 1972); severity of symptoms (May & Tuma, 1964); motivation for treatment (Luborsky, 1962); diagnostic category (Rogers et al., 1967); and quality of interpersonal relationships (Mayman, 1967).

Problems with the HSRS. Although the HSRS proved very useful, and established a place for global severity scales, some difficulties in rating were reported, and a new scale known as the Global Assessment Scale (GAS; Endicott et al., 1976) was developed. Endicott and her colleagues described difficulties in assigning HSRS ratings arising from the mixture of behavioural, historical, diagnostic and interpretive information in both the anchor point definitions and the case descriptions. In addition, there were some situations where the level of functioning was inconsistent, and guidelines were required to improve reliability.

### 2.3.2. GAS and CGAS

Scale structure. The Global Assessment Scale (GAS) is similar in structure to the HSRS, but the anchor points are defined by behavioural descriptions, there are no case illustrations (these were felt to be of limited usefulness), and ratings are based on the lowest level of functioning over the previous week, with no allowance being made for the effects of any treatment. The GAS has been widely used, and has been shown to have good reliability and validity in a variety of contexts (e.g. Dill et al., 1989; Holcomb & Otto, 1988; Bird et al., 1987). Endicott

et al (1976) and Clark et al (1983) have shown that the GAS is sensitive to clinical changes over time.

The Children's Global Assessment Scale (CGAS) is an adaptation of the GAS. The CGAS has a 100-point range which identifies psychiatric functioning along a continuum from the most severely ill to the hypothetical entirely healthy individual. Scores above 70 on the CGAS are designated as indicating normal function. The instrument contains behaviourally oriented descriptors at each anchor point, which depict behaviours and life situations applicable to children 4 to 16 years of age. Because psychiatric illness is defined broadly in terms of functioning and symptoms, the CGAS is appropriate for use with a spectrum of patients.

Shaffer and his colleagues (1983) reported only a small study of the reliability and validity of the CGAS scale, but it has since been used in a number of investigations (e.g. Steinhausen, 1987; Bird et al., 1987, 1990) which have demonstrated that the psychometric properties of the scale are satisfactory. Shaffer et al (1983) demonstrated that the CGAS is sensitive to differences in level of impairment between inpatients, and demonstrated interrater reliability and test-retest stability over a six month period. Shaffer et al (1983) also examined concurrent validity by comparing simultaneous ratings by parents on the Conners Abbreviated Parent Checklist and the CGAS. The correlation between the two was -0.25. The moderate correlation between the CGAS and Conners index demonstrates that these two approaches to measuring severity of disorder cannot be regarded as providing entirely similar or redundant information. Shaffer et al suggest that the coordinated use of global and syndrome-specific scales could be of heuristic value in differentiating meaningful diagnostic subgroups.

Bird et al. (1987) used the CGAS in a series of epidemiological studies in which its psychometric properties were established as satisfactory; they showed, for example, that CGAS scores clearly discriminated patients from nonpatients, and furthermore that adding CGAS ratings to psychiatric diagnoses and CBCL profiles provided substantially improved discrimination between clinical groups (Bird et al., 1990). Steinhausen (1987) reported that a German translation of the CGAS differentiated between cases with different degrees of diagnostic severity.

The GAS and CGAS have been combined into a single scale, the Global Assessment of Functioning (GAF), which forms Axis V of the DSM-III-R classification of psychiatric disorders (American

Psychiatric Association, 1987). However, Weissman et al (1990) suggest that the CGAS provides a more sensitive assessment of functioning than does a general instruction to include impairment among the diagnostic criteria. They also comment that the GAF (Axis V in DSM-III-R) changes the nature of the global assessment by explicitly including symptoms in the anchor points on the scale, and this could confound the relationship between symptom and function, making the GAF less useful as a measure for research. This would seem to argue for the use of a global assessment scale which emphasizes prosocial functioning, rather than supplementing diagnoses with GAF ratings, when assessing childhood functioning and symptomatology.

Global scales have been found to be useful in combination with psychiatric diagnoses in several studies. Adding impairment criteria (cut-off points on global scales, contributing to the definition of a "case") has, for instance, been shown to improve identification of children requiring treatment in a large-scale epidemiological study in Puerto Rico (Bird et al., 1990). Weissman et al (1990) found that the application of impairment criteria (CGAS below 51) improved agreement between mother and child for major depression, attention deficit, conduct disorder, and substance abuse. Children tended to report symptoms at milder levels of impairment, while parents only reported a disorder if it resulted in social disruption. It should be noted however, that impairment criteria had little impact on the agreement for anxiety disorder and the reasons for this are unclear.

### **2.3.3. Disadvantages of global ratings**

There are some problems with global assessment. Shaffer et al. (1983) reported that reliability on the CGAS was reduced where the psychiatric disturbance was severe but intermittent, and that this could be a problem in using the measure. This might be overcome if the rater is instructed to consider the subject's lowest level of functioning during the period under consideration.

There is debate about the appropriate time period to rate using these measures. In the DSM-III-R, the GAF is rated for current highest level of functioning at time of evaluation and over the past year. Rutter and Shaffer (1980) and Kendell (1980) argue that this use of a 1-year time frame rather than reference to premorbid functioning could produce misleading findings because of differences in duration of illnesses. Williams (1985), on the other hand, has argued

that a recent time period applied similarly across patients would be more valid. The assessment of both worst and highest functioning may also provide more information for making clinical decisions in treatment studies and probably in assessing seriousness of disorder.

Both Steinhausen (1987) and Bird et al. (1990) pointed out a difficulty in using the CGAS: that it emphasizes diagnostic information and gives too little weight to prosocial functioning; some anchor points are illustrated almost exclusively by examples of symptoms. (This objection is similar to that raised against the HSRS, but is more serious since HSRS ratings require consideration of the seven 'criteria of health', three of which are concerned with positive adjustment.) Steinhausen regards this as a major problem in using the CGAS in clinical practice. Bird and his colleagues, whose Puerto Rican community studies included extensive validation of the CGAS, found the measure to be very useful, but they also point to the need for development of additional measures: 'it is important to develop more objective measures of impairment that take into account not only recalled behaviour and symptomatology, but also children's functioning in other areas, such as school performance, relationships to others, interests, or use of leisure time.... This is particularly true given the trend in epidemiological methodology towards one stage community studies involving the use of structured diagnostic instruments, administered by lay interviewers who may not be qualified to arrive at clinical decisions about impairment.' (Bird et al., 1990, p.802).

#### **2.3.4. Implications for the present study**

The recording of a single, summary figure reflecting overall adjustment has obvious advantages in a study of treatment outcome. There is a good deal of evidence that global ratings reflect change in therapy more sensitively than do diagnoses or measures of specific symptoms. They also share with dimensional descriptions the important advantage of taking into account positive as well as negative adjustment. However, the most widely used global scale for children, the CGAS, has substantial drawbacks. These are discussed further in Chapter 4, in which the development of a new measure based on the CGAS is described; this measure was specifically designed to overcome the difficulties in global assessment of children discussed above.

## 2.4. CONCLUSION

Any current study of child therapy outcome has to include classification by at least one of the major diagnostic schemes available, which are the result of decades of research on reliable and valid classification of mental disorders. The difficulties in this endeavour have not been solved, but much progress had been made, and these categories form a common language and structure for research across the whole spectrum of child psychiatric treatment, which was reviewed in the first chapter. The current schemes also allow quite subtle coding on primary / secondary disorder, degrees of severity, and multi-axial assessment. The argument for including a dimensional measure in a retrospective study is weaker, as none of these measures is designed for use with information extracted from case records. However, they do provide a comprehensive, standardised, well-researched format for recording presenting symptomatology, and this seems to justify the inclusion of one such measure. For reasons given in section 2.2.6, the CBCL is clearly the most appropriate instrument for this purpose. Finally, global assessment of functioning has proved to be a sensitive measure of therapeutic outcome, which also (as a single figure) lends itself to relatively straightforward estimation of clinically significant change (see Chapter 4). The differing strengths and limitations of categorical, dimensional, and global approaches call for multimethod assessment. This was therefore the solution adopted in the study introduced in the next chapter.

## **CHAPTER 3. AIMS AND PROCEDURES IN THE ANNA FREUD CENTRE RETROSPECTIVE STUDY**

This chapter introduces a retrospective chart review study of child psychoanalysis and psychotherapy conducted at the Anna Freud Centre in London. In section 1.5, the obstacles to a prospective, randomised controlled trial of child analysis were described, and arguments were reviewed for beginning with a retrospective study, in the tradition of several investigations of adult psychoanalysis (the Boston, Columbia and Chestnut Lodge studies, see section 1.4). The limitations of retrospective methodology are well known: the use of records of uneven quality, not recorded with relevant variables in mind, using unstandardized assessment procedures and with areas of missing data which may not even be possible to identify (it may not be clear whether something was not noted because it was not there, or because it was not asked). In addition, it is of course impossible to allocate children randomly to treatment conditions. Nevertheless, a retrospective design allows the assessment of very much larger numbers of cases than could be included in a prospective study (especially of such intensive, extended treatment). It also permits provisional identification of variables related to outcome, generating hypotheses which can then be more rigorously tested prospectively.

After describing the setting of the study and the unusual quality of case records available, this chapter discusses the variables to be included, the ways in which these variables were operationalised, and the extent to which operationalisation was successful.

### **3.1. THE SELECTION OF THE ANNA FREUD CENTRE ARCHIVE AS A BASIS FOR THE STUDY OF CHILD PSYCHOANALYTIC OUTCOME**

The Anna Freud Centre, formerly known as the Hampstead Child Therapy Course and Clinic, was established in 1947 by Anna Freud; she was a daughter of Sigmund Freud, and a pioneer in her own right in the field of the psychoanalytic study and treatment of children. The Centre has for decades been acknowledged worldwide as the leading organisation in the theory and practice of psychoanalytic treatment of children and adolescents. As well as treatment, the Centre's work includes preventative services, especially a therapeutic nursery school for under-fives at risk of maladjustment; a full-time postgraduate training in child

psychoanalysis; and a very active programme of research, of which the work reported here is one example.

Since 1952, clinicians at The Anna Freud Centre have provided rich and unusually systematic documentation about psychoanalytic treatments of individual children, and children with particular types of disorder. Because of Anna Freud's commitment to the scientific method and to standardised recording of clinical material, the Centre has extensive documentation on approximately 600 children and adolescents who have undergone analyses during the past four decades, and a further 200 or so who received 'non-intensive' therapy (1-3 sessions per week).

The case records held in the Centre's archive are unusual in several respects. First, in contrast with the practice of most other institutions, the majority of patients (76%) received intensive treatment (4-5 times a week). These patients may be compared with the remaining 24% who were treated once or twice a week. A focus on 4-5 times weekly treatment conforms with Kazdin's (1988) recommendation that the initial assessment of all forms of treatment should start with the fullest implementation of that method. If and when this has been shown to be effective, dilutions of the technique can be considered relative to full implementation, alongside the matter of cost benefit and cost effectiveness analysis.

Secondly, unlike many other clinical archives, the Anna Freud Centre records include reports of a large number of psychoanalyses and psychotherapeutic treatments performed by staff as well as by trainees, (nearly 40% of the cases were treated by experienced analysts). These therapists contributed data on the most challenging groups of children, including many with pervasive developmental disorders and childhood psychoses.

Thirdly, the progress of intensive treatments is described in weekly reports which were written by all those treating patients in analysis. Children in non-intensive treatment were reported on in similar detail but less frequently, usually monthly. These reports give an account of the therapeutic process. Although they do not follow a strict structure, each report contains information on the manifest behaviour of the patient (including his degree of cooperativeness), the analyst's understanding of the child's material, the central themes worked on during that week and the patient's response to the work. Frequently, but not invariably, major

life events are also reported. Normally, the child's parents were seen regularly during the treatment (some were in fact taken into treatment themselves), and reports of these meetings also give useful information about both the family and the child's current state.

### **3.1.1. The documentation available in Anna Freud Centre records.**

The documentation available for coding charts included:

- (a) A Social History, compiled from several interviews. This report usually included: the source and timing of the referral; a description of parents and other informants; a description of the child and the presenting problems as seen by these informants; a very detailed personal history of the child from pregnancy onwards; a briefer history for each sibling; an assessment of the parental relationship; an account of each parent's personal and family history. Where available, the Social History also drew upon longitudinal observations from the Centre's preventative services - nursery school, toddler group and baby clinic (these provided a significant proportion of the referrals).
- (b) A Psychological Evaluation of the child by a clinical psychologist. The assessments used varied according to age and other considerations, but generally both intellectual and projective tests were used (most commonly the WPPSI, WISC-R, CAT, TAT and sometimes attainment tests).
- (c) Reports of diagnostic interviews with the child, usually on two occasions. The diagnostician's aim in these interviews was to discern the psychopathology underlying the child's presenting problems, and to assess his suitability for analytic treatment.
- (d) School reports. These were recorded on a three-page standardised form. In many cases, there were also supplementary documents from the school (assessments of special needs, etc.).
- (e) On the basis of all the above information, a Provisional Diagnostic Profile was compiled in 54% of cases. This Profile integrated the available information, provided a detailed

description of the inferred psychopathology, and offered recommendations for treatment. The main headings of the Profile are:

I Statement of the problem; II The referral; III Description of the child; IVa Family background; IVb Personal history; V Possibly significant factors (environmental and other); VI Assessments of development (drives, ego, superego); VII Genetic assessments (fixation points, regressions, arrests); VIII Dynamic and structural assessments (conflicts); IX General characteristics (frustration tolerance, sublimation potential, attitude to anxiety, progressive vs regressive tendencies); X Diagnosis.

The Profile was intended to be a structure for organizing the diagnostician's impressions, not a sort of questionnaire. It has no inherent reliability or validity (for any particular Profile, these depend on the clinical acumen and theoretical leanings of the diagnostician involved, and the extent to which these would be shared by his colleagues).

- (f) Weekly process reports of the content and technique of the analysis. These were written for all intensive cases (4-5 sessions per week), and so are available in 80% of records. These were used in our study mainly as a source of information about events in the child's life, and his current level of functioning; particularly towards the end of treatment. In non-intensive cases, similarly detailed monthly summaries were written.
- (g) Reports of interviews with parents during the child's treatment were available in 72% of cases. These gave important information about the child's external adaptation and current symptoms. They also often threw light on the parents' psychological states and histories, marital difficulties, and so on.
- (h) In 35% of cases, lengthy formal reports had been written describing the child's difficulties and the treatment problem and outcome.
- (i) Importantly, from the point of view of assessing outcome at the end of treatment, in 25% of these cases, a Terminal Profile or Closing Summary was written to review the original provisional formulation and to describe changes during treatment;

- (j) 41% of files contained reports of follow-up interviews or correspondence with the child or parents.

### 3.1.2. Criteria for inclusion and exclusion of cases

The case records of all children whose treatment was completed between 1952 and 1991 were considered for inclusion in the study. Cases were eligible for inclusion in the sample if they met the following criteria: (i) treatment had been offered and begun, although in some cases it was very brief; (ii) treatment was undertaken by a member of staff or a trainee at the Centre; (iii) the frequency of sessions was at least once per week; (iv) the therapist's intention was to treat, not merely to observe, the child; (v) the patient was under 20 years old at the beginning of treatment.

Approximately 20 cases which met these criteria were excluded on grounds of particular confidentiality (e.g. children of staff), and a further 10 because the records were very incomplete. 763 cases remained.

## 3.2. POSSIBLE PREDICTORS AND MEASURES OF OUTCOME IN A RETROSPECTIVE STUDY OF TREATMENT

In this section, literature is reviewed which indicates variables likely to affect the outcome of treatment, and which therefore need to be measured if possible in the present study.

### 3.2.2. Demographic and family variables.

Family size and structure appear to have a strong bearing on risk of child psychiatric disorder. Increased risk has been shown to be associated with illegitimacy (e.g. the National Child Development Study (Butler & Bonham, 1963; Davie et al., 1972; Wedge, 1969; Fogelman, 1983; Seglow et al., 1972), large family size (Rutter & Sandberg, 1985), living with only one parent (Wadsworth et al., 1985) rather than with both biological parents, or with one parent and a step-parent. Several studies (e.g. Hetherington et al., 1985; Wallerstein, 1985, 1991) have shown associations between parental divorce and antisocial behaviour many years after

the event. There are also indications that ongoing marital conflict is related to psychosomatic disorders and aggressive behaviour in both boys and girls (e.g. Sines, 1987). Rutter & Gould (1985) report that being the eldest child in a family is associated with higher frequency of emotional disorder, and this was confirmed in the large-scale Ontario Child Health Study (Links et al., 1990).

The National Child Development Study (e.g. Seglow et al., 1972) has also added to the existing data on adopted children (Norvell & Guy, 1977; Brodzinsky et al., 1984; Hodges & Tizard, 1989). Taken together, a variety of studies comparing adopted with similar non-adopted children suggest increased vulnerability in the adopted group, and that this appears most clearly in late childhood (around 11 years), not - as expected - at adolescence. Boys appear to be more affected in general than girls (Maughan & Pickles, 1990).

The greater incidence of emotional and behavioural difficulties associated with residential care in childhood have been documented by Hodges & Tizard (1989a,b) and by Rutter et al. (1990). It seems that placement in foster care or in a children's home (due to parental inability to cope, rather than to disturbance in the child) is predictive of later psychological disorder. This is not simply due to the impact of parental deviance (Rutter et al., 1990), and persists to an extent in spite of later placement in a good family environment (Hodges & Tizard, 1989a,b).

McCord (1990) has tried to disentangle the effects of parental separation and family structure from poor parenting, generally deprived social conditions, etc.. His analysis suggested that both family structure and child-rearing methods had an effect, but of the two, the parents' behaviour was more important than whether the family was intact.

Social class & current employment of parents. In Rutter & Sandberg's study (1985), maternal employment was linked to psychopathology in children. Low socio-economic status has been commonly found to relate to child psychopathology, particularly when the family also lives in a poor neighbourhood (e.g. Cohen et al., 1990). Lower social class has also been related to higher rates of attrition from treatment programmes (e.g. Viale-Val et al., 1984; Kazdin, 1990), and to poor treatment outcome, at least in conduct disordered children (Dumas & Wahler, 1983).

Ethnic background. There is evidence (Rutter et al., 1974) that black children other than Asians have higher rates of externalising disorders than white, and certainly they are more often prosecuted for criminal activity (Robins, 1991). Asian children in urban Britain appear to have lower offending rates than other groups (Mawby et al., 1979). However, two very large epidemiological studies in the US (Elliott et al., 1983; Robins et al., 1991) have found no difference between ethnic groups in rates of delinquency or conduct disorder. Prevalence rates for emotional disorders are also somewhat unclear. In the community sample of Lapouse and Monk (1958), black children had more fears (63%) than did white children (44%). In contrast, Last et al. (1987a) found that children diagnosed as having separation anxiety were primarily Caucasian. There is little to indicate a likely difference in response to treatment according to ethnic background, except that one study (Viale-Val et al., 1984) has suggested that non-white families were more likely to withdraw prematurely from treatment.

Religious background. There are some indications that involvement with organised religious activity is a protective factor in those exposed to traumatic events (e.g. Baldwin et al., 1990; Werner, 1990), and it is possible that this might have a bearing on rates of disorder and response to treatment.

Parental psychiatric history. Psychiatric disorder in a parent has been shown to be associated with substantially higher incidence and greater severity of child maladjustment, both in childhood and when these offspring become adult (e.g. Rutter & Gould, 1985; Rutter, 1988b; McCord, 1990; Cohen et al., 1990; Hibbs et al., 1991). There is evidence that as well as genetic reasons for this link (see Tienari et al., 1990), there are powerful effects of exposure to the behaviour of a mentally ill parent (e.g. Puckering, 1989). The risk is greatest when both parents are mentally ill (spouses of psychiatrically ill adults also have high rates of disorder; Quinton et al., 1990), when the child is involved in the parent's delusions, rituals, etc., or where the parental illness is accompanied by sustained marital conflict (Quinton et al., 1990).

It is interesting that in the Hibbs et al. (1991) study, the lifetime rate of psychiatric disorder was very much higher in the families of disturbed children, but the majority of these parents had suffered psychiatric episodes before the birth of the child, not since. What remained different about these parents was their very significantly higher levels of expressed emotion in comparison with parents of normal children and with parents of disturbed children without

parental psychiatric history. This raises the possibility that it is not necessarily continuing parental psychiatric illness, or the child's earlier experience of such an episode, which is damaging, but the parenting styles commonly associated with this history. A separate study by Schwartz et al. (1990) has shown that psychiatric history in a parent and criticism (one scale of the expressed emotion measure) are strongly associated with each other and with child disorder, but that each risk factor makes a strong independent contribution to the increased rate of psychopathology in children. These studies point to the need to record lifetime psychiatric history, not simply current mental state, or even the parent's history since the birth of the child, and where possible to assess family interaction in addition.

As well as the association with higher rates of child disorder, parental psychopathology is commonly expected to lead to higher rates of attrition from treatment; eight studies identified by Weisz & Weiss (1993) investigated this, but only one obtained a significant result (which was in the expected direction). It is clear, however, that parental symptomatology might have all sorts of effects on motivation for treatment as well on the child's adjustment itself, and should be recorded in any study of treatment outcome in children.

Physical ill-health in the parents could also be relevant. Illness in the mother was found by Rutter & Sandberg (1985) to be associated with lower subsequent adjustment in the child.

Proximity to the treatment centre might be expected to have an impact both on the treatment offered (in the context of the present study, for instance, on the intensity of treatment thought to be sustainable by the family), and on the likelihood of good outcome. There is little evidence in the existing literature on the impact of ease of access, although Weisz & Weiss (1993) report that 6 studies did examine the effect of this variable on attrition rates, without significant findings. It nevertheless seemed an especially important piece of information for a treatment usually involving daily attendance over a number of years.

### **3.2.2. Clinical and child variables**

There are good reasons for expecting that the child's age at referral could be related to the likelihood of improvement. Some studies have found that the younger a child is when treated, the better the outcome. In the Weisz, Weiss, Alicke & Klotz (1987) meta-analysis (see Chapter

1), there was a main effect of child age, when children aged 4-12 were compared to adolescents (13-18 yrs). The mean effect sizes were 0.92 and 0.58 respectively ( $p < 0.05$ ). There was a correlation of -0.21 between child age and therapy effect size across 163 studies ( $p < 0.05$ ). However, this main age effect was not found in the other meta-analyses conducted by Casey & Berman (1985) or Weisz, Weiss, Morton Granger & Han (1992). Several studies have examined the expectation that older children are more likely to terminate treatment prematurely, or have it terminated by parents. Weisz & Weiss (1993) reviewed this evidence and found that only one study had clearly shown this trend, the others had obtained non-significant differences.

There is little convincing evidence on the question of whether the natural history of childhood disorders is more benign in children who are younger at the onset of difficulties. (If so, then this would lead one to expect a higher rate of spontaneous remission in younger children, over the period of treatment likely in psychoanalysis.) There are several studies (e.g. Richman, Stevenson & Graham, 1982; Rutter, Tizard & Whitmore, 1981; Chazan & Jackson, 1974) which together suggest that there is quite a high continuity in disorder (perhaps 50% of children identified as "cases" at any age continue to have significant problems over a period of years, particularly if the behaviour identified is disruptive). Although it is widely believed that earlier psychiatric disorder has a better prognosis, this seems to remain an open question. (This literature is reviewed more fully in Chapter 7.)

Gender has been found to have important relationships with vulnerability to disorder, type of disorder and response to treatment in childhood. Boys more commonly present with externalising problems and girls with internalising disorders (see, for instance, Achenbach & Edelbrock, 1983; Robins, 1991). In the Ontario Child Health Study, Offord et al. (1987) found some evidence that the disparity between boys and girls in rates of emotional disorder only arises after puberty, although disruptive disorders are more common among boys throughout the age range. Evidence is beginning to emerge of interesting interactions between gender and the natural history of childhood psychiatric disorders. McGee et al. (1991), using data from the Dunedin prospective cohort study in New Zealand, found that in boys, both emotional and disruptive disorders in earlier childhood predicted disruptive (but not emotional) disorders at age 15, while in girls both types of earlier disorder predicted emotional (but not disruptive) disorders at 15. Male gender is generally thought to be associated with poorer treatment response; for instance, the percentage of boys within samples has been found to be significantly negatively

correlated with effect size in meta-analyses (Casey & Berman, 1985; Weisz, Weiss, Morton, Granger & Han, 1992).

Intellectual functioning is probably of relevance to the development of certain childhood disorders. Those DSM-III-R Axis II disorders found in childhood (see Chapter 2) include disturbances of thinking and learning by definition. Mental retardation itself is an obvious example, and pervasive developmental disorders are also strongly associated with low intelligence (Dawson, 1983; Rutter, 1983). Specific developmental disorders are characterized by poor development of certain cognitive capacities or academic skills. Axis I disorders are also in some cases linked with (usually more subtle) cognitive impairments; for example, there is accumulating evidence that conduct disorders are preceded by clear deficits in verbal and executive functions (e.g. Moffitt, 1988, 1993; Hodges & Plow, 1990). Hodges & Plow (1990) also found that depression in children was associated with underachievement (and specifically with low attainment in mathematics), and that anxiety disordered children had average IQ scores at the low end of the normal range. It is possible that either specific deficits or generally low intelligence would make a child more difficult to treat successfully in any treatment modality, including psychoanalytic treatment. However, there have been suggestions that even children with very low IQs are suitable for psychodynamic psychotherapy (Sinason 1992).

Looking at psychosocial treatments in general, the small number of child therapy outcome studies which have commented on the effect of IQ have provided conflicting answers. For instance, in a ten-year follow-up study of 168 children previously hospitalised for school refusal (Berg & Jackson, 1985), high IQ predicted positive adjustment. However, in an earlier 3 year follow-up by the same group of 100 hospitalised school phobic adolescents (Berg et al., 1976), higher IQ had been found to predict worse outcome. It is therefore still very unclear whether we should expect intelligence to relate to treatment efficacy, but certainly it seems worth recording and investigating in this context.

Presenting symptomatology and psychiatric disorders at assessment. There is a good deal of evidence that certain referral symptoms are more likely to persist than others. Aggressive behaviour, conduct disorders and overactivity have been found to be particularly likely to persist from middle childhood to adolescence and adulthood (e.g. Rutter et al., 1970; Lefkowitz

et al., 1977; West & Farrington, 1973; Herbert, 1987; see Chapter 9), although in girls the adult disorder is more usually affective than antisocial (Quinton et al., 1990; McGee et al., 1991). Childhood emotional disorders, such as separation anxiety disorder, have been thought to leave little trace in adulthood (e.g. Herbert, 1980), although there is recent evidence, from more sophisticated examination of comorbidity and wider adjustment, that these disorders are unstable rather than transient (see Chapter 9).

Treatment outcome is likely to vary according to the disorder treated. Pervasive developmental disorders are notoriously resistant to treatment (Dahl, Cohen & Provenca, 1986), and disruptive behaviour disorders are also known to have a gloomy outcome; Kazdin (1993) has concluded in a recent survey that despite short-term benefits from some parent-training programmes, no treatment for conduct disorders has yet been shown to be effective. A number of studies (e.g. Lessing et al., 1976; Weisz, Weiss & Langmeyer, 1989) have shown that children with externalising disorders are more likely than others to withdraw prematurely from treatment. Surprisingly, however, meta-analytic studies have consistently failed to find a significant effect of externalising vs internalising problems on treatment effect size, even when controlling for possibly interacting variables such as child age or therapy type (see review by Weisz & Weiss, 1993). It is therefore not entirely clear that emotional disorders have more favourable treatment outcome than disruptive behaviour problems.

Duration of current problems. There is surprisingly little evidence on the effect of chronicity of symptoms on either untreated prognosis or the outcome of treatment. The prognosis of conduct disorders has been shown in several studies to be better in adolescents who have a shorter history of behavioural problems (e.g. Loeber, 1982; Robins, 1991). More recent onset has also been found to predict good treatment outcome in OCD (Husain & Kashani, 1992). This variable is often confounded with age at referral, and not separately assessed: the younger children, often found to have better outcomes (see above) may also frequently be those with a briefer history of poor adaptation. It is also easy to confound duration with severity, e.g. conduct disorders with an early age of onset also tend to be more severe and pervasive. It seems important to evaluate the significance of these factors.

Difficulties reported by school. Rutter et al. (1970) emphasized that systematic information from the school was very important in assigning psychiatric diagnoses, and showed a strong

relationship between school failure and behavioural problems. It has now become standard practice to seek reports on the child from as many sources as possible, including teachers and often peers (see, for instance, Kazdin, 1993). More recently, evidence has accumulated to suggest that adjustment difficulties at school (such as poor peer relations, underachievement, low concentration) predict adult adjustment problems, such as criminality (e.g. Magnusson & Bergman, 1990). There is often poor agreement between parents and teachers (and children themselves) about the presence of any particular behaviour or symptoms, partly because some symptomatology is situation-specific. It is obviously important to record information about the child's adjustment in all important situations, both to avoid a partial, distorted picture of overall functioning, and because there is evidence that cross-situational disturbance may be associated with worse outcome (e.g. in Mitchell & Rosa's epidemiological study (1979) independent reports from both parents and teachers that a child was stealing or lying predicted future arrests for delinquency).

A history of 'somatic risk' in the child (accidents, illnesses, disabilities, surgery, hospitalisation) seems to be associated with later psychopathology (Quinton & Rutter, 1976; Cohen et al., 1989, 1990).

Although there does not seem to be a literature specifically touching on this, it may also be relevant to note any past psychiatric difficulties the child may have experienced, and any treatment of these, as well as any previous treatment of the child's current presenting problems.

### **3.2.3. Referral and treatment variables**

Past contact with Centre. It may be important to record previous associations between the child's family and the treatment centre, both because a family choosing to return for treatment is likely to have positive expectations, and because of the possibly beneficial effects of these earlier experiences in themselves.

An example is the therapeutic nursery school of the Anna Freud Centre, which takes referrals of families in particular need of help with their preschool children, through various forms of social disadvantage (mentally ill, single mother; large family in inadequate living conditions,

etc.). This nursery school offers free, high-quality educational and physical care, with a good deal of psychoanalytically-informed observation and management of each child. Extra consultation and therapeutic work with both parents and children is readily available on site, if needed. There is some evidence from "preschool enrichment" programmes, for instance the Perry preschool project in Michigan, of substantial gains on behavioural, educational and social measures continuing into adulthood (Schweinhart & Weikart, 1980; Berrueta-Clement et al., 1984). It appears that exposure to preschool nursery care is not sufficient in itself, and can in fact be counter-productive, particularly for aggressive children (Haskins, 1985; Belsky, 1988; McGuire & Richman, 1989). There may be a beneficial impact, provided that the children are placed "in treatment settings with staff who have greater knowledge of management methods, and when treatment goals for individual children have been outlined" (McGuire & Earls, 1991, p.145). The Anna Freud Centre nursery school amply fulfils this requirement.

Other preventative services at the Centre which might be expected to affect child adjustment, parental motivation and perhaps the outcome of treatment, include an infant paediatric clinic, toddler group and parent consultation service.

Source of current referral. Several studies have found that the more potentially coercive the referral source (e.g. court or probation officer), the more likely a family was to drop out of treatment (Gaines, 1978; Gould, Shaffer & Kaplan, 1985; Plunkett, 1984). Gould et al. (1985) found that parental pathology was only related to attrition among families who were referred by the child's school. Evidently it is important to bear in mind the possibly complicated relationships between variables associated with outcome; a variable which seems trivial may have an impact on, for instance, parental motivation. Particularly as it would be very difficult to assess motivation directly in a retrospective study, it may be important to record reliable information such as this which may have a bearing on it.

Delay between assessment and starting treatment. There is some evidence that the longer the time spent on a waiting list, the more likely it is that the family will become disenchanted with the clinic and withdraw, or that the child's problems will have improved spontaneously or through help received elsewhere (Lake & Levinger, 1960). It is also possible that, even if the child does receive treatment after a relatively long delay, the outcome of this treatment

will be prejudiced, either by reduced motivation or by a worsening of symptoms in the interval (an improvement of symptoms is presumably more likely to lead to withdrawal).

Experience of therapist. Meta-analytic studies have usually failed to find a main effect of therapist experience on treatment outcome (Casey & Berman, 1985; Weisz, Weiss, Alicke, and Klotz, 1987; Weisz, Weiss, Morton, Granger & Han, 1992). There is, however, some evidence for an interaction between therapist training and both child age and type of symptoms. In the study by Weisz, Weiss, Alicke, and Klotz (1987), age and effect size were uncorrelated among professional therapists ( $r = .11$ ) but were significantly negatively correlated among graduate students ( $r = -.31, p < .05$ ). Professional therapists were about equally effective with all ages, but graduate students were more effective with younger than with older children. In the same study, professional therapists were found to be significantly more effective with overcontrolled (internalizing) problems than were graduate students or paraprofessionals (ESs 1.03, 0.71 and 0.53 respectively). For undercontrolled (externalizing) problems, this difference did not emerge.

It is therefore worth looking for interactions between level of therapist experience and other variables. It is also very possible that in the context of psychoanalytic treatment, which is so much more intensive, prolonged and theoretically complex than the treatments previously studied, a main effect of therapist experience might exist which does not emerge in other forms of treatment.

Gender of therapist. Casey & Berman (1985) found no significant difference in treatment outcome as function of gender of therapist; however, as was suggested above it is possible that therapist variables could be more important in a longer, more intensive therapy. It might, for instance, usually be beneficial to adolescents to have a therapist of the same gender, other considerations being equal.

Frequency of sessions assigned, changes in frequency. There is not much evidence on the impact of treatment intensity on outcome, although it is believed in psychoanalytic circles that daily treatment sessions permit a fuller understanding of the psychodynamic underpinnings of a disorder, and a more profound impact on the patient's personality and adjustment, both internal and in the outside world. Heinicke & Ramsey-Klee (1986), in a study described in

Chapter 1, compared once weekly and four times weekly treatment for children with learning difficulties. This did show a superior response in the intensively treated group. A priori, one would expect intensity to be specifically important for children, because of their less developed memory and meta-memory functions, and the importance of strong relationships with adults in their development.

Work with parents, or treatment of parents, alongside treatment of child. Casey & Berman (1985) found no significant difference in effect sizes as a function of whether treatments were focused on children only, or whether parents were included. However, a number of studies have suggested that involving parents in the treatment reduces attrition rates (Lake & Levinger, 1960; Cole & Magnussen, 1967; Gaines & Stedman, 1981). Kazdin (1990) has emphasized the need to consider and treat parental dysfunction alongside the child's difficulties, because parental psychiatric disorder (such as depression) is known to be associated with increased pathology in the child. He has pointed out that child treatment programmes in which parents are involved (such as Parent Management Training for the treatment of aggressive children) often have a "side-effect" of reducing parental symptomatology (especially depression), and family or marital discord, probably providing additional and continuing therapeutic benefit to the child (e.g. Forehand, Wells & Griest, 1980; Patterson & Fleischman, 1979).

At the Anna Freud Centre, one or both parents are seen regularly during many children's treatments. The intention is partly to reduce the likelihood of attrition, but there is also an important therapeutic aim. In some cases the PSW or another therapist might take one or other parent into formal psychotherapy or even offer simultaneous psychoanalysis. The prediction of staff at the Centre would be that any of these forms of work with parents would be likely to enhance the effectiveness of treatment for the child, so it seems an important variable to record in this type of study.

Length of treatment. Casey & Berman (1985) found treatment length to be negatively related to treatment outcome, but suggested that this might be because the briefer treatments had outcome measures more closely related to the therapy tasks. In contrast, Howard et al. (1986) found a log-linear relationship between outcome and number of treatment sessions. In an extensive review of the outcome literature in psychotherapy, they found that measurable improvement should be evident in 48% to 58% of patients after 8 psychotherapy sessions,

in about 75% of patients by the end of six months of once-weekly treatment (26 sessions), and about 85% by the end of a year of treatment. These findings were quite consistent despite the diversity of patients, therapists, therapies, settings, and outcome criteria included in their analysis. A more recent study by Howard and his colleagues (Howard et al., 1993) has suggested that even longer term treatment may have deeper and more widespread effects, particularly for certain forms of pathology.

Reason for termination. Although not a subject which has been specifically examined in the literature, one would expect that children who continue in treatment until a mutually agreed termination are likely to have shown greater improvement than those who withdraw unilaterally, or those whose treatments are terminated because of external circumstances (such as the departure or long-term illness of family or therapist), or because of poor progress and a need for alternative treatment. This is as much an outcome variable as a predictor of outcome.

Year treatment started. Again, the literature gives no grounds for a prediction in either direction, but it is possible that over the forty year history of an institution treatment effectiveness might have increased or decreased. This change could be general or more specific; there might be (for instance) an increase of effectiveness with some disorders which were only gradually understood psychoanalytically, or an increase in overall improvement rates as the Centre specialised in types of disorder with which it had proved successful in the past.

Changes in therapist and frequency. Again, this is not a subject which normally arises in outcome studies, because it would not be an issue in most short-term treatment. However, in psychoanalysis which may continue for several years, a number of changes (particularly in therapist) might be expected to have a disturbing effect on the therapeutic process. It is also useful to have records of frequency of sessions at each stage in treatment, so that (with knowledge of the overall length of treatment) the total number of sessions and amounts of time in intensive / non-intensive treatment can be calculated.

## Outcome variables

The choice of outcome variables and their use in the measurement of change during treatment is discussed in the next chapter.

### **3.3. PROCEDURE FOR DATA COLLECTION**

Data collection was carried out by several people over the course of two years. The more straightforward, non-diagnostic data (demographic information, medical and school difficulties, factual details of the child's treatment at the Centre) was entered onto a proforma by six psychology students and graduates. Diagnostic judgements and assessments of level of adaptation were carried out by the present author with two graduate assistant psychologists under her supervision. The main proforma and the additional forms for recording presenting symptoms, psychological test results and formal psychiatric diagnoses are given together as Appendix 3.1.

#### **3.3.1. Measures used and variables recorded**

The variables and measures fall into four domains. Brief indications are given of the codes used, and more can be seen in Appendix 3.1, and in Appendix 3.2 which shows the codes for all the variables as they were entered from the forms in Appendix 3.1 to the computer database. After listing the variables, the approach taken to operationalisation is outlined, together with examples.

##### Demographic and family variables.

Current family or living situation (adults present at home, or nature of residential institution).

Family size (ages and genders of siblings, whether step-sibs, etc. Also details of sibling deaths if appropriate).

Proximity of home to Centre.

Each parent's geographical and religious origins.

Social class (Registrar General's Classification of occupation of each parent) & current employment status of each parent.

Losses and separations, including parental marriage breakdown, deaths, hospitalizations, etc..

Parents' and siblings' serious illnesses, disabilities, etc..

Each parent's psychiatric history: symptoms, diagnoses, treatment, past & current; current global functioning.

#### Clinical and child variables

Age at referral.

Age at beginning of treatment.

Gender.

Presenting symptomatology.

Psychiatric diagnoses.

Psychoanalytic diagnoses (a five-category scheme used in most of the Diagnostic Profiles to indicate depth of disturbance in analytic terms).

Global level of functioning (HCAM rating, described in Chapter 4).

Duration of current problems.

Previous treatment of current problems.

Other past psychological difficulties and treatment of these.

Significant medical history: accidents, illnesses, disabilities, surgery, hospitalisation.

Difficulties reported by the school (underachievement, specific learning difficulties, poor peer relationships, disruptiveness, disabling anxiety symptoms).

Intelligence and attainment test results.

#### Referral and treatment variables

Past contact with Centre (usually preventative services).

Source of current referral.

Delay between assessment and starting treatment.

Year treatment started.

Experience of therapist (staff or trainee).

Gender of therapist.

Changes in therapist (when and why).

Details of any subsequent therapists as before.

Frequency of sessions initially assigned.

Changes in frequency (year of treatment and reason for change).

Work with parents work alongside treatment.

Previous or concurrent treatment of parent or sibling at AFC.

Length of child's treatment (estimated if not certain).

Reason for termination.

### Outcome variables

Psychiatric diagnoses at termination.

Global functioning at termination.

Further treatment after termination (at AFC or elsewhere; when, why, duration, same or new therapist).

### **3.3.2. Operationalisation of variables recorded.**

The coding of variables used existing values if the information was coded using an established measure. For example, the global level of functioning of each parent was coded using the Global Assessment of Functioning scale which comprises Axis V of the DSM-III-R manual. IQ and attainment scores were similarly recorded as measured by the tests involved, and social class categories were arrived at by following the procedures in the UK Registrar General's Classification of Occupations (HMSO, 1980).

Psychiatric diagnoses for both the child and his parents were assigned where appropriate, using both the international (ICD-10) and North American (DSM III-R) standard psychiatric classifications (see Chapter 2). This judgement was made for the child's earlier history, the time of referral and for the period leading to termination. The evidence for each diagnostic assignment was recorded in terms of the diagnostic criteria in each manual, i.e. how many of the criteria were met, and with what evidence. Diagnostic assignments were rated along two dimensions: a) as definite, probable or possible<sup>2</sup>; and b) as severe, moderate or mild

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<sup>2</sup> Defined as follows:

Definite: all required criteria specifically described in material.

Probable: all but one or two criteria described, remaining features very likely to be present (e.g. specific developmental disorder where sufficient impairment is clear, but required tests not administered; mood disorder in parent, where treatment is described but individual symptoms not listed).

(here the guidelines in the DSM-III-R manual were applied). Age at onset was noted for all diagnoses, where this information had been recorded clearly.

For many other variables listed above, there were no standardised measures available, or else no measures appropriate for coding this kind of clinical information. The coding of these variables was therefore operationalised specifically for the present study. 60 closed files were selected, representing different decades, referral problems and fullness of documentation. These records were read, and information was recorded on a simplified version of the final proforma. This gave an approximate picture of the distribution of most of the variables, e.g. the codes for geographical origins of each parent were modified in the light of finding that these origins were unrepresentative of the UK urban population in general. (The location and history of the Centre meant that a high proportion of families were European Jewish refugees, and few were of Asian or African origin.) Similarly, the knowledge that the Centre had specialised over many years in studying and treating children with serious medical conditions and disabilities led to more detailed coding of these conditions, hospital treatment, and so on, than might have been relevant for a different sample.

Having gained an impression of the distribution of possible values of most of the variables, the procedure for coding these values was specified. Below, some examples of these procedures are given to illustrate how this was done.

Demographic and family variables. Much of the information in this category is straightforwardly factual; an obvious and important exception to this is the information about parental behaviour and psychopathology.

Psychiatric diagnoses were recorded for each parent as described above, but it was also decided to record further details of psychiatric history for each parent, for the past and for the time of the child's assessment. The reason for this was two-fold; first of all, the information on each parent was often not sufficient to make a psychiatric diagnosis, but was nevertheless worth recording. An example would be a history of a parent's death by suicide, but with

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Possible: clear suggestion of disorder, e.g. report that relative was depressed, but no details. Or possibility that another disorder underlies manifest symptoms, e.g. depressive state in case of solitary conduct disorder and poor self-esteem.

no details of the parent's mental state. One could not hazard a diagnosis of major depression, but it did seem relevant to note the suicide. The second reason is that the parent's behaviour might not indicate psychiatric illness, but could still be important to note as part of the child's environment. To some extent, the choice of aspects of parental psychopathology which were rated was arbitrary, but it was guided as far as possible by the literature on aspects of parental behaviour linked to childhood maladjustment (see section 3.2.1).

The list of variables recorded also included psychological or psychiatric treatment of each parent, partly as some indication of severity of pathology, and partly in case such treatment had a relationship in either direction to the outcome of the child's psychoanalytic experience. The variables recorded, and the guidelines used to assign values to these variables, are shown in table 3.1.

Clinical and child variables. The child's global level of functioning was rated on a measure developed as part of this study, and designed to assess the general adjustment of a child. It is a manualization of the CGAS instrument developed by Shaffer and colleagues (1983), which has been renamed the Hampstead Child Adaptation Measure (HCAM). It involves placing a child on a scale of 1 to 100, where scores above 70 represent normal levels of functioning. The development and use of this measure are described fully in Chapter 4, and the manual used in the retrospective study is given as Appendix 4.1.

The child's presenting symptomatology was noted using Achenbach & Edelbrock's (1983) Child Behaviour Checklist (separate forms for 2-3 year olds, and for children over 4 years or adolescents), because of its comprehensive listing of possible child and adolescent symptoms. The items were rated 0, 1 or 2 according to the criteria specified by the authors. However, it is important to note that although the checklist was originally developed using chart material, this is not the way in which it is now intended to be used (normally parents would complete a checklist at the time of the child's assessment). The published scales and norms cannot therefore be used to interpret the symptom patterns or to compare these patients with other subject groups.

	severity 1	severity 2
schizophrenic / delusional disorder bipolar affective disorder puerperal psychiatric illness (mother, with this child) other affective illness OCD other anxiety / neurotic illness substance abuse	manageable in the community, but requiring outpatient care, <u>or</u> of sufficient severity to justify such treatment (e.g. clearly required but refused treatment, or managed with intensive support & medication from GP)	requiring inpatient (IP) treatment, <u>or</u> of sufficient severity to justify such treatment (e.g. life-threatening actions, only managed at home with intensive support, or because patient refused admission)
personality disorder	mild-moderate impairment of occupational, family or social functioning (e.g. narcissistic individual has series of relationships clearly dominated by demands for attention / admiration; has shallow, egocentric relationships with children)	severe impairment of occupational, family or social functioning (e.g. borderline individual cannot work, frequently changes partner, attacks self or others, has been imprisoned)
sexual dysfunction / perversion	limiting and probably destructive to relationship, but perhaps containable (e.g. long-term impotence, paedophilia restricted to pornography, transvestism)	not likely to be tolerated by normal partner (e.g. incestuous relationship with child, impotent unless causing pain to partner, etc.)
violence / abuse towards the family  violence or other criminal behaviour outside family	likely to lead to conviction but not imprisonment if prosecuted (e.g. minor assault within or outside family, petty thefts, minor fraud)	likely to lead to imprisonment if prosecuted (repeated attacks on adults requiring hospital treatment, single such attack on child, sexual abuse of children, repeated or large-scale theft, fraud, etc.)
suicide attempts	relatively minor: repeated attempts without injury, or single attempt requiring hospital care	life-threatening or fatal; or requiring physical treatment on at least two occasions
mental retardation psychiatric inpatient treatment psychiatric outpatient treatment psychotherapy psychoanalysis	noted whether present or absent	
marital conflict	moderate: (e.g. separation of between 1 week and 2 months; rows involving minor violence, not injury; or enough misery for outside help to be sought)	severe: (marriage ended, or separation over 2 months; or very destructive ongoing situation, e.g. serious assaults, legal injunctions, children openly used as "pawns")

Table 3.1. Guidelines for rating parental symptoms, treatments, marital conflict.

Treatment variables. An example of the procedure for coding this information is provided by the definition of seven possible reasons for termination. All information on the reasons for ending treatment, from the point of view of therapist, child and parents, was noted from the treatment file. Then either one or two main reasons for termination were recorded. The first possible reason was that treatment was terminated following agreement between the therapist and the patient or parent (described as "completed"). The second and third reasons were unilateral withdrawal ("premature termination") by the parents or the child, respectively. The fourth reason was termination initiated by the therapist because of her view that the treatment was not progressing (for instance, the child was judged after a period to be unsuitable for analysis, or the therapist felt that no further progress could be made). The fifth and sixth reasons were termination due to external circumstances, which were agreed to be unavoidable (prolonged hospitalization, leaving London, etc.); this was coded 5 for reasons on the therapist's side and 6 for reasons within the child's family. The seventh reason was transfer to other treatment (admission to inpatient care, removal to a therapeutic boarding school away from London, etc.). There was also an eighth code for other reasons, and a ninth for unknown.

In the great majority of cases, one or two of these reasons for ending treatment were clearly described and agreed between parents and therapist, so that coding was straightforward. In less than 10% of cases, there was a conflict between two versions of events. For instance, a trainee therapist might have felt that the child should be transferred to another therapist when she departed at the end of training, and a new therapist would have been offered; however, the parents or child might have preferred not to continue with the treatment. In such cases, both reasons were usually coded (withdrawal by parents / child, and external circumstances on the part of the therapist).

### **3.4. INTER-RATER RELIABILITY OF DATA COLLECTED**

Each rater was trained in the use of the proforma by the present author, to a criterion of 95% agreement. (A fifth rater had to be excluded from data collection because this criterion was not reached.) Inter-rater reliability coefficients were then calculated for

100 of the charts, and intra-class agreements well over 0.9 were found for all variables reflecting factual information (e.g. child's age at referral, numbers and ages of sibs, occupation of parents, school-reported problems, details of early separations).

#### **3.4.1. The Child Behaviour Checklist.**

Inter-rater reliability of CBCL ratings was assessed on 100 cases from the retrospective study sample, giving a satisfactory mean intra-class correlation coefficient of .87 (range .71 to .96).

The CBCL was designed for completion by parents, and although the ratings in this study were made primarily on interviews with parents, it was not expected that the profiles would be comparable to those collected in the normal way. This was cursorily assessed by asking the mothers of 10 children currently being assessed for treatment to complete the CBCL, and these ratings were contrasted with data obtained from the charts by two raters using the procedure above. The level of agreement between the two chart raters was high (mean  $r = .85$ ); however, neither rater showed good agreement with the mother (mean  $r = .55$ ). The reason for this appeared to be that the chart raters used stricter criteria, providing conservative symptom profiles relative to parents. (It was found that asking each child's therapist to complete the CBCL produced profiles more similar to the mothers' than to our raters'.) Agreement between all raters for severe symptoms was high ( $> 0.8$ ). The symptom scores in the retrospective study sample could not therefore be regarded as comparable to parent ratings on the CBCL.

#### **3.4.2. Psychiatric diagnoses**

The reliability of the child psychiatric diagnoses was checked by submitting 139 charts to the scrutiny of three experienced child psychiatrists, independent of the chart review, working in the US and the UK<sup>3</sup>. Charts were selected randomly, except that where important diagnostic categories, such as pervasive developmental disorders, were underrepresented in the random sample, further cases were chosen to allow an assessment of reliability.

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<sup>3</sup> I very gratefully acknowledge the contribution of Linda Mayes MD, William Young MD, Alison Westman MD in helping to validate the child diagnoses.

Tables 3.2 to 3.5 show frequencies for each rater of each diagnostic category in the sample of 139 cases, together with kappa figures for each category. Many cases had more than one diagnosis, therefore the total frequencies are often greater than 139. The diagnostic categories are divided into emotional, disruptive, pervasive developmental and others. This corresponds to the broad groupings into which the full sample was later divided, as described in Chapter 5.

Diagnostic Category	Frequency (AFC)	Frequency (external)	Kappa
Separation Anxiety Disorder	9	13	0.69
Avoidant Disorder	6	4	0.54
Obsessive Compulsive Disorder	6	5	0.71
Phobia	7	7	0.69
Dysthymia	8	7	0.64
Sleep disorders	7	6	0.42
Adjustment Disorders & PTSD	8	6	0.85
Somatoform Disorders	7	7	0.86

Table 3.2. Reliability of Emotional Disorder Diagnoses Among 139 Cases.

Diagnostic Category	Frequency (AFC)	Frequency (external)	Kappa
ADHD	9	7	0.80
Conduct Disorder	16	17	0.75
Oppositional Defiant Disorder	12	14	0.73
Antisocial Behaviour (DSM III-R V Code)	8	5	0.75

Table 3.3. Reliability of Disruptive Disorder Diagnoses Among 139 Cases

Diagnostic Category	Frequency (AFC)	Frequency (external)	Kappa
Autistic Disorder	5	5	1.00
PDD n.o.s.	6	7	0.92

Table 3.4. Reliability of Pervasive Developmental Disorder Diagnoses Among 139 Cases

Diagnostic Category	Frequency (AFC)	Frequency (external)	Kappa
Enuresis	14	13	0.96
Encopresis	8	8	1.00
Developmental Reading Disorder	6	6	0.65
Developmental Expressive Writing Disorder	5	4	0.65
Tic Disorder	5	5	1.00
Sexual/gender Disorder	6	6	1.00
Speech Disorders	5	5	1.00
Eating Disorders	7	6	0.92

Table 3.5. Reliability of Diagnoses of Other Common Disorders Among 139 Cases

Assessment of the reliability of adult diagnoses (which were applied when appropriate to parents of the children in this study) was done in a similar way to the verification of child diagnoses. However, in only 28% of cases did either of the parents warrant a diagnosis, and for 51% of fathers and 39% of mothers there was insufficient information to make a judgement. For these reasons, fewer charts (43 children with 78 parents) were checked, and broader diagnostic categories were used. Only one independent rater was involved, a senior adult psychiatrist with extensive experience of the diagnostic systems being used<sup>4</sup>. The results are shown in Table 3.6.

Diagnostic Category	Frequency (AFC)	Frequency (external)	Kappa
Depressive and Bipolar Disorders	31	32	0.35
Anxiety Disorders	19	13	0.51
Personality Disorders	21	21	0.67
Sexual/gender Disorders	5	5	1.00
Substance Abuse	4	4	1.00
Schizophrenia/ delusional Disorder	3	3	1.00
Post-traumatic Stress Disorder	3	3	1.00

Table 3.6. Reliability of Common Diagnoses of Parents Among 43 Cases

### 3.5. DISCUSSION

#### 3.5.1. Family and demographic information

The information recorded about a child’s current family structure represented more or less all the details generally available in a file. It did not by any means include all the historical (biographical) information which was reported in most files about each parent’s

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<sup>4</sup> I am very grateful for the help of Anna Higgitt MD in validating the adult diagnoses.

life and indeed the life of each of the child's siblings. This was an abundant area in most children's Social Histories, and it is very possible that important data was lost. For instance, it was noted if a child's parents had come from a different country, but not why they had come. In many of the cases treated at the Centre, the child's parents had experienced severe trauma, such as incarceration in concentration camps or other forms of persecution. A few of the children treated had themselves been exposed to these events before arriving in the UK. In some cases, there had been multiple bereavements, not of relatives very close to the child (which would have been recorded) but of people very important to the parents. Although obviously it was necessary to draw the line at some level of detail, and it was decided to focus on types of event likely to have had a **direct** impact on the child, this area of wider and long-term life events is one which could be investigated further.

The recording of socio-economic status was restricted to classification of each parent's occupation using the Registrar General's scheme, and recording of whether the parent was currently employed. The Registrar General's classification is somewhat crude, in that it places an occupation in one of five categories, and glosses over some details of a particular individual's work which might more appropriately place him in a higher or lower class in relation to others with the same broad job title. It also omits certain occupations, such as students and members of the armed forces, so that a proportion of the parents could not be classified. Notwithstanding this, it remains the most detailed and comprehensive listing and classification available for UK occupations, and seemed adequate for the importance of this variable in the overall dataset. It would have been desirable in addition to record the income level of the families studied, but unfortunately the details of each parent's work were rarely sufficient for this to be estimated adequately, particularly in the files written before 1970, when information about fathers' lives was often sketchy.

The coding of losses and separations was detailed, covering family breakdown, fostering / adoption / institutional care, multiple caretakers in early childhood, bereavement, hospitalisations, parental absences and early placement in boarding school. There was, however, no attempt to rate the severity of these events contextually (for the particular child in his circumstances). For instance, one child's mother died and he was briefly fostered by a family already known to him; another had multiple foster placements following the murder of his mother

by his father; there were other instances between these extremes. The extent of stress involved in the first case would probably have been less, but both would have been coded similarly in terms of losses. (The second would, however, also have rated highly in the domain of father's psychiatric history.) This raises similar issues to the previous discussion of life events; in having to be selective, inevitably important information is lost. However, what was achieved was the gathering of information in a consistent way at a level reported in almost every case. The family of the child whose mother was murdered was naturally described in great detail, but the events leading to losses in other children's lives were not often recorded sufficiently fully for a scheme of contextual ratings to be used with confidence.

Coding of parents' and siblings' physical illnesses was felt to be of relatively low importance, although in certain cases severe illness or disability in family members was clearly an important part of a child's history (one child, for instance, was brought up by totally blind parents, and the impact of this was very clear in the analytic material and process). During data collection, it became clear that the reliability of this information was poor, in that physical conditions were not necessarily recorded in the files, or if they were it was often with insufficient detail to allow useful ratings of type of condition and impact on the child. This information was therefore not used in further analysis in the present study, although it remains recorded. (A number of variables such as these identify children with unusual life events or circumstances; some of these have been subjects of more microscopic studies of the possible impact of these circumstances on analytic process and outcome.)

Parental psychiatric history was thought to be a very important domain of information, and the literature amply supports this. The details which had been recorded in treatment files were very carefully noted and coded on the data collection forms in this study, as either psychiatric diagnoses or important symptoms or treatment (usually more than one of these). The extraction and coding of information was performed reliably by well-trained raters, and checked by a senior independent psychiatrist. (Kappa figures for adult diagnoses were as high as or, in many categories, higher than those found in other studies (Mellsop et al, 1991). This is not surprising, as both internal and external judges in this study were using identical and rather limited information, rather than basing their judgements on separate interviews of patients, as is commonly done in studies of diagnostic reliability.)

Unfortunately, although the information available in this domain was carefully processed, it was inevitably uneven in quality and quantity. There were two main reasons for this. The first was that, particularly in the 1950s and '60s, fathers were frequently not interviewed as part of the assessment procedure or during the child's treatment; the information about their histories was therefore either missing or reported by the mother. (This indirect information was not used as the basis for judgments on diagnoses or symptoms unless there was corroborative evidence, or the details were unusually convincing, e.g. hospital admissions or prison sentence.) Even when quite a lot of detail was recorded of a parent's psychiatric history, this was not always specific enough to make a confident decision (e.g. as to whether a disorder was of clinical severity). Naturally, the primary concern of those assessing the child and working with the parents was the likely impact of parental psychopathology on that child; such impact does not correspond well to formal diagnoses. It was not possible to assume, for instance, if a mother was described by a social worker as "irritable and depressed in her relating to the children" that this referred to a state of clinical depression. Other symptoms and signs of depression (e.g. biological features) might well not be noted even if known to the social worker, because of their limited relevance to the child. In addition, it is of course likely that some parents concealed information about their own or their partner's psychiatric history, wishing to avoid the possibility that their child's disturbance would seem to be linked to their own.

The strategy followed in this study was a conservative one of looking for confirmation of information from more than one source where possible (e.g. two informants, or information consistent with verifiable life events). Where the information was vague or unsubstantiated, normally no diagnosis or symptom would be recorded (not even rated as "possible"). This obviously reduced the likelihood of false details being entered, but it inevitably meant some loss of information from the dataset. No strategy could avoid the obscuring of relationships with treatment outcome (which was rooted in the patchiness of the original information), but the cautious procedure adopted here was felt to be safest, in that any relationships which did emerge despite the limitations would be based on harder information and conclusions could therefore be more robust.

### 3.5.2. Child and clinical information

Recording of children's psychiatric diagnoses was generally based on far more detailed and specific information than that recorded for the parents, although this was not always true for the information available at termination. (This problem is discussed further in the next chapter, where outcome assessments are described.) The kappa coefficients of agreement for the child diagnoses were in line with those obtained in studies of the reliability of DSM-III-R and ICD-10 diagnoses (Silverman et al., 1988; Steinhausen & Erdin, 1991), with a similar pattern among categories of disorder. Affective and anxiety disorders, for instance, were less reliably diagnosed than disruptive disorders, which in turn had lower reliabilities than pervasive disorders, mental retardation and movement disorders. As for the adult diagnoses, where information at termination was scarce or tangential to the question of psychiatric diagnosis, a conservative approach was taken unless substantiating information could be found.

A psychoanalytic diagnosis, using the five category system adopted by Anna Freud (1965), was only recorded for around half of the cases because this system was only used in diagnostic profiles during the 1960s and '70s. It is also a rather broad classification scheme of untested reliability and validity. (Some check on the diagnostician's judgement of this category was provided in that all Diagnostic Profiles were discussed in a conference of senior staff at the Centre, and in some cases, the diagnostic category was then changed by consensus. When this had occurred, this revised classification was recorded for our purposes.) It was thought to be worth noting this diagnostic category as the only straightforwardly codable assessment of pathology and suitability for analysis in psychoanalytic terms, which might well be found to relate to treatment outcome. As the use of the classification was based on year of referral rather than type of pathology, the large amount of missing data was not felt to be a serious drawback.

Children's presenting symptoms at assessment were recorded on CBCL protocols. As stated previously, these protocols filled out from case files by researchers did not produce profiles comparable to those filled out in the normal way by a parent. It is interesting that when forms filled in by the research team were contrasted with those obtained from mothers and from the child's therapist, the therapist's ratings were closer to those of

the mothers. Inspection of differences in ratings and scale scores suggested that both mothers and therapists were scoring items if they were characteristic of the child, whereas researchers were only noting them if they were also abnormal. For example, if a three year old's behaviour tended to be mildly oppositional at home but not elsewhere (i.e. was well within normal limits), the mother and therapist typically endorsed items referring to defiance and uncooperativeness, while the researchers did not. Similarly, an adolescent who was reported to have occasional sulky moods might be described by the mother or therapist as sometimes unhappy, sad or depressed, whereas this item would have been left blank by the research raters. They were using the CBCL as a symptom checklist rather than a description of the whole of the child's behaviour. As would be expected from this, where some aspect of a child's behaviour was clearly abnormal, therapist, mother and researcher showed high agreement on ratings.

In general, information about the child's history and current adaptation (other than the referral symptoms) was recorded quite fully in the original treatment files, and was coded with high levels of reliability between raters. The major limitation to the usefulness of these variables is the likelihood that some parents may not have been asked or fully answered all the questions relevant to our items (e.g. about medical history, duration of current difficulties, previous emotional or behavioural problems). Parents naturally vary in their ability to recall details of their children's development. In addition, there are many reasons why parents might be unwilling to give full information (e.g. an earlier event or period of illness or poor adjustment might be painful to recount, or might undermine a parent's contention that the child's current problems are isolated difficulties in otherwise smooth development). It has been pointed out by Kazdin (1988, 1990) that parent reports are easily biased by maternal psychopathology (especially anxiety and depression), marital discord, stress and quality of social support.

It seems likely, however, that this biographical information was in general collected quite fully, because of the extended assessment (generally at least 5 interviews), the comprehensive content and systematic procedure for interviewing (the history-taking sessions are virtually semi-structured interviews) and the sensitivity of these highly experienced social workers to evasions, inconsistencies and distortions in parents' accounts. In addition, information usually continued to be collected over a period of some years following the child's assessment,

as parents were seen regularly in parental guidance, further details emerging then were included in the material from which the research team made their ratings.

One particular aspect of the history which did prove problematic to rate was the duration of the current symptoms. We attempted to estimate this for all diagnoses (e.g. if a child was diagnosed as showing both enuresis and overanxious disorder, the duration of each would be recorded). The difficulty lay partly in that psychiatric diagnosis was not of primary interest to the interviewers at the time, and the onset of particular symptoms was not necessarily dated accurately. The more common problem was, however, one which is probably encountered in other psychiatric research involving recording of chronicity. Symptoms often start insidiously, and may not be recognised as a problem for some considerable time. For example, a child may have been argumentative and aggressive from his second year, gradually progressing through the now well-charted career of the conduct disordered child, increasingly oppositional, later truanting, stealing, assaulting others. Even if the parent knows when various aspects of his disruptive behaviour first showed themselves, it is likely to be difficult (and of questionable value) to date the time when he moved on from oppositional defiant disorder to conduct disorder. In this study, the guideline was to date the disorder from the time that the criteria were probably first met (using the definition for a probable diagnosis given earlier in this chapter). If this was unclear, then the duration was coded as unknown. (In practice, the diagnosable disorders of over half of the cases were coded as of unknown duration, which was unfortunate given the possible relevance of duration of disorder to treatment outcome.)

This guideline on coding duration appeared to maximise reliability between different raters, but nevertheless led to some odd decisions. For example, a child whose development had always been abnormal, who began to meet criteria for autistic disorder in the third year and was referred for treatment one year later would appear to have a relatively short duration of disorder. Somewhat similarly, a child who had never been toilet-trained would only meet criteria for encopresis after 4 years of age, and enuresis after 5 years. This could again lead to a misleading coding for duration. In order to get round this problem, a further variable was introduced in which age at onset of symptoms of a disorder was recorded, separately from the duration of diagnosable symptomatology. This seemed

to preserve as much information as possible, and enhance reliability by separating two aspects which might otherwise lead to inconsistent ratings.

Information about the outcome of treatment was not always fully recorded in the case file, which posed an obvious problem in a study established to investigate predictors of outcome. In 32% of cases there was insufficient information to decide whether a diagnosis was applicable at the end of treatment. Similarly, it quickly became evident that it would not be worthwhile filling out symptoms at termination on CBCL protocols, as this information was likely to be too patchy (in a similar proportion of cases) to have much value. The weekly reports and closing summaries were very much focused on the child's internal world and the process of treatment, so that it was impossible to be sure that changes in symptoms and specific behaviours in outside situations were noted. In many cases, interviews with parents gave a fuller picture, but again the content of these was not always reported in the file. These considerations led to the strategy of assessing outcome primarily in terms of global adaptation, assessed by a measure which used precisely the sort of information on adjustment and emotional development which was most fully recorded in these treatment records (see Chapter 4).

### **3.5.3. Treatment information**

The details recorded on the child's treatment were fairly superficial. The most obvious aspects of treatment which would have been of great interest concern the content and the techniques involved, i.e. treatment process. It was felt that at this stage, in a study with hundreds of cases (with on average 100 weekly process reports per case) it would be too technically difficult and too time-consuming to attempt to extract process information systematically. In any case, the quality of these reports was very variable. The strategy adopted was to record the quality of these records for the selection of cases for future smaller scale studies, but to delay the attempt to record therapeutic process until this could be incorporated into a prospective investigation, or at least until relevant measures had been developed for coding these reports. (Such a measure has in fact been developed alongside the present study, and is described in Chapter 10.)

#### 3.5.4. General considerations

One general aspect of data extraction, which in some respects was a difficulty, was that for most items on the study proforma information was recorded in a way that made it easy to transfer details from the files, rather than in a form suitable for future analysis. An example of this would be the comment fields used to record details of a child's difficulties at school or a parent's medical history, the separate listing of various types of early separation, of details of each sibling, etc.. Some variables then needed to be summarised to extract significant aspects, such as the number of siblings older and younger than the patient, whether or not each parent had a current psychiatric condition, whether the child had a history of disrupted care through multiple separations, and so on.

The main reason for recording information less in summary form and more as a list of items within each field was that it should maximise reliability of data extraction, by minimising the amount of judgement and inference required of the people recording the information. The second consideration was that it was not always possible to predict which details would later be of interest; for instance, there might turn out to be very specific patterns of association between a child's symptoms and those of one or both of his parents. If only summary variables had been recorded about the parents' psychiatric histories, relevant details might not be available.

The method adopted was to stick closely to the level of description available in the notes, but then derive second-order variables to reduce the quantity of data to be entered into analyses of relationships between predictor and outcome variables. The additional detail would then still be available if an area seemed to have a particularly important or complex relationship to treatment outcome. It also allowed us to take account of the distributions of variables in deciding on cut-points, groupings, and so on. This process, of data reduction and variable transformations, is described in chapter 5.

### 3.6. CONCLUSION

This chapter has described the methods used in a retrospective study of 763 cases of child psychoanalysis and psychotherapy. The records available in the Anna Freud Centre archive offered an unusually systematic collection of demographic, clinical and treatment information on a wide variety of cases. Variables were identified from the literature as likely to be important in predicting either the course of a disorder or the outcome of psychosocial treatment; others were added if they seemed likely to be relevant specifically to long-term, intensive treatment. These variables were operationalised and recorded with a high level of reliability.

The next chapter concerns the assessment of therapeutic outcome in this study. An account is given of the development of a new global scale of child adaptation, which played an important part in this assessment. The use of this and other outcome measures is then described.

## **CHAPTER 4. DEVELOPMENT OF THE HAMPSTEAD CHILD ADAPTATION MEASURE AND THE COMPREHENSIVE ASSESSMENT OF THERAPEUTIC OUTCOME**

Chapter 2 described the three major ways of describing psychological functioning and symptomatology in child psychiatry. These approaches have complementary advantages, which were discussed in more detail in Chapter 2. This chapter focuses on the need to develop a new global measure to overcome some of the difficulties in using the CGAS scale (see section 2.3.3). This seemed vital because global assessments have the advantage of providing a single summary figure, appear to be more sensitive to change than overall figures derived from multidimensional measures (McGlashan, 1973; Endicott et al., 1976), and have considerable value in prediction of therapeutic outcome (see review by Luborsky et al., 1993). In this chapter, a new measure of global adjustment is described, which is essentially a manualisation of the CGAS. Initially, the CGAS was used in the present study, but it was found to have shortcomings, which other researchers and clinicians have also described (see below). It was therefore felt to be necessary to develop a global rating scale which incorporates aspects of dimensional systems for describing childhood functioning, and which addressed the difficulties which we and others had encountered in using the CGAS.

After describing the development of this new measure, the Hampstead Child Adaptation Measure (HCAM), four methods of indicating a child's adjustment and changes in treatment are outlined. These form the basis for the analyses to be described in subsequent chapters, in assessing the outcome of treatment in the Anna Freud Centre sample.

### **4.1. THE HAMPSTEAD CHILD ADAPTATION MEASURE**

#### **4.1.1. Background**

The development of global assessments of psychological functioning has been described in Chapter 2; some of the background will be repeated here where relevant to introduce the global measure used in the present investigation.

The first global scale of psychiatric impairment, the Health-Sickness Rating Scale (HSRS; Luborsky, 1962) was developed as part of the Menninger Foundation's Psychotherapy Research Project. The HSRS is a 'thermometer scale' from 0-100 points. Ratings are made by first considering to what extent the subject meets seven 'criteria of health', then deciding on the relevant area of the 100-point scale, comparing the case with specimen case descriptions for that range (34 specimen cases are provided, at least one for each five-point interval), then deciding on the most appropriate rating for the current case in relation to those of specimen cases. A review of 18 studies using this scale (Luborsky & Bachrach, 1974) concluded that the HSRS had been found to be both reliable and valid, showing expected relationships with a variety of other measures of adjustment, symptomatology, capacity for relationships and improvement in psychotherapy.

However, although the HSRS proved very useful, and established a place for global severity scales, some difficulties in rating were reported, and a new scale known as the Global Assessment Scale (GAS; Endicott et al., 1976) was developed. Endicott and her colleagues described difficulties in assigning HSRS ratings arising from the mixture of behavioural, historical, diagnostic and interpretive information in both the anchor point definitions and the case descriptions. In addition, there were some situations where the level of functioning was inconsistent, and guidelines were required to improve reliability. The GAS scale is similar in structure to the HSRS, but the anchor points are defined by behavioural descriptions, there are no case illustrations (these were felt to be of limited usefulness), and ratings are based on the lowest level of functioning over the previous week, with no allowance being made for the effects of any treatment. The GAS has been widely used, and has been shown to have good reliability and validity in a variety of contexts including face-to-face interviews, assessments based on secondary sources of information, and in comparison with symptom rating scales and other global measures of psychiatric impairment (e.g. Dill et al., 1989; Holcomb & Otto, 1988; Bird, Canino & Rubio-Stipec, 1987).

In 1983, a children's version of the GAS was reported, the Children's Global Assessment Scale (CGAS; Shaffer et al., 1983). Shaffer and his colleagues (1983) reported only a small study of the reliability and validity of the CGAS scale, but it has since been used in a large number of investigations (e.g. Steinhausen, 1987; Bird et al., 1987, 1990) which have

demonstrated that the psychometric properties of the scale are satisfactory. Nevertheless, both Steinhausen (1987) and Bird et al. (1990) pointed out a difficulty in using the CGAS which was also found in the present study, that it emphasizes diagnostic information and gives too little weight to prosocial functioning; some anchor points are illustrated almost exclusively by examples of symptoms. (This objection is similar to that raised against the HSRS, but is more serious since HSRS ratings require consideration of the seven 'criteria of health', three of which are concerned with positive adjustment). Steinhausen (1987) regards this as a 'major problem in using the CGAS in clinical practice'. Bird and his colleagues, whose Puerto Rican community studies included extensive validation of the CGAS, found the measure to be very useful, but they also point to the need for development of additional measures: 'it is important to develop more objective measures of impairment that take into account not only recalled behaviour and symptomatology, but also children's functioning in other areas, such as school performance, relationships to others, interests, or use of leisure time.... This is particularly true given the trend in epidemiological methodology towards one stage community studies involving the use of structured diagnostic instruments, administered by lay interviewers who may not be qualified to arrive at clinical decisions about impairment.' (Bird et al., 1990, pp.802). The measure described below was developed in an effort to meet this need, and in order to improve on the reliability of our CGAS ratings with chart material.

#### **4.1.2. Experience in using the CGAS in the present study**

The CGAS scale was used in this study to rate the level of adaptation before and after treatment in well over a hundred cases. This was because it seemed to be the best available and most widely used global measure. However, considerable difficulties arose which seemed to be because the anchor descriptions were too brief, too overlapping and too symptom-orientated. In spite of regular reliability checks and associated discussions of rating procedure, the intraclass correlation coefficient between any two raters stayed between 0.65 and 0.8. The correlation between difference scores, i.e. rating at time2 - rating at time1, was much more satisfactory (between 0.88 and 0.95), but the relatively poor inter-rater reliability for any one assessment period was a problem, particularly as the global adjustment rating was clearly going to be an important outcome criterion. As the validity of this rating was inevitably limited by its reliability, it was essential to

improve the measure being used. A project was therefore begun to write a raters' manual, describing and operationalizing the consensus which had evolved during the study about how to make CGAS ratings; this amplification of CGAS has been called the Hampstead Child Adaptation Measure.

#### 4.1.3. Conceptual issues involved in designing the Hampstead Child Adaptation Measure (HCAM)

In writing the raters' manual, one important aim was to devise a scale which would reflect prosocial functioning as well as impairment, and which would not measure impairment mainly in terms of psychiatric symptoms or diagnoses. The background to this thinking was partly the literature on the CGAS cited above (Steinhausen, 1987; Bird et al., 1990). It was also influenced by the psychoanalytic approach of Anna Freud, in particular her diagnostic profile and concept of developmental lines (Freud, 1962, 1963). The form of the measure was influenced by both the HSRS and the CGAS. The rating procedure using parameters of adaptation owed much to a measure of structural change developed by Wallerstein and his colleagues for use with adult patients (Wallerstein, 1988; de Witt et al., unpub.).

The general principles involved in making ratings were as follows:

1. The level of functioning described was the child's average or general level over the preceding month (rather than the lowest level, which was used in the Shaffer study).
2. Age range. Shaffer et al. restricted use of the CGAS to 4-16 year-olds, but the HCAM scale was designed to be used throughout the range of ages in this sample, i.e. 2-18 years.

This wide age range necessitated modifications to the criteria as required, in accordance with levels of development and dependence on the environment to be expected of children at different ages. An example of the sort of adaptation required was that for children below school-age, 'functioning at school' would be assessed in terms of the child's ability to cope with nursery groups, being looked after by substitute carers, relating to peers, and so on. Here, the factors challenging the child's capacity for adaptation (e.g. peer competition,

enforced socialisation with adults, separation from caregiver, accepting guidance and instruction from others) were abstracted from the more advanced developmental setting and applied to an analogous context appropriate to a younger age group. Extrapolations of a very similar nature were made in the case of older children. For example, for older adolescents one would need to consider the patient's ability to cope with college or employment, get along with colleagues, superiors and others, with greater independence from the family.

3. The child in context. The intention in assigning HCAM ratings was to represent numerically the psychological functioning of each child in comparison with that of other children, given the biological and physical situation with which the child was faced. In particular, it was very important to take into account the child's age, environment and physical endowment.

It is debatable whether ratings should be made on an absolute or relative basis, for instance, whether a deaf child should be compared with an average child of his age, or with an average deaf child of that age. There are advantages to each method, but the most essential thing is that raters always apply the same principle, rather than rating different children on the basis of different criteria.

The decision in the case of the HCAM scale was to differentiate between psychological functioning and relationships, and other forms of adaptation or impairment. Thus, if a child's activities were inevitably restricted due to living in an institution, or to a physical handicap, then the HCAM score assigned was higher than the score given to a child showing similar restricted behaviour for psychological reasons. However, if the child's behavioural impairment was attributable to poor intellectual functioning, impaired relationships (even if due to another person's pathology) or to the emotional or cognitive consequences of physical disabilities, social adversity, etc., then raters were asked to reflect this in the score.

It is important to give examples of this. If a blind child's academic performance, independence, peer relationships, sporting activities, etc., were restricted by his handicap only to an average extent, then the child would be rated well-functioning. However, if the child showed maladaptive behaviour because he had become angry and depressed in response

to his handicap, then this would lower his HCAM score, **even though** such feelings and behaviour are very understandable and are known to be more common among handicapped children. Another important example is that if a child's relationship with his mother was poor because his mother was mentally ill, or his play and interests were restricted to avoid causing her anxiety, the child's adaptation would be rated as impaired. This is because the effect of the mother's illness could not be regarded as a fixed, external factor, such as a physical disability or lack of environmental opportunities, but probably had its effect through the emotional impact of her condition on the child. The child's restricted play is evidence of psychological impairment in a sense that the blind child or one in physically cramped conditions may not be. An illustration from the Anna Freud Centre study may clarify this further. There were two cases in this study of boys whose mothers were paranoid and reclusive. One had responded by avoiding contact with other children, originally to avoid setting off more paranoid ideas about them in his mother. He had become isolated, rather depressed and obsessional. The other boy had not brought friends home, but was popular at school, played outside and occasionally at other children's homes (risking his mother's anger at times). Both boys were regarded as having poor relationships with their mothers, but only the first as having impaired peer relationships.

4. Distinction between normal and abnormal functioning. Following the CGAS guidelines, scores in the highest three categories, i.e. above 70, were provisionally regarded as falling within the normal range; children assigned scores below 70 were seen as clinically disturbed. This division was supported by the observation that, in the present study, children rated below 70 mostly met the criteria for at least one psychiatric diagnosis.

#### 4.1.4. Scale definition

The HCAM is a 100-point rating scale, with detailed descriptions of the level of functioning represented by each decile. Each decile has also been illustrated by a case from the Anna Freud Centre archive. Raters decide on the relevant decile by reference to the anchor descriptions, and the case illustrations; within the decile, a specific rating is then chosen by considering the child's development in relation to sixteen parameters of adaptation, and the guidelines for assigning a rating. The full manual is given as Appendix 4.1; below the scale points, parameters and guidelines are outlined.

#### 4.1.5. Scale points

1. Excellent functioning (100-91). The child in this group is managing unusually well in all important areas of his life. He has good relationships with parents and siblings, is popular with peers and well-liked by teachers and other adults. He has a wide range of interests, and participates in a variety of activities. He is exceptionally mature, equable, copes well in all normal situations and obviously enjoys life.

2. Good functioning (90-81). The child is developing well (i.e. at least an average level for his age) in all areas. He is usually co-operative and pleasant, forms positive relationships with those around him, and makes good use of his abilities and skills both at school and in pursuing extra-curricular interests. The child has generally good relationships within the family, with both parents and siblings, although there may be some areas of minor conflict at times. The child copes quite comfortably with everyday situations, but this may break down partially at times of unusual stress, so that the child becomes mildly unsettled, for instance anxious, insecure, or irritable.

3. Adequate functioning (80-71). The child generally copes at school, at home and elsewhere. He has friends and is able to pursue his own interests. He is regarded as being generally of average maturity and competence for his age. This category would be used where the child has been showing a mild symptom, such as bedwetting, temper tantrums, hostility towards a sibling, mild phobic rituals, disobedience, poor school work, impaired relationships with peers, but where this is felt to be a **temporary** reaction to identifiable stress. Alternatively, the child may have longer-term but very minor symptoms (not warranting a psychiatric diagnosis), such as occasional incidents of bed-wetting in an under-five, a poor relationship with one sibling, a tendency to minor psychosomatic symptoms (e.g. occasionally has stomach-aches before school). The child is functioning normally in other areas of his life, and is certainly not regarded as disturbed or generally difficult by those around him.

4. Mildly impaired functioning (70-61). The child functions fairly adequately in most situations, although his ability to cope is rather patchy and liable to break down under stress. He is usually accepted by those around him and may have friends. He has the capacity to act effectively and in accordance with his age but this is not demonstrated

consistently. The child in this category will usually be worrying his parents and either worrying or annoying his teachers, but his symptoms may not be evident to acquaintances. Examples common in the AFC files would include: children who have developed a school phobia but do continue to attend school with considerable support, who have some minor obsessional symptoms confined to the home, who have an entrenched 'battling' relationship with a parent, nightmares or other sleep disturbances, regular bed-wetting or occasional soiling in a child over 4 years, stuttering, excessive difficulty in separating from parents, a specific learning disorder such as reading retardation, and so on. A child with more than one of these difficulties would usually be placed in the category below.

5. Significantly impaired functioning (60-51). The child shows variable adjustment, coping with some aspects of his life but not with others. (For example, he may manage adequately at home but not in school, or vice versa.) He may have friends and be capable of pursuing interests, but he will probably be seen as seriously lacking in some way (for instance in confidence, or by often being excessively aggressive or anxious). This category is used where the child shows more than one established difficulty, such as those listed above, but the disturbance still does not affect most areas of the child's life. The level of impairment in any area would not be more than mild - moderate. If the disturbance is more global, or there is a severe symptom affecting an important area of the child's life, then the category below is appropriate. An example of children seen who would be placed in this category would be a child who has for a considerable time shown a specific learning difficulty of moderate severity, resisted going to school and had battles with parents over homework, but who has good relationships otherwise within the family, with peers, and with teachers, enjoys a range of sports, and is not generally an anxious child.

6. Moderately impaired functioning (50-41). The child is regarded by others as a definite problem. His level of functioning is below expectation in all areas of life. Although he is capable of relating to others adequately, and does so at times, his relationships are more often severely disturbed by, for instance, anxious, aggressive or negativistic behaviour. His friendships and occupations are very limited, generally immature, lacking social sensitivity and depth of engagement. The difficulties of a child in this category inevitably affect most of his life, and the disturbance will be obvious to observers. The child can generally be managed with difficulty within the home and mainstream schooling, but will be causing

considerable concern to all adults involved with them, and is likely to have only poor peer relationships, if any. The symptoms will be established, not transient, but the child will still be able to understand the demands of external reality and to cope with them fairly well when not immediately involved in his symptoms (when not caught up in, for instance, obsessional rituals, or uncontrolled aggressive attacks).

7. Severe impairment of functioning (40-31). The child in this category will probably be unable to use ordinary schooling, requiring special educational or medical provision. The child has difficulties in all areas of his life. Most of his relationships are severely disturbed, marked by withdrawal, aggression or anxiety. There may be occasional glimpses of more normal behaviour but the child is unable to sustain this for any length of time. No significant area of the child's life is free from emotional difficulty and his disturbance is obvious to the most casual observer. It is seldom that such a child can be accommodated within mainstream education; nor is he often able to participate in peer-group activities or to sustain any pleasurable relationships. However, at times when he is not totally dominated by anxieties, psychotic experiences or aggression the child may have brief periods of more normal behaviour, and is usually capable of short periods of age-appropriate involvement with people and in any activity that particularly holds his attention. The child may be a serious risk to himself or others, or to property, through destructive or suicidal behaviour.

8. Gross disturbance of functioning (30-21). The child shows serious defects in all areas of functioning. He is unable to communicate with, or relate to, people in a socially appropriate way. His speech will usually be difficult to understand, the meaning being bizarre or incoherent, and sometimes also because of poor articulation. Any interest shown by the child is likely to be directed towards objects rather than people, and will probably be inappropriately maintained, being either all-consuming and obsessive, or else transient. A child whose functioning falls within this category is likely to be regarded as brain damaged, autistic or psychotic, incapable of most simple acts of social and intellectual functioning. The child may be self-mutilating, e.g. pulling out hair or head-banging, and may appear to seek this out as a form of stimulation or self-expression. However, although a child or adolescent might kill himself, e.g. by drinking poison or setting light to his clothes, he is unlikely to be capable of a truly intending a suicide attempt.

9. Very poor and dependent functioning (20-11). The child functions at a very low level indeed in relation to all the norms for his age, being unable to cope without a great deal of extra help and supervision. He shows extreme impairment in even basic tasks such as toileting and feeding. He may be severely destructive and/or self-mutilating, but this is likely to appear unthinking as well as uncontrolled (deliberate destructiveness and suicidal attempts are more typical of the two categories above). He is unable to relate acceptably to other people and may show lack of control over aggressive, violent or sexual impulses. Whereas a child in the category above might be manageable at home (with special schooling), the child in this area of the scale would very probably be looked after full-time in an institutional setting.

10. Minimal psychological functioning (10-1). The child needs constant care and attention, both day and night. The child shows gross impairment in every part of his life and is unable to relate to others or to communicate in any effective way. Children in this category would be mostly those who have suffered gross physical damage, such as severe brain injury leading to coma.

#### **4.1.6. Parameters of adaptation**

Through inspection of the Social Histories and Diagnostic Profiles of 45 cases included in the chart review, a list was compiled of fifteen parameters of adaptation; these were major areas of functioning in which one could trace expected lines of development as a child got older. The fifteen parameters are shown in Table 4.1.

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### Parameters of adaptation

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1. Responsibility for own body needs.
  2. Capacity for work and learning.
  3. Play, hobbies, interests.
  4. Frustration tolerance, impulse control.
  5. Relationship with parents.
  6. Relationship with siblings.
  7. Relationship with peers.
  8. Relationship with adults outside family.
  9. Confidence and self-esteem.
  10. Capacity to cope with anxiety.
  11. Level and lability of mood.
  12. Psychosexual adjustment.
  13. Moral development.
  14. Resilience of physical health under emotional stress.
  15. Adaptability to changes in routine.
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Table 4.1. Parameters of adaptation in the HCAM

Examples of positive and negative indications within each area were described, and guidelines were developed for rating children of different ages. These are shown in Appendix 4.1.

#### 4.1.7. Rating procedure

In any particular case, some parameters would be given more weight than others. The general procedure for arriving at an overall rating was:

1. To decide on the general region of the scale in which the case seemed to fall, on the basis of comparisons with the case examples.
2. To consider, for each parameter, how well the child was functioning in relation to other children of his age and general situation. Factors to take into account included

the child's social competence, his ability to make full use of his intellectual and physical capacities, his independence, the quality of his relationships. If the child's adaptation was consistent across the various parameters, then the overall rating would reflect the generally superior, average or poor level of adaptation. In certain cases, there would be marked unevenness in the child's development in the different areas. Where the range was from average to superior functioning, this might present few difficulties. However, where a child was functioning successfully in some areas but well below the usual level for his age in others, this unevenness in itself constituted a problem, and was taken into account in assigning a rating.

3. The various parameters would to some extent be weighted differently for children of different ages. The youngest children (pre-school) would be rated mainly on relationships within the family, development of ability to look after body needs, tolerance of frustration and stress, language and motor development, etc.. Ratings for older children increasingly give priority to peer relationships, relationships with adults outside the family, ability to work and pursue interests, self-esteem, sexual adjustment, development of moral and other values.

4. Consideration was given to whether apparently poor development in any particular area was distressing and unwanted by the child or not. This could affect the rating either positively or negatively. In some cases, an area of difficulty only constituted a serious problem when it caused unhappiness to the child. For instance, a child who had few friends by choice, because he enjoyed his own company and preferred more solitary interests, would have been regarded as functioning on a higher level than a child with similar social relationships who was unhappy and lonely, and tried unsuccessfully to make friends. However, both would have been rated less highly than another child who had good, satisfying relationships with peers. On the other hand, a problem might be more worrying if it was 'ego-syntonic'. For example, an 8 year old with daily encopresis who did not acknowledge that anything was wrong would have been seen as more disturbed than another who felt concerned and wanted help. The distinction was between acceptable personality traits (such as solitariness) and symptoms (such as social anxiety or encopresis); in the case of symptoms it was seen as more adaptive to recognize these, and to wish to change.

5. Where symptoms were present, their pervasiveness, chronicity, effect on the child and his environment, and the degree to which treatment was indicated, all had to be considered. More weight was attached to apparently entrenched characteristics than to changes in mood or ability to cope which were related to identifiable, temporary, stresses. Similarly, close attention was paid to the child's overall progress in development. If a child had fallen behind others or showed symptoms in certain areas, but seemed nevertheless to be developing and maturing to some extent, then a higher rating would be indicated. On the other hand, a child showing similar difficulties whose development seemed to be 'stuck', or even in retreat, would be rated as more impaired, perhaps being placed in the decile below.

#### 4.1.8. Psychometric properties of the HCAM scale: preliminary data

The reliability of HCAM ratings was tested by the present author and two assistants, who independently rated 50 randomly selected cases from the chart review for their adaptation at the beginning and end of treatment. Reliability figures for the CGAS scale had been established by the same raters on 50 cases earlier in the study, when the intention had been to use the existing CGAS scale without modification. In every comparison, change scores (the difference between the start and end of treatment) were highly reliable; raters differed more in their assessments of the absolute levels of impairment (see Table 4.2).

	CGAS (n = 50)	HCAM (n = 50)
ratings	0.75	0.85
change scores	0.88	0.91

reliability figures are all intraclass correlation coefficients

Table 4.2. Inter-rater reliability of CGAS ratings and HCAM ratings

Manualization considerably improved the reliability of these ratings of adaptation. Change scores were highly correlated between raters on both the CGAS and the HCAM but,

at least in this context, HCAM turned out to be a more reliable indicator of change as well as of general level of adaptation.

Concurrent validity was assessed by calculating the intraclass correlation coefficients between HCAM ratings, number of psychiatric disorders, severity of principal diagnosis, and the 3 major Achenbach CBCL scores; all these had been assigned to 657 children and adolescents aged 4-18 as part of the retrospective study. (Children aged under 4 yrs were excluded because a separate CBCL form applies, and because psychiatric diagnoses were quite infrequently given to 2-3 year olds.)

	correlation coefficient
total CBCL score	-0.514 ***
total CBCL internalising symptoms	-0.386 **
total CBCL externalising symptoms	-0.385 **
number of psychiatric diagnoses	-0.361 *
severity of principal diagnosis	-0.322 *

\*\*\* p<0.001 \*\* p<0.01 \* p<0.05

Table 4.3. Intraclass correlation coefficients between HCAM scores and five variables reflecting symptomatology and psychiatric status.

HCAM score was found to have a strong relationship with the total CBCL score, which reflects the number of presenting symptoms the child was recorded as showing at referral. There were weaker but still sizeable correlations with the number of internalising symptoms, externalising symptoms and diagnoses, and with the severity of the child's main diagnosis.

#### 4.1.9. The recording of HCAM ratings in the Anna Freud Centre retrospective study

The child's overall level of functioning was rated on the HCAM at the beginning and end of treatment. Initially, the intention was to rate the child's level of adaptation at regular intervals through the period of treatment, to avoid confounding the degree of change in adaptation scores with length of treatment. However, unfortunately it emerged that there was often insufficient information to make a reliable rating during the course

of treatment. The reason for this was that information recorded tended to be restricted to the process of therapy, and changes in the psychic functioning of the child as evidenced in this therapeutic material. Events outside the treatment sessions, even when gathered in interviews with parents, were often not noted. This meant that changes in the child's external adaptation (for instance, in the original referral symptoms) were often omitted, or referred to months later without any clear indication of when changes had occurred.

Even level of functioning at the end of treatment could not always be assessed. As this was crucial to any assessment of outcome, additional interviews were carried out with staff (most often the therapist, the PSW who had worked with the parents, or both) for most of the cases where information was scanty at termination (approximately 90 cases). When the information available from these staff seemed sufficiently detailed and consistent with other evidence (e.g. school reports of which staff had copies which had not been placed in the file), it was added to the information previously recorded. These interviews sometimes allowed an HCAM rating to be assigned, and brought the number of cases without outcome information down to 9% of the sample.

#### **4.2. SELECTION OF OUTCOME MEASURES FOR THE RETROSPECTIVE STUDY**

There is no simple way of assessing the outcome of child analysis. The measures chosen in this study as the main basis for outcome assessment were psychiatric diagnosis and HCAM ratings, particularly the latter.

Psychiatric diagnoses were regarded as important partly because they are so generally used and understood in clinical and research settings, and partly because the criteria for making diagnostic judgments have become increasingly explicit and well-founded. However, a serious difficulty in using these judgements as the basis for outcome assessments in this study was that in about  $\frac{1}{3}$  of cases there was insufficient information at the end of treatment to make a confident assessment of the child's diagnostic status. Similar considerations applied to the option of using CBCL ratings at the end of treatment as well as at referral. The reports in the child's file tended to have a wealth of information on aspects of the

child's development and adjustment, from which an overall rating could be reliably made. However, the treatment material in the files often did not contain the specific details (e.g. frequency of particular behaviours, presence of eating or sleep disturbance in a possibly depressed adolescent, severity of anxiety symptoms in different settings) required for assessing diagnostic criteria or for completing a detailed symptom checklist with any validity.

In contrast, it was found that there was sufficient information to make global adaptation ratings in all cases at referral, and in the large majority of cases at termination, especially because these were based as much on prosocial adjustment as on symptomatology. As described above, in about 5% of cases, where there was too little information to make an HCAM rating, the original records were supplemented by information from interviews, provided that this information could be adequately substantiated. Although consideration of this extra information sometimes allowed an HCAM rating to be assigned, it did not necessarily allow a diagnostic decision to be made, because again there tended to be too little precise detail (or only detail of a different kind) for the consideration of diagnostic criteria or CBCL items. HCAM ratings at both assessment and termination were available on over 90% of the full sample. These ratings, and the difference between referral and termination scores, were therefore made the primary basis for measures of therapeutic outcome.

#### 4.2.1. The measures of outcome

Four indices of outcome are used in this study. First, two ways of assessing whether the child should still be regarded as a "case".

(1) Diagnostic caseness at the end of treatment. The child was classified as still being a case on this criterion if he still showed any diagnosable psychiatric disorder at termination, and if his adaptation (HCAM) rating remained below 70. This criterion follows the CGAS definition of 70 as the cut-off between normal and abnormal functioning (Shaffer et al., 1983), which has been used in a number of studies (e.g. Steinhausen, 1987; Bird et al., 1990) together with psychiatric diagnosis to define clinical caseness.

(2) The child could be considered to be still a case on grounds of maladjustment (based on HCAM score at termination). The Jacobson & Truax criteria (1991) for clinically significant improvement were used. These authors propose three methods for determining cut-off points, which in this case all yielded similar results. The criterion chosen used Jacobson and Truax's formula for calculating the relative likelihood of being in the functional or dysfunctional population, based on the point of equal distance between the means of these two populations, weighted by the distributional properties of each population. The formula for calculating this cut-off is given by Jacobson & Truax as:

$$\text{weighted relative likelihood index} = \frac{s_0 \times M_1 + s_1 \times M_0}{s_0 + s_1}$$

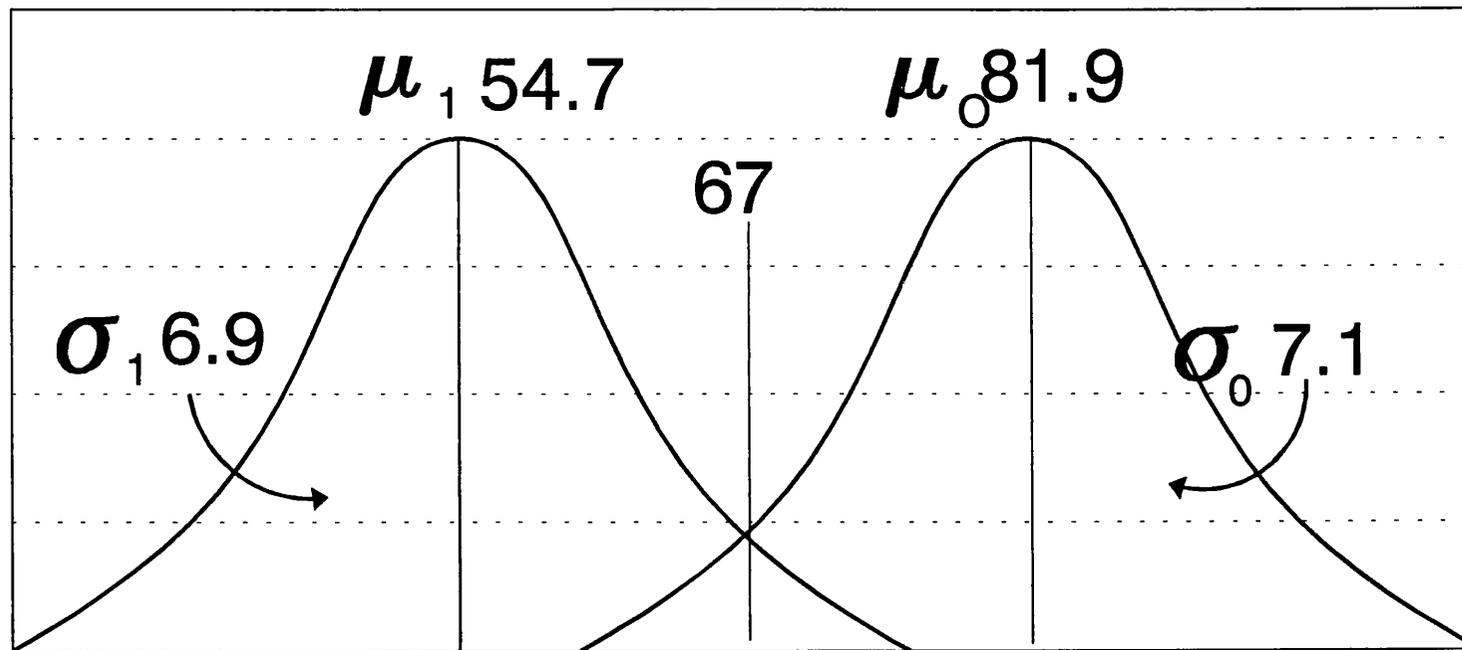
where  $s_0$  is the standard deviation (s.d.) of the normal group, and  $M_1$  is the central point of the dysfunctional group. Data from Bird et al (1987) using the CGAS scale were used to estimate the s.d. and mean of the non dysfunctional population. Data from the present study's sample was used to estimate population means and s.d.s for a dysfunctional group. HCAM ratings at termination of less than 68 identified cases who still belonged to the dysfunctional group. The two distributions were clearly discrete (see Figure 4.1).

(3) The third indicator of outcome used clinically significant improvement, as opposed to no longer being a case, as the criterion. Children were categorised according to the presence of statistically reliable change in adaptation level, based on the method proposed by Jacobson et al. (1984), and modified by Christensen & Mendoza (1986). This uses the standard deviation of the dysfunctional group, together with inter-judge reliability of the measure, to indicate the size of change necessary to identify cases where change could not be due to measurement error and chance fluctuations. The index of reliable change in HCAM ratings is given by the formula:

$$\text{reliable change} = 1.96 \times \sqrt{2} \times s \times \sqrt{(1-r_{xx})}$$

where  $r_{xx}$  is the best estimate of inter-rater reliability.

**Frequency**



**HCAM/CGAS Value**

**DYSFUNCTIONAL**

**FUNCTIONAL**

Functional Distribution Based on Bird et al (1988)

Figure 4.1. Distribution of CGAS / HCAM ratings in the functional and dysfunctional populations

For the full sample, this gives a reliable change index of 8 points; i.e. a child whose rating increases by at least 8 points can be considered to show definite improvement, even though he may still be psychiatrically diagnosable and maladjusted. Unlike the previous two measures, this looks for clinically noticeable change rather than 'cure'.

- (4) The fourth outcome indicator was a measure of the extent of improvement (or deterioration) in functioning: the change in HCAM ratings was used as a continuous variable in analyses of variance and in predictions of the extent of improvement.

### 4.3. DISCUSSION

HCAM offers several advantages, and not only for the purposes of the present chart review study. The most obvious of these is its improved reliability in comparison to the CGAS, which presumably results from the detailed specification of parameters to be considered in rating the child, and guidelines about how to assess the child in each area. In addition, consideration is given to the weighting of parameters and to the assessment of aspects of symptomatology. Case illustrations were given from children in the chart review. It was found to be essential to outline procedures for rating special circumstances affecting adaptation, such as physical handicap and extreme environmental stress. One serious difficulty in using the CGAS scale had been that it was completely unclear whether to rate a child as maladjusted if, for example, he was showing (common) emotional symptoms following bereavement, during a chronic illness, or in response to abuse. Another aspect which we, along with others using the CGAS clinically, saw as important was that there should be more emphasis on prosocial adaptation, and less definition of adaptation in terms of symptoms and treatment recommendations.

As it involves assessment of the child in fifteen different areas of adaptation and development, the new measure could quite straightforwardly be extended for use also as an instrument producing a profile of fifteen scale scores, retaining the information used to arrive at the global rating. This would require assessment of the reliability and validity of judgements for each parameter or scale, which would be likely in turn to require the specification

of detailed norms for each scale within several age-bands, so that separate ratings could be made with adequate reliability. However, this would be a logical (and, in fact, desirable) extension of the existing manual.

It has to be acknowledged that there is no simple, or single, way of describing the results of child analysis. Psychoanalysts will feel that the assessment of effectiveness in terms of improved adaptation and reduced symptomatology falls far short of the scope of the psychoanalytic enterprise. There is little of analytic interest in this factual, often superficial, information. Analysts would look for data on the nature of the dynamic psychopathology, as opposed to the symptomatology, and on the nature of the analytic experience, e.g. transference manifestations, conflicts, defences, and so forth. This sort of data presents an enormous measurement problem, and would require a great deal of time from analytically-trained or at least analytically-informed researchers, prepared to adapt their expertise to the different discipline of empirical research.

Measures of "structural change" (alterations in the child's presumed psychic apparatus) are as yet unavailable for children (but see Wallerstein, 1988). In any case, they could be applied to chart data only with great difficulty. Further, the value of this database is in some respects increased by outcome assessments which involve some indices in current use in modern psychiatric research, and others, such as the HCAM, which are designed to be understandable and usable by anyone with experience of child development and disorder. It was a deliberate choice not to attempt to assess outcome in terms specific to psychodynamic theory and practice. (This issue is discussed further in the concluding chapter of the thesis.) This choice means that we have measures of outcome based on information which is accessible, reliably recorded and relies as little as possible on inference and theoretical interpretation. It is therefore meaningful and informative to the wider public of those concerned with treatment of children and with outcome research. This information is then used as the basis of four measures of change during treatment which allow examination of different aspects of outcome: whether the child remains a case, whether his adjustment has improved significantly (more than might be accounted for by chance or measurement error), and the magnitude of any improvement in adaptation.

#### 4.4. CONCLUSION

In this chapter, an attempt has been made to develop a new measure of global adaptation in children and adolescents. This measure was conceived in response to criticisms of the most widely used instrument, the CGAS scale. The Hampstead Child Adaptation Measure offers conceptual and psychometric advantages, and has formed the basis (together with psychiatric diagnoses) for measures of clinically significant change during psychotherapy. These measures provide ways of representing four types of improvement, using both categorical and continuous variables. They therefore allow flexible assessment of change for use in predictions of therapeutic outcome.

## CHAPTER 5. DERIVATION OF NEW VARIABLES, AND DIVISION OF THE SAMPLE INTO BROAD DIAGNOSTIC GROUPS.

### 5.1. INTRODUCTION

Chapters 3 & 4 outlined the variables regarded as critical in the assessment of psychotherapy outcome in the AFC retrospective study. The variables collected represented an exhaustive set of pertinent characteristics of each child and his/her family and the treatment they received at the AFC and elsewhere. Three categories of variables were identified (see section 3.2) and justified in terms of previous epidemiological and clinical investigations.

Information was collected on all variables. Although the sample size is large, it is clear that adequate treatment of the data required a reduction of the number of variables to a key subset, and the subgrouping of subjects into clinically meaningful clusters. The reasons for this are as follows:

- (1) Statistical power is a key limitation on most outcome investigations (see Kazdin, Bass, Ayers & Rodgers, 1990). Exhaustive analysis of all variables would lower statistical power, and call for a massive adjustment of alpha levels.
- (2) Diagnostic groups would be too small to be meaningfully discussed, if they were to be kept as individual diagnoses, rather than grouped into umbrella categories.
- (3) Reliability of individual measures is enhanced by aggregation which removes unsystematic (error) variance.
- (4) Many variables are only of limited meaningfulness by themselves, and need to be considered in relation to other variables which provide an appropriate context. For example, separation needs to be qualified in terms of the child's age at the time, and the reason for the separation (e.g. separation due to loss of caregiver, or hospitalisation).
- (5) Some variables reflected single episodes of particular events, which may be expected to accumulate across time, and to have greater effects if they were repeated or chronic. Thus, stress, medical diagnoses, etc. all need to be considered quantitatively as well as in terms of presence or absence.

(6) Many variables were collected with sound theoretical justification, but their retention could not be justified empirically. The primary reason for this was the rarity of occurrence of certain conditions. A second important reason for eliminating variables was insufficient information and consequent unreliability of the material on which judgments could be made.

The databases contained 180 variables in total on 763 subjects. The databases were relational in structure, the structure of the databases is given in appendix 5.1.. Relational databases are the most appropriate for storing information efficiently where specific items (variables) occur with an unknown frequency for each case (Vossen, 1990). For example the number of diagnoses will vary for each child (in practice, from 0 to 12 including both ICD and DSM categories). A database of diagnoses, where each record represents a single diagnosis of a single case, is an efficient way of storing this information if there is a case-wise link to a database where unique information on each child can be kept, e.g. age, gender, SES etc.. A relational database, however, is not suitable for statistical analysis, which requires a "flat" database. It was the first task of data analysis to convert the relational database files to a single, flat database on which univariate and multivariate statistical analysis could then be undertaken. This chapter will describe the key steps involved in creating this database, and report the characteristics of the sample in terms of this reduced dataset.

The aim of this chapter is thus two fold. The first section will describe the variables used in the outcome investigation reported in chapters 6-9. This first, method section will aim: (i) to describe the entering of variables into databases, and the introduction of further variables, derived from the data originally collected; (ii) to present the method used for the division of the full sample into seven diagnostic subgroups, for the investigation of treatment outcome in subsequent chapters. (iii) to describe the selection of key variables from the different database files, to form a "core" file for use in analyses of outcome, and the further reduction of the number of possible predictors by factor analysis to identify highly correlated variables.

The second section will report the data obtained on these variables and describe the sample. This results section will aim:

(i) to give an outline description of the sample in terms of the main variables already discussed; (ii) to highlight aspects of the sample which affect the comparability of the outcome data obtained with other studies (both epidemiological investigations and treatment outcome studies).

## 5.2. METHOD

### 5.2.1. Database structure, and derivation of further variables.

The data collected on the proforma (Appendix 3.1) was entered into a set of database files covering information in different domains. The distribution of each variable was then inspected, and its usefulness considered, to decide where variables could be deleted or aggregated. An example of a variable deleted was that information on diagnosable disorders (psychiatric or physical) of the child's siblings was rarely recorded, and seemed unlikely to contribute to prediction of outcome.

Examples of variables aggregated included a number of demographic and diagnostic characteristics which had been recorded for each parent separately; these were used to derive new variables summarising information about the family as a whole. These new family variables are shown in Table 5.1.

new variable	derivation
social class	class of father's occupation, or if none, then class of mother's occupation
parents' geographical origins	codes giving combined codes from codes for each parent, e.g. both British; one European, one British; etc.
parents' religious affiliations	as above for each parent's religion, e.g. both Christian; one Jewish, one Christian; etc.
parents' diagnostic status	from each parent's diagnostic status, e.g. both well; mother ill, father well; not known; etc.

Table 5.1. Family variables derived by combining separate information on each parent.

Similarly, the important information about parents' psychiatric histories and treatment was contained in 18 categories for each parent, separately for past history and current state. It was decided to create some summary variables for this domain also, which would condense this information and reduce the number of variables to be used in attempting to predict outcome. The new variables are shown in Table 5.2 below. The key parameters were paternal or maternal pathology, and whether the pathology was current or past, the severity of such pathology, the presence of specific symptoms of anxiety, depression and antisocial behaviour.

new variable	derivation
severe maternal disorder, at any time	any of 12 psychiatric conditions rated 2, i.e. severe
severe paternal disorder, at any time	
moderate maternal disorder, at any time	any of 12 psychiatric conditions rated 1, i.e. moderate
moderate paternal disorder, at any time	
severe maternal disorder, current	any of 12 current psychiatric conditions rated 2, i.e. severe
severe paternal disorder, current	
moderate maternal disorder, current	any of 12 current psychiatric conditions rated 1, i.e. moderate
moderate paternal disorder, current	
mother anxious	either OCD or other anxiety disorder, rated at least moderate, at any time
father anxious	
mother depressed	bipolar or depressive disorder (including puerperal depression, for mother), rated at least moderate, at any time
father depressed	
mother antisocial	violence within or outside family, or substance abuse, rated at least moderate, at any time
father antisocial	

Table 5.2. Variables derived by combining psychiatric history information on each parent.

Other variables were introduced in most of the database files, especially to recode information which had been listed under a single variable with different codes for different types of item. An example is that difficulties reported by the child's school could be listed, with six types of difficulty identified by six codes for a single variable. This was broken down so that each of the six types of problem was separately recorded as present or absent, then the total number of separate problems reported by the school was also recorded. The resulting variables relating to school difficulties are shown in Table 5.3. Seven aspects of school-reported difficulties were coded, six specific forms of difficulty and the total number of different forms of difficulty.

variable	codes
disruptive behaviour	each rated present or absent
underachievement	
specific learning difficulty	
school refusal	
disabling anxiety at school	
poor peer relationships	
number of separate problems described by school	0 to 6 (sum of above items present)

Table 5.3. New variables for recording school-reported difficulties.

Medical events (illnesses, accidents, etc) were dealt with similarly, with additional variables added to indicate whether a child had either severe or frequent events of a particular type (e.g. frequent acute illnesses, major operations). These codes were also combined to create a variable indicating the presence or absence of a significant medical history, defined as a history of any severe or frequent medical condition or event. These variables are summarised in Table 5.4. The number and severity of medical problems were separately identified, and a global variable was created to indicate the presence of severe or multiple medical problems.

variable	codes	
number of accidents	0	none
number of serious acute illnesses	1	one
number of disabilities	2	multiple
number of serious chronic illnesses		
number of surgical operations		
severity of accidents	0	none
severity of serious acute illnesses	1	moderate (hospital admission)
severity of disabilities		
severity of serious chronic conditions	2	severe (admission $\geq$ 1 week)
severity of surgical operations		
medical history	any of the 5 categories either severe or multiple	

Table 5.4. New variables for recording medical problems.

### 5.2.2. Data reduction

Data reduction followed four steps. The original list of variables is presented in Appendix 3.2. The first step was to eliminate all variables for which insufficient data was available to warrant inclusion in the flat, core database. 11 variables were deleted at this stage. Examples of deleted variables include psychiatric and medical histories of the child's siblings.

The second step was to review the database for variables which, on theoretical grounds, would be considered important as a) measures of outcome, b) predictors of outcome, c) covariates or conditioning variables, d) important characteristics of treatment offered. Attention was given to identifying a sufficient number of variables from each of the domains which the study attempted to examine, see section 3.3.1. 102 variables were retained.

The third step examined the distribution of these variables, and the variables created by aggregation or enumeration (see section 5.2.1). In view of the aim to apply inferential and descriptive statistical procedures based on the general linear model, an attempt was

made to normalise distributions wherever possible. Data transformations were performed using square root and logarithmic transforms, as appropriate. The criteria for normalisation were the third and fourth moments of the distribution (skewness and kurtosis). In a number of cases, normalisation was not possible, and in these instances one of two procedures was followed. Some variables were eliminated from further analysis, whereas others were recoded as binary variables. (An example of the latter was that the variable coding whom the child lives with was recoded as a binary variable, both parents, or other.)

The fourth step consisted of a principal components analysis of the major predictors to be used in the analysis of treatment outcome. At this stage, missing values were not estimated, but the principal components analysis was based on a correlation matrix using all available values. The matrix is presented in Appendix 5.2. Squared multiple correlations of each variable with all other variables were relatively high, ranging between 0.10 and 0.95, with a mean of 0.40 and a median of 0.36. Principal components analysis yielded 35 factors with eigen values greater than 1. Scree tests showed the first 8 factors to be significant, which in total accounted for 42% of the variance in factor space, and 28% of the variance in data space. The factor loadings for the first 35 factors are shown in Appendix 5.3.

In order to assist with the interpretation of factor loadings, and enhance the uniqueness of the loading pattern, a varimax rotation was performed and the sorted factor loadings are shown in Appendix 5.4.. The factors were examined in conjunction with the correlation matrix presented on Appendix 5.2. Variables were eliminated if a) they both loaded on the same factor, with a loading larger than 0.7; and b) they correlated with one another at  $r=0.6$  or above. Of the two variables, normally the higher loading variable was kept, unless conceptual considerations dictated otherwise. For example, father's psychiatric problem loads higher on factor1 than severe psychiatric problem (0.95 and 0.93 respectively); in this case, the variable pertaining to severe problems was kept as it was felt that the presence of severe problems could be more reliably established, and it represented a more conservative estimate of psychiatric history. At step 4 14 variables were eliminated.

### 5.2.3. Division of sample into broad diagnostic groups

As discussed in section 5.1, the number of subjects in single diagnostic categories was relatively small. It was felt desirable to establish a hierarchy of diagnoses, to establish the primary disorder where subjects had more than one diagnosis and the primary disorder had to be established. A complex algorithm was created to group children into one of seven diagnostic categories. The principles underlying this algorithm were as follows:

a) that disorders can be arranged in a hierarchy of severity, where the presence of a definite diagnosis of even moderate severity must be considered as primary, relative to other diagnoses of equal severity, e.g. pervasive developmental disorder takes precedence over any other disorder, conduct disorder takes precedence over emotional disorder. These assumptions were based on epidemiological considerations of natural history, and the ICD hierarchical model of diagnosis;

b) that cases may be meaningfully grouped into pervasive developmental disorders; disruptive disorders, emotional disorders; and other disorders;

c) that children may be undiagnosable on the basis of retrospective data because i) they are atypical and do not fit existing nosology; ii) because insufficient information was elicited in the diagnostic interviews; iii) they genuinely do not suffer from a disorder. In these circumstances, the child's overall level of adaptation may be used to create further categories reflecting these three situations.

A new variable was created which divided the entire sample into seven broad categories, both at referral and at termination. Four categories were determined by an algorithm using psychiatric diagnoses. Three were determined (in the absence of diagnoses) by the reason for this absence (no diagnosable symptoms, or inadequate information to judge), and then on level of adaptation (HCAM). This division is described in detail, both as an example of the derivation of major second-order variables, and because it forms a basis for some of the analysis of outcome presented in the three following chapters.

Guided by existing literature on childhood psychiatric disorders (see, for example, Quay, 1979; Rutter & Gould, 1985; Gould et al., 1988), the first two broad categories were designated as emotional and disruptive disorders, respectively. The third category was a small but necessarily distinct one of pervasive developmental disorders. The fourth included any children with diagnoses not included in any previous category. The diagnoses included in each category are listed in Appendix 5.5. Only DSM-III-R diagnoses are listed in this Appendix, for brevity. Most correspond straightforwardly to ICD-10 categories; however, when a diagnosis had been made on ICD-10 but not on DSM-III-R (perhaps because the diagnoses in the two schemes were not equivalent) this was included in the procedure for allocating a child to a category (this is described after listing the diagnoses within each group). Table 5.5 gives the diagnoses most commonly used in assignment to each of the categories.

Emotional disorders	Disruptive disorders	Pervasive developmental disorders	Other disorders
overanxious disorder (n=63)	oppositional defiant disorder (n=78)	PDD n.o.s. (n=21)	enuresis (n=31)
separation anxiety disorder (n=48)	conduct disorders (n=18)	autistic disorder (n=6)	encopresis (n=17)
dysthymia (n=38)			developmental reading disorder (n=10)

Table 5.5. Diagnostic categories most commonly used to assign children to each broad diagnostic subgroup.

Each child had up to 12 separate psychiatric diagnoses, each rated possible, probable or definite, and mild, moderate severe; and either principal or additional. Some diagnoses applied to the past, some to the time of referral. Some were made by DSM-III-R criteria, others by ICD-10. It was therefore necessary first to give priority to one of these systems; although both were used. DSM-III-R categories were given precedence, mainly because these diagnoses had been assigned first (the draft of ICD-10, Chapter V was not published until about the middle of our period of data collection, and these categories were assigned in a faster, second "sweep" of the cases). The stages of group allocation were as follows:

1. The child's principal DSM-III-R diagnosis at assessment (if any) was identified.
2. This diagnosis was then used to assign the child to one of the first four broad groups, according to the list given above in Appendix 5.5.
3. Each additional DSM-III-R diagnosis applying to the child as referral was then also allocated to one of the four broad groups. If a child had an additional diagnosis of pervasive developmental disorder then he was reassigned to that group. If a child had a principal diagnosis in the emotional group, but also had an additional diagnosis in the disruptive group (and if the disruptive diagnosis was probable or definite, and of at least equal severity to the principal diagnosis) then he was transferred from the emotional group to the disruptive group.
4. If the child's principal diagnosis placed him in the "other" disorder category, but he had an additional disorder in one of the first three groups (and if the additional diagnosis was probable or definite, and of at least equal severity to the principal diagnosis), then he would be assigned to the group to which the additional diagnosis belonged. If there was more than one additional diagnosis meeting these criteria, then pervasive developmental disorders took precedence over disruptive, which took precedence over emotional group diagnoses.
5. The same sort of procedure was then followed to assign all ICD-10 diagnoses to one of the first four categories. If a child had not already been assigned to a broad diagnostic category by his DSM-III-R diagnoses, then any ICD-10 diagnosis was used to do so, precedence applying as for grouping DSM-III-R categories (see point 4 above).
6. If the child had no psychiatric diagnoses applying to the referral period, then he was assigned to one of three further groups: group 5 consisted of children with an HCAM rating below 70, with sufficient information to make a diagnosis, but none found to be applicable; group 6 of children with an HCAM rating above 70 and with no diagnosis; group 7 included the remaining children for whom there had been no diagnosis because of insufficient information in the file, and the HCAM rating was below 70.
7. A parallel procedure was followed, using termination diagnoses, to create a second variable allocating the child to one of these seven broad categories at termination.

## Reliability

The reliability with which cases were assigned to each broad category is shown in Table 5.6.

Category	Frequency (AFC)	Frequency (external)	Kappa
Emotional	41	45	0.82
Disruptive	21	20	0.91
Pervasive Developmental	16	16	0.93
Other Diagnosis	21	19	0.76
Sick, Undiagnosed	7	8	0.68
Well, undiagnosed	19	17	0.80
Insufficient Information	14	14	0.83

Table 5.6. Inter-rater reliability of Assignments to Diagnostic Groups Among 139 Cases

Table 5.6 shows that reliability in the seven categories is quite high, with the exception of the sick, undiagnosed group in which the Kappa level was only moderate. This latter group gave rise to the most common class of disagreements, where one rater gave a diagnosis whilst the other rater was more conservative, and placed the child in the undiagnosed group. On the basis of these levels of agreement, it was felt that the seven categories were of sufficient robustness to be used in further analysis.

## 5.3. RESULTS

This section will present data on core variables, as derived following the variable selection procedures outlined above. The major predictor and conditioning variables will be presented in this chapter. Data concerning therapeutic outcome will be presented in Chapter 6. The sample size is the 763 cases who met the criteria for selection outlined in section

3.1.2, unless otherwise indicated. The purpose of this section is to present sufficient information to characterise the cohort. Discussion will be restricted to variables regarded as essential for comparability with other samples, and those where the current cohort markedly differs from populations studied elsewhere.

### 5.3.1. Demographic and family characteristics

Table 5.7 shows the distribution of types of family or living situation among the children treated.

Family or living situation	% of children
Living with both biological parents	71.3
Living with one parent	14.7
Reconstituted family	5.7
Adoptive parents or care by relatives	2.9
Children's home or foster care	3.1
Other, e.g. long-term hospital	2.3

Table 5.7. Family or living situation of children entering treatment.

7.7% of the sample had experienced children's homes or foster care at some time, although only 3.1% were in care at the time of their treatment. The proportion of children in single or reconstituted families is comparable to that of the local population, but lower than the figure obtained in some other treatment settings, where quite frequently only a minority of children treated live with both parents. The percentage of broken families seen at the Centre has increased markedly in each decade since 1952, from 16% to 42%. The frequency of different reasons for children living with one parent is given in Table 5.8.

	% of total sample
divorce / separation	16.8%
death of mother	2.7%
death of father	3.9%
single mother from start	2.2%

Table 5.8. Reasons for children living with one parent.

83.2% of the children treated had at least one sibling, including half-, step- & adopted siblings. In 4.3% of cases one or more siblings had died.

In 55% of cases, both parents had been born in Britain or Ireland, in two-thirds of the remaining cases, one or both parents had come from Europe. The majority of these were Jewish people who came as refugees. This is reflected in the distribution of religious backgrounds of the parents; in 56% of cases this was stated in the child's records, and of these families 61% were Jewish, 18% Christian. (It is very likely that most of the families whose religion was not stated were non-practising Christians, so that the overall proportions of these two groups may have been similar.)

Table 5.9 shows the social class to which each family was assigned, on the basis of the Registrar General's Classification of Occupations. The family's class was defined according to the highest level at which the father had worked, or (if this was not applicable or not known), then the equivalent classification for the mother.

Social Class	I	II	III	IV or V
% of sample	20.5	43.7	25.2	6.2

Table 5.9. Social Class Distribution of patients' families.

The sample is skewed towards class I and II, relative to similar samples in other studies. A very small proportion (2.5%) of fathers were unemployed. 47% of mothers were also working, half of these full-time.

Table 5.10 shows the age distribution of the total sample at the beginning of treatment. The range was from 2 yr 1 month to 19 yr 2 months. As can be seen, the under 6 and over 14 age bands are relatively under-represented.

Age group	Under 6	6 - 9.11	10 - 13.11	14 & over
% of sample	23.0	33.7	28.9	14.4

Table 5.10. Age distribution of children treated.

60% of the sample were boys. There were significantly more boys in the younger age groups - 64% of children treated below the age of 6 were male; this proportion decreases steadily to 49% of adolescents.

Children taken into treatment were of above average intelligence, on the whole. A Full Scale IQ was available on 520 cases. The average score was 115, with a range from 53 to 176. Table 5.11 shows the distribution of IQ levels.

Level of intelligence	% of all children tested (74% of full sample)
75 or below	1.9
76 - 90	6.5
91 - 110	31.0
111 - 125	36.3
126 or above	24.3

Table 5.11. Distribution of general intelligence among children receiving treatment.

Three-quarters of the sample had IQs which were average or above. The mean Verbal IQ (n=320) was 114, and Performance IQ (n=288) 110. Attainment levels (reading age and arithmetic age) were generally in line with chronological ages, rather than with IQ levels. This probably reflects the number of children referred because of learning difficulties,

such as specific reading disorders, and the fact that children were more likely to be tested where a problem was suspected.

Psychiatric symptomatology of the parents was rated on the basis of social histories and subsequent parent interviews. Table 5.12 gives the frequency (as %) of the most common psychiatric problems. It appears that pathology in the mother was more commonly noted than pathology in the father, and this is most likely a reflection of the selective focus of interviewers on the mother's history. Nevertheless, almost one third of the families had at least one current serious psychiatric problem, and over half of the couples had at least one psychiatric problem in one or other partner during their lifetime. Clinical depression and anxiety were the most common disorders, and disorders most strongly associated with childhood pathology (e.g. drug and addiction problems) were relatively rare. Antisocial behaviour was also uncommon for a clinical population, as was the presence of serious marital conflict.

In 28% of cases, one or other parent or both met the criteria for at least one psychiatric diagnosis at the time of the child's assessment. Far more mothers than fathers were diagnosable on the information available.

Table 5.13 shows the frequency of different forms of psychiatric and psychotherapeutic treatment for each parent. (Given the paucity of information on some parents, especially fathers, our figures are certainly conservative estimates.)

The frequencies of inpatient and outpatient treatments are not surprising in view of the histories, but there is also an unusually high rate of psychodynamic treatment among these parents, compared with the likely rate in the general population.

Type of psychological problem	Mother	Father
At least one current serious problem	21.8	13.0
At least one current very serious problem	2.1	3.0
At least one serious problem during lifetime	36.8	24.3
At least one very serious problem during lifetime	9.2	8.5
Psychosis (schizophrenia, delusional disorder)	0.9	2.0
Bipolar affective disorder	2.5	1.2
Puerperal depression after birth of patient	3.9	-
Other episodes of clinical depression	26.3	9.0
Obsessive-compulsive disorder	2.3	1.6
Other anxiety disorders	13.9	4.9
Personality disorder	5.1	4.8
Drug / alcohol addiction	2.2	3.9
Sexual dysfunction or paraphilia	2.3	2.6
Violence or abuse within family	1.7	6.8
Criminal behaviour outside family	0.3	2.2
Suicide attempts	4.0	2.1
Mental subnormality	0.4	0.3
Serious marital conflict	20.5	19.8

Table 5.12. Frequencies of psychological problems among parents of children entering treatment.

	Mother %	Father %
Psych. inpatient	5.5	2.7
Psych. outpatient	8.6	2.9
Psychotherapy	14.3	8.3
Psychoanalysis	8.5	7.7
Any of the above	30.8	20.6

Table 5.13. Parents' histories of psychiatric or psychotherapeutic treatment.

### 5.3.2. Child and clinical characteristics

The frequency of categories of psychiatric diagnoses at the time of assessment is shown in Table 5.14.. The table distinguishes between those cases in which the category was assigned as a principal diagnosis, and those in which it was recorded as either principal or additional. All categories assigned for the referral period are included, even if only rated probable or possible (see section 3.3.2).

Diagnostic category	Principal category, % of sample	All diagnoses, % of sample
Anxiety disorders	25.4	36.9
Depressive disorders	10.5	15.0
Conduct disorders & ADHD	11.3	17.3
Pervasive developmental disorder, psychosis	4.3	5.2
Enuresis	4.8	12.4
Encopresis	2.5	5.5
Personality, attachment & stress disorders	3.2	7.9
Specific developmental disorders	2.0	11.6
Other specific childhood disorders (e.g. tics, mutism)	4.0	7.0
No diagnosis applicable	7.3	7.3
Insufficient information	7.3	7.3

Table 5.14. Psychiatric diagnoses of children entering treatment.

Clearly, anxiety disorders were the single most common diagnostic group within this sample. Almost 37% of the children taken into treatment warranted an anxiety diagnosis, and 15% a diagnosis of a depressive disorder (some children will be included in both categories). Also common were disruptive behaviour problems, especially oppositional defiant disorder, specific developmental disorders and elimination disorders (enuresis and encopresis). In 7.3% of cases the child was not considered to meet criteria for any diagnosis (even rated

probable or possible), and in the same number of cases there was insufficient information in the file (even at the time of assessment) to make a diagnostic decision, although an HCAM rating could be given to indicate the child's overall level of functioning.

Individual symptoms were examined using Achenbach & Edelbrock's (1986) CBCL protocol. The symptom profiles were looked at separately for the 57 children under 4 years, and the 675 children between 4 and 18 years. The most common symptoms for boys under 4 were 'fears certain animals, situations, or places', 'too fearful or anxious', 'speech problems' and 'clings to adults or too dependent'. For girls under 4, 'destroys her own things', 'fears certain animals, situations, or places' and 'too fearful or anxious' were common. In the boys over 4 group, 'demands a lot of attention', 'fears certain animals, situations, or places, other than school', 'too fearful or anxious', 'stomach aches or cramps' and 'thinks about sex too much' were commonly noted, and for females, 'acts too young for her age', 'can't concentrate, can't pay attention for long', 'can't sit still, restless, or hyperactive', 'clings to adults or too dependent', 'demands a lot of attention', 'disobedient at home', 'fears certain animals, situations, or places, other than school', 'nervous, highstrung, or tense', 'too fearful or anxious', 'stomach aches or cramps', 'talks too much'.

To confirm the validity of the symptom profile, factor analysis was carried out for all variables with a frequency greater than 10 for the under 4s, and 30 for the over 4s. The principal components analysis for the under 4s yielded 13 significant factors (eigen value greater than 1) accounting for approximately 80% of the variance. On the scree test, the first six of these factors appeared to be significant. Kaiser normalisation was used with varimax rotation, which converged after 23 iterations. When a six-factor solution was forced on the correlation matrix, the original Achenbach scales emerged strongly. The factor loadings are presented in Appendix 5.6a, and items are listed in Table 5.15.

Factor 1	Factor 2	Factor 3
81. Stubborn	6. Can't sit still	85. Temper
40. Hits others	5. Can't concentrate	8. Can't wait
15. Defiant	2. Acts too young	16. Demands must be met
53. Attacks people	92. Upset by new	29. Easily frustrated
44. Angry moods	21. Disturbed by change	66. Screams
20. Disobedient	80. Strange behaviour	
96. Wants attention	76. Speech problem	
85. Temper		
88. Uncooperative		
Factor 4	Factor 5	Factor 6
10. Clings to adults	48. Nightmares	90. Sad
73. Shy/timid	38. Can't sleep	25. Doesn't get along with other kids
97. Whining	24. Doesn't eat well	98. Withdrawn
37. Upset by separation	22. Not want to sleep alone	30. Jealous
92. Upset by new	94. Wakes often	94. (NOT) wakes often
98. Withdrawn	13. Cries much	

Table 5.15. Items loading on first six factors for CBCL items among children under 4 years old (n=57).

Factors 1 and 3 correspond to Achenbach & Edelbrock's aggressive scale, Factor 4 is largely separation and other anxieties, whilst Factor 5 is primarily sleep problems. Factor 6 relates to sadness and social withdrawal, whilst Factor 2 pertains to attention deficit and organic problems. Alpha coefficients were calculated for each of Achenbach's original scales, and all the scales, except somatic problems, achieved a coefficient greater than 0.6 (range 0.41 - 0.89).

The principal components analysis for the over 4s yielded 45 significant factors (eigen value greater than 1) accounting for approximately 65% of the variance. On the scree test, the first eight of these factors appeared to be significant. Appendix 5.6b shows the factor loadings, and the items are listed in Table 5.16.

Factor 1	Factor 2	Factor 3	Factor 4
22. Disobeys at home	103. Sad	56b Headaches	16. Cruel to others
57. Attacks people	35. Feels worthless	56a Pains	82. Steals outside home
95. Temper	12. Lonely	56c Nausea	81. Steals at home
20. Destroys own things	33. Unloved	56d Eye problems	39. Bad friends
10. Hyperactive	52. Feels guilty	50. Anxious	106. Vandalism
16. Cruel to others	91. Suicidal talk	30. Fears school	101. Truant
41. Impulsive	112. Worrying	11. Clings to adults	43. Lies cheats
84. Strange behaviour	25. Poor peer relations	112. Worrying	72. Sets fires
9. Obsessions			
89. Suspicious			
Factor 5	Factor 6	Factor 7	Factor 8
111. Withdrawn	50. Anxious	56c Nausea	10. Hyperactive
62. Clumsy	66.	56d Eye problems	41. Impulsive
25. Poor peer relations	Compulsions	5. Argues	8. Can't concentrate
84. Strange behaviour	99. Too neat	110. Wishes to be opposite sex	74. Shows off
74. Shows off	9. Obsessions	89. Suspicious	61. Poor school work
	84. Strange behaviour		

Table 5.16. Items loading on first eight factors for CBCL items among children 4 years old and over (n=675).

Factor 1 relates to physical aggressiveness, disobedience, and impulsiveness. Factor 2 includes items indicating depression. Factor 3 seems to be an anxiety factor, emphasizing somatic symptoms. Factor 4 includes items characteristic of conduct disorders, stealing, lying, truanting, vandalism, etc.. Factor 5 seems to relate to being a social misfit, withdrawn, few friends, clumsy, odd. Factor 6 includes items indicating obsessional or compulsive symptoms. Factor 7 is mainly to do with gender identity conflicts - wish to be of the opposite sex. Factor 8 includes items concerning poor concentration, especially in the school setting.

Table 5.17 shows the HCAM scores at assessment. The vast majority of these fall between 40 and 70, which is as one would expect - a child with a score below 40 would almost inevitably require inpatient management, whereas children scoring 70 or above are within the range of normal functioning.

Level of HCAM score at assessment	% of children
Below 40 (severe, disabling symptoms)	1.3
40 - 49 (moderate, widespread impairment)	20.0
50 - 59 (several areas affected)	39.8
60 - 69 (single area of difficulty)	31.5
70 - 79 (minimal impairment)	6.5
80 - 89 (good functioning, all areas)	0.9

Table 5.17. Distribution of HCAM (adjustment) scores at assessment.

Table 5.18 shows the distribution of categories, assigned to 44% of the full sample, within Miss Freud's system of five diagnostic groups: category 1 (essentially normal), 2 (transient symptomatology or developmental strain), 3 (neurotic, with 'permanent regressions, fixations and symptom formation'), 4 (atypical, distorted personality development), and 5 (destructive processes disrupting mental growth, examples would be organic or psychotic illnesses).

Category	I	II	III	IV or V
% of children	0.3	24.8	59.9	15.3

Table 5.18. Distribution of children assigned to one of Miss Freud's diagnostic categories

As one would expect, there were almost no children treated who were regarded as normal at referral. The category 5 children were almost all taken on for treatment in the 1970s, after which it was decided that analytic treatment was not the best way of helping them. The categories showed some relationship to age of child, the under 6 year olds were relatively likely to be in category 2, 10-14 year olds in category 3, and 6-10 year olds in category 4.

In 64% of cases, the school report registered serious concerns about the child. The causes of concern were classified broadly as shown in Table 5.19.

School-reported difficulties	% of sample
School refusal	7.0
Disabling anxiety	4.0
Specific learning disorders	14.2
General underachievement	26.0
Poor peer relationships	15.5
Disruptiveness	10.0
Impairment by medical condition	2.0

Table 5.19. Frequency of causes of concern at school.

The majority of school concerns surrounded underachievement or learning difficulties. Social difficulties and disruptive behaviour accounted for the bulk of the remainder. School refusal was relatively rare (compared to other referred samples).

22.1% of the sample had a significant medical history, defined as severe and/or frequent accidents, operations, acute or chronic illnesses, or long-term disability. Table 5.20 shows the distribution of these aspects of medical history; (some children scored in more than one category, so that the total is greater than 22.1%).

Severe/frequent condition	% of total
Accidents	5.0
Operations	6.6
Acute illnesses	5.9
Chronic illnesses	4.4
Disabilities	3.9

Table 5.20. Frequency of significant medical conditions

25.7% of children had been hospitalized (and separated from their parents) at least once; the maximum was 5 times. The length of hospitalization obviously varied widely, but several children had experienced hospital stays of over three months, usually as a result of serious accidents or multiple operations. About one quarter of the children had also

experienced separations while a parent was in hospital, which in some cases necessitated placement of the child away from home.

A relatively large proportion of the sample, 39.7%, had been treated previously for the symptoms leading to referral to the Centre, in up to 5 different settings. Table 5.21 shows the forms of treatment already experienced by the children treated at the Centre. The table indicates that the majority of these children had been offered statutory services, with 10% having received psychotherapeutic help.

Previous treatment	% of sample
Psychotherapy / analysis	6.0
Hospital (outpatient)	8.6
Hospital (inpatient)	3.3
Medication from GP	4.6
Tavistock Clinic or Child Guidance	4.8
Special education	8.7

Table 5.21. Forms of treatment already experienced by children treated at Anna Freud Centre.

### 5.3.3. Referral and treatment variables

Table 5.22 shows the distribution of referral sources among children treated.

Source of referral	% of sample treated
Parents / child	39.7
Medical	25.0
School, Child Guidance Clinic	15.2
Analytic (inc. within AFC)	7.5
Other (e.g. friends, soc. workers)	12.7

Table 5.22. Sources of referral of treated children.

Overall, nearly 40% of children were referred by their parents or were self-referred adolescents. The second largest referral source was medical agencies, such as the family GP, paediatrician, or child psychiatrist.

Table 5.23 shows the frequency of sessions per week, at the beginning of treatment and the highest frequency during the course of treatment. Almost two-thirds started at five times per week treatment, and three-quarters of the children were in intensive (4-5 times per week) treatment for some part of their treatment.

Frequency (sessions per wk.)	1	2	3	4	5
% of cases at beginning of treatment	15.1	11.1	3.5	7.2	63.1
Highest frequency, % of cases	11.1	8.7	3.5	8.2	68.4

Table 5.23. Starting and highest frequency of sessions per week for each child.

Table 5.24 shows the duration of treatment in this sample. Almost half of the children were in treatment for 1-3 years. 29.2% withdrew within the first year, and this was almost always a unilateral decision by the child or parents, against advice from the Centre's staff. The average length of treatment was 2 years.

Length of treatment	% of sample
3 months or less	9.4
3 months - 1 year	19.8
1 - 3 years	48.2
3 - 5 years	15.7
Over 5 years	6.9

Table 5.24 Distribution of length of treatment.

79% children had a female therapist, 21% a man. 67.4% were treated by trainees, 32.6% by members of staff. 8.1% had at least one change of therapist.

Around half of the parents of children in treatment were seen regularly to discuss the child and the analysis ('parental guidance'). Frequently, this was done by the child's therapist. In 8% of cases, one or both parents was taken into treatment in their own right at the Centre during their child's therapy. This occurred when the parent's pathology was thought to be closely linked to that of the child, or when sessions with a parent (usually the mother) had become increasingly concerned with material about her own difficulties, relationships, childhood and so on. In addition, about 16% of children had siblings in treatment at the Centre, either previously or at the same time as their analysis. Table 5.25 shows the frequency of different forms of work with other members of the family, alongside the child's treatment.

	Parental guidance	Non-intensive psychotherapy	Full analysis
Mother	45.0	3.5	3.5
Father	4.2	0.9	0.4
Sibling(s)	-	4.2	12.3

Table 5.25. % of children whose relatives were also seen regularly or treated at the Anna Freud Centre.

Table 5.26 shows the frequencies of different reasons for termination (a decision to terminate could be regarded as premature by the Centre's staff even if this occurred after the first year of treatment).

Main reason for termination	% of children treated
Completed (mutual agreement)	36.0
Premature termination by parents or child	30.3
External circumstances for therapist or family	18.7
Other (not progressing, transferred, unclear)	15.1

Table 5.26. Reasons for termination of treatment.

#### 5.4. DISCUSSION

This chapter reported the preparation of the database for the analysis of outcome data. This included the creation of new variables, the reorganisation of a relational database into a flat database, the reduction of the number of variables through conceptual and empirical methods, the creation of a diagnostic categorisation procedure, and the examination of the distributional properties of the variables retained in the database.

In comparing the variables retained with the original variables on which data was collected, it is clear that a substantial loss of information was entailed in applying the rather stringent criteria to the dataset outlined in section 5.2. A number of areas which were identified as potentially relevant to outcome in Chapters 1 and 2 will not be possible to examine in the remaining analyses to be reported. In particular, the number of process variables is highly restricted. It will only be possible to consider structural aspects of the treatment, such as intensity and superficial characteristics of the therapist, e.g. training, but not the content of the therapy itself. Whereas this imposes a substantial limitation upon the scope of the dataset, it has to be accepted as part of the trade-off between the number of cases examined and the detail permitted by the resources available.

Family and parental characteristics are also not fully represented, because of the limitations of the data contained in the case records and the difficulty in achieving reliable ratings on the basis of some of the material present.

Despite the loss of data between chart and proforma, and a further loss between proforma and database, the number of relevant variables available was still well above that which could be efficiently handled by data analytic techniques. The reduction of variables through principal components analysis was highly desirable if the goal of devising multivariate models of predictors of therapy outcome was to be realised. The high correlations between variables in the original database exposed such analyses to major distortions through multi-collinearity, and the reduction was necessary in order to reduce too much weight being given to groups of variables which happened to be more efficiently and frequently sampled at the chart review stage. The principal components analysis indicated that a relatively large number of parameters had been sampled, and that the database could not be effectively reduced to one or two major components. The elimination of highly correlated variables was conceptually as well as empirically driven, and it is reasonable to assume that the streamlined dataset constitutes a fair representation of the original variability in the database.

The categorisation of subjects into seven groups was also in part conceptually and in part empirically based. The validity of the distinctions drawn will be clearer when the criteria of outcome are applied to it. The reliability of the categories, however, is satisfactory and comparable to the inter-rater reliabilities achieved by most epidemiological surveys (Gould et al., 1988).

A problem remaining in the database is that of missing data. It is inevitable that, given the number of variables looked at, a certain proportion would, for various reasons, be unavailable to the chart review for any one case. Here, the high communality of the variables observed in section 5.2.2 would seem to be particularly helpful. Given that the coherence of the database is high, it was possible in further analyses to estimate the remaining missing values using multiple regression techniques, following the recommendations of Frane (1988).

This chapter reported some of the most critical characteristics of the Anna Freud Centre sample. Many features of the sample give grounds for concern as to the generalizability of any subsequent observations. It is important to note at this stage that the sample appears to be significantly skewed towards higher SES groups, and Jewish and high IQ children are over-represented, relative to most clinical samples and epidemiological investigations.

The significance of these distortions is difficult to estimate. Appropriate sampling is particularly important for variables which may be important predictors of outcome, e.g. IQ. A distorted sample may not yield the expected associations with outcome because certain levels of the variable are under-represented relative to relevant population norms. For example, because of the skewed SES, outcome may not emerge as related to social class, not because this variable plays no part in prediction, but rather because lower levels are insufficiently sampled. The options open at this stage are very limited, given the retrospective nature of the study. Certainly conclusions regarding these variables need to be qualified, and wherever possible contrasts should be made on the basis of matched samples controlling for these variables rather than attempting to explore their causal significance. This was the strategy adopted in the analyses reported in chapters 7 and 9.

We may be more optimistic about the representativeness of the sample as far as clinical variables are concerned. Almost all the subjects had at least one clinically significant psychiatric disorder at the time of assessment. This finding runs counter to assumptions in the literature that psychoanalytic help may be concentrated on those without serious psychological disturbance. The severity of the impairment overall is impressive, particularly if we take into account the fact that certain conditions were rarely referred for psychoanalytic treatment (e.g. psychotic disorders, life-threatening eating disorders). The relative severity of disorders in the sample is probably a reflection of the high proportion of secondary and tertiary referrals. It is likely that intensive help was only seen as appropriate by these expert referrers for severe cases. The same conclusion may be inferred from the substantial proportion of patients in this group who had had treatment prior to their referral to the Centre. The severity of the sample should caution us against uncritical comparisons of the outcome of this group with the natural history of the disorders with which they presented. Some natural history studies are community-based epidemiological investigations where the severity and chronicity of the disorders may be less than is the case for the present group.

The distribution of major categories of psychological disorders corresponds fairly well to the prevalence of these disorders in the population (eg. Rutter, Tizard and Whitmore, 1970; Yule, 1981). Certain conditions are slightly over-represented (e.g. anxiety disorders), whilst others are less common than may be expected (e.g. conduct disorders). The reason

for this difference is probably rooted in preconceptions on the part of referrers and Centre diagnosticians concerning the suitability of psychoanalytic treatment for specific disorders.

Data available on parental pathology is somewhat limited. The high prevalence of maternal disturbance is consistent with epidemiological observations (eg. Quinton et al., 1990). For paternal pathology, however, the sample seems far less representative. The recent review by Phares & Compas (1992) indicated that alcohol, drug-related and antisocial pathology was particularly likely to be linked to a wide variety of childhood disturbances. These disorders are notably rare in the present sample relative to ordinary clinical populations. This probably reflects the local population, and within that the community for whom intensive psychotherapeutic treatment appears as an appropriate choice in dealing with a child's psychological disturbance. It also undoubtedly reflects the poor quality of information recorded on the fathers of children referred, at least until the late 1970s.

It may be thought that the relative rarity of marital disturbance also reflects an unusual sample. Examining the data historically, however, it transpires that more recent referrals are predominantly from broken or single parent families, as would be the case in most other clinical samples. It is partly because the database reaches back four decades, when the majority of families were intact, that separation and chronic disharmony appears somewhat under-represented. In addition, the criteria for coding major marital discord were quite conservative (see table 3.1).

Most of the therapy offered at the Centre was intensive psychoanalytic treatment. Whilst on the one hand, this may be seen as reducing the generalizability of the dataset, there were substantial numbers of children who received non-intensive treatment, and the numbers are sufficiently large for comparisons between the two groups to be fruitful, particularly in the over 5 age group. It is also fortuitous that the amount of help received by parents varied quite considerably in the sample. About half the families received significant input, and the value of this input will be possible to examine in relation to outcome.

The duration of treatment is long relative to other studies, and there are some exceptionally long treatments in the database. About half the treatments lasted between one and three years, and a further 20% lasted more than 3 months but less than one year. It is important to note the substantial number of dropouts in the sample; nearly 10% ended treatment

with three months, for instance. Whilst such early treatment terminations may have been prompted by sudden improvement, this is unlikely and a failure to engage in treatment is by far the more likely explanation. In subsequent examinations of the data, it may prove important to examine if such early terminators can be predicted, or are associated with particular diagnostic groups.

## 5.5. CONCLUSION

In this chapter, the database to be used in further studies of treatment outcome was described, and the sample characteristics on some of the major variables were reported. The database appears to have high integrity, in terms of both reliability and independence of the variables. Although the variables it contains represent a limited set of those pertinent for study, the uniqueness of the information made available by the chart review justifies its systematic and exhaustive exploration.

## CHAPTER 6. THE OUTCOME OF TREATMENT ACROSS THE FULL RETROSPECTIVE STUDY SAMPLE

### 6.1. INTRODUCTION

In this chapter, results are presented concerning the outcome of treatment across the full retrospective study sample. The sample, of 763 children and adolescents who had been treated in psychodynamic therapy at the Anna Freud Centre, was introduced in chapter 3, and its major demographic, clinical and treatment characteristics were described in chapter 5. This chapter presents a picture of the outcome of treatment for this group, in terms of the outcome measures described in chapter 4.

Issues in the measurement of outcome were reviewed in chapter 2, and all three ways of describing childhood functioning (categorical, dimensional and global) have been used in this study. In chapter 4, a new global measure of adaptation (the HCAM) was introduced, and the question of the clinical significance of therapeutic change was explored. Four ways of describing change during treatment were then described: 1) no longer being a "case" in terms of diagnosis and adaptation level; 2) no longer being in the dysfunctional range of the HCAM distribution; 3) showing statistically reliable change in HCAM score; 4) the extent and direction of HCAM change (as a continuous variable). A further measure of improvement is used in this and subsequent chapters, where relevant: the failure to improve, shown by an HCAM score the same or worse than at assessment.

In this chapter, those variables identified in Chapter 3 as potentially significant predictors of outcome which were retained in the "core" file described in Chapter 5, are used in univariate and multivariate analyses, to examine relationships between these predictor variables and the measures of change. The implications of findings are then discussed, and the questions which they raise are clarified, to be addressed in the following three chapters.

## 6.2. METHOD

The sample in this chapter was the entire group of 763 cases in the retrospective study. For certain analyses, only those who continued in treatment for at least six months were included, as the outcome of psychodynamic psychotherapy cannot meaningfully be assessed for shorter periods of treatment. The reasons for this attrition are, however, very pertinent to any examination of therapeutic effect, and an attempt is made to investigate variables associated with premature termination.

The outcome of psychotherapeutic treatment was examined in three steps. First, the overall level of improvement was examined in terms of the criterion variables discussed in section 4.2.1. The distribution of change in HCAM scores across the entire sample was examined in detail in order to identify proportions of improvers, and the frequency and severity of negative therapeutic reactions.

The second step of the analysis examined the association between outcome and demographic and family, child and clinical, and treatment variables. This was done using univariate statistical analyses, primarily analysis of variance and contingency table analysis, as appropriate. Groups were contrasted using analysis of variance and covariance to examine a continuous dependent variable (e.g. change in CGAS) in relation to one or more categorical variables (e.g. diagnostic group and intensity of treatment), sometimes adjusted for a covariate (e.g. length of treatment). Cross-tabulation procedures were employed for looking at the relationship between two categorical variables. The interaction of three or more categorical variables (for example severity of disorder, intensity of treatment and improvement) was modelled using hierarchical log-linear analysis (Fienberg, 1977) which, in a manner analogous to the ANOVA, decomposes multi-way associations, and attempts to fit models to the observed frequency distributions using the lowest order of interactions required.

As a third step, variables which showed some association with outcome in the current or previous investigations were examined together in relation to outcome, using multivariate statistical techniques. Two main multivariate approaches were taken. Firstly, discriminant function analysis was used to predict early attrition, and good and poor outcome groups

defined by the criteria of clinically significant improvement. Secondly, the size of change was used as a dependent variable in stepwise multiple regression analyses.

## 6.3. RESULTS

### 6.3.1. Rates of improvement

Overall rates of improvement according to the three criteria are shown in Table 6.1. Only 33% of the sample could be definitely identified as no longer suffering from psychiatric disorder, defined in terms of diagnosis and overall level of adaptation at termination. The relatively low figure has to be seen as a highly conservative estimate, given that those subjects for whom insufficient information was available were assumed to have a possible diagnosable disorder at termination. A more realistic estimate of the rate of clinical improvement comes from the percentage of subjects moving from the dysfunctional to the non-dysfunctional population. Almost 50% of subjects were seen on the basis of their HCAM scores to have moved into the non-dysfunctional group. A number of subjects who remained in the dysfunctional group nevertheless made significant changes. Over 53% of the subjects showed a statistically reliable improvement over the course of their treatment.

Figure 6.1 shows the distribution of HCAM change scores across the sample. The distribution is normal, with a peak around 0. Approximately 26% of the subjects showed no change, or got worse, in the sample. Only 4.2%, however, showed a statistically reliable change for the worse, whilst 20% showed no change at all. Almost all of these cases were in treatment for short periods (less than 6 months). For the purpose of the present analysis, it was assumed that a genuine psychoanalytic process could not take place in less than 6 months of treatment, and for this reason children whose treatment terminated within this time were excluded from most further analyses.

Table 6.1 shows the percentages of children showing improvement or negative outcome, divided into non-intensive and intensive cases.

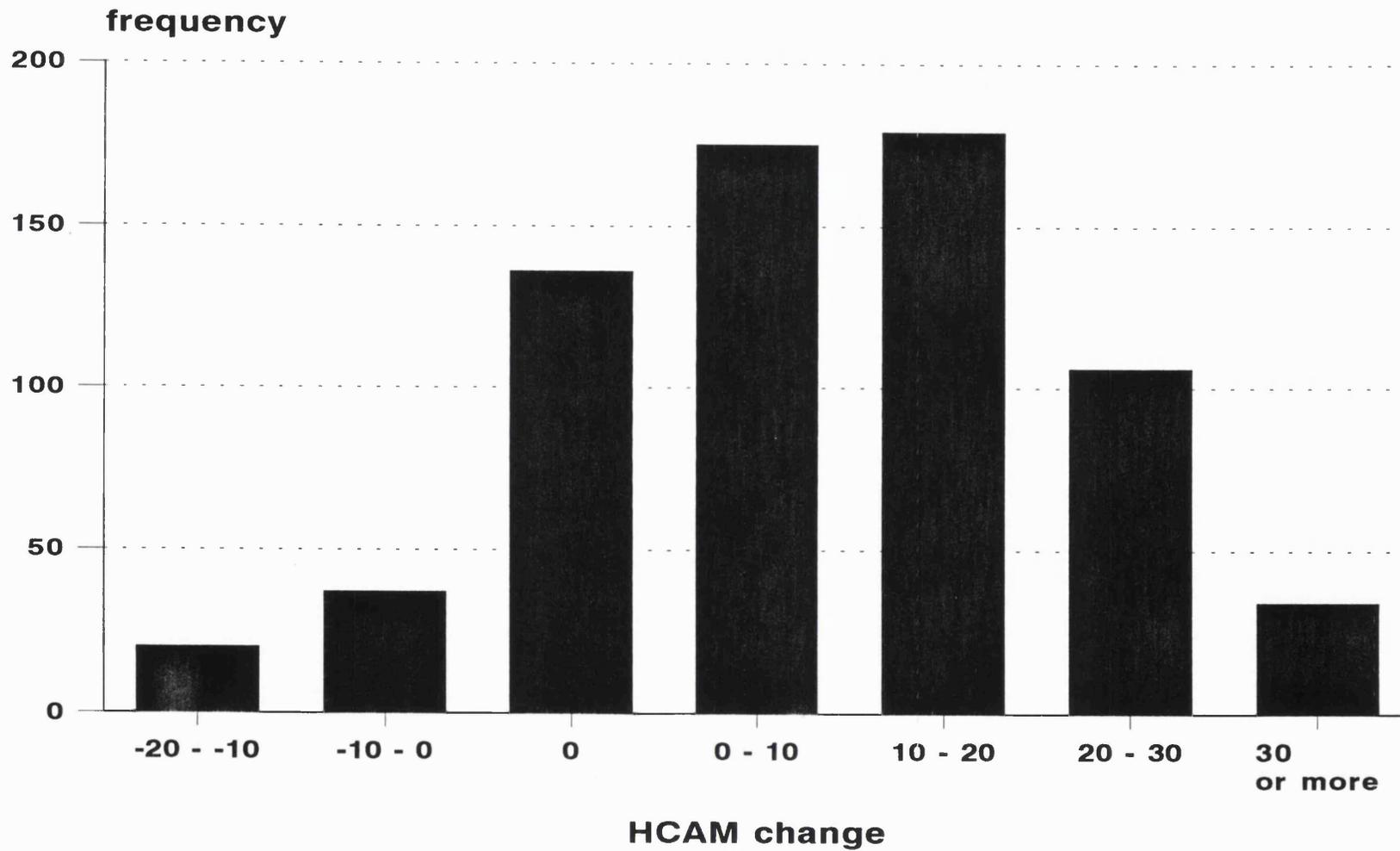


Figure 6.1. Distribution of HCAM change scores across the sample

	non-intensive	intensive	all cases	statistic
reliable improvement in HCAM	41.3	57.0	53.3	Yates $\chi^2=12.91$ , df= 1, p < .0005
no longer case on diagnostic grounds	28.5	34.4	33.0	Yates $\chi^2=1.92$ , n.s.
no longer in dysfunctional group	38.5	51.4	48.4	Yates $\chi^2=8.51$ , df=1, p < .005
HCAM level same or worse	33.0	23.8	26.0	Yates $\chi^2=5.51$ , df=1, p < .02

Table 6.1. % of cases showing improvement by different criteria, in non-intensive or intensive treatment

Table 6.2 shows the percentage of patients showing clinically significant improvement following at least 6 months of treatment. The number of cases who were not possible to diagnose increased slightly after the 18% of the sample who did not receive a significant amount of treatment had been excluded. The increase, however, is relatively small (4%). The number of patients in the non-dysfunctional group at termination also increased by approximately the same proportion, to 53% from 48%. The number of children showing significant change increased more markedly to nearly 60% when patients who did not have the benefit of treatment were excluded.

	non-intensive	intensive	all cases	statistic
reliable improvement in HCAM	49.2	61.8	59.3	Yates $\chi^2=6.07$ , df= 1, p < .02
no longer case on diagnostic grounds	33.9	38.2	37.3	Yates $\chi^2=0.61$ , n.s.
no longer in dysfunctional group	44.4	56.1	53.7	Yates $\chi^2=5.02$ , df= 1, p < .03
HCAM level same or worse	27.4	18.3	20.1	Yates $\chi^2=4.61$ , df= 1, p < .05

Table 6.2. % of cases showing improvement by different criteria, in non-intensive or intensive treatment, cases terminating within six months excluded

Most importantly, in restricting consideration of rates of improvement to children who had the benefit of at least brief treatment, we find the proportion of negative treatment outcomes substantially reduced.

Tables 6.1. and 6.2 also show improvement rates for intensive (4-5 times per week) and non-intensive (1-3 times per week) treatment. Broadly speaking, it is clear that children who received intensive treatment were more likely to improve than those who were treated non-intensively. Whereas the number of children who were definitely not diagnosable at the end of treatment was not significantly different, adaptation was rated as superior both in terms of membership of the non-dysfunctional group and reliable change ( $p < .005$  and  $p < .0005$  respectively). In contrasting tables 6.1. and 6.2, it is clear that the exclusion of brief treatments reduces the size of the difference between intensively and non-intensively treated groups. The reason for this lies in the tendency of children to drop out of non-intensive treatment, in other words, intensive treatment appears to retain children in therapy. Negative effects were more common in non-intensive treatment, although here the differences were smaller, and a relatively large number of children (18%) in intensive treatment also showed no change or got worse even after 6 months of therapy.

### 6.3.2. Variables associated with outcome

In this section, rates of improvement are given for one outcome variable, occurrence of reliable improvement in functioning, rather than separately for each of the outcome criteria. Clinically significant improvement in functioning seemed the single most important criterion of therapeutic impact, rather than the proportion of children who had ceased to be "cases".

#### Demographic and family variables

Several demographic and family variables were associated with therapeutic outcome. Table 6.3 shows the importance of family social class; it is evident that children from families in social class I (20.6% of the total) improved considerably more during treatment. This difference was equally significant when children terminating treatment early had been excluded.

	% reliably improved	statistic
class I (n = 157)	63.1	$\chi^2 = 8.02, df = 3, p < .05$
class II (n = 338)	51.5	
class III (n = 218)	49.1	
class IV, V (n = 50)	54.0	

Table 6.3. % of children showing reliable improvement, divided by social class grouping

Table 6.4 shows the proportion of children improved according to whether their family was broken (normally by divorce) or intact at the time of treatment. Clearly, children were more likely to do well if the parental relationship was intact. The difference remained significant ( $p < .01$ ) when children terminating treatment early had been excluded.

	% reliably improved	statistic
family broken (n = 190)	56.9	Yates $\chi^2 = 10.70, df = 1,$ $p < .001$
family intact (n = 573)	42.9	

Table 6.4. % of children showing reliable improvement, according to whether the family remained intact

Table 6.5 gives the results for the proportion of children improved, depending on whether the mother had received psychoanalytic treatment, either in the past, or continuing at the time of the child's referral (this does not include analytic therapy arranged by the Centre in connection with the child's treatment, it also does not include non-intensive dynamic therapy).

	% reliably improved	statistic
mother had analysis (n=64)	73.4	Yates $\chi^2=10.47$ , df=1, p < .001
mother not had analysis (n=699)	51.5	

Table 6.5. % of children showing reliable improvement, according to whether mother had had experience of psychoanalysis

There is a tendency for those children whose mothers had been in analysis to improve more than others. This difference ceases to be significant among children continuing with treatment for over 6 months, and therefore seems to reflect an impact of mother's experience of this form of treatment on dropout rates, i.e. on her commitment to continuing the child's therapy for an adequate time. None of the variables relating to parents' psychiatric histories had a significant relationship with the occurrence of reliable improvement during treatment, except that, for those children whose treatment continued for at least six months, antisocial behaviour in the mother was associated with a lower improvement rate (36% improved compared with 60%,  $p < .03$ ).

#### Child and clinical variables

Several variables in this domain were related to therapeutic outcome. Table 6.6 displays rates of improvement for children in three broad age groups; younger children improved substantially more. The age groups were chosen because of their approximate correspondence to both the age division used at the Anna Freud Centre (under-fives, latency and adolescents), and to pre-school, primary and secondary school populations.

	% reliably improved	statistic
2-5.11 years (n=176)	62.5	$\chi^2=9.50$ , df=2, p < .01
6-11.11 years (n=374)	52.7	
12 years and over (n=213)	46.9	

Table 6.6. % of children showing reliable improvement in each of three age groups

Overall, children under 6 years at the beginning of treatment were most likely to improve, while adolescents were least likely to do so. This difference remains, but is no longer statistically significant, when only children continuing for over six months are considered.

Several diagnostic variables were significantly related to outcome. Looking first at the broad diagnostic groupings described in section 5.2.3, cases in the emotional group were found to improve substantially more than others, and children with pervasive developmental disorders showed far less improvement (see Table 6.7). These differences were somewhat more marked when children terminating early were excluded, mainly because although all other groups showed 5-10% higher improvement rates, the frequency of clinically significant improvement among children with pervasive developmental disorders remained at only 28%.

	% reliably improved	statistic
emotional disorder (n=368)	63.0	$\chi^2=31.02, df=6,$ $p < .0001$
disruptive disorder (n=135)	45.2	
pervasive developmental disorder (n=29)	27.6	
other disorders (n=120)	46.7	
low HCAM, no diagnosis (n=26)	42.3	
normal HCAM, no diagnosis (n=36)	41.7	
insufficient information for diagnosis (n=49)	49.0	

Table 6.7. % of children showing reliable improvement in each of seven diagnostic groupings

When we examine the likelihood of reliable improvement according to the presence of specific diagnostic categories, several significant differences appear; these are shown together in Table 6.8.

	% reliably improved with disorder vs without	statistic
simple phobia (n=50)	76.0 vs 51.8	Yates $\chi^2=10.08$ , df=1, p < .001
separation anxiety (n=66)	69.7 vs 51.8	Yates $\chi^2=7.06$ , df=1, p < .01
avoidant disorder (n=25)	76.0 vs 52.6	Yates $\chi^2=4.43$ , df=1, p < .05
overanxious disorder (n=142)	63.4 vs 51.0	Yates $\chi^2=6.58$ , df=1, p < .01
conduct disorder (n=28)	25.0 vs 54.4	Yates $\chi^2=8.24$ , df=1, p < .005
pervasive developmental disorder (n=29)	27.6 vs 54.4	Yates $\chi^2=7.00$ , df=1, p < .01
sleep disorder (n=85)	64.7 vs 51.9	Yates $\chi^2=4.46$ , df=1, p < .05

Table 6.8. % of children showing reliable improvement according to the presence or absence of specific diagnoses

All of the above differences, except for that concerning avoidant disorder, remained significant after excluding children who dropped out within six months. Evidently, anxiety disorders (except for obsessive-compulsive disorder), tend to predict good improvement, as do sleep disorders. Pervasive developmental disorders and conduct disorder suggest a poor prognosis.

Category of psychoanalytic diagnosis was also related to likelihood of improvement. Categories 4 and 5 (children with distortions of personality development: atypical, 'borderline' and organic pictures) were much less likely to improve. This is shown in Table 6.9.

category	% reliably improved	statistic
II: transient neurotic symptoms (n=84)	67.9	$\chi^2 = 14.89$ , df=2, p < .001
III: entrenched neurotic psychopathology (n=203)	63.1	
IV or V: atypical, organic, psychotic (n=52)	36.5	

Table 6.9. Frequency of reliable improvement according to psychoanalytic diagnosis (44% of full sample had category assigned)

### Treatment characteristics

As shown in Tables 6.1 and 6.2, frequency of sessions has a strong relationship with rates of clinical improvement, both for all cases and for those continuing in treatment beyond six months. Children in 4-5 times per week treatment were more likely to show reliable improvement in adaptation (HCAM), and to move from the dysfunctional to the functional range on the same measure (they were not, however, more likely to cease to be diagnosable).

Table 6.10 shows the relationship between length of treatment and frequency of reliable change for the full sample; longer treatment was associated with far higher rates of improvement.

length of treatment	% reliably improved	statistic
under 6 months (n=136)	25.7	$\chi^2 = 80.25$ , df=4, p < .0001
6-12 months (n=65)	43.1	
1-2 years (n=216)	50.9	
2-3 years (n=160)	60.0	
over 3 years (n=186)	74.2	

Table 6.10. Frequency of reliable improvement according to length of treatment

Other variables associated with improvement concerned involvement of the parents. Table 6.11 shows that children more often improved when at least one parent was regularly seen by a member of the Centre staff to discuss the child.

	% reliably improved	statistic
parent guidance (n=306)	58.8	Yates $\chi^2=5.81$ , df=1, p < .02
no parent guidance (n=457)	49.7	

Table 6.11. % of children showing reliable improvement, according to whether parents were seen regularly

Table 6.12 shows that children whose mothers were taken into psychotherapeutic treatment in their own right at the Centre also showed greater improvement.

	% reliably improved	statistic
mother treated (n=27)	74.1	Yates $\chi^2=4.01$ , df=1, p < .05
mother not treated (n=736)	52.6	

Table 6.12. % of children showing reliable improvement, according to whether mother was given psychotherapy

Neither of the above comparisons remained statistically significant when children terminating treatment within six months were excluded, suggesting that the differences were related to lower attrition among children whose parents were engaged by involvement in the child's therapy, or in their own.

### 6.3.3. Prediction of early termination from treatment

Stepwise discriminant function analysis was used in an attempt to identify the 136 children who withdrew from treatment within six months. Several variables proved to be significantly related to attrition (approximate  $F=11.58$ ,  $df=9,752$ ,  $p < .0001$ ), but only 10% of dropouts could be correctly classified. The prediction did not improve when younger and older children, or boys and girls, were considered separately.

For the full sample, variables related to attrition were as follows. Children who withdrew were likely to be in non-intensive treatment ( $F=18.14$ ,  $df=1,752$ ,  $p < .0001$ ), to have parents

receiving regular parent guidance ( $F=20.81$ ,  $df=1,752$ ,  $p < .0001$ ), to have a father with no psychiatric history ( $F=13.55$ ,  $df=1,752$ ,  $p < .0001$ ), unless this history involved antisocial behaviour ( $F=9.60$ ,  $df=1,752$ ,  $p < .005$ ). They were more likely to have a stress-related ( $F=7.33$ ,  $df=1,752$ ,  $p < .01$ ) or impulse-control disorder ( $F=7.33$ ,  $df=1,752$ ,  $p < .01$ ), and less likely to have an anxiety disorder ( $F=8.43$ ,  $df=1,752$ ,  $p < .01$ ). Mother being in analysis, or having been in analysis previously, was related to continuing with treatment ( $F=7.52$ ,  $df=1,752$ ,  $p < .01$ ).

#### **6.3.4. Prediction of the extent of improvement in adaptation**

For the full sample, 32% of the variance in HCAM change could be accounted for, in a stepwise multiple regression analysis, by 22 variables. When children terminating treatment within six months were excluded, the proportion of variance accounted for and the variables included were almost identical. Table 6.13 shows the variables emerging as significant predictors for those children who remained in treatment. (Values shown are for the final regression equation, not for the step at which each variable was entered.)

The strongest predictors turned out to be initial level of adjustment (better functioning children improved less), length of treatment, and age of the child. The child's age emerged as a powerful predictor; younger children improving substantially more during treatment.

Other important variables were mainly in the areas of child disorder and parental functioning. Pervasive developmental disorder, ADHD, conduct disorder, bipolar disorder, psychoses, impulse-control disorders and enuresis were all associated with poor outcome. Simple phobias and stress-related syndromes (post-traumatic stress disorder and adjustment disorders) predicted greater improvement. Parent-child problem (a DSM-III-R V code for non-diagnosable problems leading to referral) was a negative predictor. Other child variables associated with good outcome were having relatively high IQ, and having been hospitalised more than once before 5 years. Positive demographic and family factors included mother being well-adjusted (higher GAF score), coming from a Jewish family, higher social class, absence of depression in the father (but presence of depression on the mother), and absence of antisocial behaviour in the mother. Treatment variables related to improvement included

	Regression coefficient (b)	Standardised regression coefficient ( $\beta$ )	F value for variable
HCAM at assessment	-0.34	-0.30	54.27***
pervasive dev. disorder	-12.56	-0.24	39.21***
length of treatment	12.24	0.21	35.17***
child's age	-0.50	-0.17	21.57***
simple phobia	5.58	0.14	15.66***
mothers GAF score	0.15	0.13	12.60***
ADHD	-7.81	-0.12	11.45***
child from AFC nursery	4.53	0.16	9.99***
bipolar disorder	-28.68	-0.10	9.61***
parents Jewish	2.85	0.10	8.38**
impulse control disorder	-14.07	-0.09	6.68**
child's IQ	0.06	0.09	6.40*
multiple hospitalisation	7.32	0.08	6.07*
stress-related disorder	7.58	0.08	5.84*
father depressed	-2.82	-0.08	5.51*
conduct disorder	-4.87	-0.08	5.24*
higher social class	1.03	0.08	4.72*
parent-child problem	-3.50	-0.07	4.59*
mother depressed	1.79	0.08	4.45*
mother antisocial	-4.07	-0.07	4.38*
psychotic disorder	-8.55	-0.07	4.18*
mother treated at AFC	3.85	0.07	4.14*
enuresis	-2.64	-0.07	4.03*

\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

Table 6.13. Prediction of improvement in adaptation by stepwise multiple regression analysis for cases continuing beyond six months (n=627).

length of treatment, having attended the Centre's nursery school, and mother receiving concurrent psychotherapy at the Centre.

A discriminant function analysis was performed to distinguish between children who showed reliable improvement and those who did not. For the full sample, this gave reasonably accurate prediction; 72.7% of those who improved, and 63.7% of those who did not could be correctly classified (approximate  $F=18.46$ ,  $df=11.750$ ,  $p<.0001$ ). After excluding cases terminating within six months, prediction of the children who failed to improve became much less accurate; only 48.8% of these cases could be identified. The variables associated with improvement in this analysis were very similar to those included in the multiple regression equation above: longer treatment, absence of pervasive developmental disorder, conduct disorder, ADHD and impulse control disorders, lower initial HCAM score, lower age, Jewish family, better psychological adjustment in the mother, but presence of a psychiatric history in the mother (approximate  $F=13.54$ ,  $df=10.615$ ,  $p<.0001$ ).

#### 6.4 DISCUSSION

This chapter examined the outcome of the psychodynamic treatment of 763 children. Estimates of the overall effectiveness of this treatment appeared to depend on the criteria applied. Only one third of the cases were no longer diagnosable at the end of treatment. This estimate, however, includes a large number of cases for whom insufficient information was available to establish a diagnosis with confidence (see section 4.2). Negative finding (i.e. the absence of a diagnosis) cannot be made with confidence without a standardized diagnostic process. Whilst in almost all cases, there was such a diagnostic process at the beginning of treatment, there was no parallel procedure at termination. The reliability of diagnostic assessments, regardless of the specificity of the diagnostic criteria, depends on the quality of information supplied by parents or children. For most younger children, such information was elicited from the parents, and could be identified in Social Histories. Only in a few cases was there a comparably detailed recorded interview with the parents at the end of treatment. It is thus difficult to draw strong or firm conclusions from these findings, except that at least one third of the children were sufficiently improved no longer to merit a diagnosis.

There were two further measures of clinically significant change, which yielded more encouraging data. Nearly 50% of the children no longer fell into the dysfunctional range of the HCAM distribution (see section 4.2.1). A similar proportion (over 53%) showed clinically significant improvement, where clinical significance is assessed in terms of the standard deviation of the measure and its test-retest reliability. The observation of a 50% improvement overall is hard to evaluate. Spontaneous remission rates for a group of disorders as heterogeneous as in the present sample are not possible to determine. Studies which have attempted to do this, e.g. Eysenck (1952), Levitt (1957), were severely criticised because of the uninformative nature of their assessments (Barrett et al., 1978).

One issue to emerge from these early studies was the inclusion of dropouts in estimates of treatment effectiveness, which may be readily criticised, since those who drop out at an early stage do not experience the treatment, and therefore cannot speak to its efficacy. In a reanalysis of the current data, patients were excluded who had less than six months of analytic treatment. With this criterion, the percentage of children improving rose to 60%, 6% short of the two thirds figure often reported in child therapy outcome investigations (e.g. Casey & Berman, 1985). Whereas it is difficult to make comparisons between this study and other outcome investigations because of differences between samples and criteria of outcome, it seems that on the basis of caseness considerations alone, psychoanalysis and psychoanalytic psychotherapy probably have an impact comparable to those of other psychological treatments.

There were statistically significant differences between intensive and non-intensive treatment, which to some degree obscure the overall outcome findings. Intensive treatment, of at least six months' duration, resulted in 56% of the cases moving from the dysfunctional to the functional distribution of HCAM. The difference between intensive and non-intensive treatment was quite substantial (1.5 sd). Such global differences between the two treatment conditions are, however, obscured by the selective assignment of patients to treatment groups. The effect of intensity is hard to interpret without considering the kind of patients that were assigned to the two treatment conditions. The issue of intensity can only be explored fully in conjunction with diagnostic information, length of treatment and other variables. This is one of the aims of the three chapters to follow.

Reliable improvement was associated with a number of variables. Improvement was, for example, more likely for individuals who came from Social Class I. Social class has frequently been shown in epidemiological studies to be associated with both risk and course of child psychiatric disorders (e.g. Cohen et al., 1990), and is less frequently a factor in controlled psychotherapy outcome investigations (Dumas & Wahler, 1983). Thus, it seems possible that in the present case social class was related to the rate of remission rather than to response to psychoanalytic treatment. Another possibility is that social class was associated with other predictor variables, such as child's intelligence or parental motivation, which may have a closer relationship with improvement in treatment. (This possibility is examined later in multivariate analyses.)

The strong association between family intactness and good treatment outcome may similarly be due partly to a greater likelihood of spontaneous remission among children living with both parents, as it has been found in epidemiological studies to be clearly related to better child mental health. This might be due to the better relationship experiences such children are likely to have had, which in turn may make it easier for such children to benefit from the psychodynamic treatment, to develop a trusting and productive therapeutic relationship with a new adult (Shirk & Saiz, 1992).

There was a highly significant association between mother's experience of analytic treatment and the likelihood that the child would improve. This is probably due to mothers being more likely to be committed to continuing their child's analysis if they had had personal experience of it. The relationship ceases to be significant once children dropping out of treatment within six months are excluded. The mother's experience of analysis might have included times when she did not see the point of continuing; this would have helped her to encourage her child to persist through difficult phases. It is also possible, given that most of these mothers had been in analysis some years before the child's referral, that their own treatment may have made them more sensitive and responsive to their child's feelings and needs, both before and during the child's treatment. There are further possibilities, one that needs to be mentioned is that these mothers may have referred their children more readily for analysis (i.e. with relatively mild or recent disorders, responding more rapidly to any intervention). Again, these possibilities are to some extent clarified by multivariate analyses.

Child age was strongly related to treatment outcome, with younger children improving more. This is consistent with some meta-analytic findings but not others; Weisz, Weiss, Alicke & Klotz (1987) found a main effect of age on effect size, other surveys have not confirmed this. The relationship between age and therapeutic outcome in the present study did not remain significant after excluding children who terminated treatment prematurely, so that part of the effect is likely to be related to greater attrition among older children and adolescents.

The broad diagnostic grouping of the child's referral problems emerged as very relevant to treatment outcome. Pervasive developmental disorders were very unresponsive to this form of treatment (only 27% reliably improved), as they appear to be to others (Dahl, Cohen & Provenca, 1986). Emotional disorders (anxiety and depression) showed by far the most positive response to psychodynamic treatment (63% improved overall), with children given disruptive and other diagnoses falling between the two levels of outcome (around 46% improved). The likelihood of improvement was increased when children terminating within 6 months had been excluded, except in the pervasive developmental disorders group, which had a very low dropout rate and little response to therapy.

Several specific diagnostic categories were also found to be significantly related to treatment outcome. Children with diagnoses of simple phobia, separation anxiety, avoidant disorder or overanxious disorder (i.e. all common anxiety disorders except for obsessive-compulsive disorder) were relatively likely to show reliable improvement. This was not simply because anxious children were less likely to drop out of treatment, as the differences (except for that concerning avoidant disorder) remained significant when only children remaining in treatment for at least six months were considered. It was also not just because anxiety disorders tend to resolve spontaneously; the evidence is that (when sufficiently severe to warrant treatment) they tend otherwise to persist over a period of years (e.g. Cohen et al., 1993). Both conduct disorder and pervasive developmental disorder are associated with very poor therapeutic outcome, with only one quarter of cases showing reliable improvement. Although the poor outcome in the disruptive disordered group (this included oppositional defiant disorder as well as conduct disorder) was in line with the low long-term success rates in other treatment modalities (see Kazdin, 1993), the differential between emotional and disruptive disorders was greater than would have been expected on the

basis of meta-analytic studies (see section 1.2). These findings strongly suggest that diagnostic groups respond very differently to psychodynamic treatment, and their outcomes and the variables which predict these may need to be examined separately.

It is interesting that among the 44% of children who had been diagnosed using psychoanalytic categories, outcome was favourable (two-thirds improved) for neurotic symptoms regardless of whether these were transient or entrenched. On the other hand, those children who had been diagnosed as suffering from atypical personality disorders, organic or psychotic disorders were found to benefit substantially less (approximately one-third improved). Again, this points to the need to consider children in the context of diagnostic groupings.

A number of treatment variables were found to have strong relationships with change in adaptation during the treatment. Higher frequency of sessions (treatment intensity) was associated with greater change in adaptation (HCAM), although not with diagnostic change. A child was not significantly more likely to cease to have any diagnosable disorder following psychoanalysis rather than psychotherapy, but was likely to be better adjusted in terms of the areas of social and emotional development considered in assigning HCAM ratings. The question immediately arises whether the children treated intensively were different with respect to other predictors of outcome. General clinical practice at the Anna Freud Centre over the years suggests that this is unlikely to be the case, intensive treatment has always been seen there as the treatment of choice, and in the one quarter of cases who were treated less intensively this was normally a compromise based on practical difficulties in attendance, rather than on clinical considerations. This issue is addressed further both by including intensity in multivariate predictions of outcome (where other relevant variables are controlled for) and by examining it separately (where relevant) for subgroups of the full sample in subsequent chapters.

The possibility of a link between intensity and effectiveness of treatment is one that is believed in psychoanalytic centres, and has some tentative support in the literature on psychodynamic approaches. Howard et al. (1986) suggested a dose-response relationship to explain their finding of a linear association between likelihood of improvement in adult psychotherapy and the log of the number of treatment sessions. This association remained when time between assessments was controlled for. The dose-response function

differed for different types of pathology (personality disorder did not respond well to short-term therapy), which underscores the importance of considering this variable in relation to particular diagnostic groups. More recently, Howard and his colleagues have studied the course of longer treatments (up to 400 sessions, rather than the 26 sessions in their earlier study) and found evidence of distinct phases in long-term therapy (Howard et al., 1993): first, enhanced well-being, then symptom reduction, eventually more profound, enduring changes in personality and adjustment. The longer the time in therapy, the greater the likelihood of reaching the third phase. Turning to the psychodynamic treatment of children, a study by Heinicke (1965) (also Heinicke & Ramsey-Klee, 1986) experimentally showed a link between treatment intensity and improvement in children with learning difficulties (see section 1.3.1). This is clearly a very important question to consider in the context of more homogeneous groups of children.

Length of treatment was also found to be very strongly related to good outcome ( $p < .0001$ ), and the proportion of cases showing reliable improvement increased steadily for at least 3 years of treatment. This is consistent again with clinical expectations (and with the phase model of Howard et al., 1993, above) that in psychoanalysis therapeutic gains accumulate over years rather than months. However, the interpretation of this relationship is very much obscured by a serious methodological limitation imposed by the retrospective nature of this study. As described in section 4.1.9, it proved impossible reliably to rate adaptation or diagnostic status at regular intervals over the course of treatment (or, of course, after treatment), which would have allowed comparison across cases at standard intervals from the beginning of treatment. Because of the form of their case records, only ratings at the beginning and end of treatment could be made with confidence for the great majority of children. This confounds treatment length and time between assessments, and therefore spontaneous developmental changes. Again, this raises the need for more sophisticated analysis of the data in this study, to allow examination of the relationships between several variables (such as treatment length and treatment intensity); to disentangle the importance of different factors in the effectiveness of treatment. It also emphasizes the importance of considering diagnostic groups separately, as rates of improvement over time need to be assessed in relation to what is known of the natural history of particular disorders. This allows some estimation of the impact of length of treatment for specific groups,

which would be much more difficult and less meaningful when children and adolescents with every type of disorder are considered together.

It is of interest that regular supportive or therapeutic work with a child's parents (particularly the mother), alongside the child's treatment, was found to be associated with better outcome. Several possible interpretations of this present themselves, for instance it is likely that parents of younger children were more often seen regularly, and we have seen that younger children were more likely to show reliable improvement. However, the impact of work with parents was no longer significant once children terminating within 6 months had been excluded. This suggests that the effect of this work on child outcome may have been primarily through keeping children in therapy for a necessary minimum period to engage the child. This relates to the result (discussed above) that where mothers had had previous personal experience of psychoanalysis, their children were more likely to improve. Again, this finding ceased to be significant among children continuing in treatment for over six months, and suggests an effect of mothers' commitment to and understanding of this form of treatment.

An attempt was made to identify those children who prematurely withdrew from treatment in a discriminant function analysis, but this was very unsuccessful (only 10% of the dropout group correctly assigned). Even when the full sample was split into older and younger children, or boys and girls, the proportion identified did not improve.

Certain variables did, however, emerge as significantly associated with attrition. Being in non-intensive treatment predicted premature withdrawal. This seems a somewhat surprising finding, as parents often say they would find bringing the child for non-intensive treatment easier to manage. It is possible that there were already signs of poor motivation (or of poor prognosis) associated with assignment to non-intensive therapy. More positively, it might be that intensive treatment was more successful in engaging the child in productive work (which therefore seemed more worth continuing for parents and child). Regular parent guidance was also associated with a lower attrition rate, presumably because of its impact on parents' motivation. However, one needs to bear in mind the reasons why some parents were seen regularly and others not; these motivational differences might have been present from the start. The absence of paternal psychiatric history (except

for antisocial behaviour) was also related to dropping out, perhaps because fathers who had not experienced emotional distress, or who were inclined to be aggressive or impulsive, were less likely to support an intensive, long-term psychotherapeutic approach. In a similar way, children whose own difficulties were triggered by a specific stress or who had impulse control problems, and who did not suffer from anxiety symptoms, may have found it more difficult to see the point of long-term psychotherapy.

Many predictors of the extent of improvement in adaptation emerged in a stepwise multiple regression analysis. The variance in outcome accounted for among those children who remained in treatment for at least six months was 32%. By far the strongest predictor of the extent of improvement was lower initial adaptation level (HCAM). This is consistent with the law of initial values (regression towards the mean), and therefore not surprising. It is, however, not consistent with the findings in the adult literature (reviewed by Luborsky et al., 1993) that improvement in adult psychotherapy was associated with higher initial ratings of adaptation (e.g. on the Health-Sickness Rating Scale). The second variable in the regression equation qualifies the first, in that once initial HCAM score had been entered, the presence of pervasive developmental disorder emerged as a very strong negative predictor. This is expected on the basis of overwhelming evidence that autism and similar syndromes are likely to have biological origins and are very resistant to treatment, probably especially psychodynamic treatment. (Certainly, the research group which treated these 30 or so profoundly disturbed inpatients concluded that psychoanalytic treatment was not effective for them). The third powerful predictor of good outcome was longer treatment, which as stated above was confounded in this study with assessment interval (therefore opportunity for spontaneous remission).

After these three strong predictors, younger age of child emerges as highly significant, together with several variables relating to child diagnosis at referral. Simple phobias and stress-related disorders (e.g. adjustment disorders) predicted better outcome, while ADHD, conduct disorder, bipolar disorder, psychoses, impulse-control disorders and enuresis were all associated with poor outcome. The directions of these predictions are very broadly in line with what would be expected from the natural history of different groups of disorders, and their responsiveness to other psychosocial treatments (see section 1.2.8). A question

arises as to whether the predictors of good outcome may differ between the diagnostic subgroups, an issue which is explored further in chapters 8 and 9.

Several other predictors of good outcome emerged in the multiple regression analysis. Additional child and clinical variables included the child having attended the Anna Freud Centre nursery school. This is a small, psychoanalytically-informed nursery which particularly selects children from disadvantaged backgrounds (financial stress, parental psychiatric illness, etc.), or children whose psychological development has already given cause for concern by the age of 2 or 3 years old. It is surprising, therefore, that these children did relatively well in their later analytic treatment. An associated factor which might help to explain the link is that the nursery children were younger; however nursery attendance emerges as a strong predictor even after age has been entered into the equation. One impact of nursery attendance may have been to create a bond between the Centre and the child's family which laid the ground for future trust and cooperation with treatment. However, it may also be that the experience of the nursery school provided these children with 'models' of positive relationships, which helped them to use the subsequent therapeutic experience. It is not possible to be sure from the data available, whether nursery schooling in general predicted better therapeutic outcome, or whether it was specific to the Anna Freud Centre's unusual school, with its links to the clinical service.

Higher child IQ also emerged as a predictor of good outcome. This was not clearly predicted by the very few relevant studies in the literature (see section 3.2.2). Berg and his colleagues found, in follow-up studies of school-phobic children, that higher IQ predicted worse outcome at three-year follow-up, and better outcome at the ten-year follow-up. There is little systematic evidence bearing on psychotherapy outcome, but some have argued (Sinason, 1992) that even very low IQ is no obstacle to productive psychodynamic treatment. These results for the overall sample suggest, however, that higher IQ is generally associated with better outcome in child psychoanalytic therapy.

It is difficult to understand why a history of multiple hospitalizations should be associated with good treatment outcome. The small amount of evidence relating to this suggests that a serious medical history makes the child more vulnerable to later psychopathology, and this may be understood in terms of impairment of the child's security in relationships

(e.g. from multiple separations), and of his sense of himself (e.g. he could feel deficient or damaged because of a chronic medical condition, or surgery). It is possible that this history of repeated hospitalisation either helps the parents to feel positive about presenting their child for help (they might feel less to blame for the emotional problems), or that it somehow makes the child more receptive to a psychoanalytic approach. Conceivably, for instance, it might give a focus for interpretations of the child's feelings which is relatively easy for the child to follow and feel understood by. For this and other reasons, analytic interpretation might be particularly effective where there is a definite history of trauma.

A number of family and demographic variables proved to be significant predictors, particularly those relating to parental psychopathology: having a currently well-functioning mother (GAF score), no maternal antisocial behaviour or severe parent-child relationship problem, and father not depressed, were all associated with better therapeutic outcome. Once maternal GAF score had been taken into account, a history of (clinical) depression in the mother was predictive of better outcome. This perhaps relates to another predictor: psychotherapeutic treatment of the mother alongside the child's treatment was related to good outcome. It is likely that both a history of depression and psychotherapeutic treatment of the mother increased her involvement in and positive attitude to the child's psychotherapy, in a way that maternal antisocial behaviour, poor parent-child relationship and generally impaired psychological functioning did not.

Other family factors related to good therapeutic result included parents being of Jewish origin. On the face of it, this is difficult to understand, but two explanations may be suggested. One is that this religious or cultural background may have been associated with greater parental motivation, as the Centre has strong historical and social links with Jewish communities in North London. This would make this finding specific to the Anna Freud Centre, perhaps even specific to the Centre in earlier decades. It would not then be expected to generalize to other samples and settings. An alternative possibility is that these families had stronger religious practices and values, which may have provided their children with greater resilience and more family cohesion (Baldwin et al., 1990; Werner, 1990). In this case, the result could be of relevance to other samples, though to religious families in general rather than specifically to Jewish families.

Higher social class appears in the multiple regression equation as a predictor of improvement in treatment, as it was in univariate analyses. The significance of this may lie in at least two factors in addition to those referred to earlier. One is that long-term treatment involving attendance five times per week, which the majority of these children were receiving, clearly makes huge practical demands on families, even though treatment is available free. Families with more resources (car, au pair to bring the child or care for siblings, etc.) would normally find this less burdensome. Another factor may have been more cultural: a greater awareness of and sympathy towards psychoanalytic treatment among the local professional middle class parents, giving them greater motivation to cooperate with this long-term, intensive therapy. Both possible influences, especially the second, are rather specific to this form of treatment and to local conditions.

A discriminant function analysis, to distinguish between those children who showed reliable improvement and those who did not, produced a very similar list of predictors to those found in the multiple regression analysis predicting the extent of change. However, the accuracy of prediction was only moderate for the full sample, and fairly poor once children terminating within six months had been excluded. This suggests that the group of 627 children remaining in treatment may have been too heterogeneous for prediction of improvement to be accurate.

## 6.5. CONCLUSION

In this chapter, the outcome of treatment in the full retrospective study sample has been described, and a preliminary attempt to identify predictors of good outcome was made using univariate and multivariate techniques.

Approximately half of the children in the full sample showed reliable improvement in HCAM rating during their treatment, and slightly fewer moved into the functional range of the HCAM distribution. Only one-third were definitely not psychiatrically diagnosable at the end of treatment, but this mostly reflected the large amount of missing data on this variable at termination. Many variables showed significant relationships with either

categorical or continuous measures of improvement. Most notable were intensity of treatment, younger age of child, and several diagnostic categories at referral.

The accuracy of prediction of improvement in adaptation was somewhat disappointing, and the identification of children likely to drop out of treatment within six months was very poor. It is important to understand the phenomenon of attrition if possible; it is an fundamental aspect of therapeutic outcome (those who do not receive the treatment cannot benefit from it), and of great interest in terms of focusing clinical services on those likely to respond. Evidently, it is not possible to elucidate this problem for the sample as a whole, although diagnostic considerations in both parents and child again appeared to be important.

In order to clarify the predictors of both attrition from treatment and the degree of improvement in treatment which is continued, it is necessary to examine more homogeneous subgroups of the total sample, and to compare groups differing mainly on one variable. The next three chapters present three such studies. In the first, the effect of age is examined by comparing three groups matched on other key variables. In chapter 8, the outcome and predictors of outcome among children with disruptive disorders are compared with those in a matched group of emotionally disordered children. Chapter 9 examines the outcome of treatment in the largest diagnostic subgroup, emotionally disordered children.

## CHAPTER 7. THE OUTCOME OF CHILD PSYCHOANALYSIS: THE EFFECT OF AGE ON IMPROVEMENT OF TREATMENT

### 7.1. INTRODUCTION

The previous chapter, in which outcome findings for the full retrospective study sample were reported, led to the conclusion that two major characteristics of the child had strong relationships with therapeutic outcome. One was the child's age, the other the type of symptomatology, or the broad diagnostic category to which he belonged. In order to investigate the effects of these variables adequately, and particularly to see whether predictors of outcome might be different between these groups, it is necessary to match groups of children differing primarily in age or diagnosis.

This chapter examines the way in which the age of a child or adolescent when referred for treatment relates to the outcome of that treatment. The issue was addressed by matching three groups of children of different ages from the retrospective study sample, examining differences between these groups, including any differences in the extent of improvement, and then looking at whether the variables predicting outcome appeared to be the same in each age range.

It is not clear whether the natural history of childhood disorders is more benign in children who are younger at the onset of difficulties. Richman, Stevenson & Graham (1982) followed hundreds of children up from 3 to 8 yrs, and found a high level of persistence. Overall, 61% of 3 year olds who were regarded as showing significant disturbance still had difficulties when clinically evaluated at 8 years. Chazan & Jackson (1974) found that 43% of children rated poorly adjusted at school entry (4-5 years) presented with clear behaviour problems at 7 years. Rutter, Tizard & Whitmore (1981), in the Isle of Wight study, evaluated children at 10-11 and again at 14-15. The overall rate of persistence of disorder was put at 60%, with lower stability for emotional than for conduct disorders. Esser, Schmidt & Woerner (1990), in a study of 400 German children followed up from 8 to 13 yrs, reported that 50% of psychiatric disorders persisted through this period. Again, there was a wide discrepancy between the optimistic prognosis of emotional disorders and the very poor outlook for

children with serious disruptive behaviour. Recently, Cohen and her colleagues (Cohen et al., 1993) have conducted a large-scale epidemiological study assessing the persistence of diagnosable psychiatric in older children and adolescents. Cohen et al. found that "for almost all combinations of diagnosis and severity level, one-third or more of the cases diagnosed at ages 9-18 were still at an equivalent diagnostic level 2½ years later" (Cohen et al., 1993, p.876). There was no difference in levels of persistence according to age at the first assessment. Unfortunately, there is no study which provides follow-up data for the full age range in the same sample, but the above investigations together suggest that one third to one half of the children presenting with disorders at any age from 3 years will still show significant disturbance some years later. There is not as yet good evidence for the wide belief that earlier psychiatric disorder has a better prognosis.

There is conflicting evidence in the literature on whether a child's age at referral (or at onset of symptoms) could be related to treatment outcome. Some studies have found that the younger a child is when treated, the better the outcome. Several studies have assessed the later adjustment of children treated for school refusal (e.g. Miller et al., 1972; Berg & Jackson, 1985), and have found that younger children had a better prognosis. Also, in the Weisz, Weiss, Alicke & Klotz (1987) meta-analysis (see Chapter 1), there was a main effect of child age, when children aged 4-12 were compared to adolescents (13-18 yrs). The mean effect sizes were 0.92 and 0.58 respectively ( $p < 0.05$ ). There was a correlation of -0.21 between child age and therapy effect size across 163 studies ( $p < 0.05$ ).

However, in Weisz et al.'s (1992) meta-analysis of six outcome studies of the treatment of depressive symptoms (in non-clinical samples), adolescents responded significantly better to these cognitive-behavioural interventions than did children under 12, and this difference was increased at follow-up. In line with this, Durlak et al. (1991) have reported a meta-analysis of 64 studies of cognitive-behavioural treatment for children aged 4 to 13 (two-thirds treated for externalising disorders). One hypothesis of the investigation was that older children would benefit more from this form of treatment, as they would generally have achieved a higher cognitive level. They found some evidence to support this idea, in that the mean ES for 11-13 year olds (the *formal operations* group) was 0.92, while 5-7 year olds (*preoperations*) and 7-11 year olds (*concrete operations*) showed effect sizes of 0.57 and 0.55 respectively. The three age groups were significantly different on homogeneity

tests, but ESs were homogeneous within groups. (Although these authors confirmed their prediction that older children would have better outcomes, they failed to demonstrate that this was due to a higher cognitive developmental level, as they found a negative correlation between cognitive change and behavioural change.)

A main age effect was not found in the other meta-analyses conducted by Casey & Berman (1985) or Weisz, Weiss, Morton Granger & Han (1992). Some individual studies have looked for an effect of age on outcome in treated cases, and have similarly found no evidence of this. Roberts (1975) for instance, followed up a sample of 131 children who had been hospitalised for school phobia 5-18 years earlier. Although he traced less than half of the cases, it is of interest that all still suffered from anxiety disorders, and age of onset was unrelated to persistence of maladjustment.

There are indications that age may interact with other variables in its relationship to treatment outcome. Weisz, Weiss, Alicke & Klotz (1987), in their meta-analysis of outcome studies, found that although there was no interaction between age, outcome and either problem type or type of therapy, there was an interaction with therapist expertise. Essentially, professional therapists were equally effective with patients of all ages (the correlation between child age and ES was 0.11, n.s., for professional therapists). However, graduate students and paraprofessionals were more effective with younger children ( $r = -0.31$  and  $-0.43$  respectively,  $p < 0.05$  in both cases). Much the same result was found in the later meta-analysis by Weisz, Weiss, Morton, Granger & Han (1992).

## 7.2. METHOD

### 7.2.1. Sample

The distribution of ages in the full sample is shown in Table 7.1. The children are divided into three age ranges, approximating the grouping of cases at the Anna Freud Centre into under fives (in practice, under six by the time treatment starts), latency children and adolescents. The ages shown are the ages at which children began in therapy, rather than the age at referral, as many factors could intervene between assessment and treatment.

	under 6 yrs	6-11.11 yrs	12 and over
number of cases (%)	145 (23.1%)	325 (51.8%)	157 (25.0%)

Table 7.1. Distribution of cases by three age groups in full sample.

Matched groups were created by a computer algorithm which individually selected children from each of the two older age groups, matched with cases in the youngest (and smallest) age group. The matching criteria included gender, socio-economic status, broad diagnostic category, adaptation score (on the HCAM) and number of sessions/week (see Table 7.2).

variable	variable values	criteria for match
gender	boy/girl	same
treatment intensity	non-intensive or intensive (1-3 or 4-5 sessions per week)	same
broad diagnostic category	emotional; disruptive; pervasive developmental; other diagnosis; none but poor functioning; none and well-functioning	same
social class	classes I to V	within one class higher/lower
HCAM rating	scale 1-100	within 5 points higher/lower

Table 7.2. Criteria used to match cases in three age groups.

101 cases in each age group were perfectly matched using the above criteria. Three further rounds of matching, relaxing the criteria on HCAM (a maximum of 10 points difference allowed), social class or treatment intensity, added a further 26 matched cases to each group. On the variables of gender and diagnostic category, the three groups were identical. 59% of each group were male; 59% were in the emotional disorders category, 18% in the disruptive disorders group, 13% in the other diagnoses group, 10% in the no diagnosis-low HCAM group. (There were no cases with pervasive developmental disorders in the matched groups, because they were too unevenly distributed by age and other variables

to be successfully matched.) Table 7.3 shows the extent to which the three groups were equivalent on the remaining criteria, where differences were allowed.

	< 6 yrs	6-11.11 yrs	≥ 12 yrs
% intensive	85.8%	81.9%	83.4%
mean SES (sd)	1.45 (0.84)	1.47 (0.85)	1.58 (0.91)
mean HCAM (sd)	56.39 (8.16)	56.92 (7.34)	56.03 (7.45)

Table 7.3. Correspondence between the three matched groups on variables used for matching.

The adolescent group had a slightly lower mean SES classification than the younger children, and the younger children were marginally more likely to receive intensive treatment. No difference between any pair of age groups on any variable approached statistical significance.

Table 7.4 shows some other demographic and treatment characteristics of the matched children; here some significant differences do appear.

	2 - 5.11	6 - 11.11	12 - 18	statistic
mean IQ (range) (s.d.)	114.0 (17.0)	114.8 (18.2)	113.9 (16.0)	F < 1
% broken families	18.1	19.7	26.0	$\chi^2=6.36,$ df=2, p < 0.05
% treated by trainees	77.2%	63.0%	66.9%	$\chi^2=6.36,$ df=2, p < 0.05
% terminating within 6 months	18.1	11.0	25.2	$\chi^2=8.60,$ df=2, p < 0.02
mean length of treatment (range) (s.d.)	1.64 (1month-10.3yrs)(0.64)	2.28 (1month - 12yrs) (0.66)	1.67 (1week-13.8yrs) (0.77)	F=7.04, df=2, 371, p < 0.001

Table 7.4. Some further demographic and treatment characteristics of children in each matched age group.

The diagnoses assigned to cases in each age group were compared, to discover whether there were differences even after matching for broad categories. The frequencies of specific diagnoses are shown in Table 7.5.

As might be expected, among emotional group diagnoses, separation anxiety disorder and sleep disturbance (mostly nightmares) were more frequent in the under 6 age range, OCD and depressive disorders in adolescents. Similarly, we find that oppositional defiant disorder and ADHD occur mostly in under-12s, while conduct disorder and antisocial behaviour predominantly occur among adolescents. Among the "other" category diagnoses, reactive attachment disorders and encopresis are mostly found in children under 6 years, while tics and personality disorders (both rare) are only found in the older groups.

### **7.2.2. Statistics**

The statistical procedures used have been described in section 6.2.

## **7.3. RESULTS**

### **7.3.1. Rates of improvement**

Rates of improvement on the first three (categorical) outcome criteria are shown in Table 7.6, together with the figures on negative outcome (staying the same, or deterioration in functioning).

	2 - 5.11	6 - 11.11	12 - 18
ADHD	5	4	0
Conduct disorder	0	6	9 *
Oppositional defiant disorder	21	20	5 **
Antisocial behaviour (V code)	0	3	10 **
Overanxious disorder	26	36	31
Major depression / dysthymia	3	13	31 ***
Separation anxiety	23	15	8 *
Obsessive-compulsive disorder	1	4	10 *
Phobia	10	7	12
Avoidant disorder	8	5	4
Specific developmental disorder	12	16	12
Sleep disorder	25	18	10 *
Eating disorder	4	3	0
Reactive attachment disorder	7	4	0 *
Enuresis	5	13	10
Encopresis	6	1	1 *
Speech disorder	12	5	4
Gender identity disorder	2	3	1
Tic disorder	0	2	6 *
Habit disorder	3	1	1
Elective mutism	1	0	0
Substance abuse	0	0	1
Impulse control disorder	0	0	1
Stress related disorder	5	3	2
Somatoform disorder	1	2	2
Personality disorder	0	0	3 *
Parent-child problem (V code)	11	9	9

p < 0.05 \*\* p < 0.01 \*\*\* p < 0.001

Table 7.5. Frequency of each diagnostic category in each age group

	2 - 5.11 %	6 -11.11 %	12 - 18 %	Statistic
No diagnosis at term., HCAM $\geq$ 70	55.9	45.7	33.1	$\chi^2 = 13.40$ , df=2, p < 0.002
Moved into functional group (HCAM $\geq$ 68)	62.2	56.7	40.2	$\chi^2 = 13.40$ , df=2, p < 0.002
Reliable improvement in HCAM ( $\geq$ 8 pts)	68.5	62.2	49.6	$\chi^2 = 9.80$ , df=2, p < 0.01
HCAM same or lower	16.5	15.7	29.1	$\chi^2 = 8.80$ , df=2, p < 0.02

Table 7.6. Percentage of children in each age group showing improvement, or negative outcome.

On every criterion, the likelihood of improvement during treatment reduces with increasing age. The equivalent rates for those children who remained in treatment for a minimum of six months are given in Table 7.7.

The mean change in HCAM level during treatment is shown for each group in Table 7.8; again, mean changes are also shown for those children who continued in treatment for over 6 months.

	2 - 5.11 %	6- 11.11 %	12 - 18 %	Statistic
No diagnosis at term., HCAM $\geq$ 70	61.5	47.8	37.9	$\chi^2 = 11.28$ , df=2, p < 0.005
moved into functional group (HCAM $\geq$ 68)	67.3	59.3	44.2	$\chi^2 = 11.10$ , df=2, p < 0.005
reliable improvement in HCAM ( $\geq$ 8 pts)	74.0	67.3	57.9	$\chi^2 = 5.85$ , df=2, p < 0.06
HCAM same or lower	10.6	11.5	20.0	$\chi^2 = 4.48$ , df=2, n.s.

Table 7.7. Percentage of children in each age group showing improvement, or negative outcome, excluding children terminating within 6 months.

	2 - 5.11	6 - 11.11	12 - 18	statistic
mean change in HCAM (range) (sd)	13.33 (-13 - 48) (10.95)	11.43 (-9 - 40) (10.00)	8.59 (-20 - 38) (10.14)	F=6.72, df=2,378, p < 0.002.
mean change, excluding dropouts (range) (sd)	14.96 (-7 - 48) (10.86)	12.11 (-9 - 40) (9.98)	9.74 (-20 - 32) (10.39)	F=6.32, df=2,309, p < 0.002.

Table 7.8. Mean changes in HCAM score within each age group, and for those who remained in treatment for at least 6 months.

### 7.3.2. Diagnostic group

Children with emotional disorders generally improved more than others, and those with disruptive disorders did less well. For the third outcome measure, reliable improvement in adaptation, the effects of age group and diagnostic group were both highly significant and independent. However, on the criteria involving a return to normal functioning, an interaction between the effects made the picture more complicated. Table 7.9 shows the likelihood of improvement on the first outcome criterion, diagnostic caseness.

	2 - 5.11 (n=95) %	6 - 11.11 (n=103) %	12 - 18 (n=87) %
emotional disorder (n=190)	79.4	53.6	46.6
disruptive disorder (n=54)	45.0	35.0	14.3
other disorder (n=41)	41.7	78.6	40.0

Table 7.9. Percentage of children no longer cases on diagnostic grounds at termination, divided by age group and diagnostic group. (Cases terminating within 6 months excluded.)

Both age group and diagnostic group had significant effects on outcome in the above log-linear analysis (partial  $\chi^2 = 13.96$ ,  $df = 2$ ,  $p < .001$ , and partial  $\chi^2 = 15.50$ ,  $df = 2$ ,  $p < .001$ , respectively). There was also a significant three-way interaction (likelihood ratio  $\chi^2 = 10.10$ ,  $df = 4$ ,  $p < .05$ ). A similar pattern was found for the criterion of return to the functional group on HCAM score ( $\geq 68$ ). The interaction is due to a very high rate of improvement in "other" diagnoses in the 6 - 12 age group.

### 7.3.3. Treatment intensity

Table 7.10 shows the mean changes in HCAM when children dropping out within 6 months are excluded.

	2 - 5.11	6 - 11.11	12 - 18
non-intensive mean change (sd)	10.79 (11.84) (n=13)	10.56 (11.91) (n=16)	9.93 (14.52) (n=11)
intensive mean change (sd)	15.55 (10.64) (n=91)	12.37 (9.57) (n=97)	9.72 (9.84) (n=84)

Table 7.10. Mean change in HCAM during non-intensive and intensive treatment, after excluding cases terminating within 6 months.

A two-way analysis of variance with age group and intensity of treatment as independent variables tentatively suggested that adolescents do not gain more benefit from intensive

treatment, while younger children possibly do (neither age group nor intensity was significant). However, because of the very unequal group sizes (very few children or adolescents in non-intensive treatment), the possibility of an interaction between age and treatment intensity could not be properly examined. It was therefore decided to examine the effect of age for intensive and non-intensive treatment separately. A one-way analysis of variance using only the children in non-intensive treatment confirmed that there was no difference in HCAM change according to age group ( $F < 1$ ). However, when only children in intensive treatment were compared, the effect of age group was highly significant ( $F = 7.45$ ,  $df = 2, 269$ ,  $p < 0.001$ ), with younger children doing substantially better. (The figures for these two comparisons have been given in Table 7.10, rows 1 and 2 respectively.)

The rates of reliable improvement according to treatment intensity suggest the same possibility (see Table 7.11).

	2 - 5.11	6 - 11.11	12 - 18
non-intensive	53.8%	50.0%	63.6%
intensive	75.8%	63.9%	52.4%

Table 7.11. % showing reliable improvement in HCAM during non-intensive and intensive treatment, after excluding cases terminating within 6 months (ns as in Table 7.10).

Again, we see that adolescents seem to be more likely to improve in non-intensive treatment, while younger children benefit from more frequent sessions. However, only the two-way interaction between age group and reliable improvement was significant in the analysis (partial  $\chi^2 = 8.33$ ,  $df = 2$ ,  $p < .02$ ). Again, the small group sizes in non-intensive treatment reduced the power of this analysis to detect an effect of intensity or any interaction between intensity and age group.

#### 7.3.4. Prediction of outcome

First of all, an attempt was made to predict those children who withdrew from treatment within six months, and were thus excluded from many of the analyses. A stepwise discriminant

function analysis was performed for each age group separately, using all variables recorded at assessment, but in none of the groups was it possible to identify predictors of attrition. In the youngest age group, none of the dropouts could be identified. In the latency age group, prediction was marginally better at 20% of dropouts correctly classified. In this group, having a stress-related disorder and having been in hospital more than once were associated with dropping out of treatment. Again, in the adolescent group, prediction of premature termination was very weak (only 10% of dropouts identified), although several significant predictors emerged in addition to those found in the younger age groups: lower IQ, an impulse control disorder, milder severity of principal diagnosis, Jewish family background, and fewer parental psychiatric problems were associated with attrition.

A stepwise multiple regression procedure was used to attempt to predict the magnitude and direction of HCAM change, using demographic, clinical and treatment variables. Only children whose treatment lasted at least 6 months were included. The first step was to examine variables related to outcome across all age groups; the final regression equation accounted for 37% of the variance ( $F=22.58$ ,  $df=11,369$ ,  $R=.63$ ,  $p<.001$ ). The variables emerging from this analysis are given in Table 7.12.

The strongest predictors of good outcome were relatively low HCAM score at assessment, remaining in treatment (beyond the first six months) until a mutually agreed termination, and relatively good psychological functioning (GAF score) in the father at the child's referral.

In order to establish if these predictors were equally appropriate for the three age groups, the predictors in Table 7.12 were used in separate standard multiple regressions; these were then contrasted with stepwise multiple regressions using all variables, for the three groups separately. It was found that, although between 32 and 48% of the variance could be accounted for in each age group using the variables in Table 7.12, this proportion was increased when additional predictors specific to each group were also included (see Table 7.13).

	Regression coefficient (b)	Standardised regression coefficient (β)	F value for variable
HCAM at assessment	-0.42	-0.31	52.22***
treatment prematurely terminated	-5.51	-0.26	34.16***
father's GAF score	0.22	0.19	21.03***
length of treatment	7.58	0.17	13.92***
parents Jewish	3.02	0.14	12.03***
stress-related diagnosis	8.75	0.13	10.63***
simple phobia	5.31	0.13	10.40***
attended AFC nursery	4.35	0.12	8.18**
age at start	-0.29	-0.12	7.19**
school-reported difficulties	-2.23	0.10	6.06*
father anxious	3.82	0.09	4.98*

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05

Table 7.12. Prediction of improvement in adaptation by stepwise multiple regression analysis for matched cases in all age groups, excluding those terminating within six months (remaining n=312).

Table 7.13 also shows the amounts of variance within each age group accounted for by different domains of variables, when these groups of variables were entered into separate stepwise regression analyses. It can be seen that between 1/3 and 1/2 of the variance within each age group could be accounted for by information known at the child's assessment. Beyond that, clinical variables were by far the most important in predicting outcome for the youngest children, whereas family and treatment variables were of much greater importance for children between 6 and 12 years. All three domains contributed substantial information in the adolescent group.

	All cases	2 - 5.11	6 - 11.11	12 - 18
Variables in Table 7.12	37	48	36	32
All variables	37	55	43	58
Assessment	33	45	33	52
Family	11	6	21	22
Clinical	19	41	13	29
Treatment	20	8	25	18

Table 7.13. Percentage of variance in outcome ratings accounted for by different groups of variables, for cases continuing in treatment for at least six months.

The predictors found when all variables were available in a stepwise multiple regression analysis for each age group are shown in Table 7.14.

The stepwise regression equation for the group of children under 6 years accounted for 55% of the variance, a statistically significant increase in  $R^2$  ( $F_{inc} = 5.09$ ,  $df = 3,92$ ,  $p < .005$ ) over that obtained with the variables in Table 7.12. 45% of the variance in outcome could be predicted from variables known at the child's referral. In addition to the variables identified as predicting outcome across age groups, predictors of good outcome for the youngest children included a diagnosis of sleep disorder, a history of significant medical problems (severe and/or frequent accidents, illnesses or surgery). A diagnosis of feeding disorder and a severe psychiatric history in the child's mother were both associated with poorer outcome.

It proved somewhat more difficult to predict the outcome of treatment within the latency age group; allowing more variables to enter the regression equation did not significantly increase the variance accounted for over that accounted for using only the predictors in Table 7.12. As for the youngest children, a severe psychiatric history in the child's mother appeared to be strongly related to outcome, but in this group the prediction was in the other direction: such a history was associated with more favourable outcome. Otherwise, all the predictors in this group had been found for the three age groups together.

Predictor variable	Standardised regression coefficient (β)		
	< 6 yrs (n=104)	6-11.11 (n=113)	≥ 12 (n=95)
HCAM level at start	-0.32***	-0.30***	-0.40***
treatment prematurely terminated	-0.27***	-0.35***	-0.26**
parents Jewish	0.16*	0.16*	0.43***
child attended AFC nursery	0.21**	0.22**	
severe maternal psych. history	-0.16*	0.28**	
father's GAF score	0.19*	0.21*	
father antisocial behaviour			-0.38***
age at start			-0.32**
length of treatment			0.26**
simple phobia	0.32***		
sleep disorder	0.22**		
significant medical history	0.21**		
disruptive at school			-0.21*
poor peer relationships			-0.22*
any school complaint	-0.18*		
eating disorder	-0.17*		
maternal suicide attempt(s)			-0.22*
personality disorder			-0.19*
history of foster care			0.25**
father anxious			0.27**
parental marital conflict			0.21*

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05

Table 7.14. Significant predictors of improvement in HCAM rating during treatment, for each matched age group (cases terminating within 6 months excluded).

The stepwise regression equation for the adolescent group accounted for 58% of the variance, which represents an increase in  $R^2$  of 26% over that obtained using the predictors in Table 7.12 ( $F_{inc} = 27.08$ ,  $df = 2,87$ ,  $p < .001$ ). Additional predictors of poor outcome specific to this group were a history of suicide attempts in the mother or antisocial behaviour in the father, personality disorder in the adolescent, disruptive behaviour or poor peer relationships at school. Curiously, a history of having been fostered, or in the care of a Local Authority, and a history of marital conflict between the parents, were both related to better outcome.

#### 7.4. DISCUSSION

The main finding in this chapter is that younger children improved more during psychoanalytic treatment, and that this was not due merely to a higher dropout rate among adolescents. It was also not due to the differences in gender distribution, social class, adaptation level, broad diagnostic category or frequency of intensive treatment effects, as these were matched across the sample from the three age groups. On the first two criteria of improvement, no longer being diagnosable and moving into the functional group on HCAM score, the difference between younger and older children remained highly significant once children terminating within six months had been excluded. The difference in rates of reliable improvement was more affected by early termination; the differences according to age were only of borderline significance ( $p < .06$ ) among those remaining in treatment. The likelihood that a child would show no improvement or would be worse at the end of treatment was also no longer significantly related to age among those remaining in treatment. It seems, therefore, that the major differences on these categorical criteria according to age were in rates of return to normal functioning, rather than in rates of positive or negative change in adaptation. Nevertheless, the mean change in HCAM score showed highly significant differences, both before and after exclusion of the children who withdrew prematurely.

As described in section 7.1, the small literature pertaining to the effect of age on the outcome of other psychosocial treatments gives no clear prediction as to the relationship between age and therapeutic success. Most meta-analyses of a variety of (largely cognitive-behavioural) approaches across the age range have not found a main effect of age, although one did (Weisz, Weiss, Alicke & Klotz, 1987). Behavioural treatment of school refusal has tended to be more successful with younger children (Miller et al., 1972; Berg & Jackson, 1985),

but cognitive-behavioural treatment for mainly externalising disorders (Durlak et al., 1991) was more effective with 11-3 year olds than with younger children. The study by Weisz et al. (1992) also showed better outcome for cognitive-behavioural treatment among adolescents than among younger children.

As the three age groups were matched on initial level of HCAM, the above results cannot be due to younger children being better adjusted from the beginning (i.e. closer to the well or functional group at referral). They could be explained by a higher rate of spontaneous remission among younger children, but although this probably fits in with clinical assumptions, there is no clear evidence of it in the literature. Studies by Richman, Stevenson & Graham (1982), Chazan & Jackson (1974) and Rutter, Tizard & Whitmore (1981) have all suggested that around half of the children in the younger two age groups could be expected to show persistence of disorders. Cohen et al. (1993) have painted a similar picture for the 9-18 age group. There is no evidence that the rate of persistence of disorder rises with age.

The differences in improvement rates might be related to differences between the age groups on variables which were not matched (see section 7.2.1). Adolescents were significantly more likely to come from broken families, to be treated by staff members and to have diagnoses of OCD, depressive or conduct disorders. No difference was found in the overall sample (see section 6.3.2) between children treated by staff and those treated by trainees. Staff are normally assigned cases expected to present particular technical difficulties, or with relatively poor prognosis, and this may have been balanced in the outcome by the effect of greater experience. Coming from a broken family was associated with significantly poorer outcome in univariate analyses of the full sample, although this factor did not emerge in the multiple regression analysis. It is possible that the higher rate of divorced parents in the adolescent group contributed to lower improvement. Having said this, broken family did not appear as a predictor of outcome within any of the age groups in the present analysis.

It does seem likely that the different diagnoses within the broad diagnostic groupings may have been important. Adolescents were more likely to have disorders such as obsessive-

compulsive or conduct disorders, which are known (see sections 8.1 and 9.1) to have worse long-term outcome than other disorders in the same groups which were more commonly found in younger children (separation anxiety, phobias, oppositional defiant disorder). However, up to a point, this does no more than restate the finding: older children suffer from disorders which are generally more resistant to treatment than those found in younger children. Conduct disorder is often thought of as the more "grown up" version of oppositional defiant disorder, and perhaps we have returned to the conclusion that older children are harder to treat.

The relevance of diagnostic group was confirmed by significant three-way interactions in log-linear analyses including age group, broad diagnostic group and either diagnostic status or return to the functional group at the end of treatment. Disruptive disorders were particularly unlikely to be fully resolved in adolescents, and "other" disorders were much more likely to be lost in "latency" aged children (i.e. those aged 6-11.11). The first result is consistent with the finding reported elsewhere (e.g. Cohen et al., 1993) and referred to above, that conduct disorders are more intractable than oppositional defiant disorder. It is likely that their spontaneous remission rate would have been more favourable.

The very high number (nearly 80%) of latency children no longer diagnosable at termination in the "other disorders" group is somewhat puzzling. It may be that the diagnoses involved, such as elimination, speech and specific developmental disorders are highly likely to resolve during this age range. The children under 6 with diagnoses not falling within emotional, disruptive or pervasive groupings may have been presenting with particularly severe forms of specific developmental disorder (presenting in the pre-school period), or conditions such as attachment disorders which may have made them relatively inaccessible to this form of intervention. Another thing to bear in mind in the under-6 age range is that some children were initially diagnosed (at, say, the age of three) with unusual symptoms such as stereotypies and specific developmental delays, but were found to be suffering from more pervasive disorders as they grew older. This finding therefore partly reflects the difficulties of making diagnoses in this age range, particularly on the basis of retrospective information.

The possibility that adolescents may not benefit from more intensive treatment is intriguing. It appears (although the differences are not statistically significant) that adolescents may do better in non-intensive treatment, while the reverse trend is seen in younger children. This difference does not appear to be predicted by the psychoanalytic literature, although some authors (e.g. Sandler et al., 1980) have pointed out that the regression and dependence involved in intensive psychoanalytic treatment may run counter to the strong developmental push in adolescence towards independence, action, and separation from parental figures.

It proved to be extremely difficult to predict those children who withdrew prematurely from treatment, in any of the three age groups. Identification of likely dropouts is a serious problem, both for a study attempting to predict psychotherapeutic outcome in general, and of course for those charged with providing services with limited resources. It has proved equally difficult in other studies (see Weisz & Weiss, 1993) to characterise these children or families who withdraw from treatment. However, one result which did emerge clearly from the present comparison was that age group itself was significantly related to rate of attrition, with children in the 6-12 age range least likely to drop out within six months, and adolescents most likely (11% and 25%, respectively,  $p < 0.02$ , see Table 7.4).

It proved possible to predict 37% of the variance in HCAM change among those children who remained in treatment beyond six months, on the basis of 11 variables. The strongest predictor was initial adaptation (HCAM) level. As discussed in the previous chapter, this would be expected on the basis of regression towards the mean, but is not in fact consistent with the findings of outcome studies in adult psychotherapy. In these studies (reviewed by Luborsky et al., 1993), poorer initial functioning predicted less change, not more as in the present study.

The second powerful predictor was the reason for ending treatment. Children showed less improvement if their treatment had been terminated, beyond the first six months, by unilateral withdrawal by the child / parents, or by external circumstances (such as departure of the therapist, or family leaving London). The third predictor of favourable outcome was good paternal psychological functioning, as measured by the GAF score. This is in line with recent findings that fathers' mental health can be as important to

child psychological functioning as mothers' (Phares & Compas, 1992). The next significant variable in the multiple regression analysis is length of treatment. The significance of this as a predictor in this study was fully discussed in section 6.4; the confounding of treatment length and assessment interval is a serious obstacle to the conclusion that more treatment brings better results. However, it should be pointed out that the rates of improvement in the present comparison are probably higher than would be expected from studies of natural history and persistence of disorders (such as those cited in section 7.1).

The next four predictors of good outcome in Table 7.12, Jewish parents, stress-related diagnosis or phobia, and previous attendance at the Anna Freud Centre nursery school, were all found among the predictors for the full sample in Chapter 6, and were discussed in section 6.4. After them, child's age also emerges as significant in the multiple regression analysis for the three groups combined, as it did in earlier univariate analyses; as before, younger children were found to show better outcome. The presence of serious difficulties in the school setting was found to predict less improvement. There may be a number of reasons for this. On the one hand, the great majority of children were referred either by parents or by people who knew the child in settings other than school. The independent reporting of concerns by the school therefore often meant that the child's disturbance was cross-situational. This may well suggest greater severity and duration of disorder, together with worse prognosis (e.g. Mitchell & Rosa, 1979). Another reason for difficulties at school to be associated with poorer treatment outcome may be that these were less directly addressed in treatment than were difficulties within the child and family. As an example, very poor peer relationships at school would have been less closely monitored and perhaps less fully understood than poor relationships with parents and siblings. They may also not have responded fully to work on intrapsychic factors and family relationships, as they may have developed a "life of their own". The child who is neglected or rejected in school may find it very difficult to change others' attitudes even when his behaviour and view of himself have become more acceptable to peers.

Finally, the presence of current or past anxiety symptoms in the child's father was related to better outcome, once father's overall level of current adjustment had been taken into account. This mirrors the finding in the previous chapter (for the full sample) that once mother's GAF score had been entered as a positive predictor, a history of depression

in the mother was related to better outcome. Both results are likely to reflect the beneficial effects of (a) good psychological functioning in a parent, and (b) the understanding and motivation for treatment that personal experience of emotional distress may give the parent.

There were substantial differences between the three matched age groups in the domains of variables which most strongly predicted treatment outcome in separate multiple regression analyses (see Table 7.13). In each of the three age groups, between  $\frac{1}{3}$  and  $\frac{1}{2}$  of the variance within each age group could be accounted for by information known at the child's assessment. This is a very large proportion of the variance in treatment outcome in comparison with other studies, in which 10-20% of variance could be predicted at the assessment stage (see Casey & Berman, 1985, Weisz et al., 1987, 1992). When all variables (i.e. including treatment characteristics) were entered into the multiple regression analysis, between 43 and 58% of variance could be accounted for within each age group. The variables selected were to some extent different in each age group, and different from those found for the three groups combined (thus, splitting the sample by age adds to the power of prediction, particularly for the adolescent group). When subgroups of variables representing the three domains of information (demographic & family, child & clinical, treatment) were used in separate multiple regression procedures, it emerged that clinical variables were by far the most important in predicting outcome for the youngest children, whereas family and treatment variables were of much greater importance for children between 6 and 12 years. All three domains contributed substantial information in the adolescent group.

Variables specifically associated with improvement among the children under six years at the beginning of treatment included sleep disorder and a history of significant medical problems. A diagnosis of feeding disorder and a severe psychiatric history in the child's mother predicted poorer outcome. Although there is little information in the literature to substantiate this, it may well be that sleep disorders tend to resolve relatively quickly in the course of development. They may also respond particularly well to the combined approach of individual treatment and parental guidance offered at the Anna Freud Centre. A history of serious medical problems is, on the face of it, a surprising predictor of improvement,

but it parallels the finding for the full sample reported in the previous chapter. Some speculative interpretations of this result were offered in section 6.4.

It is not obvious why a diagnosis of feeding disorder should predict worse outcome among the younger children, except that these cases (of serious food fads, anorexic behaviour in infants, etc.) generally convey the impression of a more pervasively disturbed parent-child relationship, of which this symptom may be the only diagnosable aspect. Often the feeding disturbance was the focus of major battles between mother and child and between the two parents, and often appeared from the history to have been rooted in distorted attitudes to eating, showing love and appreciation, etc., on the part of the mother. It may be that these relationship disturbances made the child's symptoms more intractable. Another small part of the picture may be that a few of these children were diagnosed as showing Pica, which sometimes turned out to be part of a more sinister picture, of a more pervasive developmental disturbance.

Severe psychiatric disorder (past or current) in the mother seems to have a negative impact on treatment outcome in this age group. (Severe disorder was defined in section 3.5.1 as that which would be likely to require inpatient psychiatric treatment.) Parental psychiatric illness at this level has been found in many epidemiological studies to be associated with mental ill-health in children (Puckering, 1989; Quinton et al., 1990), even when the illness occurred before the birth of the child (Hibbs et al., 1991). There is evidence, from the study by Hibbs and her colleagues, and from a study by Schwartz et al. (1990), that such a history is associated with continuing high levels of expressed emotion (especially hostility and criticism). These two factors - psychiatric history and interactional style - tend to appear together, but to contribute separately to increased rates of maladjustment in children (see section 3.2.2). One may imagine that, while a history of mild depressive episodes or an anxiety symptoms might make a parent more sympathetic to and understanding of a child's distress, major mental illness in a parent is likely to have the reverse effect. Serious episodes of illness would be likely to be associated with separations and with severe disruption to the relationship between parent and child when together. Involvement of the child in the parent's symptoms has been shown (Quinton et al., 1990) to be particularly destructive, and certainly some of the children with this background in the present sample had been the focus of psychotic ideas or obsessional rituals. Children under 6 years are

probably particularly vulnerable to such exposure, as they usually spend most of their time with the mother, and do not yet have alternative environments (such as school) to balance the effect of the parents' behaviour and attitudes.

It is curious that the same predictor (severe psychiatric history in the mother) emerged as an indicator of positive treatment response in the matched group of 6-12 year olds. A number of *post hoc* considerations may help to explain this. Unlike children of five and below, a child in this age group is generally very receptive to new relationships with peers and adults, and may particularly seek new, alternative close relationships where his experience of his mother has been limited and disturbing. The analytic relationship may offer something sufficiently intense and prolonged to amount to a different experience of parenting. This may permit the child to form a particularly deep and productive attachment, enhancing his response to analysis, whereas the younger child might still be too involved in the parental pathology to use the opportunity for a new experience in the therapeutic relationship fully.

These speculations perhaps apply also to some of the variables emerging in the multiple regression analysis for the adolescent group. Having been in foster care or children's home, or a history of severe marital conflict between the parents (often leading to divorce) were predictive of better therapeutic outcome for adolescents. These situations may similarly lead to a need for a better real relationship with a new adult (alongside the transference relationship used in psychodynamic work), which may give the adolescent far more motivation to engage in the therapeutic work, and counterbalance the push towards independence from parental figures usually found in this age group. Predictors of poor outcome emerging in the regression equation specific to this group included suicide attempts in the mother (actual suicide in two cases) and antisocial behaviour in the father. These may well be forms of psychiatric disorder with especially persistent impact, and which particularly interfere with the development of trusting relationships with adults. Three aspects of the clinical picture were associated with poor therapeutic outcome in adolescents: personality disorder, disruptive behaviour at school and seriously impaired peer relationships. Once again, these features may characterise those adolescents with a poorer capacity for object relationships, and specifically for forming a productive new relationship with an adult.

## 7.5. CONCLUSION

In the study described in this chapter, three matched groups were drawn from three broad age groups in the retrospective study sample: children under 6, 6 to 12 year olds, and adolescents. The children were matched on gender, social class, level of adaptation, diagnostic category and treatment intensity. Some differences between these groups on other variables were noted. Younger children were found to have higher rates of improvement on every indicator of treatment outcome. There were some interactions with diagnostic category and treatment intensity. Division into age groups improved the accuracy of prediction of improvement using a multiple regression technique; between one-third and one-half of the variance could be accounted for using only variables known at referral.

## CHAPTER 8. THE PREDICTION OF OUTCOME IN CHILDREN WITH DISRUPTIVE DISORDERS

### 8.1. INTRODUCTION

The findings in Chapters 6 and 7 indicated very clearly the importance of diagnostic considerations in the prediction of therapeutic outcome. The last chapter illustrated the advantages of matching children of different age groups in order to clarify the specific contribution of age to treatment efficacy, and to examine its possible interactions with other variables. This chapter uses a similar strategy to examine predictors of treatment outcome in children with disruptive disorders. These cases were individually matched with others suffering from emotional disorders without serious disruptive behaviour. Outcome was indicated by both diagnostic change and change in overall adaptation (both clinically significant improvement and return to normal functioning).

Disruptive disorders comprise three major categories of "externalising" behaviour problem. The features of oppositional defiant disorder include persistent disobedience, very provocative behaviour, argumentativeness, perhaps physical aggression. Conduct disorder is a more serious problem, commonly involving assaults and criminal activity. Attention deficit hyperactivity disorder, as its name implies involves a combination of very poor attention and physical overactivity. Also included in this category for the present purpose is a referral problem of antisocial behaviour (e.g. theft, aggressive attacks not amounting to an established disruptive disorder), which in the DSM-III-R is indicated by a V-code. Children within this group of disruptive disorders are likely to be unmanageable at home or at school, often both. Children with emotional disorders, in contrast, show primarily anxious or depressive symptoms, and might be obsessional, phobic, or withdrawn.

Studies of the natural history of these two groups of disorders (see Pepler & Rubin, 1991; Robins & Rutter, 1990) have shown that disruptive behavioural problems have a high level of persistence, and frequently predict later antisocial tendencies (e.g. Robins,

1981; Weiss & Hechtman, 1986) even when the childhood disorder takes a less serious form (e.g. Havinghurst et al., 1962).

Lefkowitz et al. (1977) investigated the stability of excessive aggressiveness by following up a group of children in New York from the age of 8 to 19 years. Aggression was much less common in girls than in boys, as has been found in every other large-scale study, but in both sexes there were high correlations between aggressiveness at 8 years and again at 19 years (0.38 for boys, 0.47 for girls). Similarly, in a London study by West & Farrington (1973), boys who were rated most aggressive at 8-10 years were far more likely than others to be in this group at 14 (50% vs 19%), 16 and 18 years (40% vs 27%), and also had higher rates of violent delinquency (14% vs 4%).

A large-scale prospective study in New Zealand (the Dunedin study, White et al., 1990) showed that antisocial behaviour at 13 years could be predicted from "externalising behaviour" at 3 years and similar behaviour at 5 years. These showed stronger associations with later antisocial behaviour than did IQ, mothers' attitudes, or any of many other variables measured. By the time the child was 11 years old, there was very high stability: 84% of those described as uncontrolled at that age met criteria for established, pervasive antisocial disorders at age 13.

By contrast, children with emotional disorders are much more likely to be normally adjusted in adulthood (Kohlberg et al., 1984; Rutter and Sandberg, 1985), although here too there is greater continuity than had previously been supposed (see Chapter 9).

Corresponding with such differences in natural history, treatment responses of these groups also clearly differ, with long term treatment outcomes tending to be much less encouraging for the disruptive disorder group (e.g. Kazdin, 1987; Dumas, 1989). Werry (1992) describes the position very negatively: "Of all the disorders of childhood, conduct disorder is both among the commonest and the most serious in immediate and ultimate consequences. Yet, it is virtually untreatable (p.477)". Systematic reviews of the relative responsiveness of these groups to psychodynamic treatments have not so far been reported.

## 8.2. METHOD

### 8.2.1. Subjects

The Anna Freud Centre sample included 135 children with a DSM-III-R principal diagnosis of disruptive disorder (79 oppositional defiant disorder, 11 ADHD, 31 conduct disorder, and 14 with a V code of antisocial behaviour). Quite a number of children show both disruptive behaviour and emotional symptoms; where this was the case in the present study the child was classified according to the more disabling symptomatology (as judged by severity and pervasiveness). If a child seemed to show both tendencies equally, he was included in the disruptive group as a mixed case. (Assignment to this diagnostic group is described fully in section 5.2.3.). Many children in the disruptive group had other diagnoses in addition to the one which had made him part of the group. 15 had a second disruptive disorder, 24 had anxiety disorders, 16 depressive illnesses, 14 separation anxiety disorder, 16 enuresis, and 9 had some other diagnosis.

The ages of the disruptive disordered children at the start of treatment ranged between 3 years 3 months and 17 years 5 months (mean = 9.0 years), and 75% were boys. 56% of the group were from social classes I and II, i.e. middle class). The IQ levels of these children were relatively high: 84% were of at least average intelligence, 31% had IQs over 120.

75% of the children were offered and accepted intensive psychoanalytic treatment (4/5 times weekly), the remainder were seen 1-2 times per week. The average length of treatment was 2 years, with a range from one week to over 8 years. Allocation to intensive or non-intensive treatment appeared to be made largely on pragmatic grounds (e.g. distance from the Centre) as opposed to diagnostic considerations. This impression was checked by performing a stepwise discriminant analysis to distinguish between intensive and non-intensive cases. Four variables were found to be significantly associated with allocation to intensive treatment (approximate  $F=6.94$ ,  $df=4,130$ ,  $p<0.001$ ): serious marital difficulties between the parents, the child attending the

Centre's nursery school, father being relatively well-functioning (GAF score), but with a history of anxiety symptoms. However, identification of the non-intensive cases was very poor; only 40% could be correctly predicted on the basis of information available at assessment. There were therefore few systematic differences between the groups on the information recorded.

This disruptive group was individually matched with 135 children treated for emotional disorder at the clinic. (Emotional disorders are primarily characterised by anxiety and depressive symptoms, see section 5.2.3. and Chapter 9). The match included gender, age, socio-economic status, adaptation score (within 5 points on the HCAM) and intensive / non-intensive treatment (see Table 8.1). The matching criteria were the same as those used in matching three age groups in the previous chapter, except that there age was fixed and diagnostic group matched, whereas the reverse was the case here. The control sample was selected using a computer algorithm from 368 cases treated for emotional problems.

variable	variable values	criteria for match
gender	boy/girl	same
treatment intensity	non-intensive or intensive (1-3 or 4-5 sessions per week)	same
age	2-18 yrs	within 1 year, higher/lower
social class	classes I to V	within one class higher/lower
HCAM rating	scale 1-100	within 5 points higher/lower

Table 8.1. Criteria used to match cases in disruptive and emotionally disordered groups.

For 95% of cases perfect matches were found. For 5% the stringency of two matching criteria (socio-economic status or HCAM score) was relaxed.

The control group were mainly suffering from anxiety disorders: 27% had a principal diagnosis of overanxious disorder or generalized anxiety disorder, 17% separation anxiety disorder, 17% dysthymia or a major depressive disorder, 16% phobic or avoidant disorders, 8% sleep disorders, 6% obsessive-compulsive disorder, 5% reactive or adjustment disorders.

Table 8.2 shows some of the demographic characteristics of the two matched groups, including the variables used for matching.

Variable	Disruptive (n=135)	Emotionally disordered (n=135)	Statistics F <sub>1,268</sub>
Percent male	75%	75%	
Mean age in years (SD) (Range)	9.0(3.6) (3.2-17.4)	9.0(3.7) (2.7-18.0)	< 1.0
Mean IQ (SD) (Range)	111.6(14.4) (69-141)	115.8(17.6) (53-163)	3.6
Percent Social Class I & II	56%	56%	
Mean HCAM (SD) (Range)	53.6(8.1) (32-70)	54.3(7.0) 38-70	< 1.0
Percent in intensive treatment	75%	75%	
Mean length of treatment in yrs (SD) (Range)	2.0(1.7) (0.1-8.7)	2.5(1.9) (0.1-12.0)	5.5*

\* p < 0.05

Table 8.2. Demographic characteristics of matched groups of disruptive and emotionally disordered children in psychoanalytic and psychotherapeutic treatments at the Anna Freud Centre.

There were many differences between the matched groups of potential relevance to treatment outcome. The disruptive children had fewer mothers with a psychiatric history (F for linear trend = 4.15, df=1,270, p < 0.05) and more children from foster or residential care ( $\chi^2 = 6.35$ , (df=1, N=270), p < 0.02). They were also more likely to drop out of treatment ( $\chi^2 = 12.14$  (df=3, N=270), p < 0.01) and therefore their

average treatment length was shorter ( $F=5.45$ ,  $df=1,266$ ,  $p < 0.02$ ).

The distributions of reasons for termination and of length of treatment for each group are shown in Tables 8.3 and 8.4, respectively.

	disruptive %	emotional %
completed (agreed)	30	41
withdrew prematurely	37	24
transferred / no progress	19	11
external circumstances	14	29

Table 8.3. Reasons for termination of treatment among matched disruptive and emotionally disordered children.

	disruptive %	emotional %
up to 3 months	12	6
3 - 12 months	25	15
1 - 3 years	42	52
over 3 years	21	27

Table 8.4. Duration of treatment among matched disruptive and emotionally disordered children.

### 8.2.2. Outcome measures

Four measures of outcome were used, described more fully in section 4.2.1.. First: diagnostic caseness at the end of treatment, defined as the presence of any diagnosable psychiatric disorder together with an adaptation level rating below 70.

Second, the child could be considered to be still a case on grounds of maladjustment (i.e. HCAM score on adaptation at termination). HCAM ratings at termination of less

than 68 identified cases who still belonged to the dysfunctional group.

Third, cases were categorised according to the presence of statistically reliable change in adaptation level. In this data, a reliable change index of 7.5 points was calculated for the emotionally disordered group, and 8.5 for the disruptive disordered children. A difference of 8 points or more between ratings at the beginning and end of treatment was taken to indicate a statistically significant change.

Fourth, the change in HCAM ratings was used as a continuous variable in predictions of the extent of improvement.

### **8.2.3. Statistical analysis**

The statistical procedures used have been described in section 6.2.

## **8.3. RESULTS**

### **8.3.1. Rates of improvement**

Psychoanalysis and psychotherapy were associated with a significant improvement in functioning in both groups. The number of diagnosable cases decreased from 100% at the beginning of treatment to 33% at termination in the total sample. This reduction however includes 34% of cases from whom insufficient information was available for a conclusive diagnosis (see Table 8.5). As HCAM scores at termination were available for all but 9% of cases, improvement rates based on adaptation are a better guide to changes during treatment.

	Disruptive (%)	Emotional (%)
no longer case on diagnostic grounds	32.6	52.6
no longer case on grounds of adaptation	32.6	56.3
reliable improvement in adaptation	45.9	72.6

Table 8.5. Improvement rates in each group according to different criteria.

There were large differences in improvement rates between the two groups according to all three criteria. The number of children without diagnosis was significantly greater in the control group than in the disruptive group ( $\chi^2 = 11.0$ , (1, N=270),  $p < .001$ ). These diagnoses include disruptive cases with only non-disruptive diagnoses at termination, but excluding these cases would only add about 5% to the undiagnosed disruptive group. The difference in clinically significant improvement rates is also highly significant statistically ( $\chi^2 = 15.4$ , (1, N=270),  $p < .001$ ). On the third measure of reliable change, somewhat higher improvement rates were found, but again there was a superior treatment response for the emotional group ( $\chi^2 = 20$ , (1, N=270),  $p < .0001$ ).

Among the disruptive group, improvement rates were highest for children with oppositional defiant disorder, and lowest in cases of conduct disorder (e.g. on the measure of reliable change, 56% of oppositional children improved significantly, compared with 36% with ADHD or with a V code of antisocial behaviour, and only 23% of conduct disordered children).

A 30-40% improvement rate in the disruptive group after an average of 2 years of intensive treatment does not seem impressive, but many of these children (31%) terminated treatment within the first year, the majority within the first 6 months. Particularly as attendance tended to be poor amongst these children, it was decided to exclude those whose treatment was terminated within this first year from many of the analyses of treatment outcome, as they could not be said to have experience the treatment. Instead of trying to determine predictors of good outcome within the whole

sample, two separate issues were addressed: who drops out within one year, and of those who remain, which improve? Below, improvement rates are described in relation to a number of key variables, then an account is given of attempts to predict attrition and improvement among those who remained in treatment, using multivariate techniques.

69% of the disruptive group who remained in treatment for at least one year were no longer diagnosable at termination, and 62% showed reliable improvement. These effectiveness rates refer primarily to psychoanalysis, since over two thirds of the children who dropped out of treatment within the first year were receiving non-intensive help (1-2 sessions per week). 40% of those in non-intensive therapy dropped out, compared with 25% in analysis ( $\chi^2 = 3.46$ ,  $(df=1, N=135)$ ,  $p=0.06$ .)

The relationship between age and improvement in treatment was examined. Within the disruptive group there was a strong association: children under 9 years ( $n=70$ ) showed a mean improvement in CGAS of 10.0 points, compared with 5.3 points in the group of older children and adolescents ( $n=65$ ) ( $F=8.47$ ,  $df=1,133$ ,  $p<0.005$ ). This is not simply due to lower attrition in younger children as, when only cases continuing beyond one year are considered, a comparable difference is found between the younger and older groups (means 11.9 ( $n=51$ ), and 6.6 ( $n=42$ ) respectively;  $F=6.48$ ,  $df=1,91$ ,  $p<0.02$ ). The difference between intensive and non-intensive treatment was particularly marked for the younger age group. A two-way analysis of variance of mean CGAS change yielded a significant interaction term for the age by intensity comparison ( $F=4.98$ ,  $df=1,131$ ,  $p<.03$ ). Interestingly, these associations with age were not found within the matched group with primarily emotional disorders.

It is interesting to note that mean differences in HCAM ratings between the disruptive and the emotionally disordered groups markedly diminish when one focuses on children who had full psychoanalytic treatment, i.e. 4-5 sessions per week over an extended period (see Table 8.6).

	disruptive	emotional
all cases	7.8 (n=135)	14.0 (n=135)
treated $\geq$ 1 yr	9.5 (n=93)	15.8 (n=106)
intensive, $\geq$ 1 yr	11.6 (n=58)	16.0 (n=93)
intensive, $\geq$ 3 yrs	14.7 (n=21)	17.9 (n=33)

Table 8.6. Mean change in HCAM in disruptive and emotionally disordered children, according to intensity and duration of treatment.

The average improvement in HCAM score was 14 in the matched emotional group and only 7.8 in the disruptive disordered group ( $F=26.12$ ,  $df=1,268$ ,  $p<0.001$ ). When one excludes children whose treatment ended within the first year, the HCAM change for the disruptive group is 9.5 points ( $F=20.20$ ,  $df=1,197$ ,  $p<0.001$ ). If we then exclude those in only twice weekly treatment, the magnitude of improvement in the disruptive group (but not in the emotional group) significantly increases, and the size of the difference between the two groups is reduced ( $F=6.70$ ,  $df=1,149$ ,  $p<0.02$ ). When we examine improvement rates for children remaining in intensive treatment for at least 3 years (an unexceptionable basis for judging psychoanalytic treatment), then we find that the difference between disruptive and emotionally disordered children is no longer statistically significant. A very similar pattern emerges if one looks at the percentage of children showing reliable improvement. It may be, then, that psychoanalysis can bring about substantial improvements in children with such disorders, but children with disruptive disorders are difficult to keep in analysis.

### 8.3.2. Prediction

A critical question becomes whether one can predict which child is likely to terminate treatment prematurely. Taking the whole of the disruptive disordered group together, the answer is no. A stepwise discriminant analysis was able to identify correctly only 52% of those terminating within one year, and 88% of those who remained in treatment (approximate  $F=10.32$ ,  $df=5,129$ ,  $p<0.001$ ). Significant predictors of

remaining in treatment were: being in intensive (4-5 times weekly) treatment; having a less well-functioning mother (judged on Axis V of DSM-III-R by the GAF score) whose major problem was not anxiety; having specific learning difficulties at school; and continued support to the parents by regular meetings with a social worker.

When the children aged 9 years or more ( $n=65$ ), amongst whom the majority (56%) of premature terminations occurred, prediction became more accurate. A stepwise discriminant function analysis correctly identified 74% of drop-outs and 87% of those who continued among this older group, on the basis of four variables (approximate  $F=13.14$ ,  $df=4,57$ ,  $p<0.001$ ). Children who stayed in treatment were likely to be younger, to have specific learning difficulties, to be in intensive treatment, and to have mothers with current psychiatric symptoms. Prediction was far less successful for children under 9 years ( $n=70$ ): only 50% of premature terminators and 90% of those who continued could be identified (approximate  $F=5.80$ ,  $df=4,63$ ,  $p<0.001$ ). Intensive treatment again emerged as one of the predictive factors for remaining in treatment, along with female gender, and having a less well-functioning mother, but not an anxious mother.

It was also difficult to predict the much smaller number (18%) of children terminating within the first year in the emotionally disordered group. A stepwise discriminant analysis identified only 45% of those dropping out, and 92% of those who remained in therapy (approximate  $F=7.78$ ,  $df=7,127$ ,  $p<0.001$ ). Again, intensive treatment predicted continuation beyond one year; other predictors were having a parent with a history of depression, intact parental relationship, no school refusal/truancy, being younger at the beginning of treatment, good peer relationships, and no associated attachment or post-traumatic psychiatric disorder.

It proved much easier to predict the magnitude of improvement. Demographic, diagnostic and clinical predictors of improvement were examined for both groups in this study using stepwise multiple regression procedure. Initially, this was done using all cases in the two groups separately, i.e. not excluding those who terminated treatment early. Here, outcome was more predictable for children in the emotional group than for disruptive disordered children. 40% of the variance was accounted for

by family, diagnostic, clinical and treatment variables for the disruptive disordered group, whilst 52% could be accounted for in the emotional disordered group.

The variables which predicted success were quite widely different for the two clinical populations. Family and demographic factors (e.g. maternal anxiety disorder, or the child having been in foster care) were particularly important predictors for disruptive children, but accounted for only 11% of the variance for the emotional disordered group (e.g. parents not divorced or separated). Diagnostic variables were also more important predictors for the disruptive disordered group (e.g. presence of anxiety disorder, absence of other comorbidity and school-reported problems); for the emotional group, less severe principal diagnoses, better initial adaptation and the absence of enuresis were the most important diagnostic considerations. However, in total, diagnostic and clinical variables accounted for less than 17% of the variance in outcome as opposed to nearly 25% in the case of the disruptive group. Conversely, treatment characteristics were the most powerful set of predictors of improvement for the emotionally disordered group (no change of therapist, regular meetings with the parents before the child commenced treatment, as well as length of treatment predicted nearly 20% of the variance). Treatment variables were less important in the disruptive disorders group (accounted for only 13.8% of variance).

It was possible to account for 58% of the variance in treatment outcome for the 93 disruptive children treated for more than one year ( $R^2=0.58$ ,  $F=12.02$ ,  $df=9,79$ ,  $p<0.001$ ). Table 8.7 shows the results of the stepwise regression procedure (values given are for the final equation).

Variable	Regression coefficient (b)	Standardised regression coefficient (β)	F value for variable
Other childhood disorders	- 7.47	- 0.35	21.37***
Length of treatment	21.52	0.35	19.49***
Emotional disorder	6.49	0.29	15.17***
Under-achievement	- 5.94	- 0.25	8.82**
AFC Nursery	8.25	0.23	8.63**
Mother anxious	- 7.14	- 0.20	6.29*
Foster care	- 6.75	- 0.19	6.16*
Mother treated (AFC)	8.95	0.18	5.43*
School/learning difficulties	- 4.33	- 0.19	5.26*
Father anxious	5.83	0.15	4.00*

\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

Table 8.7. Prediction of extent of improvement in adaptation, disruptive group, where treatment continued beyond 1 year (n = 93).

There were three particularly powerful predictors: the absence of other psychiatric disorders ("comorbidity"), particularly specific developmental disorders, longer treatment, and the presence of an additional emotional disorder, particularly anxiety. Children were likely to do less well in analysis if they had been in foster care, if the child's mother had a history of anxiety disorder, if the child was underachieving at school relative to his IQ, and if the school expressed serious concerns about the child. Children were likely to do better if their mother was also receiving treatment at the Centre, and if the child had been in the Centre's nursery school.

Similar variables emerged as significant predictors in a discriminant function analysis attempting to distinguish between children who showed significant improvement within each diagnostic group. The outcome in around 80% of cases could be correctly predicted from a combination of these variables. Tables 8.8 and 8.9 show the predictors

emerging in a discriminant analysis for the disruptive and emotional group children separately, first for all cases then for those who continued in treatment for at least one year.

There is little overlap between the predictor variables in the two groups. The only variable in common is intensive treatment, which predicted improved functioning in both diagnostic subgroups, although among the disruptive disordered children it was no longer significant once early terminators had been excluded. Other variables associated with improvement in the disruptive group were absence of a serious medical history, absence of school-reported difficulties, absence of concurrent disorders other than emotional disorders, and the provision of psychotherapeutic treatment of the mother alongside the child's treatment. After excluding dropouts, the presence of emotional disorder, and a history of attendance at the Centre's nursery school became significant predictors of improvement.

For children in the matched emotional group, apart from intensive treatment, predictors of reliable improvement included lower HCAM rating at referral, parents not divorced, history of severe maternal psychiatric history, no change of therapist and the presence of anxiety symptoms at school.

As the presence of an emotional disorder (particularly anxiety), in addition to a disruptive disorder, emerged consistently as an important predictor of outcome, the impact of anxiety was examined specifically. It was confirmed that an concurrent diagnosis of anxiety was strongly related to both the extent of HCAM change and the occurrence of reliable improvement in adaptation (see Tables 8.10 and 8.11).

predictor variable	all cases		continued $\geq$ 1 yr	
	not improved	improved	not improved	improved
medical history	27%	5% **	33%	6% **
problems at school	81%	55% **	88%	62% **
other disorder (non-emotional)	41%	17% *	55%	19% **
intensive treatment	49%	68% **	-	-
mother also treated	0%	7% *	0%	8% *
emotional disorder	-	-	19%	38% *
AFC nursery	-	-	0%	17% *

\*  $p < 0.01$  \*\*  $p < 0.00$

Table 8.8. Variables predicting whether a disruptive disordered child showed reliable improvement in HCAM (discriminant function analysis).

predictor variable	all cases (80% correct)		continued $\geq$ 1 yr (80% correct)	
	not improved	improved	not improved	improved
intensive treatment	76%	86% **	79%	90% **
HCAM at referral (mean rating)	57	53 **	58	53 **
parents divorced	32%	11% **	-	-
severe psych. history in mother	5%	13% **	-	-
change of therapist	-	-	16%	4% *
anxious at school	-	-	0%	8% *

\*  $p < 0.01$  \*\*  $p < 0.001$

Table 8.9. Variables predicting whether a child in the emotional (control) group showed reliable improvement in HCAM (discriminant function analysis).

	disruptive	emotional
with anxiety diagnosis	14.3 (n=17)	17.3 (n=74)
without anxiety diagnosis	8.6 (n=76)	14.1 (n=25)

Table 8.10. Mean change in HCAM among disruptive and emotional group children, according to the presence or absence of anxiety disorder. (Cases terminating within one year excluded.)

A two-way analysis of variance showed that both diagnostic group and the presence of anxiety disorder had significant effects on the extent of improvement ( $F=5.68$ ,  $df=1$ ,  $p<0.02$  and  $F=6.27$ ,  $df=1$ ,  $p<0.02$ , respectively). The interaction was not significant.

	disruptive % improved	emotional % improved
with anxiety diagnosis	64.7 (n=17)	79.7 (n=74)
without anxiety diagnosis	50.0 (n=76)	70.4 (n=25)

Table 8.11. Percent showing reliable improvement in HCAM among disruptive and emotional group children, according to the presence or absence of anxiety disorder. (Cases terminating within one year excluded.)

A log-linear analysis of the relationships between anxiety disorder, diagnostic group and reliable change showed a significant relationship between anxiety disorder and reliable change (likelihood ratio  $\chi^2=8.15$ ,  $df=1$ ,  $p<0.005$ ), but neither the effect of diagnostic group nor the three-way interaction was significant.

Next, an attempt was made to predict those children who were functioning at a lower adaptation level at the end of treatment (9% of those who continued beyond one year, and 11% of the entire disruptive group had actually got worse by the time treatment was terminated). It emerged that only one third of these children could be predicted on the basis of the information collected. Variables significantly associated with worsening of adaptation were: school performance generally below the child's capacity or interfered with by anxiety symptoms, the presence of other childhood disorders with

the exception of specific developmental disorders, lower socio-economic status, and higher paternal GAF score (approximate  $F=9.35$ ,  $df=6,86$ ,  $p<0.001$ ).

#### 8.4. DISCUSSION

The percentage of disruptive disordered children who return to a level of functioning within the normal range on the HCAM measure (33% of all disruptive cases, and 36% of those who remained in treatment for over 1 year) is roughly comparable to rates reported in other studies (see Dumas, 1989; Brandt & Zlotnick, 1988). It is necessary to be cautious in making comparisons across investigations, given diverse measures of improvement. The rates reported above are "clinically significant" (Kazdin, 1990), in that the aim was to identify a proportion of children who returned to normative levels of functioning, or in whom the magnitude of improvement exceeded a particular cut-off expressed as standard deviation units (see Jacobson, 1988). They fall short of recent reports of the rates of improvement for conduct disordered children who receive a combination of Parent Management Training and Problem-Solving Skills Training (Kazdin et al., 1992). However, it should be noted that the HCAM measure aims to assess the children in all contexts, and in the latter study, when school and home assessments were combined only 50% of children were functioning within the normal range. On the other hand, the amount of therapy received was considerably greater in the present study.

The predictors of premature termination of psychoanalytic treatment were found to overlap relatively little with those reported in other studies of treatment of disruptive disordered children and adolescents (see Kazdin, 1990). The overall attrition rate was also lower than the normal 45-65% (Pekarik & Stephenson, 1988), in spite of the long-term nature of this treatment. It emerged quite consistently that parental psychopathology (with the exception of maternal anxiety) was negatively related to attrition, and other variables found elsewhere to predict dropping out of treatment, such as comorbidity and lower IQ, appeared to make no difference within this group of disruptive children. A number of factors which might be expected to be relevant, such as whether the child was treated by a staff or student therapist, parental pathology, family size, the presence of multiple symptomatology in the child, verbal intelligence,

and so on showed no differences. An additional diagnosis of specific developmental disorder was, in fact, associated with remaining in therapy among children over 9 years old (those most likely to drop out). It may be that associated pathology in both parent and child are more effectively managed within a setting using a psychodynamic approach, where the intervention (for both child and parent) intentionally addresses all areas of personalities and relationships, rather than being focused primarily on the disruptive behaviour.

Parental failure to comply with treatment recommendations is found similarly to be a major problem in the implementation of behavioral and cognitive-behavioral programmes (e.g. Kazdin, 1985). This underlines the importance of reporting success rates on the basis of all cases offered treatment, rather than excluding drop-outs, as numerous early behavioral studies did. In this study, starting treatment on a 4 or 5 times weekly basis significantly reduced premature termination. It should be noted that beyond the possible value of intensive treatment in reducing the risk of attrition, the willingness to enter such an intensive and long-term programme of treatment may well indicate high parental motivation. It is of course possible that certain children were offered intensive treatment because of this or other factors already suggesting a better prognosis. However, as stated earlier, this possibility was examined using discriminant function analysis to distinguish those terminating within the first year from other patients. The 'drop-outs' could not be accurately identified using many criteria often associated with treatment outcome.

The difference in change scores in children with or without anxiety disorder is highly significant clinically as well as statistically. Where treatment continued for at least one year, the magnitude of change in HCAM score for children with both a disruptive and an anxiety disorder was 13, comparable to the average change of nearly 16 in the emotionally disordered group. 65% of disruptive children with an additional diagnosis of anxiety showed significant improvements after at least one year's treatment, as compared to 50% of those without. This confirms a number of previous observations (e.g. Conte et al, 1988) that a history of anxiety is a predictor of good psychotherapy outcome. This result is in marked contrast to the other finding that all forms of comorbidity apart from anxiety reduce the likelihood of successful analytic treatment.

Similarly, specific developmental disorders are generally recognized as aggravating the difficulties of children with disruptive disorders (Rutter, 1989), and it is not surprising that they also interfere with the extent to which the child is able to benefit from psychoanalytic treatment. In the present study these children generally stayed in treatment but improved significantly less than others (this relationship was not found in the children with primarily emotional symptoms). Thus there is a complex relationship between co-morbidity, attrition and therapeutic improvement. Anxiety symptoms in disruptive children who stay in treatment are associated with good outcome whilst all other forms of co-morbidity predict relatively poor outcome. Outcome was assessed not just in terms of the disruptive behaviour, but of overall adaptation and the persistence of diagnosable disorders. Therefore, children with additional symptoms (such as learning disabilities, tics, encopresis) would have been rated as still impaired if these other difficulties had remained while the disruptive behaviour improved.

It is interesting that there appeared to be a dose-effect relationship between treatment length and magnitude of change. This association has some support from meta-analytic investigations of psychotherapy outcome in adults (Howard et al., 1986; see section 6.4). Amount of treatment in this study appears not to be just a mediator variable for time between assessment and termination, i.e. spontaneous remission by maturation. Among children in treatment for over one year, those in intensive treatment showed significantly greater improvement than those treated once or twice a week, over a comparable period. The findings are also consistent with Heinecke's classical study of the frequency of child therapy sessions, described in Chapter 1 (Heinecke & Ramsey-Klee, 1986).

Children under 9 appeared to be especially likely to benefit from intensive treatment. For older children, 4 or 5 times weekly treatment did not significantly improve outcome. This is, of course, consistent with the pattern reported in Chapter 7. However, even for older children and adolescents, assignment to intensive treatment significantly reduced the likelihood of early termination. The pattern of results suggest that the efficacy of non-intensive psychodynamic treatment of conduct disorder might be maximised if treatment were initially offered relatively intensively (to prevent

attrition) and reduced after six to twelve months, when the maximum likelihood of premature termination had passed.

Parents' adjustment has also been shown by previous studies to be an important predictor in the natural history of disruptive disorders (e.g. Richman et al, 1982; Patterson et al., 1991), and it has already emerged in Chapters 6 and 7 as a powerful but complex influence on outcome in this study. It is encouraging that treating the psychological problems of the mother is likely to improve the chances of the child benefitting from psychoanalytic treatment, just as the mother's anxiety-related difficulties are likely to hinder it. As has been discussed before, the finding that children of relatively disturbed mothers were more likely to remain in treatment was probably a result of the support which the mothers themselves gained during the child's treatment, which could have motivated them to continue it. It is also arguable that the analytic relationship with a better functioning adult was more valued by children whose primary caregiver showed significant psychiatric disturbance, and that the child or adolescent therefore tried to continue the treatment.

The importance of this component is under-scored by findings that maternal stress and depression contribute to (and are exacerbated by) disruptive behaviour in children (Dumas & Gibson, 1990; Patterson, 1986). It is also emphasised by a recent report by Szapocznik and his colleagues (1989) where individual and family-based treatments were contrasted. In this study, individual treatment, however beneficial it was for the child, was associated in the long term (one year after termination) with a deterioration in family functioning. It is possible that the individual concurrent treatment of one or both parents pre-empts such complications.

The importance of social factors in psychoanalytic treatment was highlighted by the powerful association between improvement and the child having attended the Centre's nursery school, often some years earlier (see section 6.4). 90% of these children showed clinically significant improvement, as compared with 42% of the other disruptive children ( $\chi^2 = 8.45$ ,  $df=1$ ,  $n=135$ )  $p < 0.005$ ). The only associated factor which may help to explain the link is that the nursery children were younger; however nursery attendance emerges as a much stronger predictor than age. Because children are selected

for this nursery on the basis of risk factors (e.g. family breakdown, parental pathology, economic deprivation), we might have expected a negative association with magnitude of improvement. The experience of the nursery school possibly provided these children with 'models' of positive relationships, which helped them to use the subsequent therapeutic experience. Conversely, relationship experiences before and during foster care (a predictor of poor therapeutic outcome) could present considerable obstacles to benefitting from treatment.

Younger age showed a strong association with good outcome in the disruptive group, even when children terminating within one year were excluded. However, this relationship did not emerge in the multivariate analysis of predictors. Presumably, in the present comparison it was mediated by other variables such as frequency of sessions, comorbidity and attendance at the Centre's nursery school.

## 8.5. CONCLUSION

In the analyses reported in this chapter, 135 children and adolescents with a principal diagnosis of disruptive disorder were individually matched with others suffering from emotional disorders. Outcome was indicated by diagnostic change and change in overall adaptation (clinically significant improvement or return to normal functioning).

Improvement rates were significantly higher for the emotional than the disruptive group. Within the disruptive group, significant improvement was more frequent among children with oppositional defiant disorder (56%) than those with ADHD (36%) or conduct disorder (23%). These improvement rates seem to be reasonably high in the light of the reasonably well-mapped natural history of the disorders under scrutiny, particularly the poor prognosis normally found in untreated children with disruptive disorders. However, early attrition emerged as the main obstacle to successful psychoanalytic treatment in disruptive children. 31% of the disruptive disordered children terminated treatment within one year.

Of those disruptive children who remained in treatment, 69% were no longer diagnosable on termination. 58% of the variance in outcome ratings could be accounted

for within this group; the crucial variables in predicting attrition and symptomatic improvement were found to be quite different in the disruptive and emotional groups, confirming the supposition that diagnostic considerations would be important in the prediction of therapeutic outcome.

## CHAPTER 9. THE OUTCOME OF TREATMENT FOR CHILDREN WITH EMOTIONAL DISORDERS

### 9.1. INTRODUCTION

This chapter focuses on the outcome of psychoanalytic treatment for the largest diagnostic group treated at the Anna Freud Centre, 352 children and adolescents with emotional disorders. These syndromes are characterized by anxiety or depression, and are broadly 'internalising' disorders, as opposed to (for instance) disruptive or developmental disorders. We have found evidence in each of the three previous chapters that children with these disorders, in particular anxiety disorders, show good improvement during psychotherapeutic treatment; this is true within the full sample, when matched samples from three age groups are contrasted, and when the outcome of treatment of children with disruptive disorders is examined. The present chapter allows us to look in more depth at children with different types of emotional disorder, and at the factors which appear to influence the outcome of psychodynamic treatment in this group.

Emotional disorders constitute just under half of the overall prevalence of psychological disorders in childhood (Rutter, Tizard & Whitmore, 1970; Yule, 1981; Esser, Schmidt & Woerner, 1990), and recent epidemiological work suggests that they are probably the most common problems across all age groups (e.g. Costello et al., 1988; Kashani & Orvaschel, 1990; McGee et al., 1990; Bernstein & Borchardt, 1991, for review). Children with symptoms of anxiety and depression are less frequently referred for psychiatric attention than those with disruptive disorders (Kazdin, 1985) and the information available on the natural history of the disorder and its response to psychological treatment is sparse when compared with that available for other diagnostic groups.

It is widely believed that emotional disorders often remit spontaneously, (this is often based on pioneering work such as the Robins (1966) follow-up study, which suggested low persistence of emotional disorders). This may account for their underrepresentation in clinical studies (Ollendick & King, 1991). Recent longitudinal investigations (Fischer

et al., 1984; Harrington et al., 1990) and retrospective studies (Agras, Chapin & Oliveau, 1972; Francis & Ollendick, 1986) suggest that this may be an overly optimistic view. There is also evidence that the natural history of different anxiety disorders differs, so that although separation anxiety and early childhood phobias have a relatively benign course (Husain & Kashani, 1992), overanxious disorder appears to be more chronic (Last, 1987; Cantwell & Baker, 1989), to be associated with additional depression in adolescence (Strauss et al., 1988) and perhaps with generalized anxiety disorder in adulthood (Last et al., 1987). A recent follow-up investigation (Cohen et al., 1993) showed that 47% of children with severe overanxious disorder continued to suffer from the same disorder 2½ years later, almost all still at a severe level.

Even disorders such as separation anxiety disorder (SAD) may have an unstable rather than a good prognosis; in a small sample followed up by Cantwell & Baker (1989), only one of nine children still had SAD four years later, but a further four had a variety of other disorders, two disruptive behavioural disorders and three overanxious disorder; the remaining four children were well. There are tentative suggestions in the literature that SAD is associated with difficulties over separation in adult life: continued separation anxiety disorder and neurotic depression (Flakierska et al., 1988) crises over leaving home or changing jobs (Werkman, 1987), work phobia (Coolidge et al., 1964) and agoraphobia (Gittelman & Klein, 1984; Rutter, 1985). Similarly, in Cantwell & Baker's (1989) study, of 14 children referred for treatment of avoidant disorder, 29% showed the same disorder 4 years later, but overall 64% were still psychiatrically ill (most with overanxious disorder). Overanxious disorder itself had the lowest recovery rate after 4 years in this study: 25% had the same disorder, and 75% were still diagnosably ill with disruptive and emotional disorders. Other studies have examined the persistence of obsessive-compulsive disorder (OCD). Flament et al. (1988) reported on 20 adolescents with symptoms of OCD; at follow-up two years later, most still had an OCD diagnosis (Berg et al, 1989); it seems that even with treatment, most child patients continued to suffer from the disorder, and their adjustment (which was followed into adulthood) was poor: they showed difficulties in relationships and in work (Hollingsworth et al., 1980).

The clinical course of childhood depression has been charted by Kovacs & Gatsonis (1989), who followed up a sample of over 100 cases aged 8-13 with depressive disorders (DSM-III criteria) for a number of years. They found that although nearly all episodes had resolved within three to four years (median time to recovery 9.5 months), the majority of children with original diagnoses of major depression or dysthymia had further episodes of major depression over the following five years. There was also a 20-30% risk of development of secondary anxiety, conduct or bipolar disorder during these years. There is accumulating evidence (King & Pittman, 1970; Kandel & Davies, 1986; Garber et al., 1988; Harrington et al., 1990) that depressive disorders in childhood and adolescence are associated with significantly greater risk of affective disorders in adulthood. The Harrington et al. (1990) study, for instance, showed that depression in childhood or adolescence was associated with relative risks of psychiatric treatment and hospitalisation three times higher than those found among matched non-depressed child psychiatric patients. There seemed to be a specifically increased rate of affective illness (both depressive and bipolar) rather than of psychiatric morbidity in general. Kazdin (1990) summarises this picture as demonstrating high rates of recovery from episodes, but with high rates of relapse.

There is beginning to be some evidence on the long-term effects of emotional disorders on general development. Kashani & Orvaschel (1990) studied a community sample of 210 children and adolescents aged between 8 and 17 years. They found that children with anxiety disorders in each age group had higher rates of all other disorders than non-anxious children. They also showed that the anxious children failed to show the improvement with age in peer relationships seen in other children, and that in the area of family relationships, non-anxious children showed a steady level of difficulties across the age range, but the anxious children showed an increasing frequency of problems in the older groups. Other signs of poor adjustment were increasingly prevalent among the older anxious children: at 8 years, the anxious children had more signs of psychopathology than others, but were reasonably well-functioning in other ways; by 12 years, they had more difficulties in school and poorer self-image; at 17 years, anxious children were more likely to be depressed, show behavioural disorders and somatic complaints, and significantly poorer self-esteem than non-anxious peers. It seems that

the impact of anxiety disorders can be pervasive, and increasingly so as the child gets older.

Systematic studies of the effectiveness of treatment for emotional disorders are rather few, although this is changing. There is good evidence that pharmacotherapy can be helpful in certain conditions, such as OCD (Apter et al., 1984; Flament et al., 1985; Leonard et al., 1988); clomipramine seems to be effective in the treatment of childhood OCD, as it is with adults. There is also evidence that childhood depression can be effectively treated with tricyclic antidepressants (e.g. Puig-Antich et al., 1987), although at follow-up 70% of the children in this sample had suffered further episodes after treatment was discontinued. There are also suggestions (Ryan et al., 1986) that adolescents may be less responsive than either pre-pubertal children or adults to tricyclic treatment (imipramine). Studies of drug treatment in other childhood emotional disorders are inconclusive. Anxiolytics have been found to show paradoxical effects in many children (McDermott et al., 1989; Klein & Last, 1989), although there are inconsistent reports of good results with alprazolam and clonazepam (e.g. Bernstein et al., 1987; Simeon & Ferguson, 1987; Kutcher, 1990). Tricyclics have been used with SAD and school phobia (Rabiner & Klein, 1969; Berney et al., 1981), but with conflicting findings.

There are many single case studies of behavioural and cognitive treatment of emotional disorders (see Kendall et al., 1988, and Silverman & Kearney, in press, for reviews), but few reports of groups of cases, fewer still with any control condition. Imaginal and *in vivo* desensitization have been used to treat a variety of childhood disorders including school refusal, tics, anorexia nervosa, dog phobia, etc. (see Hatzenbuehler & Schroeder, 1978). The most systematic study (Miller et al., 1972) unfortunately gave inconclusive results; children with a variety of phobias (mostly school phobia) were randomly assigned to either systematic desensitization, psychotherapy or a waiting list control condition. Parental ratings of improvement showed that both active treatments were superior to the control condition, with no significant difference between them. However, ratings by a clinician (other than the therapist) showed no difference between the three groups. Other studies have used single-case designs (e.g. van Hasselt et al.,

1979; Ross et al., 1971; Frame et al., 1982) or series of treated cases without controls (e.g. Kearney & Silverman, 1990).

The few controlled investigations of the outcome of psychosocial treatments for childhood depression have generally used cognitive-behavioural approaches and non-clinical samples (e.g. Stark, Reynolds & Kaslow, 1987; Kahn, Jenson & Kehle, 1988). The six studies to date have been reviewed recently by Weisz and his colleagues (Weisz et al., 1992), who concluded that for these non-referred children, there did seem to be a positive effect of the (largely behavioural) treatments, and interestingly found that the effect size was substantially higher for adolescents than for children under 12 years (ESs 0.90 and 0.46, respectively,  $p < 0.01$ ). The difference was magnified at follow-up, when the under 12 group were no better off than untreated children, but gains were maintained among adolescents over the 1-3 month follow-up period. Kazdin (1990) has pointed out that these studies provide only weak tests of the effectiveness of cognitive-behavioural treatment for depression, because of a) small samples spread over a number of treatment conditions, and b) use of children not meeting diagnostic criteria.

## 9.2. METHOD

### 9.2.1. Subjects

The emotional disorders group was drawn from 763 closed treatment files of the Anna Freud Centre, which constitute the retrospective study sample. 352 cases met criteria for at least one DSM-III-R diagnosis which were classified as emotional disorder (136 overanxious or generalized anxiety disorder, 93 major depression or dysthymia, 64 SAD, 49 simple phobias, 24 avoidant disorder, 37 OCD). The sample also included 27 children with a diagnosis of dyssomnia, parasomnia or somatoform disorder, who also had significant emotional symptoms (at least two relevant items on the CBCL rated 'very true'), without meeting the criteria for a specific anxiety or depressive disorder. Children with a diagnosis of a psychotic or pervasive developmental disorder were excluded. 24 children had a disruptive disorder (22 of these oppositional defiant disorder) in addition to the emotional disorder, and there were many other coexisting

diagnoses, e.g. 48 children had enuresis or encopresis, and 39 showed specific developmental disorders.

On the basis of a hierarchical class analysis of a symptoms by cases matrix (de Boeck et al., 1993) the children were divided into three major diagnostic subgroups: group 1 contained 99 children with a depressive disorder (major depression or dysthymia) with or without comorbid anxiety; group 2 included 144 children with generalized anxiety (OAD or generalised anxiety disorder) with or without focused anxiety symptoms; group 3 included 109 children with specific anxiety disorders (e.g. simple phobia, OCD, SAD). To confirm this grouping, a discriminant function analysis was performed on the symptom x case matrix. The model accurately assigned between 75% and 85% of the cases, compared to chance assignment of 33%. Table 9.1 contrasts some demographic and clinical characteristics of these groups.

There were few differences at referral between the groups, but some of these have potential relevance to treatment outcome. Depressed children were likely to be slightly older, to come from a broken family, and to receive non-intensive treatment. More of them had fathers with psychiatric histories ( $\chi^2=8.3$ ,  $df=2$ ,  $p < .02$ ), and, relative to the group with specific anxiety disorders, more showed underachievement and poor peer relationships at school ( $\chi^2=19.9$ ,  $df=2$ ,  $p < .001$  and  $\chi^2=10.5$ ,  $df=2$ ,  $p < .005$ , respectively).

The median length of treatment was 2 years (geometric mean 1.95, range 1 week to 13.6 years). The three groups did not differ significantly in terms of length of treatment. 7.5% terminated treatment within 3 months, 14% within 6 months, and 25% before one year. Depressed children more often terminated treatment within six months, 21% compared to 7-8% in the other two groups ( $\chi^2=13.4$ ,  $df=2$ ,  $p < .002$ ).

	Depression	generalized anxiety	specific anxiety	whole group	stats
mean age (s.d.)	11.9 (3.7)	9.2 (3.6)	9.7 (4.3)	10.1 (4.0)	$F_{2,313} = 15.1$ , $p < .0001$
% boys	55%	52%	56%	54%	$\chi^2 = .40$ , $df = 2$ , n.s.
mean IQ (s.d.)	116.4 (14.0)	115.9 (16.9)	112.3 (13.4)	114.9 (15.1)	$F_{2,349} = 2.45$ , n.s.
% social class I or II	65%	70%	70%	69%	$\chi^2 = .94$ , $df = 2$ , n.s.
% intact families	68%	81%	81%	78%	$\chi^2 = 7.70$ , $df = 2$ , $p < .03$
% only child	11%	17%	15%	15%	$\chi^2 = 1.46$ , $df = 2$ , n.s.
% fostered	7%	4%	7%	6%	$\chi^2 = 2.23$ , $df = 2$ , n.s.
mean HCAM score (s.d.)	53.0 (7.6)	54.8 (7.2)	53.6 (7.3)	53.9 (7.3)	$F_{2,349} = 1.90$ , n.s.
% intensive treatment	61%	77%	76%	72%	$\chi^2 = 9.21$ , $df = 2$ , $p < .01$

Table 9.1. Some demographic and clinical characteristics of children in each diagnostic group.

254 of these children were offered intensive psychoanalytic treatment (4-5 times per week), the remainder (98) were taken into psychotherapy 1-3 times per week. A stepwise discriminant analysis (Jennrich, 1977) was performed in order to establish the

characteristics of children who were more likely to be allocated to intensive treatment. It emerged that younger children with higher IQs, with avoidant or obsessive-compulsive disorder or specific learning difficulties were more likely to be offered analysis, whilst older children, with a reactive attachment disorder or in local authority fostering were more likely to receive non-intensive treatment. These variables in combination predicted the treatment allocation of 69% of the cases.

### **9.2.2. Measures**

The documentation available and the variables coded have been described in detail in Chapter 3. The outcome measures used were described in Chapter 4. As in the analysis of the relationship between age and therapeutic outcome, it was decided to exclude children who treated for less than six months from most of the statistical analyses, as this was judged to be the shortest length of treatment which could be regarded as constituting some psychoanalytic experience.

### **9.2.3. Statistical analysis**

The statistical procedures used have been described in section 6.2.

## **9.3. RESULTS**

### **9.3.1. Rates of improvement**

Rates of improvement varied between 40% and 71%, according to the criteria used (see Table 9.2).

47% of cases were definitely not diagnosable at the end of their treatment, and had HCAM scores above 70. Over half the subjects were no longer in the dysfunctional group on the HCAM at the end of treatment, and over ⅔ showed a reliable improvement in adaptation rating. If children treated for less than six months are excluded from the sample, improvement rates for the three criteria across all three

diagnostic groupings improve by 5-10%. There were no overall differences in rates of improvement across diagnostic subgroups on the  $\chi^2$  test.

Outcome at termination	depressed (%) n=99 [74]	generalized anxiety (%) n=144 [129]	specific anxiety (%) n=109 [96]	whole group (%) n=352 [299]
no diagnosis + HCAM $\geq$ 70	40.4 [51.4]	50.0 [53.5]	49.5 [53.1]	47.2 [52.8]
not dysfunctional, HCAM $\geq$ 68	44.4 [55.4]	54.9 [58.9]	55.0 [58.3]	52.0 [57.9]
reliable improvement in HCAM (> 7 pts)	61.6 [74.3]	66.0 [69.8]	70.6 [72.9]	66.2 [71.9]

Table 9.2. Rates of improvement in each diagnostic group according to different outcome criteria. (Numbers in square brackets refer to rates of improvement when children treated for less than 6 months are excluded.)

In 26% of cases the information was insufficient at termination to decide on diagnosis, but 27% still had at least one disorder at termination. Only 13% of the sample continued to have diagnoses of emotional disorder; OCD and SAD most frequently remained. Other persistent diagnoses were enuresis, specific developmental disorders and conduct disorder. Table 9.3 shows rates of emotional, conduct and other diagnoses at the end of treatment for children given emotional group diagnoses at the beginning of treatment (some children were given more than one emotional group disorder, and hence appear in more than one row of the table).

Children with a diagnosis of simple phobia (with or without other disorders) were less likely to be diagnosable at the end of treatment (corrected  $\chi^2=3.89$ ,  $df=1$ ,  $p < .05$ ). On the second outcome criterion, those with a diagnosis of a depressive disorder were more likely to remain in the dysfunctional range of HCAM score, i.e. below 68 (corrected  $\chi^2=4.73$ ,  $df=1$ ,  $p < .03$ ).

Diagnoses at beginning of treatment	Diagnoses at termination			
	Emotional Disorder	Conduct Disorder	Other Diagnoses	Any Diagnosis
Simple Phobia (n=48)	14.6%	0%	8.3%	22.9%
Separation Anxiety (n=58)	15.5%	5.2%	5.2%	25.9%
OCD (n=34)	29.4%	0%	0%	29.4%
OAD (n=145)	13.1%	1.4%	9.7%	24.2%
Avoidant Dis. (n=20)	20%	0%	5.0%	25.0%
Depression (n=65)	18.5%	0%	6.2%	24.7%
Emotional + Conduct dis. (n=22)	4.5%	18.2%	13.6%	36.3%
Any emotional disorder (n=299)	15.4%	2.0%	6.4%	23.8%

Table 9.3. Percentage of cases with initial diagnoses of emotional disorder with diagnosable disorders at the end of treatment. (Children terminating treatment within six months excluded).

As the three diagnostic subgroups differed in age, we examined improvement rates separately for children under and over 11 years. Hierarchical log-linear analyses were performed on 3x2x2 contingency tables, using diagnostic grouping, age group, and improved vs not improved as the three factors. On the whole, a higher proportion of younger children improved (partial  $\chi^2=8.87$ ,  $df=1$ ,  $p<.003$ , and  $\chi^2=12.56$ ,  $df=1$ ,  $p<.0005$  respectively for diagnostic status and moving out of the dysfunctional group). However, the difference in rates of reliable improvement in adaptation between younger and older children was not significant ( $\chi^2=1.72$ ,  $df=1$ , n.s.). Although the depressed group was slightly older than the other two groups, there was no indication of a significant three-way interaction between diagnostic group, age and likelihood of improvement on any of the criteria. Thus, any difference in outcome associated with diagnosis could not be attributed to age differences between the groups.

### 9.3.2. Treatment intensity

Treatment intensity was associated with positive outcome; whereas 87% of the sample treated in full psychoanalysis showed reliable change (rise in HCAM > 7 points), and 86% moved out of the dysfunctional group (HCAM  $\geq$  68), only 67% and 75% respectively of children in psychotherapy showed these changes. A three-way hierarchical log-linear analysis, including diagnostic group, intensity and outcome criteria, yielded a significant two-way interaction between outcome and treatment intensity for both the above criteria (partial  $\chi^2=15.12$ ,  $df=1$ ,  $p<.0001$ , and partial  $\chi^2=6.16$ ,  $df=1$ ,  $p<.02$ , respectively). A three-way analysis of variance also revealed that HCAM change was significantly greater in children treated intensively. The mean change in HCAM for children treated in psychoanalysis for at least 6 months was 13.9 (s.d. 10.9), and for children similarly treated non-intensively 8.7 (s.d. 12.9) ( $F=7.45$ ,  $df=1,306$ ,  $p<.01$ ). In neither case was the effect of diagnostic group significant.

As psychoanalytic treatment was frequently longer than psychotherapeutic treatment, treatment length was controlled for by introducing it into the hierarchical log-linear analysis. The analysis clearly revealed that whilst intensity was associated with length ( $\chi^2=12.23$ ,  $df=3$ ,  $p<.01$ ), longer treatment and more intensive treatment were **independently** associated with a greater likelihood of reliable improvement (partial  $\chi^2=17.47$ ,  $df=3$ ,  $p<.001$ , and partial  $\chi^2=7.85$ ,  $df=1$ ,  $p<.01$ , respectively). Similarly, whilst outcome was better for younger children, who also more often received intensive treatment, they did not benefit more from this assignment than older individuals ( $\chi^2 < 1$ ,  $df=1$ , n.s.).

More frequent sessions were associated with larger HCAM changes. A 2x3 analysis of covariance was performed, with intensity and diagnostic group as between factors, treatment length as a covariate, and treatments shorter than six months excluded. The main effect of intensity was significant ( $F=5.55$ ,  $df=1,305$ ,  $p<.02$ ). The mean HCAM change in non-intensive treatment was 8.7 (s.d.=12.9), and in intensive treatment was 13.9 (s.d.=10.9). There was no significant interaction between diagnosis and intensity of treatment ( $F < 1$ , N.S.), but test of simple effects revealed that children with

	Intensive Treatment mean (s.d.)	Non-Intensive Treatment mean (s.d.)	Test of simple effects <sup>a</sup> mean (s.d.)
separation anxiety	14.7 (12.1) (n=48)	16.4 (17.3) (n=10)	F < 1, N.S.
simple phobia	18.1 (12.0) (n=42)	16.2 (12.2) (n=6)	F < 1, N.S.
overanxious / GAD	14.0 (10.5) (n=117)	7.4 (12.2) (n=28)	F <sub>1,307</sub> =4.59, p < .04
avoidant	12.3 (9.1) (n=20)	— (n=0)	—
obsessive-compulsive	12.4 (12.9) (n=29)	10.6 (17.1) (n=5)	F < 1, N.S.
depression	13.1 (10.3) (n=52)	5.6 (14.1) (n=13)	F <sub>1,307</sub> =3.52, p < .06
disruptive + emotional	15.6 (12.7) (n=17)	-1.4 (3.7) (n=5)	F <sub>1,307</sub> =6.66, p < .01

<sup>a</sup> F-ratios derived from tests of simple effects from intensity x diagnostic groups ANCOVAs, controlling for length of treatment.

Table 9.4. Mean HCAM change in intensive (4-5 x per week) and non-intensive (1-3 x per week) treatments for children with different diagnoses of emotional disorder. (Children terminating treatment within six months excluded).

overanxious or generalized anxiety disorders did significantly better in intensivetreatment ( $F=5.13$ ,  $df=1,305$ ,  $p<.03$ ). Additional ANCOVAs were performed for each of the specific diagnostic categories, and significant interactions were found in three diagnostic groups: children with OAD, depression or mixed emotional and disruptive disorder did significantly better in 4-5 times weekly treatment (see Table 9.4).

Next, the relative benefit of intensive vs non-intensive treatment for children with severe vs. less severe psychopathology was examined. The cases were divided into two severity groups; severe cases ( $n=84$ ) were defined by HCAM scores of 45 or below at the start of treatment (55 cases), three or more diagnosable disorders (16 further cases), or a psychoanalytic diagnosis of atypical personality development (13 cases). (This psychoanalytic diagnosis (A. Freud, 1962) did not indicate that the child had a pervasive developmental or personality disorder, but that he was regarded clinically as 'borderline' rather than neurotic.) Children in the severely disturbed group were much more likely to show reliable improvement if they were in intensive treatment rather than psychotherapy (78.7% and 26.1%, respectively). By contrast, less severely disordered children were almost as likely to benefit from non-intensive treatment (68.8% and 57.4%, respectively). A significant three-way interaction of intensity, severity and reliable improvement in a log-linear analysis confirms the robustness of this finding (likelihood ratio  $\chi^2=8.14$ ,  $df=1$ ,  $p<.005$ ).

Notwithstanding the greater impact of intensive treatment, the majority of severely disordered children did remain diagnosable and within the dysfunctional range of HCAM at termination, even when only those treated for over six months were considered ( $n=60$ ). 36.4% of severe cases given intensive treatment were not diagnosable (and had HCAM scores over 70) at termination, as opposed to 6.2% of those in non-intensive therapy (for non-severe cases, 59.9% and 54.1%, respectively). There was again a significant three-way interaction with treatment intensity (likelihood ratio  $\chi^2=3.92$ ,  $df=1$ ,  $p<.05$ ). More of the severe cases moved into the functional HCAM range ( $\geq 68$ ), but although the same pattern emerged, the interaction with intensity did not reach statistical significance ( $p<0.1$ ).

The reduction in the likelihood of negative therapeutic effects was as important as the enhancement of positive ones. Over half (56.5%) of the children with severe disorders

in the non-intensive treatment group showed no improvement or got worse, whereas only 15% of severely disturbed children in the intensively treated group did so. Again, there was little difference in the likelihood of negative outcomes for less severe disorders (25.5% and 16.7%). The significance of this effect was confirmed by the three-way interaction between severity, intensity and negative outcome in a hierarchical log-linear analysis ( $\chi^2=5.08$ ,  $df=1$ ,  $p<.03$ ).

The importance of intensity was equally clear when the extent of HCAM change was contrasted. An analysis of covariance, controlling for initial HCAM level, yielded a significant interaction between severity of disorder and intensity of treatment ( $F=5.39$ ,  $df=1,347$ ,  $p<.02$ ). The mean changes in HCAM, adjusted for initial HCAM level, are shown in Table 9.5.

	Non-intensive	Intensive
Moderate	11.1 (11.94) n=47	13.0 (10.27) n=221
Severe	3.0 (12.64) n=23	12.4 (13.18) n=61

Table 9.5. Mean HCAM change for moderately and severely disturbed children in non-intensive or intensive treatment, adjusted for initial HCAM level.

Severely disturbed children benefitted very little from non-intensive treatment, and intensive treatment seems hard to justify in terms of the measures used here for less severely disturbed children.

### 9.3.3. Early terminations

53 children (15%) terminated treatment within 6 months. These children were likely to be older ( $F=5.9$ ,  $df=1,350$ ,  $p<.02$ ), to have a diagnosis of depression ( $F=11.43$ ,  $df=1,350$ ,  $p<.001$ ), not to have a diagnosis of anxiety disorder ( $F=4.12$ ,  $df=1,350$ ,  $p<.05$ ), and not to have a mother in psychoanalytic treatment ( $F=7.67$ ,  $df=1,350$ ,  $p<.01$ ). Multivariate analysis (stepwise discriminant function), however, yielded disappointing results, in that only 9 (17%) of the 53 children terminating prematurely

could be accurately predicted on the basis of these variables. The prediction did not improve when younger and older children, or the three major diagnostic groupings, were considered separately.

#### 9.3.4. Prediction of outcome

A stepwise multiple regression procedure was used to attempt to predict the magnitude and direction of HCAM change, using demographic, clinical and treatment variables. Only the 299 children whose treatment lasted at least 6 months were included. The final regression equation accounted for 31% of the variance ( $F=11.69$ ,  $df=11,287$ ,  $R=.56$ ,  $p<.001$ ) (see Table 9.6).

	Regression coefficient (b)	Standardised regression coefficient ( $\beta$ )	F value for variable
HCAM at assessment	-0.36	-0.23	18.06***
length of treatment	12.8	0.21	17.97***
mothers GAF score	0.29	0.23	17.17***
child's age	-0.62	-0.21	16.10***
child's IQ	0.13	0.18	11.80***
simple phobia	4.72	0.15	9.06***
mother antisocial	-8.68	-0.13	7.35**
mother anxious	3.90	0.13	6.90**
poor peer relations	-3.90	-0.13	6.27*
child from AFC nursery	6.00	0.11	4.82*
mother treated at AFC	5.38	0.10	4.08*

\*\*\*  $p<0.001$ , \*\*  $p<0.01$ , \*  $p<0.05$

Table 9.6. Prediction of improvement in adaptation by stepwise multiple regression analysis for cases continuing beyond six months (n=299).

The strongest predictors of good outcome were relatively low HCAM score at assessment, longer treatment, and relatively good psychological functioning (GAF score) in the mother at the child's referral. These predictors were confirmed by randomly splitting the sample and performing the regression analysis independently for each group of 150 children. Both regressions were significant and very similar predictors emerged.

In order to establish if these predictors were equally appropriate for the three diagnostic groupings, the predictors in Table 9.6 were used in standard multiple regressions; these were then contrasted with stepwise multiple regressions using all variables, for the three groups separately. It was found that, although a comparable proportion of the variance could be accounted for in each diagnostic subgrouping using the variables in Table 9.6, this proportion was substantially increased within the groups of children with depressive disorders or specific anxiety disorders when additional predictors specific to the group were also included (see Table 9.7).

	All cases	Depressed	Generalized anxiety	Specific anxiety
Variables in Table 9.6	31	21	24	36
All variables	31	55	28	59
Assessment	26	34	22	51
Treatment	12	6	18	12
Clinical	17	6	12	35
Family	8	33	10	19

Table 9.7. The percentage of variance in HCAM changes accounted for by different groups of variables, within the whole emotional group and each subgrouping.

The subset of variables in Table 9.6, which had emerged as significant predictors for the whole emotionally disordered group, together predicted between 21% and 36% of the variance in outcome within each diagnostic subgrouping. This was not significantly

increased for the subgroup of children with generalized anxiety symptoms if other variables were included, but for the other two subgroups, specific additional or alternative variables did add convincingly to the accuracy with which HCAM change could be predicted.

The stepwise regression equation for the depressed group accounted for 55% of the variance, a statistically significant increase in  $R^2$  ( $F_{inc}=7.00$ ,  $df=7,63$ ,  $p<.001$ ) over that obtained with the variables in Table 9.6. 34% of the variance in outcome could be predicted from variables known at the child's referral. In addition to the variables identified as predicting outcome across the whole emotionally disordered group, predictors of poor outcome for depressed children included the presence of conduct disorder ( $p<.001$ ), encopresis ( $p<.001$ ), personality disorder in the mother ( $p<.03$ ), and being an only child ( $p<.0001$ ). Intensive parent guidance before commencing treatment was a predictor of good outcome ( $p<.05$ ). Some variables in Table 9.6 did not predict outcome for the depressed group, these were initial HCAM score, age of child, the presence of phobic symptoms, psychotherapeutic treatment of the mother and attendance at the Centre's nursery.

The stepwise regression equation for the specific anxiety disordered group accounted for 59% of the variance, which represents an increase in  $R^2$  of 23% over that obtained using the predictors in Table 9.6 ( $F_{inc}=4.5$ ,  $df=10,83$ ,  $p<.001$ ). Additional predictors of good outcome specific to this group were a low GAF score in the father ( $p<.001$ ), but no diagnosis of personality disorder in the father ( $p<.01$ ), mother having received psychoanalytic treatment ( $p<.03$ ), female gender ( $p<.03$ ), and no serious medical history in the child ( $p<.05$ ). Length of treatment and attendance at the Centre's nursery school were not significant predictors in this group with specific anxiety disorders.

The most important domains of variables in relation to outcome differed between the three diagnostic subgroupings. For the depressed subgroup, information about the child's family had by far the strongest relationship with outcome. For the group with specific anxiety disorders, clinical variables (details of the child's symptomatology and history) gave the best prediction. Amongst children with generalized anxiety symptoms,

all three domains (family, clinical and treatment variables) were of comparable importance.

#### 9.4. DISCUSSION

The results of the study suggest that emotional disorder responds relatively well to psychoanalytic treatment. The large majority of children no longer had any diagnosis following an average of 2 years treatment. The estimates of improvement compare favourably with what is known about the natural history of many of the disorders included in the study (Cantwell and Baker, 1989; Husain and Kashani, 1992; Cohen et al., 1993), although sampling, diagnostic attrition and other methodological problems make it difficult to contrast groups from different studies. In the Cantwell & Baker (1989) study, approximately half of the children followed up still had some emotional disorder diagnosis four years later, and of the remainder some had another disorder such as a conduct disorder. Only between one quarter and one half were free of diagnosable symptoms at follow-up.

In this study, some disorders known to be relatively persistent (e.g. OAD, OCD) responded well to psychoanalysis. The disorder which showed most improvement, simple phobia, is known to have a high spontaneous remission rate, but it is interesting that these children did well in treatment even when the phobic disorder was accompanied by other diagnosable symptoms, such as generalized anxiety or depression. Depressed children and adolescents in general, while not necessarily diagnosable at the end of treatment, were less likely than others to move into the functional group in terms of HCAM score.

Children under 11 years were more likely to show improvement. The older group were as likely to show reliable change but less likely to lose their diagnosis or their caseness on the HCAM. This finding is consistent with results from other studies of inpatient (Berg & Jackson, 1985) and outpatient treatment outcome for children (e.g. Coolidge et al., 1964; Waldron, 1976), and with meta-analytic studies where therapy effect sizes tend to be larger for younger children (Weisz & Weiss, 1993). The finding is of course

also consistent with the general result in Chapters 6 and 7, that younger children show more improvement in psychodynamic treatment, even when matched on other important variables. It mirrors the observation in Chapter 8 that younger children with conduct disorders are more likely to respond positively to this form of treatment.

There was no difference in improvement rates between the broad, hierarchical diagnostic groupings of depressive disorders, generalized anxiety disorders and specific anxiety syndromes. However, there were differences between children according to the presence or absence of more specific diagnoses: those with simple phobias were likely to have lost not only this but any other diagnosis by termination; those with depressive disorders were less likely to move into the functional range on the HCAM. The differences between diagnostic groups could not be accounted for in terms of age. This parallels the finding in the previous chapter that anxiety symptoms increased the likelihood of positive outcome in disruptive children. It may be relevant that, as in previous studies (e.g. Kovacs et al., 1989), around half of the children in the depressed group also had diagnoses of anxiety disorders. It has been found that comorbidity of anxiety and depression is associated with greater severity of both disorders (Bernstein, 1991). However, in this study, HCAM levels at referral were not lower in the depressed group, and the severity ratings of their individual disorders were not generally higher. It is likely that motivational factors in both child and parents were important; just as anxiety may help children to become engaged in a treatment, the presence of depression may reduce the likelihood of establishing a good treatment alliance. This suggestion is consistent with the higher rate of premature termination among the depressed group.

There was no confirmation of the finding reported by Weisz et al. (1992) of a greater therapeutic effect for depressed adolescents than for depressed children. This might be because children in the present sample were referred and showed clinically diagnosable symptoms (whereas previous studies have used school samples), or possibly because depressed children can use psychoanalytic treatment more easily than cognitive-behavioural therapy, which was used in the studies reviewed by Weisz and colleagues.

These results support the usefulness of intensive treatment for certain disorders, as did Heinicke's classical study (Heinicke & Ramsey-Klee, 1986) which showed that intensive

psychotherapeutic treatment was more effective in treating children with learning difficulties. In the present study, intensive treatment was associated with an increased likelihood of significant improvement, and with larger changes. Although the intensively and non-intensively treated children differed on a number of parameters at the outset, these did not account for the significant differences observed. Controlling for length of treatment, age and initial HCAM level, the significantly superior outcome of intensive treatment remained. Of the diagnostic categories, children with OAD, depression or mixed emotional and conduct disorder seemed particularly likely to benefit from four or five times weekly treatment. Generally, the more severe the disorder, the better the justification for intensive treatment appeared to be.

Although the superiority of intensive treatment was apparent on all four measures of outcome, the results suggested that reducing **negative** outcomes associated with the non-intensive treatment of severely disturbed children may be the most important consideration. This is highly important clinically, as non-intensive psychotherapy has become the *de facto* treatment of choice for many children comparable to the severe sample. The relatively poor outcome associated with non-intensive treatment of this group is therefore worrying. By contrast, no superiority of intensive treatment was found for less severely or pervasively impaired children. Most children in this group had diagnoses such as simple phobias and separation anxiety disorder which were relatively likely to remit spontaneously (Cantwell and Baker, 1989; Husain and Kashani, 1992). It could be argued that treatment intensity had no impact on these diagnoses because the process of change was developmental rather than psychotherapeutic. The rates of improvement were nevertheless superior to those reported in studies of the natural history of these disorders. It may be that the therapeutic relationship facilitated a natural process of remission, and possibly prevented the appearance of new symptoms (which has been found to occur frequently in untreated children), but this did not depend on intensive input.

Early terminations occurred less often than was the case with disruptive disorders treated at this Centre (see Chapter 8). As might be expected from the negative and conflicting findings on attrition shown in meta-analyses (Weisz & Weiss, 1993), it proved difficult to predict which children were likely to withdraw from treatment.

Older or depressed children were more likely to terminate before six months. The presence of anxiety, and the mother's commitment to this form of intervention, enhanced the likelihood of the child staying in analysis. Neither remission nor worsening of symptomatology appeared to be a major factor in early termination. Unlike the observations of factors associated with premature termination in conduct disordered children (Kazdin, 1990b), disruptive behaviour, socio-economic disadvantage or parental psychopathology did not predict attrition in this group. It was, however, in line with Kazdin's findings that depression in the child was associated with early termination.

A number of demographic, clinical and treatment variables helped to identify children who were most likely to improve in psychoanalysis. Children with lower initial levels of HCAM improved more, a predictable finding consistent with regression towards the mean. Using a stepwise procedure, in looking for further predictors, this was controlled for by entering initial values of HCAM as a covariate.

The association of longer treatment with good outcome is consistent with a dose-effect relationship between number of sessions and treatment outcome (Howard et al., 1986, 1993). However, as has been discussed in section 6.4, the retrospective nature of this study confounds treatment length and time between assessments, and therefore spontaneous developmental changes. In view of this, it is important to underscore that length of treatment and treatment intensity (i.e. number of sessions per week) appear to have separate effects on outcome. The effect of treatment intensity, for example, was restricted to certain diagnoses, whilst treatment length predicted good outcome for the emotional group in general.

The mother's psychiatric history and status had a complex association with outcome. When mother's overall adjustment was controlled for, the presence of anxiety in the mother predicted good outcome. This seems surprising, but replicates the observation in Chapter 8 of the same finding with disruptive disordered children. It is likely that these mothers had a better understanding of the child's need, and played a more active part in ensuring the child's participation in the treatment process. The positive influence of mother's concurrent treatment may also relate to this, and supports Kazdin

et al.'s (1992) observation concerning the importance of simultaneous treatment for parents. Whilst maternal anxiety had a positive effect, a history of antisocial personality disorder or behaviour (drug or alcohol addiction, criminality, violence within the family) in the mother predicted poorer outcome. It is likely that the child's capacity for forming strong and secure attachments would have been impaired by such a history (Kaufman & Zigler, 1989). In the few cases where such problems were current, the child's treatment probably suffered direct interference from unreliable parenting.

Younger children benefitted significantly more from treatment than older children. This is consistent with findings for the sample as a whole, reported in chapters 6 and 7. There have also been occasional suggestions in the literature of better prognosis of emotional disorder with earlier onset (e.g. Agras et al. 1972; Miller et al. 1972). Apart from this, the strength of the association between age and outcome, controlling for severity of disturbance in the child and mother, as well as treatment length, is in line with the generally held belief among child analysts (e.g. Sandler et al., 1980, p.86-7) that younger children, in whom psychic structuralisation is not yet complete, have greater potential to benefit from insight-oriented treatment. Similarly, children with relatively high intelligence were found in the sample as a whole (section 6.3.4) to be more responsive to psychodynamic treatment, and the finding in this subgroup is consistent with this.

It is interesting to note that the child's previous attendance at the Centre's nursery school was associated with good outcome for emotionally disordered children, just as it was in the comparisons reported in previous chapters, and discussed in section 6.4.

The above predictors applied to the entire emotionally disordered group. It was also possible to identify specific predictors of improvement within the three subgroups, which accounted for over half the variance in treatment outcome. Amongst children with depressive disorders, intensive parent guidance before commencing treatment appeared to be of particular value. In this group, an additional disruptive disorder, or encopresis, were negative treatment indicators. These may be patterns of comorbidity associated with depression which are difficult to treat psychotherapeutically. Similarly,

one may speculate that having no siblings creates particular difficulties for a depressed child, who may already be isolated.

59% of the variance outcome for children with specific anxiety disorders (SAD, OCD, avoidant disorder or phobias) was accounted for, with some predictors specific to this group. Just as maternal psychiatric history was associated with good outcome in the full emotional group, psychiatric impairment in the father was a positive predictor for this subgroup, as long as it did not involve personality disorder. Mother having experienced psychoanalytic treatment was also positively associated with improvement. These factors probably reflect parental motivation and understanding of the child's need of help. A history of serious or multiple illnesses, disabilities, surgical operations or accidents in the child was associated with low improvement. These children may have had more profound anxieties and relationship difficulties than did other children with these diagnoses, following serious illnesses and hospitalisation (but see discussion in section 6.4 on multiple hospitalization). Female gender was also found to be associated with good outcome in this group; this is consistent with the meta-analytic findings of Casey & Berman (1985) and Weisz et al. (1992), but it is interesting that it was not found to be a significant predictor for the emotional disordered group as a whole.

## 9.5. CONCLUSION

This chapter described the outcome of treatment in 352 children with emotional disorders. These children were divided into those suffering from depression (with or without anxiety), generalized anxiety disorders, and specific anxiety disorders.

The findings generally support the value of psychodynamic treatment for emotional disorders. Intensive treatment appears to have a substantial, beneficial impact on emotional disorder where this disorder is severe, and accompanied by other diagnoses or personality pathology in the child. In contrast, a cautionary note is called for on the practice of 1-2 weekly psychotherapy for children with severe or multiple pathologies; in this study, non-intensive treatment resulted in little or no improvement in over half of these cases. There was also evidence that children with generalized anxiety disorders,

depressive disorders or concurrent disruptive disorders responded significantly better to intensive therapy. However, while children with milder or circumscribed symptoms improved in psychotherapy more than would be expected from the natural history, this improvement was not enhanced by greater length or intensity of treatment.

The final chapter provides an overview and general discussion of the findings in these four chapters in which results have been reported, and presents a plan for future research in which some outstanding questions can be addressed.

## CHAPTER 10. DISCUSSION, CONCLUSIONS AND FUTURE DIRECTIONS

This thesis has described the methodology and results of a study of the outcome of psychoanalytic psychotherapy for children. The rationale for investigating this issue initially using a retrospective design was presented in section 1.5. This chapter is in four parts. First, the major results presented in chapters 6 to 9 are summarised, and general themes emerging across the four chapters are identified. In the second section, the strengths and limitations of this methodology are considered. A third section outlines a theoretical model of change in child psychoanalysis which was developed in parallel with this work, and helps to integrate some of the findings. Finally, a plan is described for a prospective study of outcome building on the results of the present study, and offering solutions to some of the obstacles to prospective investigations in this field. This prospective study will allow some assumptions of the theoretical model to be tested.

### 10.1 OVERALL RESULTS OF THE RETROSPECTIVE STUDY

Chapter 6 reported on the outcome of treatment across the whole retrospective study sample of 763 children and adolescents who had undergone psychodynamic therapy at the Anna Freud Centre. Both univariate and multivariate methods were used in order to identify predictors of good outcome.

The findings showed reliable improvement in HCAM ratings during treatment in nearly half of the children in the full sample, whereas a smaller proportion could be found in the functional range of the HCAM distribution. In addition, only one-third of the sample were no longer psychiatrically diagnosable at the end of treatment, but this was heavily influenced by the considerable amount of missing data on this variable at termination. Many variables were significantly associated with either categorical or continuous measures of improvement, particularly intensity of treatment, younger age of child, and several diagnostic categories at referral. Children in the broad diagnostic groupings of disruptive disorder tended to do less well in treatment, and in the case of pervasive developmental disorder this picture did not improve with longer treatment.

It was not possible to predict those children who withdrew prematurely from treatment. However, there were some variables significantly associated with attrition - for example, non-intensive treatment predicted withdrawal. The three principal predictors of improvement in adaptation were found to be lower initial adaptation level (HCAM), the presence or absence of pervasive developmental disorder, and longer treatment. Further predictors included the child's age and other diagnostic variables. It seemed very likely from this analysis of outcome in the overall sample that the considerable heterogeneity of subjects made it more difficult to identify predictors of attrition or of improvement during treatment. Major sources of heterogeneity, which had emerged as important predictors of therapeutic change in the full sample, were the age of the child and his broad diagnostic category. Matched groups of children differing on these variables were therefore created to examine the impact on outcome of differences in age and diagnosis.

The following three chapters examined these more homogenous subgroups of the total sample. Chapter 7 considered whether different rates and predictors of improvement would be found, depending on the age of the child or adolescent when referred, which had been found in Chapter 6 to be an important influence on outcome in the overall sample. Three groups of children of different ages were matched on several key variables: broad diagnostic grouping, gender, SES, HCAM level at referral, and intensity of treatment. Differences between the groups were then examined, including differences in the extent of improvement (to see whether these differences would still be found after matching for other major variables). Variables that predicted outcome were also looked at within each age group.

The results showed that on all three categorical outcome criteria, the probability of improvement during treatment decreased with age. Within each age group, children with emotional disorders tended to improve more than the others, whilst those with disruptive disorders fared less well. Both age group and diagnostic group were significantly associated with reliable improvement in adaptation. There were suggestions that adolescents may not benefit more from intensive treatment, whereas younger children clearly did better in 4-5 times per week treatment than with 1-3 sessions per week.

It was not possible to predict attrition accurately in any of the age groups. However, the magnitude and direction of HCAM change was investigated using a stepwise multiple regression procedure, initially for the three age groups combined. The strongest predictors were relatively low HCAM scores at assessment, staying in treatment until termination was mutually agreed, and relatively good psychological functioning (GAF score) in the father at the child's referral. Separate regression analyses were then performed on the matched samples from each age group, to find out whether there would be a significant increase in the accuracy of prediction of outcome. This was indeed the case, particularly for the under 6s and the adolescents. Variables specific to each age group emerged, most of them associated with either parental psychiatric history, or the presence of particular deprivation in the child's history (hospitalisation, foster care). These findings suggest that the nature of pathology in these children, or the accessibility of pathology to treatment, differed according to age.

Chapter 8 considered the predictors of treatment outcome in children with disruptive disorders. These cases were individually matched with others suffering from emotional disorders without serious disruptive behaviour. Disruptive disorders included oppositional defiant disorder, conduct disorder and attention deficit hyperactivity, and a small number given a V code (DSM-III-R) of antisocial behaviour.

Results showed that psychoanalysis and psychotherapy were both associated with a significant improvement in functioning in both groups. There were considerable differences in improvement rates between the two groups according to the three criteria - children in the control group (emotional disorders) were more likely to improve than those in the disruptive group. Within the disruptive group, improvement was greatest for children with oppositional defiant disorder, and lowest for those with conduct disorders.

58% of the variance in treatment outcome for the disruptive group treated for more than one year could be accounted for in a multiple regression analysis. There were three particularly powerful predictors: the absence of other comorbidity, (particularly specific developmental disorders), longer treatment, and the presence of an additional emotional disorder (particularly anxiety). Both the specific predictors and the important

domains (family, clinical or treatment variables) of predictor differed considerably between the matched disruptive and emotional groups.

Nearly a third of the children in the disruptive group had terminated treatment within the first year, the majority within the first 6 months. Significant predictors of remaining in treatment were parental psychopathology (other than anxiety), being in intensive treatment, having specific learning difficulties at school, and continued support to parents by regular meetings with a social worker. On the whole, it seemed that psychodynamic treatment could be beneficial to children with disruptive behaviour, but that these children and their families were difficult to retain in treatment.

Chapter 9 examined the outcome of psychoanalytic treatment for the largest diagnostic group treated - 352 children and adolescents with emotional disorders ("internalising" disorders such as anxiety or depression). Rates of improvement for each diagnostic group (depression, generalized anxiety, specific anxiety) varied between 40% and 71%, according to the criteria used (no diagnosis, not dysfunctional, reliable improvement). Depressed children or adolescents were less likely to improve, children with specific anxiety disorders (especially phobias) showed greatest improvement.

The strongest predictors of good outcome in a multiple regression analysis for the whole emotional group were relatively low HCAM scores at assessment, longer treatment, and relatively good psychological functioning (GAF score) in the mother at the time of the child's referral. The most significant domains of variables with regard to outcome differed between the three diagnostic subgroups - for example, for the group with specific anxiety disorders, clinical variables were the most important predictors.

Intensive treatment was especially beneficial when the disorder was severe, or was complicated by other disorders, or personality/ developmental pathology in the child. In general, the more severely disturbed group benefited much more from intensive treatment, and tended to show little improvement in non-intensive therapy. The less severe group improved equally in non-intensive or intensive therapy. A similar pattern applied to diagnostic categories within the emotional disorders: those with depression,

overanxious disorder or concurrent disruptive disorder required intensive intervention, other disorders apparently did not.

A number of themes run through this summary of the various analyses reported here. Younger children appear to improve more during psychodynamic treatment. Anxiety disorders, particularly specific rather than pervasive symptoms, are associated with a good prognosis, even if the primary diagnosis is of a different type, e.g. disruptive. Children with pervasive developmental disorders (e.g. autism) do not do well, even with prolonged, intensive treatment. However, among children with emotional disorders, there is evidence that severe or pervasive symptomatology does respond well to intensive treatment, but does not show satisfactory rates of improvement in non-intensive psychotherapy.

## 10.2 LIMITATIONS AND STRENGTHS OF THE STUDY DESIGN

There are serious limitations to retrospective studies of this kind. Amongst the most important are: non-random assignment of patients (e.g. to intensive and non-intensive treatment); the lack of untreated controls; restriction to chart based information; the confounding of length of treatment with the interval between assessments (spontaneous remission); the unrepresentativeness of the sample; unknown bias from early dropouts.

This retrospective investigation obviously did not allow random assignment of children to treatment or control groups. It therefore cannot conclusively show child analysis to be effective in the treatment of children, relative to other modes of treatment, or to no treatment. The grounds for comparison are studies of the natural history of the disorders under scrutiny. Information is gradually accumulating from epidemiological studies (most recently the work of Cohen and her colleagues: Cohen et al., 1993) that psychiatric disorders in children tend to persist for years in about half of all cases. There appears to be little difference in this persistence according to the age of the child, but certain disorders are particularly likely to continue (especially pervasive developmental disorders, but also conduct disorders).

However, even with this evidence of the stability of mental disorders in children and adolescents, one cannot rule out the possibility of spontaneous remission in this study because recruitment criteria were different and the period of treatment very long (in some cases, as long as the follow-up period in most epidemiological investigations). A possible strategy would be to match the children in this study as closely as possible with others treated (or, ideally, simply referred) elsewhere for comparable problems. However, as the present sample is somewhat unusual in its demographic characteristics and (probably) parental attitudes to treatment, this would not provide a straightforward comparison group. The issue can only be convincingly addressed in a prospective design, incorporating a carefully chosen control group from the same population.

It is also, of course, a consideration that even where the rate of improvement during treatment is clearly superior to that expected from the natural history, the effective elements in treatment remain to be identified. With an intensive and complex treatment, involving considerable attention to both parents and children, and occasionally wider social intervention (e.g. transfer to a more appropriate school), it is by no means clear that the analytic work has been the crucial ingredient. This is largely unavoidable in a retrospective study, although some confirmation did emerge, in multivariate analyses of treatment outcome, that additional aspects of the Centre's work (parent guidance, psychotherapeutic treatment of parents, attendance at the Centre's nursery school) did have an impact on the extent of change in the child's functioning. It also seems clear that intensity of treatment can have a strong impact in certain types of disorder, and in children rather than adolescents. To what extent this is a result of more thorough analytic work being done in more intensive therapy, and to what extent it means that non-specific factors (attention) have a different impact on different groups, remains to be clarified.

A further limitation of the study is its restriction to chart based information. The validity of archival records is always open to doubt; one cannot be confident that all important aspects of cases were noted and recorded, or that changing scientific interests have not influenced techniques of assessment to a point where phenomena are no longer perceived in comparable ways. It is not possible to assess aspects of the cases which may need systematic, 'live' information, e.g. actual frequencies or severities of

symptoms (it was probably sufficient for clinical purposes to describe a parent as 'obviously depressed' or a child's symptom as 'much better', but this does not allow confident assessment of diagnostic criteria). Other important aspects of the case, such as the parents' attitudes to the treatment, must be assessed in standardised ways, as the individual clinicians who recorded impressions of the family for clinical purposes relied heavily on intuition and inference, sometimes recording no basis for their conclusions. This did not allow ratings to be made on this possibly vital predictor of attrition and treatment response. However, an advantage of the Anna Freud Centre data-set is that, for historical reasons, both clinical recording and technical approach were relatively consistent, explicit and standardized.

A very important limitation of the present study is that it was only possible to take measures of improvement at the beginning and end of therapy, rather than at regular intervals throughout the course of the treatment. This means that improvement may be confounded by length of treatment, particularly for disorders which have a high rate of spontaneous remission. There are hints of a dose-response relationship in the results of the present analyses (improvement generally being a result of treatment intensity as well as length of treatment). This is consistent with the model of phases of adult psychodynamic treatment developed by Howard and colleagues (Howard et al., 1986, 1993), wherein treatment first engenders a sense of well-being and hopefulness, then reduces symptoms, but can only in the longer term make an impact on pervasive maladaptive relating or character pathology. However, it would be very premature to claim that the present study has been able to do more than produce findings consistent with this hypothesis. The study can, nevertheless, inform future designs, such as that outlined in section 10.4, which will be able to throw more light on this central question.

The unrepresentative sample of children relative to those found in other clinics, both in the UK and in the US, also presents an obstacle to generalizing from this study. Indisputably, these cases were higher in socio-economic status and intelligence than most similar groups, and the families were probably functioning more adequately, with fewer external disadvantages and parental psychopathology. It is unfortunately often the case that studies of referred children use atypical samples. It is fortunate that, in

contrast to the majority of early outcome studies of psychosocial treatment (see section 1.2.8) this study did assign clear diagnoses, qualified by ratings of severity and confidence. Also, the children were referred for a wide range of problems, instead of being restricted to (for example) school phobia.

A further limitation to this study's contribution to predicting psychotherapy outcome is the difficulty in accounting for attrition. Regardless of the fact that around half of the variance in outcome can be predicted in the children who continue with treatment, if the 18% who withdraw within 6 months cannot be identified, then the power of prediction from this data-set is disappointing. It has proved very difficult to account for premature termination in other studies of treatment outcome also (Weisz & Weiss, 1993). This is probably again something which needs to be investigated prospectively, when both external factors (such as transport difficulties, or number of other children in the family) can be measured alongside likely internal influences (such as parents' attitudes to psychological distress and treatment; what the recommendation of analysis means to the parents and child - criticism, failure, or an opportunity for support and understanding; the relationship formed between the therapist and parents and child; the relationship between parents and social worker, etc.).

Notwithstanding the above limitations, the integrity of this database is relatively high. The original clinical records were systematic and constantly monitored, and data extraction was reliable and guided by clear operational criteria. The powerful and replicable prediction of success rates from the variables coded also attests to the soundness of the data. The strength of the prediction (over 50% of the variance in therapeutic outcome accounted for if three age groups are examined separately, or if cases are divided into diagnostic subgroups) is considerably better than that reported in most psychotherapy studies with either children or adults. In other studies, variables obtained prior to the start of treatment have rarely accounted for more than 10-20% of the variance in outcome (Casey & Berman, 1985; Weisz et al, 1987, 1992). Excluding treatment variables, it proved possible to specify 30-50% of this variability, applying predictors similar to those used in other studies.

Several factors may account for this. The most important is the length and relative homogeneity of the treatment offered. Most psychotherapy studies examine brief interventions and therefore identify individuals who benefit from treatment in the short term. There may have been other children in those samples, with similar demographic and clinical features, who would have benefitted from the treatment had it continued. A further advantage, in terms of prediction, was the heterogeneity of the Hampstead sample, as it was a clinical population rather than one specially drawn up for experimental purposes.

It is a less likely, but nevertheless possible, alternative that the superior quality of the raw data and operationalizations gave a firmer basis from which to predict. One distinction between the present study and others is that the Anna Freud Centre database (for all its limitations) is based on the sophisticated and systematic observations of skilled analysts. In the past, the generally poor reliability of clinical judgments has gradually shifted clinical data collection away from interview data towards far more reliable psychometric instruments. More recently, researchers have become increasingly aware of the limitations, alongside the advantages, of this approach. It is possible that the predictive power of this clinically-based data-set, subjected to rigorous operationalization, may support a paradigmatic shift in research on psychosocial interventions, from a uniquely psychometric tradition to one where such information is supplemented with data collected using traditional clinical skills.

It is nevertheless true that, in view of the many important limitations detailed above, the question of the effectiveness of psychodynamic treatment for children can only be convincingly answered by a prospective design, using random allocation between treatment and control groups. The study to be described in section 10.4 aims to assess treatment effectiveness in this way. It also aims to test theoretical hypotheses described in section 10.3 below, bearing on the finding that emotional disorders involving severe, widespread impairment are treatable analytically, but require more intensive work; less disabling disorders appear to benefit equally (at least on a symptomatic level) from non-intensive therapy.

### **10.3 A THEORETICAL MODEL OF CHANGE IN CHILD PSYCHOANALYSIS**

The results of the analysis of data in the retrospective study, especially of the impact of treatment intensity and prediction of treatment outcome using multivariate techniques, will be examined in the context of the theoretical model of change in psychoanalysis which has been developed at the Anna Freud Centre over a number of years.

#### **10.3.1. The theoretical background established by Anna Freud**

Clinical work at the Anna Freud Centre represents a combination of insight-oriented therapy and "developmental help", based on the model of psychopathology outlined by Anna Freud (1965, 1981). Anna Freud's model assumes that emotional disorders of childhood arise as a consequence of the arrest or distortion of one or more lines of normal affective and cognitive development. Such developmental deviations create special difficulties for the child, for which he or she may find maladaptive solutions, resulting in emotional difficulties. Developmental anomalies are thus conceived by Anna Freud as risk factors for neurotic disorders.

Neurotic disorders themselves are thought to begin with the emergence of distorted mental representations involving the self, or important figures for the child, most frequently associated with sexual or aggressive aspects of relationship experiences. The anxiety created by such representations may call forth psychological defences which, if effective, remove mental representations from consciousness or alter them, thereby reducing the anxiety and preventing the emergence of mental disorder. Neurotic disorders involve failed, sometimes exaggerated, defensive manoeuvres, the continued prominence of distorted mental representations, and consequent intensification of anxiety.

#### **10.3.2. The elaboration of Anna Freud's model**

The theoretical developments which underpin the study to be described in section 10.4 are based both on clinical observations, and on several lines of empirical investigation,

which are briefly described below.

(a) The development of secure emotional ties between the infant and caregivers (Fonagy et al., 1991 a & b; Fonagy et al., 1993c). The London Parent-Child Project, based at the Anna Freud Centre and University College London, is conducting a longitudinal study with a cohort of 100 first-born children whose parents were interviewed in the last trimester of mother's pregnancy.

The pre-natal interviews included a measure of the parents' representations of their own childhoods, the Adult Attachment Interview (AAI), devised by Mary Main (Main and Goldwyn, 1991). The analysis of AAI data gives an indication of the nature of an individual's generalised expectations about relationships, what Bowlby (1980) termed 'the internal working model'. The results at one year and 18 months follow-up showed that parents' representation or working model of relationships predicted the security of their child's relationship to them as measured in the Strange Situation one year later.

One of the most interesting findings, which highlighted the importance of the measurement of the mental representation of relationship patterns in psychotherapy outcome studies, concerned the failure of commonly used questionnaire measures of personality, psychopathology and current and past relationships (EPQ, GHQ, IQ, MFPS, SOSE, DAS) to predict infant security. Further, in a post-hoc examination of interview transcripts it was found that parents' capacity to meaningfully reflect upon their own and their caregivers' state of mind was the most powerful predictor of attachment security in the infant. This finding focused attention on the importance of "mentalizing" (Morton & Frith, in press), the capacity to accurately represent and understand mental states of belief, desire and intention in self and other. This is an important component of the model of the therapeutic efficacy of psychoanalysis (see section (b) below).

Interestingly, hierarchical log linear analysis of the relationship of mother's and father's security of attachment and the security attachment of the child to the parents indicated that the attachment security of each parent had an independent and powerful predictive effect on the child's relationship with that parent alone. This finding not only makes

an account of intergenerational concordance in terms of infant temperament or general environmental factors improbable but also implies that more than one internal working model of relationships may exist. The development, or activation, of a secure working model in the context of a therapeutic relationship may be an important component of individual therapy. In further post-hoc analysis of this data infant insecurity was found only to be associated with indicators of hardship in the mother's history for women whose mentalizing or reflective capacity was rated as low (Fonagy et al., in press). The mentalizing and reflective capacity enhanced by child psychotherapy may therefore be important in increasing resilience.

(b) The nature of change in child psychotherapy (Fonagy & Moran, 1991; Fonagy et al., 1993b). These clinical and theoretical papers extend certain psychoanalytic assumptions concerning the nature of psychic change in child analysis. Two models of the psychoanalytic treatment of mental disturbance are delineated.

The first (the synthetic model) describes the mechanism by which the patient is helped to recover threatening ideas and feelings which had been repudiated or distorted as a result of conflict and defence. The second model (the mental process model) draws attention to the therapeutic effects of engaging previously inhibited mental processes within the psychoanalytic encounter. This engagement tends to occur primarily through patient and analyst focusing on the thoughts and feelings of each person, and how the child understands these (i.e. "mentalizing", above). The two models entail distinctions between two types of pathology, requiring two types of analytic work, with different predicted rates of change.

The notion of unutilized mental processes offers a conceptual bridge between psychoanalytic work with children and advances in cognitive science; it also stresses the therapeutic value of a mentalizing or reflective capacity, which independently emerged as important in the parent-child attachment relationship (see section (a)). Furthermore, it offers a theoretical explanation of a long-established clinical finding, that children with marked developmental or personality disturbances require longer treatment, with modifications of classical psychodynamic technique (e.g. A. Freud, 1965). This theoretical basis leads to the prediction that there will be clear differences in technique,

levels of change, and rates of change depending on the depth of personality disturbance in a child.

(c) Inhibition of mental functioning in personality disorder (Fonagy, 1991; Fonagy et al, 1993a). The ideas outlined above, concerning a connection between disturbed attachment, inhibition of mental processes and personality pathology, have been examined in a study of borderline personality disorder (BPD). The hypothesis was that an early and sustained history of trauma and abuse in these individuals would be associated with inhibition of their capacity to envisage mental states (reflective self function). This has been supported by both a cross-sectional and a longitudinal investigation.

Patients who met Gunderson's criteria for BPD were rated as having lower reflective self function than control groups of patients with non-psychotic psychiatric disorders of equal severity. The inpatient psychotherapeutic treatment of BPD patients was associated with an improvement in reflective self function in all cases who showed substantial symptom reductions in response to the treatment. These findings offer preliminary support for the hypotheses that a) part of the disturbance of BPD patients may be understood in terms of a deficit of mentalizing functions, and b) that these functions are inaccessible to such patients, but may be recovered in the course of psychotherapeutic treatment.

### **10.3.3. The relationship between results from the present study and the model of change in psychoanalysis**

The elaboration of Anna Freud's model, outlined in section 10.3.2, was developed alongside the retrospective study as findings of differences in treatment outcome emerged. It is therefore not entirely surprising that the model outlined accounts for many of the observations reported in this thesis. In this section, I will reconsider the major findings in the context of the theoretical model outlined above.

a) The impact of intensity on treatment outcome, and the difference between emotional and disruptive disorders

As has been explained in section 10.3.1, intensive clinical work at the Anna Freud Centre represents a combination of insight-oriented therapy and "developmental help", based on the model of psychopathology outlined by Anna Freud (1965, 1981).

The intensity of treatment is thought to be relevant not to mental representations, conscious or unconscious, but to the mental processes which gave rise to these representations. Intensive psychotherapeutic treatment involves the elaboration of distorted and, in part, non-conscious mental representations. The therapist, on the bases of the child's verbalisation, non-verbal play and other behaviours attempts to construct a hypothetical model of the child's conscious and unconscious mental representations and, using this model, helps the child obtain insight into how and why the child's thoughts and feelings frequently seem irrational, inappropriate and inaccurate. Such understanding may result in the reorganisation of the child's mental world, and the integration of developmentally earlier modes of thinking into a more mature, developmentally appropriate framework.

In addition to facilitating insight, the therapist also performs what may be seen as a rehabilitative function of gradually removing the obstacles which have impeded the normal lines of emotional and cognitive development. This is conceived by us (Fonagy et al., 1993b) in terms analogous to those of Vygotsky (1978), as the therapist creating a social framework, or "scaffolding", which encourages the normal evolution of the child's mental function. The establishment of an intensive relationship focusing on the mental world of the other is believed to be essential for this rehabilitative function of therapy to be effective. This is achieved through the interpretation of the so-called transference, ie. the patient's presumed conscious and preconscious thoughts and feelings concerning the therapist. Also of great importance are the therapist's actual and fantasised feelings and thoughts concerning the patient.

These aspects of treatment may account for the greater impact of intensive treatment on patients whose primary disturbance is thought to be at the level of distortions in mental processes, rather than mental representation. Of particular relevance here are

two aspects of the results observed in the present study. First, the interaction between treatment intensity and severity of disturbance for the emotionally disordered group, and second, the relationship of treatment length (and intensity) to the difference in outcome between emotional and disruptive disordered children. With regard to the first of these issues, I would argue that process disturbance is more likely to play a part in more severe pathologies. Fonagy and his colleagues (Fonagy, 1991; Fonagy et al., 1993a), in connection with borderline disorders, argue that inhibitions and distortions of mental processes make the individual vulnerable to further symptomatic disturbance. Multiple symptomatology, one way in which severity was operationalised in Chapter 9, would therefore suggest process disturbance. The presence of an Axis II diagnosis, or Anna Freud's diagnosis of characterological disturbance, could similarly be argued to mark individuals whose capacity to generate undistorted mental representations is fundamentally curtailed. It is likely that intensive treatment, in the context of a relatively safe therapeutic milieu, is required if the development of arrested emotional and cognitive development is to resume. On the basis of these assumptions, I would further speculate that the intensive treatment offered to these individuals was the minimum necessary to permit other aspects of the therapeutic process, pertaining to distorted mental representations, to take effect.

Non-intensive dynamic psychotherapy shares many features with intensive treatment, including the model of psychological disturbance. Its focus, however, is more likely to be restricted to the identification of distorted mental representations, and the interpersonal relationship between therapist and child is less frequently the focus of therapeutic attention and intervention. The less frequent sessions in non-intensive therapy generally mean that as the therapeutic relationship is less likely to be the primary focus of the treatment the patient's current perception of the therapist's and his/her own mental states are rarely monitored with the same degree of accuracy and consistency. Non-intensive treatment is less likely to tackle developmental anomalies which underpin the child's vulnerability. Less severe disturbance, not requiring such anomalies to be addressed, is unlikely to benefit more from intensive treatment than from non-intensive therapy, and this pattern was observed in the case of emotional disorders.

With regard to length of treatment, I would also argue that brief treatments may correct disturbances of mental representation, but are unlikely to provide the child with adequate input for the "rehabilitative" function of therapy to take place. The lack of a significant difference between emotional and disruptive disorders following long-term treatment may be understood in these terms. Disruptive behaviour is perhaps more likely to involve disturbances of mental process, for example, aggression may be seen as a malfunctioning defensive strategy to protect a fragile and vulnerable self representation, i.e. sense of self. The weakness of this representation may be found in an inhibition of self-monitoring and self-reflective processes (Fonagy, Moran & Target, 1993). Thus, in children for who aggression was a significant part of their pathology, short-term psychotherapeutic treatment was not likely to lead to substantial improvements.

Within this model, we would also expect that the primarily self-reflective psychotherapeutic approach would be a source of confusion and frustration for many individuals with disruptive disorders. The high rate of premature termination in this group may be linked to therapists' failure to take the child's inadequate capacity to engage in the process of mentalization into account. If the child has attended therapy and experienced an interpersonal, reflective interaction for a prolonged period, we may assume that developmental distortions of mental functioning were to some measure corrected, and the process based on the reorganisation of mental representations could then take place.

#### b) The effect of age on outcome

Throughout the study, younger age emerged as a factor predicting relatively good outcome. This is consistent with the developmental model outlined in the previous section, in at least two ways. Firstly, the model, along with most current cognitive models of the mind, assumes that mental representations are organised within networks, frames or schemas (Rummelhart & McClelland, 1986). The implication of such a model is that the meaning of representations is achieved through the strengthening of connections between its components as well as other representations. This occurs across time, with representations becoming more focalised and better established with each activation. Distortions of mental representations must involve the activation of

irrelevant or unrelated components, contemporaneously with the activation of a specific schema. The more such a network is activated simultaneously, the stronger the connections will become, and the harder they will be to dissolve. A network including such maladaptive components will be activated together readily with only very partial clues. Chronological time will facilitate the integration of these networks, and enhance their imperviousness to change. Older children's disturbance is more likely to be based on well-established, coherent networks, and interpretative and other therapeutic experience is less likely to have an impact upon these structures.

Age also marks the evolution of increasingly elaborate mental processes, which are probably "canalized" (Waddington, 1986). The model outlined in Fonagy, Moran, Edgumbe, Kennedy & Target (1993) suggests that mental processes are particularly vulnerable to conflict-related distortion and inhibition at early stages of their development. Once established, processes are unlikely to be affected by psychic conflict. Conversely, distortions of mental processes are increasingly difficult to address therapeutically once the maturationally critical phase of their development has passed. If intervention is early, mental processes may receive the social input necessary for their normal evolution. Once profound inhibitions have been established, therapeutic work involves the undoing of these inhibitions and distortions, and the freeing of the developmental process.

A further consideration concerns the combined impact of distorted developmental processes and mental representations. As mental processes are seen as the psychological mechanisms which create mental representations, the impact of a poorly functioning process will rapidly and cumulatively increase with age. By this I mean that a deficit in mental processes is likely to give rise to more and more distorted mental representations as the child grows older, and may undermine the normal conflict-free development of other mental processes. In consequence, later interventions are more likely to encounter multiple mental process disturbances as well as an increasing number of distorted mental representations, which naturally serve to reduce the chances of successful intervention. All these considerations argue for the importance of early intervention, and the likely preventative value of intensive intervention in reducing the

chance of future mental disorder arising out of inhibitions or distortions of mental processes.

c) The influence of anxiety on treatment outcome

One of the more puzzling results of the present project was the apparent advantage of a diagnosis of comorbid anxiety to treatment outcome for children with disruptive disorders. We consistently observed that children who experienced anxiety in association with their disruptive problem, or other psychological problems, were more likely to respond positively to psychotherapeutic help. Within the model outlined in the previous section, anxiety is seen as an indicator of the quality of organisation of the "representational world" (Sandler & Rosenblatt, 1962). Within this model of disturbance, anxiety is seen as an internal signal (Freud, 1926) of incompatible mental representations. The child is motivated by this anxiety to distort representations in a defensive way, and ultimately to inhibit mental processes in order to reconcile incompatible experiences.

In this model, the absence of anxiety is then an indication of a pervasive distortion of representations, or more likely a substantial inhibition of mental processes, to a point where incompatibility is no longer experienced. For example, a profound inhibition of reflective capacity may preclude the identification of distorted representations and ensure relative freedom from anxiety, but at the cost of causing substantial developmental handicap. A pervasive reorganisation of the representational world may be the cognitive process underlying the so-called primitive defence of splitting, where appropriate connections between mental representations are apparently severed. Thus, the absence of anxiety in most instances could be expected to be synonymous with greater inaccessibility to therapeutic help based on a reflective process. If the child has inhibited reflective function, the implications of therapeutic interpretations will not be considered. This model has much in common with Bion's observation (Bion, 1962) concerning patients' propensity to "attack" the linking of ideas.

d) The imperviousness of depression to psychotherapeutic treatment

There have been no previous studies of the psychodynamic treatment of childhood depression; indeed the very diagnosis of childhood depression has been controversial

until relatively recently (Rutter, 1988c). It was a surprise finding of the present study that of the emotional disorders, depression seemed one of the more resistant to psychotherapeutic or psychoanalytic help. This is in marked contrast to the adult psychotherapy outcome literature, where depression has been shown to respond well to interpersonal dynamic psychotherapy (Luborsky et al., 1988; Shea et al., 1992). A possible implication is that childhood depression may represent a pathology of a qualitatively different nature to adult depression, and indicate a deeper, more widespread disturbance.

Within the model described above, childhood depression is seen as a disturbance of mental processes related to the development of the self. Amongst the key symptoms of depression in childhood are low self-esteem, feelings of hopelessness, dysfunctional interaction with peers and adults, a failure to respond appropriately to praise, and a tendency to respond to positive relationships with negative behaviours (American Psychiatric Association, 1987). The psychoanalytic understanding of this pattern of reaction in adults is most commonly couched in terms of the discrepancy between the ego-ideal and the self-representation, and/or an unusually severe sense of self-criticism and blame (Jacobson, 1956). Similarly, in the cognitive literature, latent cognitive structures are seen as emphasizing an undervaluing of the self, an over-extended sense of responsibility and invariably pessimistic expectations of the future (Beck, 1987). In the psychoanalytic context, self-criticism and self-devaluation are seen as defensive manoeuvres, helpful in dealing with aggression by turning the hostility to the other into a self-directed attack.

It seems likely that whereas depression in adults may indeed reflect distortions of either self-representations or representation of the ego-ideal, in children suffering from depression, neither of these structures have been sufficiently well formulated for direct expression in subjective states. I would argue that childhood depression may in some instances reflect a dysfunction of mental processes associated with the creation of self-representation, particularly those associated with self-monitoring and self-evaluation. In this model, depressed children experience an absence of a sense of self, whereas depressed adults experience self-devaluation. The same overly critical attitude towards the self, which in adults may manifest as hopelessness, has the capacity to create a

subjective threat to the very existence of a sense of identity. Self-directed hostility threatens to destroy, and undermines the growth of the child's as yet fragile sense of self. In adults, this form of disturbance would be more akin to profound narcissistic states or borderline personality disorder. The relatively poor response of depressed children to psychotherapy is seen in this context as an indication of the seriousness of their disturbance. It should be noted that disorders involving precarious or vulnerable sense of self are notoriously difficult to treat in adults, and on the basis of the present evidence also in children.

e) The influence of parental pathology

A consistent finding across all groups was the significant contribution of parental pathology to the likely success of the child's treatment. As was indicated above, it is not unusual to find that a psychiatric history in a parent is associated with mental disorder in a child, and this may be accommodated by both biological and social accounts of childhood disturbance. It is also not surprising that current mental illness in parents adversely affects therapeutic response, as the mental disorder would be expected to act both as an ongoing stress counteracting any therapeutic benefits, and more practically as an obstacle to reliable attendance and consistent motivation.

Within the context of the model discussed above, a further explanation may be forthcoming. Studies reviewed in the previous section have shown that the parents' capacity to reflect on the child's mental state may be critical for both the development of normal patterns of attachment between the child and the caregiver, and the normal growth of mentalizing function in the child (Fonagy et al., 1991; Main, 1991). Psychiatric disturbance may be one of a number of reasons why a mismatch between parental and infant mental state can repeatedly occur. I would speculate that many children with psychiatrically ill parents develop disturbed attachment relationships (e.g. Belsky & Rovine, 1987; Shaw & Vondra, 1993). It is likely that insecure internal working models of relationships may make the child more resistant to an interpersonal relationship with a benevolent adult, including a psychotherapeutic relationship (Shirk & Saiz, 1992). It is also likely that children whose early experience has tended to inhibit the growth of a reflective self (i.e. of the capacity to think about mental states in oneself and in others) will have particular difficulty in using dynamic psychotherapy,

which uses this capacity more than most forms of treatment. Although this form of intervention - the development of a long-term, intimate relationship with a reliable, sensitive adult - may offer a vital opportunity for change to such a child, he will find it much harder to understand and to use than a child whose "mentalizing" capacity is already well-developed.

Further complexity is added by the finding that, although good current functioning in parents was a positive factor, once this had been taken into account, a history of certain forms of psychiatric disorder in either parent was also associated with greater improvement. Broadly, a history of emotional disorder in a parent was a positive predictor, while personality disorders, suicide attempts, and antisocial behaviour (including violence within the family) were negative influences. This is interesting in the context of the theoretical model being considered here. I would suggest that a history of emotional disorder (which had sometimes occurred before the birth of the child) might tend subsequently to increase the parent's sensitivity to and interest in thoughts and feelings, including the mental states of their child. Thus, a combination of currently good functioning and a history of (for instance) depressive illness could be associated with relatively good reflective self function in parent and child. One may speculate that this might be so even if early parent-child attachment had not been very secure. For instance, even if the parent had been affected by a mood disorder during the child's infancy, so that the child's reflective self was not well developed during that time, subsequent sensitive and interested parenting might enhance this development in such a way as to make the child responsive to a later therapeutic relationship. This could be seen as a particular form of resilience, wherein the child had been exposed to significant stress (the parent's illness), but could withstand this, be robust in the face of later stresses, and make good use of later relationships, because he was able to make sense of his experience in psychological terms.

In contrast, significant personality disorders, serious suicide attempts, and violent or antisocial behaviour on the part of a parent are very unlikely to give the child safe psychological growing room, or for that matter to be transient enough to give the child a better later experience of the parent. One would not therefore expect a history of

these disorders to provide the child with the basis for a productive psychotherapeutic relationship.

f) The relevance of specificity vs pervasiveness of pathology

There was a clear relationship across the analyses reported in this thesis; more specific symptoms, such as specific anxiety disorders, were likely to improve in either intensive or non-intensive treatment, while more widespread impairment, e.g. depressive, overanxious or mixed emotional and disruptive disorders improved substantially more in intensive therapy. This was independent of the rated severity of the disorder, or level of overall adaptation. I suggest that this may be understood in terms of the distinction between disturbances of mental processes (inevitably affecting a wide range of situations and relationships), and distorted mental representations.

As has been discussed above, clinical depression in children may usually be a result of a "process" disorder, rather than distortion of more specific representations as has been described in adults in the cognitive therapy literature (Beck, 1987). One may speculate that adolescents are more like adults in this respect, which might in turn explain the meta-analytic finding reported by Weisz et al. (1992) that adolescents respond very much better to cognitive-behavioural treatment for depression than do children under 12, whose small gains are very soon lost. Similar considerations apply to overanxious disorder in children and to other pervasive symptomatology. Intensive, long-term dynamic psychotherapy may provide a productive approach which has so far eluded clinicians and researchers. However, less intensive therapy may not have sufficient impact and continuity to correct the distortion or retardation of mental processes which have been inhibited.

This raises the question of the very poor outcome of treatment of children with autistic and other pervasive developmental disorders. For these children, even long-term intensive treatment by experienced child analysts had little lasting impact, although deficits in social cognitive processing are often thought to be important in the understanding of autistic syndromes (Baron-Cohen, Tager-Flusberg & Cohen, 1993). Apart from the obvious possibility that these children's development has been biologically and irreversibly limited, there are other ways of thinking about this

finding. One is the suggestion that pervasive developmental disorders involve impairment of several mental processes, presenting a barrier to development which even five fifty-minute sessions per week cannot penetrate. Baron-Cohen (1991) has persuasively argued that autistic children lack 'precursors' of theory of mind, without which reflective self, as described in this model, could not be developed.

#### **10.4 FUTURE DIRECTIONS: A PROSPECTIVE STUDY OF THE EFFECTIVENESS OF PSYCHOANALYTIC THERAPY FOR CHILDREN WITH ANXIETY DISORDERS**

Here a plan is suggested for a prospective study to investigate psychodynamic treatment for the group of children most commonly referred for psychotherapy, children of 7-10 years suffering from anxiety disorders. This plan (which is presented fully, in the form of an application for funding, in Appendix 10.1) is based on the work reported in this thesis, and therefore represents an appropriate conclusion for the work, indicating future directions which outcome research should follow in this field.

##### **10.4.1. Specific aims.**

(1) to initiate a wide-ranging investigation of the effectiveness of psychoanalytically-oriented psychotherapy for children which, if interim results are encouraging, will eventually be extended across a number of sites with a variety of patient groups.

(2) to provide preliminary data, from a randomised controlled trial, of the effectiveness of intensive and non-intensive dynamic therapy for children with severe anxiety disorders. In this first phase of the project, 90 children aged 7 to 10 years will be randomly assigned to three conditions: intensive and non-intensive psychotherapy, with a control condition involving work with parents (30 children per group).

(3) to continue extensive preparatory work on the research methodology for rigorous evaluation of psychodynamic treatments for children. This includes the development and validation of a manual for psychodynamic treatment, accumulation of normative developmental data on relevant outcome measures, and development of

psychometrically sound instruments for diagnostic assessment and monitoring of the process of change in psychotherapy.

(4) to evaluate a dose-response relationship by contrasting the efficacy of intensive (4 or 5 times weekly) and non-intensive (1 or 2 times weekly) psychodynamic treatments, for this group of children.

(5) to test a number of hypotheses about the nature of the effects of intensive and non-intensive treatments, to provide some data on the means by which these effects are achieved, and to investigate whether these effects have a beneficial impact on long-term adjustment.

#### 10.4.2. Preliminary work on development of measures

The codification and manualisation of child psychoanalytic technique. As described in section 1.5, one of the major obstacles to establishing a prospective study of child analysis has been the requirement for therapists to use an explicitly specified technique, incorporated into a manual. Work has been proceeding for some years, alongside the retrospective investigation, on writing such a manual. This work was enormously helped by decades of systematic work on technique at the Anna Freud Centre, which is briefly described below. It was also informed by the extensive reviewing of weekly treatment reports in previously treated cases, which formed part of the retrospective study reported in this thesis. Although for the purposes of the retrospective investigation, this reviewing was primarily carried out to track the progress of children's symptoms and changes in adaptation, it led to considerable familiarity with the elements of treatment content and technique, which contributed to the writing of the treatment manual.

Under Anna Freud's influence, the Centre developed a particular approach to the collection of child psychoanalytic data. Material contained in the weekly written reports of the therapist was subjected at regular intervals to a detailed categorisation and classification called "indexing". The procedures for indexing a case together with categories and definitions have been described in Bolland & Sandler (1965). After years of indexing, all index cards (over 3000 items) which pertained to the section of the Index on Treatment Situation and Technique were reviewed by three senior clinicians, in

conjunction with Anna Freud. A book describing the essential features of the treatment technique of the Hampstead Child Therapy Clinic emerged from this review (Sandler, Kennedy & Tyson, 1980). The book describes the framework of treatment (scheduling and attendance, interruptions, change of setting and change of therapist), the therapeutic relationship (treatment alliance, resistance, insight and self-observation, reactions to interpretations, transference and other uses of the therapist), the child's modes of expression (analytic material, acting out and behaviours within the session), therapeutic interventions (introducing the treatment, clarifications and confrontations, interpretation, interventions supporting interpretations, selection and timing of interpretations, working through interpretations, restrictions on the child, physical contact and gratification, permitted modifications of standard technique, extra-analytic contact and termination of treatment). The book also includes discussion of the aims of dynamic psychotherapy with children, and the way such considerations inform assessment and follow-up.

The Hampstead Manual of Child Psychoanalysis (Fonagy et al., unpublished manuscript) develops the codification presented in Sandler et al. (1980), and was written specifically for the proposed prospective investigation. It currently consists of 14 chapters, each taking an important aspect of technique, providing a definition, the aims the analyst should have in mind in using that form of intervention, the ways in which it is implemented, and finally situations in which it is not likely to be helpful.

Work on validating the Manual is in progress: individual chapters of the manual have been subjected to formal assessments of comprehensibility, accuracy and comprehensiveness with current senior and junior Centre staff (Miller, 1993).

The verification of treatment integrity: The Weekly Rating Scale. This scale represents an attempt to quantify the psychoanalytic experience of children treated at the Centre. The instrument was inspired by Enrico Jones' Psychotherapy Q-sort (Jones and Windholz, 1990) which has been adapted for use on child analytic material, in a questionnaire format.

The Anna Freud Centre Weekly Rating Scale has 425 items which cover the following dimensions: general stance to the analysis, manifest ideational content, manifest affective content, behavioural content, manifest mental functioning, analytic understanding, non-interpretive stance, interpretive interventions (including the patient's response), and rater's judgement of the quality of the analytic work. The scale is intended to provide a measure of the content and quality of the work with each patient, which may help to identify what type of treatment was most successful in which sort of case. It also offers a way of excluding cases where the therapeutic work, for whatever reason, did not conform to the technique described in the treatment manual.

As well as using this measure as part of a prospective study of outcome, it is intended to use it to supplement the measures already used in the retrospective study described in this thesis. This would allow a test of the psychoanalytic assumption that aspects of therapeutic content and technique are relevant to outcome, just as demographic, clinical and other treatment variables have proved to be, and might significantly increase the amount of variance in outcome ratings which could be accounted for.

#### **10.4.3. Research design and methods.**

This section covers the first phase of what is envisaged as a comprehensive, multi-site investigation of the effects and processes of psychodynamic treatment of children with mental disorders. Among the highlights of this proposal are the following:

- a) the recruitment of an ethnically diverse, clinical population of children with at least one diagnosis of severe anxiety disorder;
- b) extensive assessments of important background and outcome variables;
- c) experimental manipulation of treatment intensity, with a therapist cross-over design;
- d) a three-group comparison design (intensive treatment, non-intensive treatment, parent guidance only);
- e) homogeneity of therapist training, in a codified and manualised form of treatment, and plans for monitoring the consistency and integrity of all treatment components;
- f) strategies for keeping families in long-term treatment, especially relevant to those

with low SES backgrounds;  
g) comprehensive long-term follow-up.

### Subject recruitment and selection

#### i) Selection criteria.

Inclusionary criteria for participants will be as follows:

1. A diagnosis of anxiety disorder established via structured parent interviews. Anxiety disorders (including complex symptom pictures including significant anxiety) were found in the retrospective study to respond particularly well to a psychodynamic approach.
2. Severity of disorder indicated by surpassing of cut-offs on standardised rating instruments from both parents and teachers (Child Behaviour Checklist, Teachers Report Form, Hampstead Child Adaptation Measure). The severity criterion is imposed to ensure that the child's impairment is pervasive (cross-situational); it is proposed that children included are shown to surpass cut-offs on both parent and teacher scales. It seems, from epidemiological studies and from the study reported here, that cross-situational disorders have poorer prognoses and are more challenging to treat than those confined to either home or school.
3. Age of subjects between 7 and 10 years. This age restriction has several purposes: first although some sources of heterogeneity, such as comorbid diagnoses or ethnic diversity, are seen as desirable parts of this protocol, heterogeneity with respect to too many variables may prove problematic in view of the relatively small size of the sample. Second, treatment protocol will be difficult to keep consistent across too wide an age band; as under-fives and adolescents tend to require modifications of the treatment techniques outlined in the Manual. Third, data from the retrospective study demonstrated that this age group responds well to psychosocial treatment of the type offered. Fourth, excluding older children avoids the potential confound associated with puberty. Fifth, by making the age limits seven to ten years, children will be in a relatively homogeneous social context (junior school), and sociometric appraisals in class-rooms can be performed in a uniform format. Sixth, this age

range represents the largest group of children referred for psychiatric treatment.

4. **Duration of disorder of at least one year** in order to confirm the seriousness of the presenting problem. The cases in the severe category within the corresponding retrospective study sample all had a duration of disorder of at least one year, often much longer.

Exclusionary criteria will include:

1. **IQ scores below 80.** This criterion is imposed partly to reduce heterogeneity and partly because higher IQ was found to be a good prognostic factor in the retrospective study.
2. **Pervasive developmental disorders, movement disorders, (including Tourettes syndrome), psychotic disorders,** showed little improvement in the present study; patients with these diagnoses will be excluded.
3. **Major medical or neurological conditions** which require ongoing treatments and special alterations in the treatment approach, e.g. diabetes, severe sensory disorders.
4. As providing interventions in languages other than English is problematic, each family will need to **converse fluently in English.**
5. The parents do not undertake to ensure their **own and their child's attendance** for treatment and research assessments.
6. The child is **assessed at the Anna Freud Centre as unsuitable** for at least one of the available treatment conditions. This assessment is a clinical judgement of the child and family's accessibility to and need for intensive or non-intensive treatment, and for parent guidance. Findings of the retrospective study clearly suggested the importance of parental motivation. If the diagnostic assessment strongly suggests that the family will not in fact support the treatment, or that one of these treatments will be unhelpful, then the child could not be entered into the study.

## ii) **Recruitment.**

Recruitment will occur through clinics which provide services for children with

emotional or behavioural disorders, most notably four Child Guidance Clinics. These centres serve inner city areas with large percentages of low-income families, and wide distributions of ethnic and SES families will be yielded. Although no impact of social class or ethnicity was demonstrated in the retrospective study, the sample was very skewed (see section 10.2). No conclusion could therefore be drawn as to the importance of these variables, and the findings could not be generalized to more usual clinical samples.

### iii) **Multiple gating procedures for subject selection.**

To use reduce attrition from treatment conditions, and to allow investigation of variables associated with attrition, subject selection will follow a multiple gating procedure (Patterson, 1982), beginning with broad screening of relatively large numbers of children using appropriately trained child experts (clinicians, teachers, educational psychologists) and progressing to more time-consuming and detailed assessments.

#### Phase I.

All referrals in the designated age group are screened for key symptoms. Teacher questionnaires are sent.

#### Phase II.

Those who on the checklist meet the diagnostic criteria are interviewed, and information is collected with regard to chronicity, comorbidity, language, etc.. Those meeting these criteria are given self-administered instruments to establish severity criteria.

#### Phase III.

The families of children who meet the severity criteria are seen, and structured interviews, IQ, neurological and achievement tests are performed.

#### Phase IV.

Families attend for the clinic-based assessments (these are listed in Table 10.1).

### Psychosocial treatment comparisons.

i) **The treatment and control groups.** Once consent forms have been signed, random assignment of subjects to psychosocial treatments will occur, between three treatment

conditions: i) intensive treatment group; ii) non-intensive treatment group; iii) parent guidance group.

Families in each condition will be offered at least two years of continuous intervention. It is expected on the basis of retrospective study findings that treatments in all three groups will generally continue for between six months and four years. Because length of treatment cannot be dictated by the research design, independent assessments of outcome will occur throughout the treatment at six-monthly intervals. For children whose treatment has terminated, the schedule of assessments will continue for a period of five years from the start of treatment.

There are two major reasons for not simply evaluating the efficacy of the most intensive form of this therapy. The first is that, in practice, non-intensive therapy is usually the only form of psychodynamic treatment available to children needing this help. Full psychoanalysis is extremely expensive and time-consuming for both family and therapist, and there are anyway few child analysts to provide this form of treatment, in relation to the potential demand. Once or twice weekly treatment using the same principles is, on the other hand, fairly widely available. Nevertheless, the provision is quite inadequate to cope with the level of referrals, even though these are often made as a "last resort". It is, therefore, of considerable service relevance to evaluate the usefulness of this form of therapy, and to identify groups of children most likely to benefit, so that scarce resources can be targeted efficiently.

A second reason for evaluating non-intensive as well as intensive treatment is to test a hypothesis, based on theoretical and empirical work described in section 10.3.2, that there is a difference in the level at which change is likely to occur according to treatment intensity. If this were found to be the case, one would expect confirmation of the result of the retrospective study, that certain clinical groups to respond equally well to either intensive or non-intensive treatment, whilst others would require intensive therapy to show clinically significant or sustained improvement. It is predicted that developmental changes (particularly in the areas of social cognition and attachment) will be facilitated more by intensive therapy, and that this will be related to better long-term adjustment and resilience.

It could be argued that evaluation of the efficacy of psychodynamic treatment could be better done with either a treatment-no treatment comparison or a treatment-placebo comparison (such as intensive / non-intensive play therapy). There are substantial ethical and practical problems in establishing an untreated (or placebo) control group of referred children; these were discussed in sections 1.2.8 and 1.5. A further difficulty with a placebo group matched for intensity is that the heavy costs may not be justified in the absence of existing evidence that psychodynamic therapy is effective. If the present investigation provided such evidence, then funding could be sought for a study controlling for attention-placebo effects.

A further possibility would be to contrast psychodynamic treatment with an alternative treatment of proven efficacy, such as cognitive-behavioural therapy or interpersonal psychotherapy. However, no treatment has in fact been shown to be effective for severe anxiety disorders, particularly overanxious disorder which is likely to be the most common diagnosis in the proposed sample. Although cognitive-behavioural treatment seems promising, there is as yet no strong evidence to demonstrate that it is an effective treatment for pervasive anxiety in children. The cognitive element might anyway be of limited usefulness in children of this age (see section 10.3.3). Interpersonal psychotherapy (Klerman et al., 1984) is a possibility, in that it is standardized and has been used with adolescents, but this has two problems: first, it has not been used with children of this age, and second, it might be seen as too similar to psychodynamic therapy to provide an appropriate contrast.

Work with parents is the most common treatment for this group of children in the UK. Husain & Kashani (1992), as well as pointing out the lack of evidence for any specific treatment with this group, state from clinical experience that "parental counselling and education aimed toward an improved understanding of the nature of the child's temperament is very effective in minimizing or removing environmental stresses" (p.80). This seems to be an ethically acceptable minimal treatment control group for this investigation.

ii) **Random assignment to conditions.** A key issue of random assignment for groups of such relatively small size will be whether to stratify, i.e. block children on certain

key variables prior to the assignment. An important advantage of stratification is the reduction of error terms (associated with heterogeneity) and enhancement of comparability between the groups.

Arguing against the appropriateness of stratification is the somewhat arbitrary nature of selecting certain variables to be used, (e.g. age, gender, IQ, family structure, etc.) from a potentially large set of such variables. As was shown in the retrospective study, the key variables on which children might be blocked vary according to the specific clinical group. Although restricting the sample to a relatively narrow age range and to children with severe anxiety disorders reduces the uncertainty as to crucial variables, considerable heterogeneity is still expected because of the range of other disorders which these children are also likely to have (conduct disorders, learning difficulties, etc.). Further, there exists a problem of stratification on the basis of continuous variables (e.g. IQ), which may distort the actual distribution of subjects on a variable of interest. In addition, there are serious practical problems with stratification, in that recruitment for the study will be a continuous process, which will not readily permit the matching of children between groups.

For all these reasons, basic random assignment to conditions is proposed, with statistical control (e.g. analysis of covariance) to be applied in case of significant inequalities arising on critical variables. Indeed, according to Maxwell et al. (1984) ANCOVA provides greater statistical power than does blocking, in nearly all instances. Thus, the only constraint envisaged on random assignments to treatments is that equal number of subjects begin in each of the three conditions for the first two years of the study.

### iii) **Description of intervention conditions.**

1) **Intensive psychoanalytic psychotherapy.** This treatment will consist of four or five times weekly individual sessions, each lasting 50 minutes, for 45 weeks per year. The rationale and technique of treatment are fully described in the manual written for the present study (see 10.4.2), and some of the theoretical assumptions have been described in section 10.3.

This treatment involves the use of toys, games and other devices to engage children in a process of self-exploration with an adult who is friendly but tries, within a trusting relationship, to draw attention to the unconscious determinants of the child's behaviour. The therapist uses the child's fantasy, imaginary games and spontaneous associations, in conjunction with other sources of data from the family, school etc, to construct a hypothetical picture of the child's unconscious mental life and current emotional concerns.

A variety of external circumstances exacerbate the child's tendency to develop distorted representations; the most important of these involve relationships, such as conflict between the parents, or exaggerated reactions to the child (in terms of either unpredictability, hostility or over-involvement) on the part of the child's caregivers, in which the child's anxieties tend to be magnified rather than contained. Family or wider social circumstances may create further problems of intrapsychic adaptation for the child, and may make it more difficult to cope with an already existing problem, by, for example, undermining his psychological defences. Psychodynamic treatment does not aim to modify the child's social context, but rather to strengthen the child's capacity to deal with sometimes highly abnormal situations. However, commonly, guidance is provided to the parents (see section 3) below) to help them identify the ways in which they unintentionally contribute to their child's difficulties, at times offering them insight as to the possible non-conscious reasons why they find themselves doing so. This form of guidance will be offered to the parents of all children in the individual treatment conditions.

2) **non-intensive psychotherapy.** Non-intensive dynamic psychotherapy shares many features of content and technique with intensive treatment. The material the therapist uses to identify maladaptive thinking is identical to that used in intensive treatment i.e. the child's play and drawings, as well as narrative. The therapeutic experience is, however, expected to be qualitatively different in intensive and non-intensive treatment. The child's adaptation to the world external to the therapeutic situation, and to stressful situations at home and at school tend to be prominent. Treatment addresses the immediate causes of the child's mental disorder, but is thought to be unlikely to tackle developmental anomalies which underpin the child's vulnerability. Thus, a difference

in treatment outcomes is expected between the two treatment intensities, particularly reflected in measures of the child's 'internal working model' of relationships, social cognition, and resilience in the face of life events following termination. It is also anticipated that any such differences will become more evident at long-term follow-up.

3) **Parental guidance.** The rationale for this form of intervention, in terms of a psychodynamic model of childhood emotional disorder, has already been described in section 1), and will not be repeated here.

Parents are seen (normally fortnightly) for fifty minutes. Wherever possible, both parents are seen although it is more common for mothers to be seen alone, with occasional attendance by the father. The technique of this work was described in section 1.1.5. At times, the therapist may attempt to convey his or her understanding of a parent's behaviour in terms of current or past events in the parent's life, and the parent's unconscious tendency to transmit difficulties in his or her life to the child. In arriving at formulations of the parent's behaviour, and communicating these to the parent, the therapist's aim is to elaborate the parent's perception of the child, significant distortions in this perception, the origins of these distortions, and the way such distortions influence the parent's feelings and behaviour towards the child.

iv) Outcome measures. Naturally, measures applied in the evaluation of other therapies, such as change in symptoms, can and should be used to assess the outcome of psychodynamic treatment. This was an important consideration in the choice of outcome assessment in the retrospective study, and applies equally here. However, if a fair test is to be made of claims that dynamic treatment does more reduce symptoms, then an attempt must be made to measure parameters identified by psychoanalysts as pertinent to their work (e.g. measures of intrapsychic functioning). In order for such measures to be acceptable, they have to meet a further criterion of relevance, viz previous empirical studies should have shown such parameters to be associated with the healthy development of children. Some such measures are: the quality of object relationships (internal working models), adaptiveness of defences (coping styles), the range and regulation of the child's emotional responses, the development of morality, and social behaviours. This poses a formidable task, in that normative data are not yet

available on many measures. The approach adopted is to make more extensive use of recent progress in developmental psychology, and adopt measures which were devised to chart the cognitive and social development of children, and collect pertinent normative data on these measures for the purposes of comparison.

Each measure proposed has satisfactory reliability and established validity for the assessment of emotional disorder. All measures not previously standardised for a British population are at present undergoing field tests for longitudinal assessment on a sample of 120 school children.

The measures are not of equal importance to the study. Domains are designated as being of high priority if they have a) immediate service relevance, or b) evidence exists to link the domain to subsequent resilience to stress-related disorders. A second set of domains are described as of medium priority. These variables are included if a) on the basis of the therapeutic literature, they may be expected to show improvement although such improvements will not necessarily be considered of high priority by families or referrers, or b) evidence linking these domains to the child's resilience is speculative or poorly supported by data. A third set of domains pertain to exploratory studies undertaken in conjunction with the examination of the main hypothesis under investigation. Included here are contextual variables which may help explain observed differences in outcome that do not pertain to the main hypothesis under investigation, and where statistical power is too weak to permit the drawing of definitive conclusions. It is anticipated that there will be strong observed relationships between the outcome domains, which in many instances are linked theoretically within dynamic as well as other major theoretical frameworks.

Domains have been selected where, within this theoretical framework, improvements may be expected to be to some degree independent of one another because the underlying processes differ. Thus, for example, improvements in symptomatology, e.g. anxiety, may be partly independent of the development of prosocial behaviours. In order to determine whether the effects observed are independent of one another, it is proposed to take a multivariate approach to the testing of statistical significance of treatment effects. The effect of psychodynamic treatment on lower priority domains

will be examined by statistically controlling for change observed in higher priority domains. Thus, symptomatic change will be controlled for when looking at social adaptation, and both of these when looking at changes in self-esteem.

The fourth set of domains concerns the dose-response relationship of therapy and outcome. The results of the retrospective study supported the previous claims of such a relationship, based on theoretical considerations and empirical studies (e.g. Howard et al., 1986, 1993). Individual differences in outcome should relate to the presence of a specific and limited set of process variables, which are assumed to be crucial to therapeutic improvement by psychodynamic therapists. This was an innovative and powerful feature of the Menninger study of adult psychoanalysis, described in section 1.4. Such therapeutic process goals will be defined by expert clinicians, on the basis of the dynamic formulation of the case, at the outset for each child. This will be done using the treatment manual and the instrument used to monitor it.

There are a large number of measures proposed, raising a number of serious problems for the study. Firstly, the tolerance of families (particularly parents) and teachers to measurement is limited. It should be noted that it will be possible to administer some of these measures to many of the parents whilst they wait during the child's treatment sessions. If measures are to be eliminated because of the tolerance of a caregiver is exceeded, they will be eliminated in reverse order of priority. Secondly, the validity of the statistical treatment of the data is threatened by the large number of measures.

The adoption of Bonferroni significance levels would substantially reduce the power of the statistical design, and is not seen as appropriate here. Two alternatives are proposed: post hoc analysis will permit the combination of measures on the basis of a) latent variables, and b) composite measures put together on the basis of theoretical considerations. The latter alternative is preferred, and the domains are specified to facilitate the creation of such composite measures, given that the coefficients of consistency observed (Cronbach, 1964) permit such aggregation. Thirdly, priorities may not be the same for all families. To enhance the appropriateness of measures to an individual child, parents, children, referrers and assessors will all be asked to review the domains, and rank-order these according to importance for a particular case. The rank

orders will be combined in the light of the description of the case by independent experts at the admissions case conference for each child, in order to create a personalized set of goals. This procedure will enable one to look at outcomes across children in "critical" domains, in terms of effect size.

### High priority domains

#### *Symptomatology:*

The measures in this domain aim to monitor changes in the presence and severity of problem behaviours, using standardised measures, in order to provide a measure of comparability with the effects of other treatments. This domain was studied as thoroughly as possible in the retrospective study, but inevitably this data was far less accurate than that which will be available in a prospective investigation. The prediction is that symptomatology will improve in psychodynamic treatment at a faster rate and to a greater extent than in parent guidance alone. A further prediction is that the rate and extent of improvement in psychodynamic treatment will be related to the extent to which the psychodynamic goals set at the stage of diagnostic assessment are achieved, within each treatment, when the two intensity groups are combined. Extent of change will be assessed in terms of number of symptoms reported, summed across informants.

#### *Social adaptation:*

The treatment is expected to have significant impact on the child's social behaviour and competence, alongside symptomatic improvements. Within a psychodynamic model of anxiety disorders, unevenness of social maturity is seen as the most relevant risk factor for the development of anxiety disorders. Thus, a particular emphasis of this assessment is the way that treatment enhances prosocial behaviours in the child and facilitates maturational processes which are indexed by the emergence of age-appropriate behaviours, and the balance between development in different areas. The Hampstead Adaptation Measure, described in Chapter 4 and used in the retrospective investigation, is being further developed with separate scales for five age groups and 15 parameters of adaptation. This will allow assessment of unevenness of development, as well as of global level of adjustment. In a prospective study, several other variables pertaining to

this domain can also be assessed. It is predicted that psychodynamic treatment will advance the social maturity of the child, in comparison with parent guidance, and the extent of change will be related to the achievement of psychodynamic goals. The strongest relationship is expected to occur in interpersonal domains of peer relationships, including popularity, and unevenness of social maturity to be better addressed by dynamic treatment than by parent guidance.

### *Self-esteem:*

Low self-esteem is a very common feature of anxiety disorders, which may be secondary to mental disorder and peer reactions to the child's behaviour, or in more severe cases be an indication of developmental pathology and a deficit in the evolution of self-structure. Self-esteem was minimally assessed in the study reported here, only by relevant CBCL items rated mainly from parents' report. It is anticipated that improvements in self-esteem will be in line with improvements in symptomatology and social adaptation in children with mildly impaired self-esteem. In children with severe impairments of self-esteem, improvements in this domain will be an independent goal of treatment. In the latter group of children, in psychodynamic treatment, maximum change is expected in the child's self-reported view of himself. In parent guidance, parents' views of the child are expected to change more than the child's view of himself.

### Medium priority domains

#### *Child personality:*

There is no agreed framework for the study of personality in children. Measurement of personality is complex and strongly influenced by situational and informant effects. There was no way of assessing this from case records, but an attempt to do so will be made in the planned study. Data from direct (rating or self report) or indirect (projective) measures tend to relate poorly. In the present study a multi-measure approach will be taken. The explicit aim of intensive intervention is to bring about change in the child's personality structure. Abnormalities in the child's personality structure are regarded as the predisposing factors for mental disorder. It is not expected

that major changes in personality structure will emerge immediately, but that personality development in the longer term will be less deviant for the psychodynamically treated group than for children who only receive parent guidance.

*Educational performance:*

Anxiety disorders frequently impede the child's adaptation at school. To the extent that this could be assessed in the retrospective study, there was evidence that educational problems showed a strong relationship to treatment outcome in most groups studied. Anxiety and depression are likely to interfere with attention and learning. In addition, it is expected that many of the children in this study will have concurrent disruptive disorders, which also have a strong relationship with poor attendance, attention and performance at school. In addition, on the basis of the dynamic hypothesis of anxiety disorder, it is anticipated that some children will defensively inhibit their educational performance because of fear of competition (unconscious concerns about damage to other children), etc.. The prediction is that, even in children in whom symptomatic reduction is otherwise limited, there will be an improvement in educational performance associated with dynamic treatment and the achievement of psychodynamic goals.

*Social cognition:*

Within this theoretical framework, inhibitions upon social cognitive processes place the child at risk because they reduce his capacity to deal with family and social conflict, as well as his own emotional distress. It is anticipated that the development of social cognitions will be retarded and distorted in most severely emotionally disordered children. The specific aspects of social cognition which are most likely to be affected include: moral development, emotional processing and "mentalizing" capacity. These domains are now amenable to objective assessment, using one of two paradigms: a) the child's narratives, and b) experimental procedures aiming to assess perceptual processing and memory biases. It is anticipated that improvements in these domains will be related to certain aspects of treatment process, in particular, the accuracy of the therapist's perception of the child's mental state, within the treatment, which will be independently assessed. Changes in social cognition are expected to be associated with

the presence of these aspects of dynamic treatment, and these changes are expected to reduce the likelihood of the recurrence of symptomatology during the follow-up period.

### Low priority domains

#### *Family relations:*

Poor and difficult relationships amongst family members can be a consequence of mental disorder but are more commonly seen as causally linked to the development of emotional problems in the child. Although assessed superficially in the retrospective study through a number of related variables, this domain can only be adequately evaluated in a prospective design. Intensive and non-intensive treatment together with parental guidance is expected to improve family functioning in general, and parent-child relationship in particular. Parental stress should decrease and the parent's representation of the child should be more complex and favourable. In the case of intensive treatment, the child's representation of the relationship to the parent is expected to become more complex and secure.

#### *Intercurrent treatment:*

In the comparison group, and in some individuals treated in the two psychotherapy groups, parents may seek alternative or additional treatment. The monitoring of intercurrent treatment is particularly important in case children who respond positively to treatment do so because of intercurrent treatment. This could not be accurately monitored retrospectively, although such information was recorded when available. Parents, teachers and general practitioners, as well as the therapists, will be interviewed as to intercurrent treatment throughout the study, including medication, other psychosocial treatments (cognitive-behaviour therapy, psychotherapy, family therapy), special educational help, use of general practitioner, use of social services, special support groups, etc.. It will be particularly interesting if successful treatment leads to a reduction in the use of other services.

#### *Conditioning variables:*

A number of variables are likely to affect outcome of treatment, and may need to be

controlled for in any statistical analysis of the data. These are all known to aggravate emotional disorders, and cannot be controlled in the study. These variables are: parental psychopathology; the treatment of parental psychopathology; parents' physical health; life events for the child and for the family, both stressful and positive; marital relationship of the parents. Measures will include: CIS-R (Lewis & Pelosi, 1990) followed by full SCID for cases (yearly). Social Adjustment Scale (Cooper et al., 1982) (yearly) to monitor the parents' capacity to cope with life events. Short form of LEDS for the parent, and Goodyer Life Events Schedule for the child (yearly). SF36 to monitor the parents' health (6 monthly). Checklist for monitoring parent treatment (yearly). Adult Attachment Interview (2 yearly). Dyadic Adjustment Scale (yearly).

Table 10.1 shows the measures to be used in each domain, the main references, rationale for inclusion in the study, informants and frequency of administration.

**v) Critical Issues regarding design.**

a) **Sample size** needs to be sufficient to permit the detection of a statistically significant difference between the groups in a reasonable proportion of instances. Following Cohen (1992) power has been set at 0.80, and alpha at 0.05. It can be argued that a difference between intensive treatment and a minimal treatment control is of little interest clinically or theoretically unless the size of the effect observed is fairly large. A difference in means of 0.8 standard deviations is assumed to be the smallest difference of interest, even though it is classified as a large effect size by Cohen. Power calculations indicate that a mean difference of this size at alpha set at 0.05, and power at 0.80 requires a sample size of 26 per group, in a one-way analysis of variance. This sample size permits each of the treatments to be contrasted with the control group; a large effect size cannot be assumed in contrasting intensive and non-intensive psychosocial treatments. Here, a more appropriate strategy might be to examine dose-response relationships in terms of the correlation between outcome and the extent to which processes judged by clinicians to be pertinent to the case were addressed in the treatment. By combining the two intensity groups, a sample size of 60 should be sufficient to examine the significance of  $r$ , with alpha set at 0.01, to adjust for the increased likelihood of type I errors, in the light of the number of comparisons.

	domain	major reference	rationale	informant	assessment interval
K-SADS	symptomatology	Puig-Antich & Chambers (1978)	to assess the presence of diagnosable mental disorder	parent	yearly
Child Behaviour Checklist, including 3 most salient problems	symptomatology & social adaptation	Achenbach & Edelbrock (1983)	to assess the extent and severity of problem behaviours from the parent's point of view; the Social Competence Scale indicates prosocial behaviours noted by parents	parent	6 monthly
Teacher's Report Form, including 3 most salient problems	symptomatology & social adaptation	Achenbach & Edelbrock (1986)	to assess the extent and severity of problem behaviours from the teacher's point of view; the Social Competence Scale indicates prosocial behaviours noted by teachers	teacher	6 monthly
Vineland Adaptive and Maladaptive Behaviour Scales	symptomatology & social adaptation	Sparrow, Balla & Cicchetti (1984)	to assess the child's general adaptation in developmental terms, and test the hypothesis of developmental advancement associated with psychodynamic treatment	parent	yearly
Hampstead Child Adaptation Measure	social adaptation	Target, Fonagy & Mayes (unpub.)	to assess the child's social adaptation on the basis of interviews with the parent and teacher, in terms of an expanded version of Anna Freud's model of developmental lines	parent & teacher	6 monthly
Goodyer Friendship Interview	peer relationships	Goodyer (1989)	to assess the impact of therapy on the child's capacity to relate to peers	parent and child	yearly
sociometric assessment	peer perception	Hops & Lewin (1984)	to assess the impact of treatment on the child's social behaviour and capacity to make relationships, assessed in terms of popularity with peers	peers	yearly

laboratory observation of structured peer interaction	social behaviour	Murray & (1993)	to assess the child's capacity to cooperate, plan, compete, share and resolve conflict in a structured laboratory play situation with "best friend"	observation	18 monthly
standardized attainment testing for National Curriculum	educational attainment		this is to compare the child's performance to national and school standards, and change in the child's position associated with treatment	teacher	yearly
Kaufman ABC	intellectual function	Kaufman & Kaufman (1984)	to assess the child's information processing capacities pertinent to a number of educational domains, including reading and mathematics	child	18 monthly
Harter scales	self-esteem	Harter (1985)	to assess the child's self-esteem in multiple contexts in several task domains	child, parent & teacher	yearly
Block's Q sort	child personality	Block & Block (1980)	to assess personality traits from the point of view of several informants, using a measure where longitudinal information is already available	child, parent and teacher	yearly
Anna Freud's diagnostic profile	child personality & treatment goals	A. Freud (1965)	to provide a systematic, psychoanalytic formulation of the child's pathology, independently rated by expert judges	therapist and expert judge	18 monthly
McArthur story stems	social cognition	Emde et al. (in press); Hammond, Steele & Fonagy (unpub.)	to assess, on the basis of a narrative completion task, a number of social cognitive capacities, including self-other representation, theory of mind / mentalization, moral development, attachment status and capacity for resolving interpersonal conflict	child report and observation	yearly

second-order theory of mind	social cognition	Wellman (1990)	to assess the child's capacity to represent the other's capacity to represent mental states	child	18 monthly
mean-nice stories	social cognition	Fischer & Hencke (1990); Fischer et al. (1992)	to assess the level of the child's awareness of good and bad social behaviour	child	18 monthly
rating of TAT narratives	social cognition	Westen (1990)	to assess the affective tone, complexity of representation of people, understanding of social causality, and capacity for investment in relationships and morals	child	18 monthly
Parenting Stress Index	family relations	Loyd & Abidin (1985)	to assess stress in the parent-child relationship	parent	18 monthly
5 minute speech sample	family relations	Magana et al. (1986)	to assess the level and quality of expressed emotion in the family	parent	6 monthly
parent perception inventory	family relations	Hazzard, Christensen & Margolin (1983)	to assess if the child's perception of the parent changes as a function of treatment	child	yearly
attachment classification of the child	family relations	(Main, 1991)	to assess if the security of the child's attachment (in terms of the child's representation of attachment relationships) improves as a function of treatment	child	18 monthly

Table 10.1 Clinic-based assessments, with domains and key references.

b) **Prevention of attrition.** A crucial issue for this study is the prevention of subject attrition. This could dramatically reduce both the internal and the external validity of the study, and was shown in the retrospective study to be a serious obstacle to successful treatment (especially of older children and those with disruptive disorders). Furthermore, in most groups of children in that study, those children who withdrew prematurely could not be predicted on the basis of available information.

Flick (1988) considered a wide range of issues related to clinical trials. Several of his recommendations concerning data analytic procedures are addressed below, but we intend to take a number of measures to minimise the danger of attrition. These will be:

- 1) Payment of families and teachers for completion of questionnaires and participation in the assessments.
- 2) Families will be offered either transport facilities to the Centre for treatment and assessment sessions, or reimbursements based on their actual costs.
- 3) At each stage of the recruitment process, the need to make a commitment to attend for treatment will be stressed. The parents of these children need continued and active support to maintain the child in treatment; this Centre has extensive experience in offering this, even to highly disturbed and disorganised families, and there are suggestions from the retrospective study findings that this support has a significant impact on treatment outcome.

c) **Monitoring of treatment integrity.** All therapists participating will have had at least three years of full-time training in child psychotherapeutic techniques. In addition, participating therapists will attend a two week full-time training course based on the manual of child therapy used. The training course will include extensive case discussions, and the reviewing of videotaped clinical material for highlighting technical issues related to insight-oriented and developmental interventions. This training programme will be run by senior clinicians at the Centre who were involved in the drawing up of the treatment manual.

Treatment integrity will be monitored by the therapist completing a treatment content schedule after randomly chosen sessions. This instrument was described in section 10.4.2. In order to continuously monitor the validity of the report, sessions selected

randomly will be videotaped. Videotaped sessions will be independently rated on the session content rating scale, and in case of persistent and significant discrepancies between independent ratings and the therapist's report, the therapist's work will be continuously monitored, and special supervision will be arranged.

d) **Data analysis.** The most important aspects of planned data analysis are: 1) the ascertainment of pre-inclusion and post-inclusion attrition; 2) the analysis of individual subject response to the treatment, in addition to average group data; 3) clinical in addition to statistical significance of post-intervention and follow-up outcomes. 4) An evaluation of the representativeness of the intervention sample after the multiple gating assessment procedures, which is essential to determine the extent to which findings are generalizable to other populations.

By obtaining preliminary data including demographic as well as clinical information in the first phase of the assessment, from the family, teacher and family practitioner, it will be possible to perform comparisons between those who proceed to Phase II and those who either opt out or are screened out. One can continue to perform increasingly detailed comparisons of stayers vs non-stayers at each stage of assessment, right down to comparing those who continued with treatment once started with those who dropped out within 6 months and will be replaced by other children. Particularly important will be the reasons for not taking up the offer of treatment or terminating it prematurely. Soliciting the reasons why some families decide not to participate will help to specify the population to whom subsequent intervention results will be generalizable.

Comparison across the three psychosocial intervention conditions will commence with the establishment of a pre-intervention baseline of the four groups in order to establish comparability. This necessary because of the strategy of random assignment without stratification. One-way ANOVAs, with careful attention to the homogeneity of distributions across the sample, will facilitate such comparisons. This approach is viewed as more appropriate than a multivariate strategy at this stage, in view of the need to statistically control for any discrepancies which emerge, which may be obscured by either artificially lowering alpha levels with Bonferroni adjustments or exploring

only global differences using a MANOVA model (see Huberty & Morris, 1989, for a discussion of the advantages of multiple ANOVAs).

We will then turn to the analysis of any attrition that will inevitably occur despite all efforts to keep families engaged (see Flick, 1988, on post-inclusion attrition). Attrition may be viewed as an outcome variable, but it is nevertheless a major threat to the experimental design. Even if attrition rates were comparable between the groups, the reasons for attrition may be different (e.g. treatment demand in the intensive group and insufficient treatment in the other three groups). Therefore, completers-only analysis of the data will be biased. Flick recommends coding attrition as a dummy variable, in order to examine significant interaction between dropout and condition. In the absence of interaction effects, we may proceed with a standard outcome analysis. If an interaction is identified, standard outcome analysis will be supplemented with end-point analysis and the replacement of missing data through multiple regression strategies (see Flick, 1988, p 508-512). Assuming that no systematic bias is identified, differences between groups will be examined using a condition x time MANOVA / ANOVA model, using BMDP5V for unbalanced repeated measures models. Attrition will obviously affect the power of these analyses, which is why it has been decided to replace subjects who have dropped out within the first six months of treatment. After this time, dropouts will be included with the treated group, and data will be sought from them at all critical time-points for hypothesis testing. It is anticipated that these data will be forthcoming on high priority variables, given the relative brevity and non-intrusive nature of these assessments. The sample size of 30 per group will permit data loss at 13% before the statistical validity of the design is threatened.

This programme can be supplemented by the general univariate and multivariate analysis programme (4V) from the same suite, in analyses of data where missing observations are negligible (Schluchter, 1988). A trend analysis extracting linear and quadratic trends will be performed to see if rate of improvement is comparable between groups. If baseline differences exist, pre-intervention levels will be used as covariates (see Maxwell et al., 1984). Planned contrasts will be used to compare groups at specific time points if a significant interaction time and condition is found on a particular dependent variable. It will be important to ascertain per-comparison alpha levels (Huberty &

Morris, 1989).

Demographic variables and family characteristics, and variables relating to the treatment (e.g. therapist experience) may be used within these models as additional independent variables in order to ascertain important subject x treatment interactions. Site of recruitment, for example, may be an important factor to examine. In the light of the relatively small sample, interaction variables will be selected with care, and could be analyzed only singly in order for power to be maintained at acceptable levels. Some of the critical variables will include gender, ethnicity and comorbidity. In the latter domain, the presence or absence of conduct or other disruptive disorders may be of particular importance. For example, on the basis of the retrospective study and pilot investigations, it may be estimated that 15% of the sample will have concurrent disruptive disorder (ODD / CD), and 20% learning disabilities.

For the analysis of outcome, the clinical significance of gains that are made will need to be addressed. This is best done through the examination of obtained pre- and post-treatment differences, relative to normative data which we have collected separately. This is the empirical strategy suggested by Jacobson & Truax (1991), which will be implemented on the basis of longitudinal normative data currently being collected on these measures. It is parallel to the strategy used in the retrospective study, using HCAM ratings (see section 4.2.1). Attempts will be made to contrast changes observed associated with treatment with changes which might be expected on the basis of the normative data set. This will allow an examination of the proportion of subjects across the conditions who experienced a clinically significant benefit for a given outcome measure.

Kazdin (1991) pointed to the paucity of information in child psychotherapy research with respect to the processes responsible for improvement. Measures used to monitor treatment integrity will enable one to explore the relationship of treatment outcome (measured as effect size relative to the normal population) and the presence of factors assumed to be critical in the treatment of severe anxiety disorder. For example, a key prediction links a specific form of transference interpretation, the exploration of the patient's view of the therapist as a mental entity, to the capacity of patients to deal with

the psychological world in general. It is hoped that through detailed study of individual cases, the time course of psychic change related to therapeutic intervention will lead to further understanding of the therapeutic process, as occurred in the studies of psychoanalytic treatment of brittle diabetes (Moran & Fonagy, 1987). Of course, correlational analysis does not prove causation, but the use of time-series techniques may help in strengthening the case that the presence of certain types of therapeutic interventions lead to changes in outcome variables, and not the other way round.

## 10.5 CONCLUSIONS

The retrospective study of case records described in this thesis has explored the potential and the limitations of this methodology for evaluating the efficacy of psychodynamic treatment for children. The study involved the development of standardised procedures for extraction of information expected to be relevant to therapeutic outcome, on the basis of the existing literature. It also involved devising a new global measure of child adaptation, which became a key element of outcome assessment in the study.

It proved possible to make surprisingly powerful predictions of treatment outcome on the basis of information in these case records, particularly when the sample was subdivided on the basis of age or diagnostic characteristics. However, the limitations of any retrospective investigation mean that it is ideally used as a basis for measurement and hypotheses to be tested more fully in a prospective study. A possible study of this type has been described in detail in this concluding chapter.

Although psychoanalysts have long been reluctant to undertake empirical research to aggregate their findings and to investigate the effectiveness of their work, psychoanalysis does have a tradition of sharing clinical material and experience. These studies attempt to find ways of extending this tradition, so that psychoanalysis can benefit from advances in scientific methodology. This should ultimately allow one to test and compare clinical assumptions and theoretical ideas more rigorously, and to assess the effectiveness of this form of treatment in a way that meets the highest standards of the

wider community. Only in this way will those concerned with the mental health of children and adolescents be able to judge whether there are children whose pathology may be inaccessible to other forms of treatment, but for whom psychoanalysis offers a way forward.

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APPENDIX 3.1. PROFORMA USED WITH ANNA FREUD CENTRE FILES

Patient Details

Name \_\_\_\_\_ Index No.

Sex M / F                      Date of Birth

day                      month                      year

Address: London District     or County \_\_\_\_\_

Patient living with:	<input type="checkbox"/>	natural parents	<input type="checkbox"/>	mother
	<input type="checkbox"/>	father	<input type="checkbox"/>	M + step-father
	<input type="checkbox"/>	F + Step-mother	<input type="checkbox"/>	adoptive parents
	<input type="checkbox"/>	relatives	<input type="checkbox"/>	foster parents
	<input type="checkbox"/>	childrens' home	<input type="checkbox"/>	other _____

Siblings, at beginning of treatment:

T / A / S / H	M / F	<input type="text"/>	<input type="text"/>	yrs/mths.	Same home?	Y / N
T / A / S / H	M / F	<input type="text"/>	<input type="text"/>	yrs/mths.	Same home?	Y / N
T / A / S / H	M / F	<input type="text"/>	<input type="text"/>	yrs/mths.	Same home?	Y / N
T / A / S / H	M / F	<input type="text"/>	<input type="text"/>	yrs/mths.	Same home?	Y / N
T / A / S / H	M / F	<input type="text"/>	<input type="text"/>	yrs/mths.	Same home?	Y / N
T / A / S / H	M / F	<input type="text"/>	<input type="text"/>	yrs/mths.	Same home?	Y / N

Dead siblings (including stillbirths, but not miscarriages):

T / A / S / H	M / F	<input type="text"/>	<input type="text"/>	yrs/mths at death.	Age of patient	yrs/mths/ not yet born.
	at time of death:	<input type="text"/>	<input type="text"/>	yrs/mths at death.	Age of patient	yrs/mths / not yet born.
T / A / S / H	M / F	<input type="text"/>	<input type="text"/>	yrs/mths at death.	Age of patient	yrs/mths / not yet born.
	at time of death:	<input type="text"/>	<input type="text"/>	yrs/mths at death.	Age of patient	yrs/mths / not yet born.

Parents (natural or adoptive)

Country of origin:

- UK / Eire
- Continental Europe - West
- Continental Europe - East
- N. America
- S. America
- Asia
- S. Africa / Zimbabwe
- Rest of Africa
- Australia / NZ
- Other (state) \_\_\_\_\_
- Not known

Father                  Mother


Religious background:

- Jewish
- C of E
- Other Protestant
- RC
- Unspecified Christian
- Atheist / Agnostic
- Muslim
- Sikh
- Hindu
- Other (state) \_\_\_\_\_
- Not known

Father                  Mother


Father's Occupation (highest level) \_\_\_\_\_ /N.K.

Reg. General's Classification \_\_\_\_\_ / not assignable / not known

At assessment:  employed  employed intermittently  
 unemployed  not known

Mother's Occupation (highest level) \_\_\_\_\_ /N.K.

Reg. General's Classification \_\_\_\_\_ / not assignable / not known

At assessment:  employed full-time  employed part-time  
 no paid work  employed intermittently  
 not known

Family constitution:  intact  broken

If broken:  separation / divorce, patient   yrs  
 mother's death, patient   yrs  
 father's death, patient   yrs  
 single parent (father left before patient's birth)  
 other \_\_\_\_\_

Other significant separations:

Hospitalisation of \_\_\_\_\_  
\_\_\_\_\_ absence \_\_\_\_\_ patient's age \_\_\_\_\_  
\_\_\_\_\_ wks \_\_\_\_\_ yrs \_\_\_\_\_ mths  
\_\_\_\_\_ wks \_\_\_\_\_ yrs \_\_\_\_\_ mths  
\_\_\_\_\_ wks \_\_\_\_\_ yrs \_\_\_\_\_ mths  
\_\_\_\_\_ wks \_\_\_\_\_ yrs \_\_\_\_\_ mths

Death / departure of important figure, child under 5 yrs  
(state) \_\_\_\_\_

Boarding school, child under 10 yrs

Taken into Local Authority Care, or other fostering.

Age of child                      yrs / mths. No. of placements

Reason for removal \_\_\_\_\_

Length of separation from natural/adoptive family   yrs/wks.

Parental holidays / business trips, both absent, child under 3 yrs.

Other significant separations \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Frequent changes of primary caretaker (nanny, au pairs, etc, in sole charge)  
when child under 4 yrs?      Yes / no /not known.

Serious physical illness in family:

Father \_\_\_\_\_

Mother \_\_\_\_\_

Siblings \_\_\_\_\_

\_\_\_\_\_

Psychiatric symptoms or treatment in family:

Mother		Father		
Now	Hist.	Now	Hist.	
				Psychosis
				Bipolar affective disorder
				Puerperal depression following birth of patient
				Other depressive episodes
				Obsessional illness
				Other anxiety symptoms
				Personality disorder
				Drug/alcohol addiction
				Sexual dysfunction
				Violence/extreme aggressiveness within family
				Antisocial behaviour outside family
				Suicide attempts
				Mental subnormality
				Inpatient psychiatric treatment
				Outpatient psychiatric treatment
				Psychotherapy
				Psychoanalysis
				Major Marital Problems
Further details				

Referral and assessment.

Referral source:

<input type="checkbox"/>	Parents
<input type="checkbox"/>	Patient
<input type="checkbox"/>	GP
<input type="checkbox"/>	CGC
<input type="checkbox"/>	Other doctor / hospital _____
_____	
<input type="checkbox"/>	Therapist treating other member of family _____
_____	
<input type="checkbox"/>	School / education authority
<input type="checkbox"/>	AFC Nursery
<input type="checkbox"/>	AFC Baby Clinic
<input type="checkbox"/>	Other _____

Previous treatment for presenting problems:

<input type="checkbox"/>	Hospital psychiatric treatment _____
<input type="checkbox"/>	Paediatric advice _____
<input type="checkbox"/>	Tavistock Clinic _____
<input type="checkbox"/>	(Other) CGC _____
<input type="checkbox"/>	Special schooling / remedial teaching _____
<input type="checkbox"/>	Psychotherapy / psychoanalysis _____
_____	
<input type="checkbox"/>	Other _____

School / learning difficulties:

<input type="checkbox"/>	School refusal _____
<input type="checkbox"/>	Specific learning difficulty _____
<input type="checkbox"/>	Serious underachievement _____
<input type="checkbox"/>	Poor peer relationships _____
<input type="checkbox"/>	Disruptive behaviour _____
<input type="checkbox"/>	Disabling anxiety symptoms (e.g. compulsions) _____

Problems secondary to physical handicap (e.g. partial sight) \_\_\_\_\_

Other \_\_\_\_\_

Significant medical history:

Accidents \_\_\_\_\_

Operations \_\_\_\_\_

Chronic conditions \_\_\_\_\_

Serious acute illnesses \_\_\_\_\_

Other \_\_\_\_\_

Diagnostic statement at assessment? Y/N Category \_\_\_\_\_

Treatment

Year treatment began  Sessions per week initially

Age at beginning of treatment  yrs  months

Length of treatment, if known  yrs  months

If not known, length of recorded treatment  yrs  months

Therapist: staff / student.

Name \_\_\_\_\_

Sex: M / F

Change of therapist? Y / N

Yr. of treatment

Reason:

<input type="checkbox"/>

Change to staff.

Departure of first therapist

Death of first therapist

Change to therapist of other sex

Other \_\_\_\_\_

Name \_\_\_\_\_

staff / student M / F

Changes in frequency? Y / N

(1) Year of treatment

New frequency

per week / month

Reason

(2) Year of treatment

New frequency

per week / month

Reason

(3) Year of treatment

New frequency

per week / month

Reason

Code reasons:

1. Need for more intensive work
2. Preparation for agreed termination
3. Major practical problems in bringing child
4. Parents' wish to reduce frequency, other than 3.
5. Child's wish to reduce frequency
- 6 Admission to hospital (physical illness)
7. Admission to hospital (psychiatric reasons)
8. Move to residential school / community (therapeutic reasons)
9. Other (specify)

Information on termination

<input type="checkbox"/>	good	<input type="checkbox"/>	scanty
<input type="checkbox"/>	from inference	<input type="checkbox"/>	none

Information on outcome

<input type="checkbox"/>	good	<input type="checkbox"/>	scanty
<input type="checkbox"/>	from inference	<input type="checkbox"/>	none

Reason for termination,

if known

NOT KNOWN

<input type="checkbox"/>	by agreement (completed)
<input type="checkbox"/>	premature, by parents
<input type="checkbox"/>	premature, by patient
<input type="checkbox"/>	by therapist, not progressing
<input type="checkbox"/>	by therapist, ext. circs, e.g. departure
<input type="checkbox"/>	by patient / parents, ext. circs.
<input type="checkbox"/>	transferred to other treatment _____
_____	
<input type="checkbox"/>	other _____
_____	

Subsequent Consultation? Y/N  
Treatment Recommended? Y/N

Subsequent treatment at Centre? Y / N .

If yes: age treatment began  yrs  months

length of treatment  yrs  months

sessions per week / month

Reason for further treatment \_\_\_\_\_

change of therapist? Y / N

Reason \_\_\_\_\_

Subsequent treatment elsewhere? Y / N / not known.

If yes: Before age 18? Y / N . Arranged through Centre? Y / N .

Further details \_\_\_\_\_

Reports available

<input type="checkbox"/>	Referrer's report		
<input type="checkbox"/>	Social history		
<input type="checkbox"/>	Psychological testing	<input type="checkbox"/> IQ	<input type="checkbox"/> projective
<input type="checkbox"/>	Diagnostic interviews with child		
<input type="checkbox"/>	Diagnostic interviews with parents		
<input type="checkbox"/>	Diagnostic profile		
<input type="checkbox"/>	Minutes of diagnostic conference		
<input type="checkbox"/>	Weekly reports	All / most / some / none	
<input type="checkbox"/>	Bimonthly reports	All / most / some / none	
<input type="checkbox"/>	Number of biannual reports		
<input type="checkbox"/>	Number of Wednesday papers		
<input type="checkbox"/>	Published report		
<input type="checkbox"/>	Indexing		
<input type="checkbox"/>	School reports		
<input type="checkbox"/>	Reported interviews with parents during treatment		
<input type="checkbox"/>	Nursery records		
<input type="checkbox"/>	Closing summary		
<input type="checkbox"/>	Terminal profile		
<input type="checkbox"/>	Follow-up reports		
	Quality of weekly reports	<input type="checkbox"/>	especially clear and informative
		<input type="checkbox"/>	average
		<input type="checkbox"/>	vague, rambling or very brief
	Average length of weeklies:	less than half a page / half - 1 page / 1 -	
		pages / over 2 pages	

# CHILD BEHAVIOR CHECKLIST FOR AGES 2-3

For office use only  
ID # \_\_\_\_\_

CHILD'S NAME _____			PARENTS' USUAL TYPE OF WORK, even if not working now (Please be specific—for example, auto mechanic, high school teacher, homemaker, laborer, lather operator, shoe salesman, army sergeant.) _____		
SEX <input type="checkbox"/> Boy <input type="checkbox"/> Girl	AGE _____	ETHNIC GROUP OR RACE _____	FATHER'S TYPE OF WORK: _____		
TODAY'S DATE Mo. _____ Date _____ Yr. _____		CHILD'S BIRTHDATE Mo. _____ Date _____ Yr. _____	MOTHER'S TYPE OF WORK: _____		
Please fill out this form to reflect <i>your</i> view of the child's behavior even if other people might not agree. Feel free to write additional comments beside each item and in the space provided on page 2.			THIS FORM FILLED OUT BY: <input type="checkbox"/> Mother (name): _____ <input type="checkbox"/> Father (name): _____ <input type="checkbox"/> Other—name & relationship to child: _____		

Below is a list of items that describe children. For each item that describes the child now or within the past 2 months, please circle the 2 if the item is very true or often true of the child. Circle the 1 if the item is somewhat or sometimes true of the child. If the item is not true of the child, circle the 0. Please answer all items as well as you can, even if some do not seem to apply to the child.

	0 = Not True (as far as you know)	1 = Somewhat or Sometimes True		2 = Very True or Often True
0 1 2			1. Aches or pains (without medical cause)	0 1 2 33. Feelings are easily hurt
0 1 2			2. Acts too young for age	0 1 2 34. Gets hurt a lot, accident-prone
0 1 2			3. Afraid to try new things	0 1 2 35. Gets in many fights
0 1 2			4. Avoids looking others in the eye	0 1 2 36. Gets into everything
0 1 2			5. Can't concentrate, can't pay attention for long	0 1 2 37. Gets too upset when separated from parents
0 1 2			6. Can't sit still or restless	0 1 2 38. Has trouble getting to sleep
0 1 2			7. Can't stand having things out of place	0 1 2 39. Headaches (without medical cause)
0 1 2			8. Can't stand waiting; wants everything now	0 1 2 40. Hits others
0 1 2			9. Chews on things that aren't edible	0 1 2 41. Holds his/her breath
0 1 2			10. Clings to adults or too dependent	0 1 2 42. Hurts animals or people without meaning to
0 1 2			11. Constantly seeks help	0 1 2 43. Looks unhappy without good reason
0 1 2			12. Constipated, doesn't move bowels	0 1 2 44. Angry moods
0 1 2			13. Cries a lot	0 1 2 45. Nausea, feels sick (without medical cause)
0 1 2			14. Cruel to animals	0 1 2 46. Nervous movements or twitching (describe): _____
0 1 2			15. Defiant	
0 1 2			16. Demands must be met immediately	0 1 2 47. Nervous, highstrung, or tense
0 1 2			17. Destroys his/her own things	0 1 2 48. Nightmares
0 1 2			18. Destroys things belonging to his/her family or other children	0 1 2 49. Overeating
0 1 2			19. Diarrhea or loose bowels when not sick	0 1 2 50. Over tired
0 1 2			20. Disobedient	0 1 2 51. Overweight
0 1 2			21. Disturbed by any change in routine	0 1 2 52. Painful bowel movements
0 1 2			22. Doesn't want to sleep alone	0 1 2 53. Physically attacks people
0 1 2			23. Doesn't answer when people talk to him/her	0 1 2 54. Picks nose, skin, or other parts of body (describe): _____
0 1 2			24. Doesn't eat well (describe): _____	
0 1 2			25. Doesn't get along with other children	0 1 2 55. Plays with own sex parts too much
0 1 2			26. Doesn't know how to have fun, acts like a little adult	0 1 2 56. Poorly coordinated or clumsy
0 1 2			27. Doesn't seem to feel guilty after misbehaving	0 1 2 57. Problems with eyes without medical cause (describe): _____
0 1 2			28. Doesn't want to go out of home	
0 1 2			29. Easily frustrated	0 1 2 58. Punishment doesn't change his/her behavior
0 1 2			30. Easily jealous	0 1 2 59. Quickly shifts from one activity to another
0 1 2			31. Eats or drinks things that are not food—don't include sweets (describe): _____	0 1 2 60. Rashes or other skin problems (without medical cause)
0 1 2			32. Fears certain animals, situations, or places (describe): _____	0 1 2 61. Refuses to eat
				0 1 2 62. Refuses to play active games
				0 1 2 63. Repeatedly rocks head or body
				0 1 2 64. Resists going to bed at night

- |   |   |   |  |   |   |   |  |
|---|---|---|--|---|---|---|--|
| 0 | 1 | 2 | 65. Resists toilet training (describe): _____                                | 0 | 1 | 2 | 82. Sudden changes in mood or feelings                                       |
| 0 | 1 | 2 | 66. Screams a lot  | 0 | 1 | 2 | 83. Sulks a lot  |
| 0 | 1 | 2 | 67. Seems unresponsive to affection  | 0 | 1 | 2 | 84. Talks or cries out in sleep  |
| 0 | 1 | 2 | 68. Self-conscious or easily embarrassed                                     | 0 | 1 | 2 | 85. Temper tantrums or hot temper  |
| 0 | 1 | 2 | 69. Selfish or won't share   | 0 | 1 | 2 | 86. Too concerned with neatness or cleanliness                               |
| 0 | 1 | 2 | 70. Shows little affection toward people                                     | 0 | 1 | 2 | 87. Too fearful or anxious   |
| 0 | 1 | 2 | 71. Shows little interest in things around him/her                           | 0 | 1 | 2 | 88. Uncooperative  |
| 0 | 1 | 2 | 72. Shows too little fear of getting hurt                                    | 0 | 1 | 2 | 89. Underactive, slow moving, or lacks energy                                |
| 0 | 1 | 2 | 73. Shy or timid   | 0 | 1 | 2 | 90. Unhappy, sad, or depressed   |
| 0 | 1 | 2 | 74. Sleeps less than most children during day and/or night (describe): _____ | 0 | 1 | 2 | 91. Unusually loud   |
| 0 | 1 | 2 | 75. Smears or plays with bowel movements                                     | 0 | 1 | 2 | 92. Upset by new people or situations (describe): _____                      |
| 0 | 1 | 2 | 76. Speech problem (describe): _____   | 0 | 1 | 2 | 93. Vomiting, throwing up (without medical cause)                            |
| 0 | 1 | 2 | 77. Stares into space or seems preoccupied                                   | 0 | 1 | 2 | 94. Wakes up often at night  |
| 0 | 1 | 2 | 78. Stomachaches or cramps (without medical cause)                           | 0 | 1 | 2 | 95. Wanders away from home   |
| 0 | 1 | 2 | 79. Stores up things he/she doesn't need (describe): _____                   | 0 | 1 | 2 | 96. Wants a lot of attention   |
| 0 | 1 | 2 | 80. Strange behavior (describe): _____                                       | 0 | 1 | 2 | 97. Whining  |
| 0 | 1 | 2 | 81. Stubborn, sullen, or irritable   | 0 | 1 | 2 | 98. Withdrawn, doesn't get involved with others                              |
|   |   |   |  | 0 | 1 | 2 | 99. Worrying   |
|   |   |   |  | 0 | 1 | 2 | 100. Please write in any problems your child has that were not listed above. |
|   |   |   |  | 0 | 1 | 2 | _____  |
|   |   |   |  | 0 | 1 | 2 | _____  |
|   |   |   |  | 0 | 1 | 2 | _____  |

PLEASE BE SURE YOU HAVE ANSWERED ALL ITEMS.

UNDERLINE ANY YOU ARE CONCERNED ABOUT.

Does your child have any illness, physical disability, or mental handicap?  No  Yes - Please describe

What concerns you most about your child?

Please describe the best things about your child:

Below is a list of items that describe children. For each item that describes your child now or within the past 6 months, please circle the 2 if the item is very true or often true of your child. Circle the 1 if the item is somewhat or sometimes true of your child. If the item is not true of your child, circle the 0. Please answer all items as well as you can, even if some do not seem to apply to your child.

0 = Not True (as far as you know)    1 = Somewhat or Sometimes True    2 = Very True or Often True

- |   |   |   |     |   |   |   |   |     |  |
|---|---|---|-----|---|---|---|---|-----|--|
| 0 | 1 | 2 | 1.  | Acts too young for his/her age  | 0 | 1 | 2 | 31. | Fears he/she might think or do something bad               |
| 0 | 1 | 2 | 2.  | Allergy (describe): _____   | 0 | 1 | 2 | 32. | Feels he/she has to be perfect                             |
|   |   |   |     | _____   | 0 | 1 | 2 | 33. | Feels or complains that no one loves him/her               |
| 0 | 1 | 2 | 3.  | Argues a lot  | 0 | 1 | 2 | 34. | Feels others are out to get him/her                        |
| 0 | 1 | 2 | 4.  | Asthma  | 0 | 1 | 2 | 35. | Feels worthless or inferior                                |
| 0 | 1 | 2 | 5.  | Behaves like opposite sex   | 0 | 1 | 2 | 36. | Gets hurt a lot, accident-prone                            |
| 0 | 1 | 2 | 6.  | Bowel movements outside toilet  | 0 | 1 | 2 | 37. | Gets in many fights  |
| 0 | 1 | 2 | 7.  | Bragging, boasting  | 0 | 1 | 2 | 38. | Gets teased a lot  |
| 0 | 1 | 2 | 8.  | Can't concentrate, can't pay attention for long                                   | 0 | 1 | 2 | 39. | Hangs around with children who get in trouble              |
| 0 | 1 | 2 | 9.  | Can't get his/her mind off certain thoughts; obsessions (describe): _____         | 0 | 1 | 2 | 40. | Hears sounds or voices that aren't there (describe): _____ |
|   | 1 | 2 | 10. | Can't sit still, restless, or hyperactive   |   |   |   |     | _____  |
| 1 | 1 | 2 | 11. | Clings to adults or too dependent   | 0 | 1 | 2 | 41. | Impulsive or acts without thinking                         |
| 1 | 1 | 2 | 12. | Complains of loneliness   | 0 | 1 | 2 | 42. | Likes to be alone  |
| 1 | 1 | 2 | 13. | Confused or seems to be in a fog  | 0 | 1 | 2 | 43. | Lying or cheating  |
| 1 | 1 | 2 | 14. | Cries a lot   | 0 | 1 | 2 | 44. | Bites fingernails  |
| 0 | 1 | 2 | 15. | Cruel to animals  | 0 | 1 | 2 | 45. | Nervous, highstrung, or tense                              |
| 0 | 1 | 2 | 16. | Cruelty, bullying, or meanness to others  | 0 | 1 | 2 | 46. | Nervous movements or twitching (describe): _____           |
| 0 | 1 | 2 | 17. | Day-dreams or gets lost in his/her thoughts                                       |   |   |   |     | _____  |
| 0 | 1 | 2 | 18. | Deliberately harms self or attempts suicide                                       | 0 | 1 | 2 | 47. | Nightmares   |
| 0 | 1 | 2 | 19. | Demands a lot of attention  | 0 | 1 | 2 | 48. | Not liked by other children                                |
| 0 | 1 | 2 | 20. | Destroys his/her own things   | 0 | 1 | 2 | 49. | Constipated, doesn't move bowels                           |
| 0 | 1 | 2 | 21. | Destroys things belonging to his/her family or other children                     | 0 | 1 | 2 | 50. | Too fearful or anxious                                     |
| 0 | 1 | 2 | 22. | Disobedient at home   | 0 | 1 | 2 | 51. | Feels dizzy  |
| 0 | 1 | 2 | 23. | Disobedient at school   | 0 | 1 | 2 | 52. | Feels too guilty   |
| 0 | 1 | 2 | 24. | Doesn't eat well  | 0 | 1 | 2 | 53. | Overeating   |
| 0 | 1 | 2 | 25. | Doesn't get along with other children   | 0 | 1 | 2 | 54. | Overtired  |
| 0 | 1 | 2 | 26. | Doesn't seem to feel guilty after misbehaving                                     | 0 | 1 | 2 | 55. | Overweight   |
| 0 | 1 | 2 | 27. | Easily jealous  |   |   |   | 56. | Physical problems without known medical cause:             |
| 0 | 1 | 2 | 28. | Eats or drinks things that are not food – don't include sweets (describe): _____  | 0 | 1 | 2 | a.  | Aches or pains   |
|   |   |   |     | _____   | 0 | 1 | 2 | b.  | Headaches  |
|   |   |   |     |   | 0 | 1 | 2 | c.  | Nausea, feels sick   |
|   |   |   |     |   | 0 | 1 | 2 | d.  | Problems with eyes (describe): _____                       |
| 0 | 1 | 2 | 29. | Fears certain animals, situations, or places, other than school (describe): _____ | 0 | 1 | 2 | e.  | Rashes or other skin problems                              |
|   |   |   |     | _____   | 0 | 1 | 2 | f.  | Stomachaches or cramps                                     |
|   |   |   |     |   | 0 | 1 | 2 | g.  | Vomiting, throwing up                                      |
|   |   |   |     |   | 0 | 1 | 2 | h.  | Other (describe): _____                                    |

- 0 1 2 57. Physically attacks people
- 0 1 2 58. Picks nose, skin, or other parts of body (describe): \_\_\_\_\_
- 0 1 2 59. Plays with own sex parts in public
- 0 1 2 60. Plays with own sex parts too much
- 0 1 2 61. Poor school work
- 0 1 2 62. Poorly coordinated or clumsy
- 0 1 2 63. Prefers playing with older children
- 0 1 2 64. Prefers playing with younger children
- 0 1 2 65. Refuses to talk
- 0 1 2 66. Repeats certain acts over and over, compulsions (describe): \_\_\_\_\_
- 0 1 2 67. Runs away from home
- 0 1 2 68. Screams a lot
- 0 1 2 69. Secretive, keeps things to self
- 0 1 2 70. Sees things that aren't there (describe): \_\_\_\_\_
- 0 1 2 71. Self-conscious or easily embarrassed
- 0 1 2 72. Sets fires
- 0 1 2 73. Sexual problems (describe): \_\_\_\_\_
- 0 1 2 74. Showing off or clowning
- 0 1 2 75. Shy or timid
- 0 1 2 76. Sleeps less than most children
- 0 1 2 77. Sleeps more than most children during day and/or night (describe): \_\_\_\_\_
- 0 1 2 78. Smears or plays with bowel movements
- 0 1 2 79. Speech problem (describe): \_\_\_\_\_
- 0 1 2 80. Stares blankly
- 0 1 2 81. Steals at home
- 0 1 2 82. Steals outside the home
- 0 1 2 83. Stores up things he/she doesn't need (describe): \_\_\_\_\_

- 0 1 2 84. Strange behaviors (describe): \_\_\_\_\_
- 0 1 2 85. Strange ideas (describe): \_\_\_\_\_
- 0 1 2 86. Stubborn, sullen, or irritable
- 0 1 2 87. Sudden changes in mood or feelings
- 0 1 2 88. Sulks a lot
- 0 1 2 89. Suspicious
- 0 1 2 90. Swearing or obscene language
- 0 1 2 91. Talks about killing self
- 0 1 2 92. Talks or walks in sleep (describe): \_\_\_\_\_
- 0 1 2 93. Talks too much
- 0 1 2 94. Teases a lot
- 0 1 2 95. Temper tantrums or hot temper
- 0 1 2 96. Thinks about sex too much
- 0 1 2 97. Threatens people
- 0 1 2 98. Thumb-sucking
- 0 1 2 99. Too concerned with neatness or cleanliness
- 0 1 2 100. Trouble sleeping (describe): \_\_\_\_\_
- 0 1 2 101. Truancy, skips school
- 0 1 2 102. Underactive, slow moving, or lacks energy
- 0 1 2 103. Unhappy, sad, or depressed
- 0 1 2 104. Unusually loud
- 0 1 2 105. Uses alcohol or drugs for nonmedical purposes (describe): \_\_\_\_\_
- 0 1 2 106. Vandalism
- 0 1 2 107. Wets self during the day
- 0 1 2 108. Wets the bed
- 0 1 2 109. Whining
- 0 1 2 110. Wishes to be of opposite sex
- 0 1 2 111. Withdrawn, doesn't get involved with others
- 0 1 2 112. Worrying
- 113. Please write in any problems your child has that were not listed above:  
 0 1 2 \_\_\_\_\_  
 0 1 2 \_\_\_\_\_  
 0 1 2 \_\_\_\_\_

PLEASE BE SURE YOU HAVE ANSWERED ALL ITEMS

PAGE 4

UNDERLINE ANY YOU ARE CONCERNED ABOUT

--	--	--

Index no.

**PSYCHIATRIC DIAGNOSIS OF CHILD (PATIENT)**

**Child diagnosable in past?**

(improved at least 3 months before assessment)

<input type="checkbox"/>	Yes
<input type="checkbox"/>	Criteria not fulfilled
<input type="checkbox"/>	Insufficient information

**Child diagnosable at assessment?**

<input type="checkbox"/>	Yes
<input type="checkbox"/>	Criteria not fulfilled
<input type="checkbox"/>	Insufficient information

CGAS score at assessment

<input type="text"/>	<input type="text"/>	\N.K.
----------------------	----------------------	-------

**Child diagnosable at termination?**

<input type="checkbox"/>	Yes
<input type="checkbox"/>	Criteria not fulfilled
<input type="checkbox"/>	Insufficient information

CGAS score

<input type="text"/>	<input type="text"/>	\N.K.
----------------------	----------------------	-------

AFC category

<input type="text"/>
----------------------

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Index no.

**FORM FOR PSYCHIATRIC DIAGNOSIS OF CHILD**

**Material used:** Past / at assessment / at termination

**Diagnosis:** Principal / Additional / N.K.

**Code:**

--	--	--

--	--

**Category:**.....

---

**Severity:** Mild / Moderate / Severe

List numbered symptoms present:

**Criteria:** Y/N A.....

Y/N B.....

Y/N C.....

Y/N D.....

Y/N E.....

(Cross out letters not applicable for given category.)

**Certainty of Diagnosis:** Definite / Probable / Possible

**Definite:** all required criteria specifically described in material.

**Probable:** all but one or two criteria described, remaining features very likely to be present (e.g. specific developmental disorder where sufficient impairment is clear, but required tests not administered; mood disorder in parent, where treatment is described but individual symptoms not listed.)

**Possible:** clear suggestion of disorder, e.g. report that relative was depressed, but no details. Or possibility that another disorder underlies manifest symptoms, e.g. depressive state in case of solitary conduct disorder and poor self-esteem.

Age at onset

--	--

yrs / NOT KNOWN

Duration

--	--

Yrs.

--	--

Mnths CONTINUES/ N.K.

Treatment

--

\_\_\_\_\_

--	--	--

Index no.

PSYCHIATRIC DIAGNOSIS OF PARENT

Mother diagnosable in past?

(up to 3 months before assessment)


Yes  
Criteria not fulfilled  
Insufficient information

Mother diagnosable at assessment?

(including preceding 3 months)


Yes  
Criteria not fulfilled  
Insufficient information

GAF score at assessment

--	--

\N.K.

Father diagnosable in past?

(up to 3 months before assessment)


Yes  
Criteria not fulfilled  
Insufficient information

Father diagnosable at assessment?

(including preceding 3 months)


Yes  
Criteria not fulfilled  
Insufficient information

GAF score at assessment

--	--

\N.K.

--	--	--

Index no.

FORM FOR PSYCHIATRIC DIAGNOSIS OF PARENT

Person diagnosed: Mother / Father

Material used: Past / at assessment

Diagnosis: Principal / Additional / N.K.

Code:

--	--	--

--	--

Category:.....

---

Severity: Mild / Moderate / Severe

List numbered symptoms present:

Criteria: Y/N A.....

Y/N B.....

Y/N C.....

Y/N D.....

Y/NE.....

(Cross out letters not applicable for given category.)

Certainty of Diagnosis: Definite / Probable / Possible

**Definite:** all required criteria specifically described in material.

**Probable:** all but one or two criteria described, remaining features very likely to be present (e.g. specific developmental disorder where sufficient impairment is clear, but required tests not administered; mood disorder in parent, where treatment is described but individual symptoms not listed.)

**Possible:** clear suggestion of disorder, e.g. report that relative was depressed, but no details. Or possibility that another disorder underlies manifest symptoms, e.g. depressive state in case of solitary conduct disorder and poor self-esteem.

Index no.

--	--	--

Number of tests done at AFC

Number of tests done elsewhere

IQ scores at AFC assessment (beginning of treatment):

WISC-R or equivalent

Verbal IQ

Performance IQ

Full Scale IQ

Test administered: WISC / WISC-R / Stanford Binet / Kohs / Merrill Palmer / Other

Reading age:  yrs  mths

Test:

Arith. age:  yrs  mths

Test:

Chron. age:  yrs  mths

IQ scores at other assesment

1.) WISC-R or equivalent

Verbal IQ

Performance IQ

Full Scale IQ

Test administered: WISC / WISC-R / Stanford Binet / Kohs / Merrill Palmer / Other

Reading age:  yrs  mths

Test:

Arith. age:  yrs  mths

Test:

Chron. age:  yrs  mths

2.) WISC-R or equivalent

Verbal IQ

Performance IQ

Full Scale IQ

Test administered: WISC / WISC-R / Stanford Binet / Kohs / Merrill Palmer / Other

Reading age:  yrs  mths

Test:

Arith. age:  yrs  mths

Test:

Chron. age:  yrs  mths

3.) WISC-R or equivalent

Verbal IQ

Performance IQ

Full Scale IQ

Test administered: WISC / WISC-R / Stanford Binet / Kohs / Merrill Palmer / Other

Reading age:   yrs   mths

Test:

Arith. age:   yrs   mths

Test:

Chron. age:   yrs   mths

4.) WISC-R or equivalent

Verbal IQ

Performance IQ

Full Scale IQ

Test administered: WISC / WISC-R / Stanford Binet / Kohs / Merrill Palmer / Other

Reading age:   yrs   mths

Test:

Arith. age:   yrs   mths

Test:

Chron. age:   yrs   mths

APPENDIX 3.2. VARIABLES EXTRACTED FROM CASE RECORDS IN RETROSPECTIVE STUDY

<u>FIELD</u>	<u>LABEL</u>	<u>DESCRIPTION</u>
In or out of London		
Whom Living with	1	Both parents
	2	Mother
	3	Father
	4	Mother & Stepfather
	5	Father & Stepmother
	6	Relatives
	7	Childrens' Home
	8	Adoptive Parents
	9	Foster Parents
	0	Other
Father Home Country ) Mother Home Country )	1	UK/Eire
	2	West Europe
	3	East Europe
	4	North America
	5	South America
	6	Asia
	7	S.Africa/Zimbabwe
	8	Rest of Africa
	9	Australia/N Zealand
	10	Other
	11	Not Known

	0	Not Entered
Father Religion ) Mother Religion )	1	Jewish
	2	Church of England
	3	Other Protestatnt
	4	Roman Catholic
	5	Unspecified Christian
	6	Atheist/Agnostic
	7	Muslim
	8	Sikh
	9	Hindu
	10	Other
	11	Not Known
Father Occupation Type	E	Employed
	I	Intermittently
	U	Unemployed
	N	Not Known
	[blank]	Blank
	Z	Not Applicable (eg parent dead)
Father's/Mother's Registrar-General Classification (Social and Economic Status).	1	RGC Class I
	2	RGC Class II
	3	RGC Class III
	4	RGC Class 1V
	5	RGC Class V
	0	Not Entered

Mother Occupation Type	F	Employed Full-Time
	N	No Paid Work
	P	Part Time
	I	Intermittent
	[blank]	Blank
	Z	Not Applicable (eg parent dead)
Family Broken/Intact	B	Broken
	I	Intact
Father Ill ) Mother Ill )	Y	Yes
	N	No
	[blank]	Blank
Description of Father's Illness 1 ) Description of Mother's Illness 1 )		
Father Illness 2 ) Mother Illness 2 )		
Mother Diag. in Past ) Father Diag. in Past )	1	Yes
	2	Criteria Not Met
	3	Insuff. Information
	[blank]	Blank
Mother Diag. at Referral ) Father Diag. at Referral )	1	Yes
	2	C r i t e r i a   N o t Met
	3	Insuff. Information
	[blank]	[blank]   Blank
	4	Not Applicable (eg parent dead)
Mother-GAF Score )		

Father-GAF Score )

Child Diag. in Past C. Diag. at Referral	1	Yes
	2	Criteria Not Met
	3	Insuff.Information
	[blank]	Not Entered

Child CGAS Score

1st Referral Source	1	Parents
2nd Referral Source	2	Patient
	3	GP
	4	Child Guidance Clinic
	5	Other Dr/Hospital
	6	Therapy Treatment Other
	7	School/Ed Authority
	8	Anna Freud Nursery
	9	Anna Freud Baby Clinic
	10	Other Referrer

Diag. Statement at Assessment

1st A.F.C. Category	1	I
2nd A.F.C. Category (Diagnostic Grpngs according to criteria ld down by A.Freud)	2	II
	3	III
	4	IV
	5	V

Year Treatment Began

Initial Number of Sessions

Maximum Number of Sessions

Age at Start of Treatment

Length of Treatment

Estimated Length of Treatment

Info. on Termination	G	Good
Info. on Outcome	S	Scanty
	O	Only Inference
	N	None
	[blank]	Not Entered
1st Reason for Term	1	By Agreement
2nd Reason	2	Premature by Parents
	3	Premature by Patient
	4	Therapist - no progress
	5	By Therapist - External Circumstances
	6	Patient/Parent - External Circumstances
	7	Transfer to Other Treat
	8	Other Reason
	[blank]	Not Entered
Diagnosable at Term.	1	Yes
	2	Criteria not Fulfilled
	3	Insuff Information
	[blank]	Not Entered

CGAS Score at Term.

Change in CGAS Score (compared to start of treatment)

Subsequent Treatment at A.F. Centre

Subsequent Consultation at A.F. Centre

Subsequent A.F. Centre Treatment Recommendation

Age at Start of Subsequent Treatment

Length of Subsequent Treatment

Frequency of Subsequent Sessions

Reason for Subsequent Treatment                      1                      Continuing after Break

2                      Continuing with New Problems

3                      Enabled for Geographical Reasons

4                      Accepts Change of Therapist

5                      Other

6                      Not Known (Blank or 0 = n/a)

Subsequent Treatment - Same Therapist?                      [blank]                      Not Applicable

N                      No

Y                      Yes

Subsequent Treatment - Reason for Change                      0                      N/A

1                      Change to Staff

2                      Departure of Therapist

3                      Death of Therapist

4                      Change to Other Sex of Therapist

5                      Other Reasons

6                      Not Known

Subsequent Treatment Elsewhere

No. of A.F.C. IQ Tests

No. of IQ Tests Done Elsewhere

Referrer's Report

Social History

Psychological Testing

Intelligent Tests

Projective Testing

No. of Diagnostic Interviews with Child

Diagnostic Interview with Parents	M	More than 5
	L	5 or Less
	N	None
	[blank]	Left Blank

Diagnostic Profile

Minutes of Diagnostic Profile

Weekly Reports	A	All
	M	Most
	S	Some
	N	None

Bimonthly reports	A	All
	M	Most
	S	Some
	N	None

No. of Biannual Reports

No. of Wednesday (Case Conference) Reports

Published Report

Whether Case Indexed (Y/N)

School Reports

Interviews with Parents During Treatment

Nursery Records

Closing Summary

Termination Profile

Follow-up Reports

Quality of Weekly Reports	C	Clear and Informative
	A	Average
	V	Vague or Rambling
	N	Not Applicable
Average Length of Weekly Reports	0	< ½ Page
	1	½-1 Page
	2	1-2 Pages
	3	> 2 Pages
	[blank]	Blank

Baby Clinic

Toddler Group

Parent Guidance Before Treatment

Parent Guidance During Treatment

Parent/Mother/Father in Analysis Simult with Child

Treatment of Close Relative

Other Relationships with A.F. Staff

Age at Assessment

Number of Diagnoses at Entry

Diagnostic Axes	1	Axis I (DSM)
	2	Axis II (DSM)
	3	ICD 10 Axis
	[blank]	Not Entered

Entry Diagnosis

Confidence of Diagnosis (at entry)	1	Possible
	2	Probable
	3	Definite
	[blank]	Not entered

Time of Entry Diagnosis

1	Past
2	At Assessment
[blank]	Not Entered

Status of Entry Diagnosis

1	Principal
2	Additional
3	Not Known
[blank]	Not Entered

Severity of Entry  
Diagnosis

1	Mild
2	Moderate
3	Severe
[blank]	Not Entered

Age at Diagnosis

Duration of Illness

Illness Complete/ Not	1	Complete
--------------------------	---	----------

	2	Continuing
	[blank]	Not Entered
Number of Treatments		
Number of Termination Diagnoses		
Diagnostic axes	1	Axis I (DSM)
	2	Axis II (DSM)
	3	ICD 10 Axis
Termination Diagnoses		
Confidence of Termination Diagnosis	1	Possible Diagnosis
	2	Probable
	3	Definite
Severity of Diagnosis	1	Mild
	2	Moderate
	3	Severe
Status of Diagnosis	1	Principal
	2	Additional
	[blank]	Not Entered
Serial No. of Parent Diagnosis		
Which Parent Diagnosed	M	Mother
	F	Father
When Parent Diagnosed	1	Past
	2	Assessment
	[blank]	Not Entered
Diagnostic Axes	1	Axis I (DSM)
	2	Axis II (DSM)

	3	ICD 10 Axis
Parental Diagnosis		
Confidence of Parent Diagnosis	1	Possible
	2	Probable
	3	Definite
Status of Diagnosis	1	Principal
	2	Additional
	[blank]	Not Entered
Severity of Diagnosis	1	Mild
	2	Moderate
	3	Severe
Number of Previous Treatments		
Type of Previous Treatment	0	No Treatment
	1	Hospital Out-Patient
	2	Hospital In-Patient
	3	Pediatric Advice
	4	Tavistock Clinic
	5	Other Child Guidance
	6	Remedial Teaching
	7	Therapy/Analysis
	8	Other Treatment
	9	Not Known
Age at Previous Treatment		
Which Diagnosis Treated		
Previous Drug Treatment		

Number of Learning Difficulties

Learning Problem	1	School Refusal (Y/N)
	2	Specific Learning Difficulty (Y/N)
	3	Serious Underach. (Y/N)
	4	Poor Peer Relations (Y/N)
	5	Disruptive Behaviour (Y/N)
	6	Disabling Anxiety (Y/N)
	7	Physical Handicap (Y/N)
	8	Other Learning Problem (Y/N)

Age at Time of Problem

Serial Number of Medical Problem

Medical Problem	1	Accidents
	2	Operations
	3	Chronic Conditions
	4	Serious Acute Illness
	5	Other Medical Problems

Age at Time of Problem

Serial Number of Therapist

Type of Therapist	S	Staff
	T	Trainee
Gender of Therapist	M	Male
	F	Female

Year of Treatment Therapist Changed

Reason for Change of Therapist	1	Change of Staff
	2	1st Therapist Departs
	3	1st Therapist Dies
	4	Chnge to Diff Therapist Gender
	5	Other Reason
	0	No Change

Year of Change of Frequency

New Frequency	1	1 session per week
	2	2 sessions
	3	3 sessions
	4	4 sessions
	5	5 sessions

Reason for Change of Frequency	1	More Intensive Treatment Needed
	2	Preparation for Termination
	3	Practical Problems in Attending
	4	Parents' Wish
	5	Child's Wish
	6	Hosp. Admission (Physical)
	7	Hosp. Admission (Psychiatric)
	8	Res/ School/Therap.

		Community
	9	Other Reason
Family Breaks Number		
Type of Break	1	Separation/Divorce
	2	Mother's Death
	3	Father's Death
	4	Single Parent
	5	Other Break
	6	Death/Departure of Significant Person Before Child Aged 5.
	7	Boarding School, Child < 10.
	8	L.A. Care/Fostering
	9	ParentalHolidays/Trips -Both Absent. Child < 3
	10	Change of Caretaker
	11	Other Sig. Separations
Age When Family Broken		
Type of Subsequent Treatment	1	Psychiatric Hospital
	2	Pediatric Advice
	3	Tavistock Clinic
Clinic	4	Other Child Guidance
	5	Special School
	6	Remedial Teaching
	7	Therapy/Analysis

	8	Other
Age at Subsequent Treatment		
Reason for Subsequent Treatment	0	Not Known
	1	Break from Therapy
	2	New Problem
	3	Geographical Reason (Travelling Distance)
	4	Change of Therapist
	5	Other
Whether Subsequent Treatment Arranged Through Anna Freud Centre	0	No
	1	Yes
Number of Siblings		
Number of Siblings Who Died		
Type of Sibling	T	Twins
	A	Adopted
	S	Step
	H	Half
	[blank]	True Sib
Sex of Sibling	M	Male
	F	Female
Age of Sibling		
Number of IQ Tests		
Time of Testing		At Assessment

Before Assessment

After Assessment

Score on Verbal IQ Scale

Score on Performance IQ Scale

Score on Full IQ Scale

Type of Test

1

WISC

2

WISC-R

3

Stanford-Binet

4

Kohs

5

Merrill-Palmer

6

Other

Reading Age

Arithmetic Age

Chronological Age of Child at Each Test

Number of Achenbach Items Scored

Number of Item Scored

Total Achenbach Score

Number of Each Hospitalisation

Who Was Hospitalised

C

Child

M

Mother

F

Father

Length of Hospitalisation

Age of Child at Time of Hospitalisation

Parent Psychiatric Symptom Number

Type of Symptom

1

Psychosis

Disorder	2	Bipolar Affective
	3	Puerperal Depression
	4	Other Depressive Episodes
	5	Obsessional Illness
	6	Other Anxiety Symptoms
	7	Personality Disorder
	8	Drug/Alcohol Addiction
	9	Sexual Dysfunction
	10	Violence within Family
	11	Antisocial Behaviour
	12	Suicide Attempts
	13	Mental Subnormality
	14	Inpatient Psychiatric Treatment
	15	Outpatient Psychiatric Treatment
	16	Psychotherapy
	17	Psychoanalysis
	18	Major Marital Problems
	Parent with Symptom	M
F		Father
When Symptom Present	N	Now
	H	History
Severity of Symptom	0	Minor
	1	MOD (O/P Severity)
	2	MAJ (I/P Severity)

**APPENDIX 3.3. ADDITIONAL VARIABLES DERIVED FROM ORIGINAL VARIABLES IN APPENDIX 2**

Parents' Home Country                      0                                      Not Known

1                      Both British

2                      Both European

3                      1 Brit/1 Europe

4                      1 Brit/1 Non-Europe

5                      Both Non-Europe

6                      1 Europe/1 Non-Europe

Parents' Religion                      0                                      Not Known

1                                      Jewish Family

2                                      Jewish Mother

3                                      Both Christian

4                                      Both Atheist

5                                      Mixed Religion

Family Social Class = Father's RGC. If 0, then Mother's RGC

Parents Psychiatric                      1                                      Both Diagnosable  
Status

2                                      Father Diagnosable

3                                      Mother Diagnosable

4                                      Both Well

5	Father Well
6	Mother Well
7	No Information

Mother's, Father's  
GAF Grouping. Under 40 = Group 3; higher scores banded in 10's to give groups 4-9.

Child's CGAS Grouping. Under 40 = Group 3; higher scores banded in 10's to give groups 4-7; over 70 = group 8.

Age Group at Start	1	< 6 years
	2	> 6, < 10
	3	> 10. < 14
	4	> 14

CGAS Grouping  
at Termination. Under 40 = Group 3; higher scores banded in 10's to give groups 4-9.

Mother treated at AFC	0	No
	1	Yes
Father treated at AFC	0	No
	1	Yes
Sibling treated at AFC	0	No
	1	Yes

Number of Learning Problems

School Refusal (Y/N)

Specific Learning Difficulty (Y/N)

Underachievement (Y/N)

Poor Peer Relations (Y/N)

Disruptive Behaviour (Y/N)

Disabling Anxiety (Y/N)

Physical Handicap (Y/N)

Other School Problems (Y/N)  
Number of Staff Therapists Seen  
Number of Trainee Therapists Seen  
Number of Female Therapists Seen  
Number of Male Therapists Seen  
Total Number of Therapists Seen  
Number of Changes of Frequency of Sessions  
Estimated total no. of sessions  
No. of weeks of intensive treatment  
Proportion of treatment time which was intensive  
Parents Divorced/Separated (Y/N)  
Mother Dead (Y/N)  
Father Dead (Y/N)  
Either Parent Dead  
Single Parent (Y/N)  
Boarding School Under 10 Years (Y/N)  
Local Authority Care or fostering (Y/N)  
Joint Parental Holidays, Child Under 3 Years (Y/N)  
Frequent Changes in Primary Caretaker Before 5 Years (Y/N)  
Death/Departure of Important Figure (Y/N)  
Other Significant Separation (Y/N)  
Age of Child at Time of Divorce/Separation  
Age of Child at Mother's Death  
Age of Child at Father's Death  
Age of Child when 1st Parent Died

Age of Child When Goes to Boarding School

Youngest Age of Child When Parents Both Away

Count Losses as Mother Death

Father Death

Parent in Hospital > 1 year

Child < 5 in Hospital for > 4 weeks

Child > 5 in Hospital for > 3 months

Divorce when Child < 12

Count Insecure Situations as:

Nanny

Separation < 5

Other Sig Breaks

Joint Holiday

Boarding School < 10

No. Times Child Hospitalised

No. Times Mother Hospitalised

No. Times Father Hospitalised

Longest Hospitalisation of Child Under 5

Longest Hospitalisation of Child Over 5

Longest Hospitalisation of Parent

Multiple Child Hospitalisations

Multiple Parent Hospitalisations

Number of Subsequent Treatments Elsewhere

Subsequent Treatment In: Psych Hospital - In or Out  
Patient (Y/N)

Pediatric Advice (Y/N)

Tavistock Clinic (Y/N)

Other Child Guidance (Y/N)

Special School (Y/N)

Remedial Teaching (Y/N)

Therapy or Analysis (Y/N)

Other Subsequent Treatment (Y/N)

Subsequent Treatment Elsewhere with Same Problem

Subsequent Treatment Elsewhere with New Problem

No. Subsequent Treatments Elsewhere Arranged Through Anna Freud Centre

No. Subsequent Treatments Elsewhere Not Arranged Through Anna Freud Centre

Subsequent Drug Treatment

No. of Siblings

No. of Dead Siblings

No. Older Brothers

No. Dead Brothers Older than Child

No. Older Sisters

No. Dead Sisters Older than Child

No. Younger Brothers

No. Dead Brothers Younger than Child

No. Younger Sisters

No. Dead Sisters Younger than Child

No. Half or Step Sibs

No. Dead Half or Step Sibs

No. Adopted Sibs

Sibling of Same Age as Child (Y/N)

Dead Twin of Child

Twin Brother (Y/N)

Any Twins

Twin Sister (Y/N)

No. Sibs Dying while Child Alive

Age of Child when First Sib Died

Age of Child when Last Sib Died

Age of Child when Sibling Born

Whether Sibling Lives in Same Home as Child

No. Siblings in Same Home as Child

Current Psychiatric Problem	- Mother
Current Psychiatric Problem	- Father
Psychiatric Problem Ever	- Mother
Psychiatric Problem Ever	- Father
Severe Psychiatric Problem Now	- Mother
Severe Psychiatric Problem Now	- Father
Severe Psychiatric Problem Ever	- Mother
Severe Psychiatric Problem Ever	- Father
Very Severe Psychiatric Problem Now	- Mother
Very Severe Psychiatric Problem Now	- Father
Very Severe Psychiatric Problem Ever	- Mother
Very Severe Psychiatric Problem Ever	- Father
Psychosis	- Mother
Psychosis	- Father
Bipolar Affective Disorder	- Mother
Bipolar Affective Disorder	- Father
Puerperal Depression	- Mother
Puerperal Depression	- Father
Other Depressive Episodes	- Mother
Other Depressive Episodes	- Father
Obsessional Illness	- Mother
Obsessional Illness	- Father
Other Anxiety Symptoms	- Mother

Other Anxiety Symptoms	- Father
Personality Disorder	- Mother
Personality Disorder	- Father
Drug/Alcohol Addiction	- Mother
Drug/Alcohol Addiction	- Father
Sexual Dysfunction	- Mother
Sexual Dysfunction	- Father
Violence within Family	- Mother
Violence within Family	- Father
Antisocial Behaviour	- Mother
Antisocial Behaviour	- Father
Suicide Attempts	- Mother
Suicide Attempts	- Father
Mental Subnormality	- Mother
Mental Subnormality	- Father
Inpatient Psychiatric Treatment	- Mother
Inpatient Psychiatric Treatment	- Father
Outpatient Psychiatric Treatment	- Mother
Outpatient Psychiatric Treatment	- Father
Psychotherapy	- Mother
Psychotherapy	- Father
Psychoanalysis	- Mother
Psychoanalysis	- Father
Major Marital Problems	- Mother
Major Marital Problems	- Father

Any Accidents	0	No
Operations		
Chronic Disabilities	1	Yes
Chronic Illnesses		
Acute Illnesses		
<b>Frequency of Accidents</b>	0	None
Operations		
Chronic Disabilities	1	Single
Chronic Illness		
Acute Illness	2	Multiple
<b>Severity of Accidents</b>	0	None
Operations		
Chronic Disabilities	1	Minor
Chronic Illness		
Acute Illness	2	Major
Average Performance IQ		
Average Verbal IQ		
Average Full-Scale IQ		
Average Reading Age		
Average Arithmetic Age		
Number of IQ Tests		
Best Estimate of Intelligence (Full Scale IQ at Referral, or Earlier Full Scale IQ, or Verbal IQ at Referral, or Performance IQ at Referral)		
Frequent or severe accidents	0	No
Frequent or severe operations		
Frequent or severe chronic illness	1	Yes
Frequent or severe disabilities		
Frequent or severe acute illness		
Significant Medical History		
If any of the 5 above = 1,	0	No
then medical history = 1	1	Yes

Broad Diagnostic Category at Referral	1	Emotional
Broad Diagnostic Category at Termination	2	Disruptive
	3	Pervasive Developmental
	4	Other Diagnoses
	5	Not Diagnosable HCAM < 70
	6	Not Diagnosable HCAM > 70
	7	Insufficient Information
Diagnosis Used to Assign Above Category at Referral		DSM/ICD
Diagnosis Used to Assign Above Category at Termination		DSM/ICD
Principal Diagnosis at Assessment	1	Mild
Principal Diagnosis at Termination	2	Moderate
	3	Severe
Severity of Principal Diagnosis at Assessment	1	Mild
Severity of Principal Diagnosis at Termination	2	Moderate
	3	Severe

Diagnosis at Referral:  
(for the following;

0 = does not have diagnosis  
1 = has diagnosis)

Schizophrenia/Delusional Disorder  
PDD  
Simple Phobia  
Separation Anxiety Disorder  
Generalized Anxiety (Including OAD)  
Avoidant Disorder  
Obsessive Compulsive Disorder  
Depressive Disorder  
Sleep Disorder (Dyssomnia or Parasomnia)  
Mental Retardation  
Specific Developmental Disorder  
ADHD  
Conduct Disorder  
ODD  
Antisocial Behaviour (V Code)  
Eating/Feeding Disorder  
Reactive Attachment Disorder  
Enuresis  
Encopresis  
Tic Disorder  
Gender Identity Disorder  
Speech Disorder  
Habit Disorder  
Impulse Control Disorder  
Elective Mutism  
Substance Abuse  
Sexual Disorder  
Stress-Related Disorder (Adjustment/Post Traumatic Stress Disorder)  
Psychological Factors Affecting Physical Condition, or Somatoform Disorder  
Personality Disorder  
Parent Child Problem (V Code)

Diagnosis at Termination:  
(for the following;

0 = does not have diagnosis  
1 = has diagnosis)

Schizophrenia/Delusional Disorder  
PDD  
Simple Phobia  
Separation Anxiety Disorder  
Generalized Anxiety (Including OAD)

Avoidant Disorder  
 Obsessive Compulsive Disorder  
 Depressive Disorder  
 Sleep Disorder (Dyssomnia or Parasomnia)  
 Mental Retardation  
 Specific Developmental Disorder  
 ADHD  
 Conduct Disorder  
 ODD  
 Antisocial Behaviour (V Code)  
 Eating/Feeding Disorder  
 Reactive Attachment Disorder  
 Enuresis  
 Encopresis  
 Tic Disorder  
 Gender Identity Disorder  
 Speech Disorder  
 Habit Disorder  
 Impulse Control Disorder  
 Elective Mutism  
 Substance Abuse  
 Sexual Disorder  
 Stress-Related Disorder (Adjustment/Post Traumatic Stress Disorder)  
 Psychological Factors Affecting Physical Condition, or Somatoform Disorder  
 Personality Disorder  
 Parent-Child Problem (V Code)

Mother Diagnosable at Assessment	0	Not Known
Father Diagnosable at Assessment	1	Yes
Either Parent Diagnosable at Assessment	2	No

Mother Diagnosable in the Past	0	Not Known
Father Diagnosable in the Past	1	Yes
Either Parent Diagnosable in the Past	2	No

#### APPENDIX 4.1. THE HAMPSTEAD CHILD ADAPTATION MEASURE

We aimed to devise a scale which would reflect prosocial functioning as well as impairment and which would not measure impairment mainly in terms of psychiatric symptoms or diagnoses. The background to this thinking was the psychoanalytic approach of Anna Freud, in particular her diagnostic profile and concept of developmental lines (Freud, 1962, 1963). The form of the measure was influenced by both the HSRS and the CGAS. The rating procedure using parameters of adaptation owed much to the measure of structural change developed by Wallerstein and his colleagues for use with adult patients (de Witt et al., unpub.; Wallerstein, 1988).

The level of functioning described was the child's average or general level over the preceding month (rather than the lowest level, which was used in the Shaffer study). We did not restrict use of the scale to 4-16 year-olds, but used it throughout the range of ages in our sample, i.e. 2-18 years, making modifications to the criteria as required, in accordance with the age-appropriate level of development and response to the environment of children at these extremes of the age range (see below). An example of the sort of adaptation required was that for children below school-age, 'functioning at school' is assessed in terms of the child's ability to cope with nursery groups, being looked after by substitute carers, relating to peers, and so on. Here, the relevant parameters challenging the child's capacity for adaptation (e.g. peer competition, enforced socialisation with adults, separation from caregiver, accepting guidance and instruction from others) were abstracted from the more advanced developmental setting and applied to an analogous context appropriate to a younger age group. Extrapolations of a very similar nature are made in the case of older children. For example, for older adolescents one needs to consider the patient's ability to cope with college or employment, get along with colleagues, superiors and others, with greater independence from the family.

The general principle in assigning HCAM ratings was to represent numerically the psychological functioning of each child in comparison with that of other children, given the biological/physical and social situation with which the child was faced. In particular, we were careful to take into account the child's age, social environment and physical

endowment. Thus, if a child's activities were notably restricted due to living in an institution, or to a physical handicap, then the HCAM score assigned was higher than the score given to a child showing similar restricted behaviour for psychological reasons, reflecting poor adaptation. If the child's behavioural impairment was due to poor intellectual functioning, learning difficulties or to the psychological consequences of physical disabilities, social adversity, etc., then raters were asked to reflect this in the score. So, for example, if a blind child's academic performance, independence, peer relationships, sporting activities, etc., were restricted by his handicap only to the extent that this was expectable, then the child would be rated well-functioning. However, if the child showed maladaptive behaviour because he had become angry and depressed in response to his handicap, then this would lower his HCAM score, **even though** such feelings and behaviour may be very understandable and are known to be more common among handicapped children.

Following the CGAS guidelines, scores in the highest three categories, i.e. above 70, were regarded as falling within the normal range; children assigned scores below 70 were seen as clinically disturbed, and mostly meet the criteria for at least one psychiatric diagnosis.

#### Scale definition

The HCAM is a 100-point rating scale, with detailed descriptions of the level of functioning represented by each decile. Each decile is also illustrated by a case from the Anna Freud Centre archive. The relevant decile is decided by reference to the anchor descriptions, and the case illustrations; within the decile, a specific rating is chosen by considering the child's development in relation to sixteen parameters of adaptation, and the guidelines for assigning a rating (see below). The full manual is given as Appendix 1; below we outline the scale points, parameters and guidelines.

100-91        The child shows excellent functioning in every aspect of his life. He has good relationships with parents and siblings, is popular with peers and well-liked by teachers and other adults. He has a wide range of interests, and participates in a variety of activities. He is exceptionally mature, of equable

temperament, copes well in all situations and obviously enjoys life.

90-81 The child functions well (i.e. at at least an average level for his age) in all areas. He is usually co-operative and pleasant, forms positive relationships with those around him, and makes good use of his abilities and skills both at school and in pursuing extra-curricular interests. The child has generally good relationships within the family, with both parents and siblings, although there may be some areas of minor conflict at times. The child will be able to cope quite comfortably with everyday situations, but this may break down partially at times of unusual stress, so that the child becomes mildly unsettled, for instance anxious, insecure, or irritable.

80-71 The child shows a good level of functioning and generally copes well at school, at home and elsewhere. He has friends and is able to pursue his own interests. He is regarded as being of average maturity and competence for his age. This category would be used where the child has been showing some mild symptoms, such as bedwetting, temper tantrums, hostility towards a sibling, mild phobic rituals, disobedience, poor school work, impaired relationships with peers, but where these symptoms are felt to be temporary reactions to identifiable stress. Alternatively, the child may have longer-term but very minor symptoms (not warranting a psychiatric diagnosis), such as occasional incidents of bed-wetting in an under-five, a rather poor relationship with one sibling, a tendency to minor psychosomatic symptoms (e.g. sometimes has stomach-aches before school). The child is functioning normally in other areas of his life, and is certainly not regarded as disturbed or generally difficult by those around him.

70-61 The child functions fairly well in most situations, although his ability to cope is rather erratic and liable to break down under stress. He is generally accepted by those around him and has friends. He has the capacity to act effectively and in accordance with his age but this is not demonstrated consistently: These are children who will usually be worrying their parents

and probably also their teachers, but whose symptoms may not be evident to acquaintances. Examples common in the AFC files are children who have developed a school phobia but do continue to attend school with considerable support, who have some minor obsessional symptoms confined to the home, who have an entrenched 'battling' relationship with a parent, nightmares and other sleep disturbances, regular bed-wetting or occasional soiling in a child over 4 years, stuttering, excessive difficulty in separating from parents, a specific learning disorder such as reading retardation, and so on. A child with more than one of these difficulties would usually be better placed in the category below.

60-51 The child shows variable functioning, coping better with some aspects of his life than with others. For example, he may manage more adequately at home than in school, or vice versa. He may have friends and be capable of pursuing particular interests but he will probably be seen as lacking confidence or being particularly aggressive or anxious at times. This category is used where the child shows a number of established difficulties such as those listed above, but the disturbance does not affect most areas of the child's life. The level of impairment in any area should not be more than mild - moderate. If the disturbance is more global, or there is a severe symptom affecting an important area of the child's life, then the category below is more appropriate. An example of the children seen who should be placed in this category would be a child who has for a considerable time shown a specific learning difficulty of moderate severity, resisted going to school and had battles with parents over homework, but who has good relationships otherwise within the family, with peers, and with teachers, enjoys a range of sports, and is not generally an anxious child.

50-41 The child will be regarded by others as a definite problem. His level of functioning is below expectation in all areas of life. Although he is capable of relating to others adequately, and does so at times, his relationships are more often severely disturbed by, for instance, anxious, aggressive or

negativistic behaviour. His friendships and occupations are generally immature, lacking social sensitivity and depth of engagement. These are children whose difficulties inevitably affect most of their lives, and the disturbance will be obvious to observers. They can generally be managed with difficulty within the home and mainstream schooling, but will be causing considerable concern to all adults involved with them, and are likely to have only poor peer relationships, if any. The symptoms will be established, not transient, but these children will still be able to understand the demands of external reality and to cope with them fairly well when not immediately involved in their symptoms (when not caught up in, for instance, obsessional rituals, or uncontrolled aggressive attacks).

40-31

Many, but not all, children in this category will be unable to use ordinary schooling, requiring special educational or medical provision. These children have difficulties in all areas of their life. Most of their relationships are severely disturbed, marked by extreme withdrawal, aggression or anxiety. They may show occasional glimpses of more normal behaviour but are unable to sustain this for any length of time. These are children who have no significant area of their life free from emotional difficulty and whose disturbance is obvious to the most casual observer. It is seldom that such children can be easily accommodated within mainstream education; nor are they often able to participate in peer-group activities or to take part in relatively conflict-free relationships. However, at times when they are not totally dominated by their anxieties and aggression these children may have brief periods of more normal functioning and are usually capable of sustaining short periods of age-appropriate involvement with people and in any activity that particularly holds their attention.

30-21

The child shows gross defects in all areas of functioning. He is unable to communicate with, or relate to, people in an appropriate way and does not participate socially. His speech will usually be retarded, and often difficult to understand either because of poor articulation or general incoherence.

Any interest shown by the child is likely to be directed towards objects rather than people, and will probably be inappropriately maintained, being either all-consuming and obsessive, or else fleeting and transient. Most children whose functioning falls within this category will be regarded as brain damaged, autistic or psychotic, incapable of most simple acts of social and intellectual functioning. Few children this grossly disturbed are taken on for psychoanalytic treatment but some may be regarded as responding to extreme environmental stress. Such children may thus be seen as potentially capable of making positive use of psychological intervention.

20-11 The child functions at a very low level indeed in relation to the norms for his age, being unable to cope without a great deal of extra help and supervision. He shows extreme impairment in even basic tasks such as toileting and feeding. He is unable to relate acceptably to other people and may show lack of control over aggressive, violent or sexual impulses.

10-1 The child needs constant care and attention, both day and night. These children may be destructive and/or self-mutilating. They show gross impairment in every part of their lives and are unable to relate to others or to communicate in any effective way.

### Parameters of adaptation

Through inspection of Social Histories and Diagnostic Profiles of 45 cases included in the chart review, we compiled a list of fifteen parameters of adaptation; these are major areas of functioning in which one can trace expected lines of development as a child gets older. The fifteen parameters are as follows:

Appropriate responsibility for the child's own body needs  
Ability to work and play

Play, hobbies, interests  
Frustration tolerance and impulse control  
Relationships with parents  
Relationships with siblings  
Relations with peers outside family  
Relations with adults outside family  
Levels of confidence and self-esteem  
Ability to cope with stress and anxiety  
Prevailing mood and variability of mood  
Psychosexual development  
Sense of moral responsibility  
Tendency to produce physical symptoms under emotional stress  
Adaptability to changes in routine.

Indications are given of positive and negative features within each area, and guidelines are given for rating children of different ages. In addition, procedures are described for assigning ratings where there is very uneven development in different areas, taking account of environmental stress, physical handicaps, and so on.

#### 1. Ability to look after own body needs

+ looks after bodily care as well as would be expected for child's age and physical capacity.

- fails to develop appropriate self-care, refuses or is unable to take this responsibility resulting in e.g. enuresis or encopresis, lack of hygiene, requires dressing, does not eat adequately.

#### Age guidelines

A physically normal child would generally be able to manage most washing and dressing tasks, and be independent in using the lavatory, by the age of

about five years. He or she would continue to need guidance in deciding how often to wash hair, how to ensure adequate diet, etc., for a further few years, but would be able to cope with day-to-day self-care pretty competently.

## 2. Ability to learn and work

- + child shows curiosity and tries to find out about things at an age-appropriate level.
- interest in learning or the capacity to do so are restricted or absent.

### Age guidelines

In very young children, learning will take place largely through physical play, observation and manipulation. A healthy child will appear alert, socially responsive and keen to explore objects. An active interest in how things work generally progresses in school-age children from manipulation through dismantling and construction to the increasing ability to do these operations in imagination, and eventually to think about wholly abstract concepts.

## 3. Ability to tolerate frustration and control impulses

- + The child is able to contain his impulses and defer gratification at an age-appropriate level.
- The child has not learned to accept normal levels of frustration and shows socially inappropriate behaviour, such as tantrums, excessive demandingness or crying whenever thwarted, aggressive outbursts, unacceptable sexual behaviour.

### Age guidelines.

Babies and toddlers have very little tolerance of frustration, but from the age of about two years most children develop some capacity to wait for increasing lengths of time for things they want, and gradually learn to understand why gratification will sometimes be delayed or refused. By the time they start school, most children can control their more antisocial impulses and wait their turn for a few minutes. However, while learning to fit in at school the child may regress to more demanding, impulsive behaviour at home for some time. By the age of about eight years, children are generally able to channel and sublimate impulses when appropriate, and to accept normal levels of frustration without displaying socially unacceptable behaviour. Adolescence brings an increase in drives and to some extent the process of learning appropriate expression and control needs to be gone through again.

#### 4. Relationship with parents

+ The child has warm and increasingly mutual relationships with his parents, (unless this is prevented by the parents' own attitudes or behaviour). There is cooperation and pleasure in each others' company as appropriate to the child's age.

- The child's feelings or behaviour obstruct the development of a good relationship, e.g. the child is constantly rude, aggressive, withdrawn, anxiously demanding or controlling, etc.

### Age guidelines

A healthy child becomes less physically and emotionally dependent on the parents with age, so that after about the age of six or seven the parents are less central in the child's world, and with adolescence even their practical support and encouragement is less necessary. However, the overall

relationship between a child and his parents should always be warm and enjoyable, as long as the parents are able to provide a positive basis for the child's development.

## 5. Relationships with siblings

+ The child develops generally positive relationships with siblings, and is able to enjoy their companionship, taking into account age and sex differences.

- There is excessive competition, conflict, or unhealthy dependence between the child and his siblings, which disturbs the balance of the family.

### Age guidelines

Very young children up to the age of about two are not able to appreciate that siblings have equal claim on resources and on parental attention. This has to be learned gradually. The birth of a younger brother or sister is a major, and often traumatic, event for a small child. Many under-fives will slip back into earlier behaviour patterns at this time, becoming clinging or demanding or with a recurrence of bed-wetting and other regressive behaviours. This should ideally be short-lasting, diminishing as the child adjusts to the new situation. Arguments among siblings occur in almost all families from time to time and are not in themselves a cause for concern. By the time a child reaches school-age he or she ought to be learning to negotiate, compromise, and understand another's point of view sufficiently well to be able to sort out most of his quarrels with brothers and sisters without constant parental intervention. This is a process that continues throughout childhood. The different ages of siblings in a family allow the child to learn how to accept help from those older than himself and to offer protection and support to the younger members of the family. The often passionate, though short-lived, battles of a toddler usually die down in

middle childhood though they may re-emerge for a time with all the old intensity as adolescence is reached.

#### 6. Relationships with peers outside the family

+ The child relates well to most other children of similar age, developing close friendships with a small number. He is able to get on well with groups of children and individually.

- The child is unpopular with other children, or does not attempt to be accepted by them. He may be very shy and timid, over-aggressive, poor in social skills (bossy, insensitive to indications of others' feelings, unable to reciprocate friendly approaches, etc.), or withdrawn and isolated through choice. The child will be left out of activities and fail to develop close friendships, except perhaps with one or two others, probably also with some social difficulties.

#### Age guidelines

Very young children of two years or less may enjoy playing in the company of others, but are normally still focused on family relationships. In the pre-school years, peers become increasingly important, and most children learn to behave in ways that are acceptable and, ideally, attractive to others of their age. Sharing valued possessions, from a favourite toy to the attention of the mother or nursery teacher, becomes easier, and the benefits of being liked and befriended more obvious. However, relationships with peers are still relatively fickle. After the age of five or six, peers become of great importance as the child spends much of his time at school or developing interests in the company of other children, and the influence of parents (while still powerful) gradually moves into the background. Popularity with peers generally becomes of crucial concern, and the development of some close stable friendships is very important. In the primary school years, same-sex friendships tend to dominate, and there is often some antagonism

between boys and girls. In adolescence, although same-sex friendships usually remain strong and important, heterosexual interest generally provides a strong impetus for being accepted and admired by peers of the other sex, and all peer relationships may acquire some sexual tinge.

## 7. Relationships with adults outside the family

+ The child relates satisfactorily to adults outside the family. Where appropriate to the situation and the adult concerned, he can be friendly, affectionate, assertive and willing to accept help (e.g. from a teacher, or a stranger if in trouble).

- The child behaves inappropriately with adults outside the family, e.g. he is excessively shy, suspicious or hostile without sufficient reason or he may seek the attention of adults indiscriminately.

### Age guidelines

While all children should ideally be responsive and to some extent positive towards friendly adults, they would not be expected to be generally polite and cooperative until the age of around three or four. Once the child starts school, it becomes very important that he should learn to deal with a variety of unknown adults in that setting and others. Difficulties in doing this create obstacles to his learning, pursuit of out-of-school interests and sports, and development of relationships with peers (staying at friends' houses, etc.). During adolescence, relationships with adults need to become somewhat more like relationships between adults, i.e. the child becomes more able to present himself as an independent person and to relate on an basis of more mutual respect and benefit. Adults will still be in positions of authority over the adolescent, who needs eventually to make the transition from a child's to an adult's attitude to this.

## 8. Development of confidence and self-esteem

- + The child feels pleasure and a realistic sense of pride in his progress and achievements. He identifies and values aspects of himself which are particular strengths, and feels confident in his abilities.
- The child feels inadequate and worthless and fails to recognise or appreciate his accomplishments. He lacks motivation to persist with tasks, giving up easily. Sometimes the feeling of inferiority shows itself, paradoxically, in a tendency to boast excessively of minor, or even non-existent, successes.

### Age guidelines

Childhood is a time of constant progress and development. Very young children take pleasure in learning to feed themselves, to walk and talk, and to enlarge the scope of their abilities. As a child becomes more able to perform tasks for himself he will become more independent of his parents and learn increasingly to trust in his own capabilities. Children who are sufficiently reinforced by the approval and encouragement of parents and teachers will usually persist in mastering new areas of competence and developing a sense of their own worth. By the time a child starts school it is important that he should have confidence in his own ability to meet and cope with the many new challenges he will be faced with. His self-esteem should be sufficiently robust by the age of 5 that he can assimilate occasional failure though he will continue to need help from others in learning how to evaluate himself. As his personal identity becomes more firmly established in the middle years of childhood the child begins to construct a relatively stable picture of himself which relies heavily on his perceptions of his attributes. The early teenage years are often times of great self-doubt and uncertainty alternating with a sense of great potential and capacity. This continues throughout adolescence, but the child should also become capable at this time of making a fairly realistic assessment of both his strengths and limitations and should be looking for ways to best realise

his potential.

9. Ability to cope with very stressful events

+ The child possesses a variety of techniques for handling stress which he can use flexibly and appropriately. He is able to accept and use help and support when necessary and to hold on to a sense of his own worth even in difficult circumstances.

- The child relies excessively and indiscriminately on only one or two ways of coping with stress, e.g. he totally denies its existence, becomes phobically avoidant or severely regressed. He may produce physical or psychological symptoms as an indirect indication of his distress and anxiety.

Age guidelines

Children of all ages suffer extreme stress from events such as the death or serious illness of a primary caregiver, separations, hospitalisations and other losses. Babies and very young children rely almost totally on parents and others to protect them from the effects of severe stress. As the child becomes increasingly able to talk about his anxieties and to understand the reason why some events occur, he should be able, provided he has appropriate support, to cope with most stresses without excessive disorientation. All children need help in understanding events which cause extreme distress but the child with a secure sense of self should not be overwhelmed by feelings of guilt or hopelessness. The ability to cope with stress increases consistently as the child grows older.

10. General mood, and variability of mood

+ The underlying mood of the child should be relatively equable without rapid fluctuations or large mood swings although he should be sufficiently

responsive to his own internal feelings and to the external world to show mood appropriate to the situation, with neither over- or under-reaction.

- Regardless of circumstances, the child will find it difficult to shift mood, remaining, for example, depressed and withdrawn, or hyperactive and insensitive to the feelings of those around him. Some children may experience rapid changes of mood with seemingly little or no trigger factors.

### Age Guidelines

Children are born with varying temperaments and some are naturally more equable than others. These individual differences contribute to the development of the total personality and should be taken into account when assessing whether a child's behaviour is a cause for concern. Babies and toddlers often show rapid changes of mood, shifting very fast from, say, distress to pleasure or from contentment to anger but by school age the child should be learning to monitor his reactions to events and to be capable of some control over his moods. By about nine or ten he should seldom need to resort to less-adaptive ways of coping such as sulking or screaming or unpredictable changes of mood and should, ideally, be able to retain a generally well-balanced frame of mind. During adolescence, mood-swings and previously discarded emotional responses such as crying, sulking and shouting may re-appear for a while, though often only in certain environments (e.g. home) with the child able to behave in a more mature way when necessary.

### 11. Sexual development

+ The child shows recognition of, and pride in, his gender identity. His interest in sexual matters should be appropriate to his age and physical development.

- The child behaves in an age-discrepant manner in relation to sexual concerns. He may be inhibited and embarrassed or ashamed and unhappy

about normal sexual feelings and about his sexual identity; alternatively he may be obsessively curious and excessively disinhibited.

### Age Guidelines

By the age of about two children have generally developed an increasingly stable sense of their own gender identity and are beginning to understand sexual difference. All healthy children are curious about sex and reproduction and will show interest in their own, and others' bodies. If they are given relevant answers to their questions they should gain a growing understanding of sexual issues appropriate to their physical and psychological stage of development. Up to the age of about four they may be relatively sexually disinhibited, but develop increasing modesty and a growing awareness of social sanctions against unacceptable public behaviour (e.g. masturbation). Throughout the middle years of childhood, interests and energy are focused more on school work, friendships and hobbies than on sexual matters, but physical development at puberty brings a sharp increase in sexual awareness, which may be experienced as either pleasurable or anxiety-provoking or, often, both. The healthy adolescent will be comfortable enough with the idea of his own sexual identity to be able to cope sufficiently well with any anxiety, and to find ways of appropriately expressing his sexuality, leading eventually, usually in late adolescence or early adulthood, to a mutual and caring sexual relationship with a suitable partner.

### 12. Play, hobbies, interests

- + The child is capable of sustained and constructive play and is interested in a wide range of activities.
- The child is often bored and restless and unable to occupy himself. He may flit from one activity to another without being able to concentrate on anything or, he may be unwilling to take an active role in entertaining

himself, interested only in passive entertainment such as television and videos.

### Age guidelines

The very young child will not be able to occupy himself for very long at a time and will need to be played with and entertained by his caretakers. By the age of three or four he should be able to play happily by himself or with peers and siblings for short periods of time but will still require a good deal of adult attention and participation. During the early school years, the healthy child will show an increasing capacity to think up games and activities and be able to amuse himself without constant adult supervision and involvement though he will still enjoy and benefit from shared activities with parents, teachers and other adults. He should be discovering a variety of different interests, both active and outdoors (as in sport and running and chasing games) and quieter, more solitary, pursuits such as reading, drawing, music, collecting, and model making. By ten or eleven many children will have one or two favourite hobbies about which they may be quite knowledgeable and interested in finding out more. They will be able to maintain a balance between becoming obsessed with one specific activity to the exclusion of everything else and having insufficient concentration to persist in any occupation for long enough to develop a real interest. During the teenage years many of these hobbies will fall away under the pressures of increased school work and the social activities of adolescence but some should remain and survive into adulthood.

### 13. Sense of moral responsibility

+ The child will develop a sense of his own contribution to events, an understanding that what he says and does affects and influences other people. He will learn to take this into account before he acts. He will be able to appreciate that others' points of view may call for equal

consideration with his.

- The child remains the centre of his world and fails to make allowances for the needs of other people. He insists on having his own way.

#### Age guidelines

A sense of moral responsibility evolves only gradually and is rarely fully secure before late adolescence, if then. At first the baby demands that his wishes should be met without delay and he cannot wait for gratification. By the time he begins to understand language he should be able to tolerate occasional short delays before his needs are met and also to realise that not everything he wants will be given to him. As the child forms relationships with others he will have to begin to consider people in their own right and not simply as extensions of himself, though it will not be until he is about eight years old that he has a genuine capacity to consider what it would be like to be in someone else's position. He gradually learns to consider the consequences of his actions and to accept responsibility for what he does. All this happens slowly and often inconsistently so that the older child can display altruistic behaviour one day and be making unreasonable demands for his own needs to be met the next. A true sense of moral responsibility has not always developed even by adulthood but some ability to make decisions based on a realistic perception of one's own and others' needs should be slowly evolving throughout childhood.

#### 14. Physical health resilient, not affected by emotional state

+ The child has generally good health, or, any illnesses or disabilities seem independent of psychological factors.

- Physical symptoms e.g. allergies, headaches, diarrhoea, insomnia, appear at times of stress.

### Age guidelines

Emotional distress in babies and the very young child often shows itself in physical symptoms, although individuals vary considerably in their tendency to do this. As mental capacity develops and the ability to verbalise feelings of anxiety and stress increases there should be less need to use physical means to express psychological pain or discomfort. Most children (and adults) will fall back on physical expressions of worry and distress from time to time but the psychologically stable child should not be in the habit of doing so.

#### 15. Adaptable, can cope with changes to routine

- + The child is not intolerably dismayed by occasional changes of school, moves of house, etc. and is able to adapt flexibly to most alterations in general routine.
- The child reacts with anger or anxiety to minor changes; his need for predictability is restricting and inflexible both for himself and for other members of the family.

### Age Guidelines

Generally speaking, the younger the child the more security he gets from a set routine and the greater the need to keep significant change to a minimum. No child can be expected to cope with continual change or with major change, say, in primary caretakers, without signs of distress, nor is it easy to cope with many changes at once as might happen if moving house also meant leaving friends behind and going to a new school but most children should manage less drastic alterations without too much anxiety. Toddlers often protest at even minor changes in daily routine, seeing unfamiliar people, trying different foods and so on but most children should be more flexible than this by about four or five. Schooldays demand a certain ability to cope with change and new teachers and lessons and the

healthy child will generally be able to cope with this, though he may need a little extra support and understanding at particularly difficult times such as the beginnings of the school year.

### **Guidelines for weighting different parameters in particular cases.**

In any particular case, some of these parameters will be given more weight than others. The general procedure for arriving at an overall rating is:

1. To decide on the general region of the scale in which the case seems to fall, on the basis of comparisons with the case examples.

2. To consider, for each parameter, how well the child functions in relation to other children of his age and general situation. Factors to take into account include the child's social competence, his ability to make full use of his intellectual and physical capacities, his independence, the quality of his relationships. If the child's adaptation is consistent across the various parameters, then the overall rating will reflect the generally superior, average or poor level of adaptation. In certain cases, there will be marked unevenness in the child's development in the different areas. Where the range is from average to superior functioning, this may present few difficulties. However, where a child is functioning successfully in some areas but well below the usual level for his age in others, this unevenness in itself constitutes a problem, and needs to be taken into account in assigning a rating.

3. The various parameters are to some extent weighted differently for children of different ages. The youngest children (pre-school) will be rated mainly on relationships within the family, development of ability to look after body needs, tolerance of frustration and stress, language and motor development, etc.. Ratings for older children will increasingly give priority to peer relationships, relationships with adults outside the family, ability to work

and pursue interests, self-esteem, sexual adjustment, development of moral and other values.

4. Consideration should be given to whether apparently poor development in any particular area is distressing and unwanted by the child or not. This can affect the rating either positively or negatively. In some cases, an area of difficulty only becomes a serious problem when it causes unhappiness to the child. For instance, a child who has few friends by choice, because he enjoys his own company and prefers more solitary interests, would be regarded as functioning on a higher level than a child with similar social relationships who is unhappy and lonely and tries unsuccessfully to make friends. However, both would be rated less highly than another child who has good, satisfying relationships with peers. On the other hand, a problem may be more worrying if it is 'ego-syntonic'. For example, an 8 year old with daily encopresis who does not acknowledge that anything is wrong would be seen as more disturbed than another who is ashamed and would like help. The distinctions are between acceptable personality traits (such as solitariness) and symptoms (such as social anxiety or encopresis); in the case of symptoms it is more adaptive to recognize these, and to wish to change.

5. Where symptoms are present, their pervasiveness, chronicity, effect on the child and his environment, and the degree to which treatment is indicated, all have to be considered. More weight is attached to apparently entrenched characteristics than to changes in mood or ability to cope which are related to identifiable, temporary, stresses. Similarly, it is very important to review the child's overall progress in development. If a child has fallen behind others or shows symptoms in certain areas, but seems nevertheless to be developing and maturing to some extent, then a higher rating would be indicated. On the other hand, a child showing similar difficulties whose development seems to be 'stuck', or even regressing, will be rated as more impaired, perhaps being placed in the decile below.

**APPENDIX 5.1. STRUCTURE OF THE RETROSPECTIVE STUDY DATA BASE**

<u>CASE</u>				
1. <u>Case number</u> (other variables listed case-wise)				
<u>REFERRAL DIAGNOSES</u>  1. <u>Case number</u> 2. <u>Diagnosis serial number</u> (other information for each diagnosis)	<u>TERMINATION DIAGNOSES</u>  1. <u>Case number</u> 2. <u>Diagnosis serial number</u> (other information for each diagnosis)	<u>PARENTS' DIAGNOSES</u>  1. <u>Case number</u> 2. <u>Diagnosis serial number</u> (other information for each diagnosis)	<u>PARENTS' PSYCHIATRIC HISTORY</u>  1. <u>Case number</u> 2. <u>Problem serial number</u> (other information for each problem)	<u>REFERRAL SYMPTOMS</u>  1. <u>Case number</u> 2. <u>CBCL item number</u> (other information on each symptom)
<u>PREVIOUS TREATMENT</u>  1. <u>Case number</u> 2. <u>Treatment serial number</u> (other information on each treatment)	<u>SCHOOL PROBLEMS</u>  1. <u>Case number</u> 2. <u>School problem serial number</u> (other information for each problem)	<u>MEDICAL HISTORY</u>  1. <u>Case number</u> 2. <u>Medical problem serial number</u> (other information for each problem)	<u>BREAKS</u>  1. <u>Case number</u> 2. <u>Separation serial number</u> (other information for each problem)	<u>SIBLINGS</u>  1. <u>Case number</u> 2. <u>Sibling serial number</u> (other information on each sibling)
<u>PSYCHOLOGICAL TESTS</u>  1. <u>Case number</u> 2. <u>Test serial number</u> (other information for each problem)	<u>HOSPITAL ADMISSIONS</u>  1. <u>Case number</u> 2. <u>Hospitalization serial number</u> (other information for each problem)	<u>THERAPISTS</u>  1. <u>Case number</u> 2. <u>Therapist serial number</u> (other information for each problem)	<u>SESSION FREQUENCY</u>  1. <u>Case number</u> 2. <u>Frequency serial number</u> (other information regarding each period of treatment according to frequency)	<u>SUBSEQUENT TREATMENT</u>  1. <u>Case number</u> 2. <u>Later treatment serial number</u> (other information on each treatment)

## APPENDIX 5.2. CORRELATION MATRIX OF MAJOR PREDICTOR VARIABLES

### VARIABLE CODING

CGAS_DSM	=	referral HCAM
ALL_CAT	=	diagnostic category
CATSEV	=	severity
SEX	=	gender
ST_AE_YR	=	age at start
LIVewith	=	living with
BREAK_YN	=	broken family
DEPRIVE	=	deprivation
par_rel	=	religion
s_class	=	social class
DSMQAL1	=	par.psych.illness
n_sibs	=	siblings
medhist	=	medical history
loss	=	losses
L.A.fstr	=	foster care
insec	=	insecurity
chd_hosp	=	hospitalization
cm_hosp	=	multiple hospitalization
par_dead	=	parent dead
RGAFCR_M	=	mother's GAF score
RGARCR_F	=	father's GAF score
PREFOURC	=	referral source
intest	=	IQ
l_diffs	=	school problems
disrptve	=	disruptive (school)
refusal	=	school refusal
dficlty	=	specific learning difficulty
underach	=	underachievement
peer_rln	=	poor peer relationships
anxiety	=	anxious at school
NURSERY	=	attended AFC nursery
PG_BF_TR	=	parent work before treatment
m_afcrt	=	mother treated at AFC
f_afcrt	=	father treated at AFC
s_afcrt	=	sibling treated at AFC
MPROBN	=	mother's current psychological problems
FPROBN	=	father's current psychological problems
MPROBE	=	mother's history of psychological problems
FPROBE	=	father's history of psychological problems
MSPROBE	=	mother's severest problem ever
FSPROBE	=	father's severest problem ever
MVSPROBE	=	mother's very severe problem ever
FVSPROBE	=	father's very severe problem ever
MANTISOC	=	mother antisocial
FANTISOC	=	father antisocial

MANX	=	mother anxiety disorder
FANX	=	father anxiety disorder
MDEP	=	mother depressive disorder
FDEP	=	father depressive disorder
MPROB7	=	mother personality disorder
FPROB7	=	father personality disorder
MPROB12	=	maternal suicide attempt
MPROB15	=	mother had psychotherapy
MPROB17	=	mother in analysis
MPROB18	=	marital conflict
SESS_INI	=	frequency of sessions (start)
SESS_MAX	=	frequency of sessions (maximum)
n_ther	=	number of therapists
th_TYP1	=	staff/student therapist
PG_DR_TR	=	parent work during treatment
simphob	=	phobia
sepanx	=	separation anxiety
genanx	=	overanxious
avoid	=	avoidant
OCD	=	OCD
depress	=	depression
sleep	=	sleep disorder
PDD	=	PDD
SDD	=	SDD
ADHD	=	ADHD
conduct	=	conduct disorder
oppdef	=	oppositional defiant disorder
antisoc	=	antisocial behaviour
eating	=	eating disorder
attch	=	attachment disorder
wet	=	enuresis
encop	=	encopresis
tics	=	tic disorder
gender	=	gender identity disorder
speech	=	speech disorder
habit	=	habit disorder
mute	=	elective mutism
subst	=	substance abuse
schiz	=	psychosis
bipolar	=	bipolar disorder
sexdis	=	sexual disorder
impulse	=	impulse control disorder
stress	=	stress-related disorder
psyphys	=	psychosomatic
pdis	=	personality disorder
p_cprob	=	parent-child problem

	CGAS_DSM	ALL_CAT	CATSEV	SEX	ST_AE_YR	LIVEWITH	BREAK_YN	
	4	6	10	12	13	14	18	
CGAS_DSM	4	1.000						
ALL_CAT	6	0.304	1.000					
CATSEV	10	-0.309	0.008	1.000				
SEX	12	0.166	-0.050	-0.062	1.000			
ST_AE_YR	13	-0.117	-0.091	0.087	0.093	1.000		
LIVEWITH	14	-0.068	-0.027	0.081	-0.019	0.075	1.000	
BREAK_YN	18	0.013	0.060	-0.046	-0.022	0.084	0.216	1.000
DEPRIVE	19	0.007	0.063	-0.033	0.011	0.019	0.142	0.373
par_rel	20	-0.049	0.025	0.046	0.025	-0.038	0.085	0.098
s_class	21	-0.170	-0.048	0.129	-0.071	0.084	0.106	0.039
DSMQAL1	24	-0.069	0.028	0.017	0.005	0.145	0.082	0.113
n_sibs	28	-0.049	-0.011	0.066	-0.000	0.133	0.081	-0.037
medhist	29	-0.069	-0.010	0.106	-0.017	0.050	-0.043	-0.030
loss	30	-0.029	0.035	-0.014	0.005	0.077	0.307	0.731
dvrcesep	31	0.040	0.060	-0.057	0.025	0.075	0.102	0.769
L.A.fstr	32	-0.119	-0.031	0.022	0.005	0.042	0.344	0.212
insec	33	0.003	0.035	-0.058	0.025	0.054	0.051	0.155
chd_hosp	34	-0.112	-0.028	0.127	-0.061	0.044	-0.043	-0.044
cm_hosp	35	-0.055	0.025	0.112	0.038	-0.003	-0.057	0.012
par_dead	36	0.046	0.039	-0.051	-0.066	0.073	0.177	0.420
RGAFCR_M	38	0.211	0.030	-0.065	0.036	0.019	-0.111	-0.145
RGAFCR_F	40	0.192	0.061	-0.111	0.048	-0.061	-0.019	-0.161
PREFOURC	43	-0.130	-0.084	-0.021	-0.030	-0.040	0.118	-0.055
intest	45	0.234	0.004	-0.097	-0.060	0.030	-0.074	-0.069
l_diffs	48	-0.318	-0.030	0.091	-0.142	0.186	0.059	-0.003
disrptve	49	-0.182	0.013	0.042	-0.091	-0.072	0.056	0.053
refusal	50	-0.162	-0.078	0.069	0.049	0.189	0.067	0.038
dfficlty	51	-0.039	0.050	0.047	-0.056	0.000	-0.019	-0.015
underach	52	-0.106	0.021	0.051	-0.123	0.223	0.105	-0.011
peer_rln	53	-0.191	-0.057	-0.040	-0.074	0.018	0.015	0.037
anxiety	54	-0.104	-0.070	-0.023	-0.049	0.100	-0.002	-0.028

		CGAS_DSM	ALL_CAT	CATSEV	SEX	ST_AE_YR	LIVewith	BREAK_YN
		4	6	10	12	13	14	18
NURSERY	55	-0.000	0.027	-0.078	-0.046	-0.307	-0.028	0.082
PG_BF_TR	56	-0.050	0.008	0.015	-0.063	-0.114	0.009	0.034
m_afcrt	57	0.005	-0.011	0.005	-0.039	-0.070	-0.033	-0.004
f_afcrt	58	-0.075	-0.015	0.092	0.007	-0.054	0.064	0.046
s_afcrt	59	0.172	0.025	-0.106	-0.024	-0.047	-0.036	-0.035
MPROBN	60	-0.053	-0.054	0.017	0.031	-0.065	0.004	0.026
FPROBN	61	-0.055	-0.064	0.010	0.021	-0.001	-0.032	0.024
MPROBE	62	-0.039	-0.067	0.001	0.019	-0.044	0.041	0.091
FPROBE	63	-0.037	-0.057	-0.044	0.030	0.036	-0.020	0.105
MSPROBE	64	-0.038	-0.083	-0.001	0.015	-0.023	0.047	0.093
FSPROBE	65	-0.018	-0.046	-0.052	0.037	0.019	-0.004	0.096
MVSPROBE	66	0.061	0.003	-0.013	-0.024	0.011	0.139	0.158
FVSPROBE	67	-0.021	0.016	-0.003	0.001	-0.014	-0.008	0.177
MANTISOC	68	-0.016	0.052	-0.071	-0.000	0.055	0.149	0.227
FANTISOC	69	-0.040	0.037	-0.001	0.031	0.023	-0.059	0.253
MANX	70	-0.047	-0.068	0.079	0.013	-0.030	-0.023	-0.111
FANX	71	0.055	-0.059	-0.015	0.074	0.047	-0.052	-0.081
MDEP	72	-0.031	-0.059	0.000	-0.005	-0.077	-0.042	0.046
FDEP	73	-0.023	-0.075	-0.058	-0.007	0.036	-0.011	-0.063
MPROB7	74	-0.114	-0.084	-0.043	0.081	0.032	0.040	0.154
FPROB7	75	-0.080	-0.021	0.034	-0.049	-0.078	0.014	0.105
MPROB12	76	0.107	0.041	0.002	0.014	-0.043	0.038	0.160
MPROB15	77	-0.027	-0.032	0.055	-0.026	0.046	0.006	-0.000
MPROB17	78	0.080	-0.022	-0.041	-0.018	-0.051	-0.014	-0.006
MPROB18	79	0.024	0.005	-0.047	0.039	0.064	0.008	0.359
SESS_INI	80	-0.032	-0.053	0.026	-0.041	-0.127	-0.036	-0.105
SESS_MAX	81	-0.067	-0.096	0.010	-0.042	-0.078	-0.053	-0.113
n_ther	82	-0.002	-0.033	0.076	-0.021	0.025	0.622	-0.015
th_TYP1	83	0.202	0.027	-0.136	0.003	-0.092	-0.041	-0.003
PG_DR_TR	87	-0.030	0.042	0.064	-0.027	-0.338	-0.122	-0.085
simphob	91	-0.118	-0.196	0.114	0.041	0.055	-0.024	-0.081
sepanx	92	-0.063	-0.213	0.034	0.053	-0.113	-0.006	-0.045

		CGAS_DSM	ALL_CAT	CATSEV	SEX	ST_AE_YR	LIVEWITH	BREAK_YN
		4	6	10	12	13	14	18
genanx	93	-0.079	-0.338	0.000	0.063	0.022	-0.055	-0.055
avoid	94	-0.070	-0.132	-0.039	-0.059	-0.012	-0.067	-0.031
OCD	95	-0.144	-0.166	0.048	-0.037	0.190	-0.060	-0.026
depress	96	-0.141	-0.255	-0.025	0.015	0.282	0.073	0.093
sleep	97	0.028	-0.234	0.016	0.034	-0.107	-0.021	-0.085
PDD	99	-0.334	0.059	0.034	-0.098	-0.144	0.004	-0.038
SDD	100	-0.074	0.004	0.072	-0.088	-0.018	0.073	0.019
ADHD	101	-0.060	-0.036	-0.017	-0.087	-0.092	0.071	0.066
conduct	102	-0.119	-0.029	-0.039	-0.109	0.057	0.008	0.035
oppdef	103	-0.092	-0.094	0.102	-0.050	-0.102	0.036	-0.016
antisoc	104	0.086	-0.041	-0.047	-0.031	0.120	-0.024	0.023
eating	105	-0.009	-0.036	-0.037	-0.016	-0.091	0.053	-0.020
attch	106	-0.084	-0.097	-0.071	0.070	-0.112	0.097	0.027
wet	107	0.037	0.077	0.168	-0.081	-0.011	0.041	0.011
encop	108	0.033	0.079	0.116	-0.094	-0.078	0.037	-0.056
tics	109	-0.035	-0.013	0.014	-0.037	0.076	-0.016	-0.033
gender	110	0.041	0.022	-0.048	0.035	-0.033	-0.009	-0.020
speech	111	0.001	-0.023	-0.057	-0.067	-0.094	0.037	-0.072
habit	112	0.021	0.031	-0.066	-0.004	-0.089	0.020	-0.026
mute	113	-0.059	0.019	0.105	-0.008	0.015	-0.030	0.066
subst	114	-0.059	0.031	0.061	-0.030	0.063	0.079	0.067
schiz	115	-0.070	0.007	-0.001	0.001	0.063	0.005	-0.045
bipolar	116	-0.031	-0.028	-0.000	-0.030	0.044	0.079	0.067
sexdis	117	0.028	0.002	-0.123	-0.022	0.015	-0.034	-0.040
impulse	118	-0.108	-0.030	-0.001	-0.022	0.025	0.101	0.079
stress	119	0.029	-0.099	-0.063	0.051	0.005	0.029	0.073
psyphys	120	-0.070	-0.104	0.045	0.032	0.104	0.004	-0.081
pdis	121	-0.007	0.032	-0.062	-0.022	0.101	0.014	0.003
p_cprob	122	0.069	0.006	-0.069	0.033	-0.025	-0.061	-0.048

	DEPRIVE	par_rel	s_class	DSMQAL1	n_sibs	medhist	loss	
	19	20	21	24	28	29	30	
DEPRIVE	19	1.000						
par_rel	20	0.047	1.000					
s_class	21	-0.062	0.172	1.000				
DSMQAL1	24	0.011	-0.092	0.102	1.000			
n_sibs	28	0.031	0.022	0.050	-0.001	1.000		
medhist	29	0.045	0.057	0.072	0.034	0.001	1.000	
loss	30	0.420	0.117	0.120	0.130	0.024	0.058	1.000
dvrcesep	31	0.322	0.090	0.022	0.065	-0.009	-0.015	0.634
L.A.fstr	32	0.199	0.111	0.151	0.109	0.016	-0.032	0.595
insec	33	0.635	-0.032	-0.090	0.046	0.045	0.022	0.110
chd_hosp	34	0.068	0.039	0.173	0.009	-0.058	0.476	0.101
cm_hosp	35	-0.022	-0.027	0.054	0.009	-0.025	0.203	0.083
par_dead	36	0.188	-0.046	-0.025	0.094	0.044	-0.018	0.417
RGAFCR_M	38	-0.058	-0.085	-0.092	0.173	0.060	0.076	-0.129
RGAFCR_F	40	-0.045	-0.004	-0.224	0.096	0.005	-0.002	-0.142
PREFOURC	43	-0.051	0.069	0.189	0.035	-0.027	0.032	0.076
intest	45	-0.066	-0.095	-0.202	0.034	-0.053	-0.106	-0.124
l_diffs	48	0.068	0.019	0.029	0.045	-0.009	0.115	0.042
disrptve	49	0.056	0.038	0.071	0.016	-0.026	0.017	0.025
refusal	50	-0.019	0.091	0.088	0.010	0.109	-0.057	0.010
dfficlty	51	0.028	0.021	0.014	-0.034	-0.039	0.031	0.008
underach	52	0.037	-0.040	-0.080	0.061	0.060	0.091	0.005
peer_rln	53	0.038	-0.002	-0.013	0.056	-0.043	0.003	0.071
anxiety	54	-0.004	-0.021	0.080	0.020	-0.030	-0.007	0.007
NURSERY	55	-0.094	0.031	-0.018	-0.070	-0.136	-0.044	0.030
PG_BF_TR	56	-0.048	-0.051	-0.016	-0.021	-0.055	-0.060	-0.011
m_afctr	57	-0.060	-0.009	0.024	-0.077	-0.032	0.000	-0.009
f_afctr	58	0.017	-0.013	-0.010	0.002	0.093	-0.052	0.041
s_afctr	59	-0.021	-0.006	-0.138	-0.100	0.124	-0.088	-0.056
MPROBN	60	-0.023	0.026	0.064	-0.151	-0.041	-0.050	-0.006
FPROBN	61	0.027	0.070	0.066	-0.235	0.005	0.008	0.028
MPROBE	62	0.051	0.101	0.035	-0.157	0.023	-0.047	0.068

	DEPRIVE	par_rel	s_class	DSMQAL1	n_sibs	medhist	loss	
		19	20	21	24	28	29	30
FPROBE	63	0.090	0.036	0.060	-0.155	0.055	-0.010	0.074
MSPROBE	64	0.042	0.094	0.035	-0.150	0.033	-0.035	0.078
FSPROBE	65	0.069	0.063	0.059	-0.151	0.048	-0.023	0.073
MVSPROBE	66	0.105	0.116	0.084	-0.056	0.089	-0.013	0.183
FVSPROBE	67	0.111	0.030	0.097	-0.089	0.087	0.013	0.166
MANTISOC	68	0.122	0.067	0.042	0.031	0.104	-0.003	0.225
FANTISOC	69	0.176	0.089	0.082	-0.042	0.060	0.045	0.198
MANX	70	-0.035	-0.073	0.021	-0.018	-0.049	-0.013	-0.097
FANX	71	-0.044	0.000	-0.011	-0.064	-0.023	0.002	-0.054
MDEP	72	0.039	0.093	-0.034	-0.181	0.054	-0.066	0.022
FDEP	73	0.009	-0.079	-0.017	-0.100	0.075	-0.034	-0.074
MPROB7	74	0.047	0.090	-0.005	-0.069	-0.045	0.012	0.125
FPROB7	75	0.065	0.047	0.028	-0.108	-0.018	-0.027	0.060
MPROB12	76	0.108	0.107	-0.017	-0.063	-0.008	-0.003	0.118
MPROB15	77	0.050	0.079	0.102	-0.064	0.044	0.065	0.047
MPROB17	78	-0.017	-0.132	-0.105	-0.014	-0.019	-0.023	-0.045
MPROB18	79	0.189	0.115	-0.001	0.008	0.027	0.025	0.275
SESS_INI	80	-0.009	-0.063	-0.121	-0.047	-0.038	0.002	-0.147
SESS_MAX	81	0.026	-0.039	-0.141	-0.034	-0.024	0.014	-0.168
n_ther	82	0.016	0.006	0.100	-0.004	-0.003	-0.009	-0.020
th_TYP1	83	0.025	-0.078	-0.095	-0.063	-0.013	-0.034	-0.106
PG_DR_TR	87	-0.065	0.014	-0.084	-0.170	-0.035	-0.041	-0.099
simphob	91	-0.077	0.017	0.080	-0.058	0.042	0.002	-0.045
sepanx	92	-0.079	0.023	-0.007	-0.028	-0.031	0.007	-0.025
genanx	93	-0.046	-0.016	-0.007	-0.108	-0.051	-0.078	-0.082
avoid	94	0.004	-0.022	-0.029	-0.013	-0.049	-0.046	-0.014
OCD	95	0.026	-0.011	0.019	0.027	-0.053	-0.006	-0.004
depress	96	0.065	0.014	-0.004	0.042	0.065	0.019	0.089
sleep	97	-0.088	-0.011	-0.028	-0.025	0.005	0.004	-0.074
PDD	99	0.104	0.095	0.023	0.026	-0.052	0.105	0.015
SDD	100	0.054	0.033	0.049	-0.010	-0.007	0.038	0.047
ADHD	101	0.005	-0.033	0.028	0.017	0.018	0.027	-0.008

	DEPRIVE	par_rel	s_class	DSMQAL1	n_sibs	medhist	loss	
		19	20	21	24	28	29	30
conduct	102	0.025	0.055	0.082	0.029	0.099	0.022	0.056
oppdef	103	0.023	-0.031	-0.036	-0.059	-0.006	-0.047	0.017
antisoc	104	-0.013	-0.029	0.019	-0.018	0.043	-0.038	-0.008
eating	105	0.010	0.005	-0.054	-0.090	-0.008	0.035	-0.016
attch	106	0.041	0.077	0.015	-0.021	-0.093	-0.009	0.105
wet	107	0.046	0.039	0.036	0.044	0.030	-0.041	0.018
encop	108	0.016	-0.006	0.016	0.027	0.114	0.011	-0.052
tics	109	-0.029	0.023	0.054	0.014	-0.036	-0.054	0.002
gender	110	-0.070	-0.020	-0.021	-0.014	0.054	-0.018	-0.030
speech	111	-0.038	0.001	0.011	-0.074	-0.038	-0.021	-0.041
habit	112	-0.028	-0.037	0.048	0.011	-0.051	-0.024	0.009
mute	113	0.049	-0.024	0.037	0.081	0.075	0.017	0.037
subst	114	-0.048	0.018	0.043	0.047	-0.048	-0.020	-0.020
schiz	115	0.029	0.072	0.042	-0.022	-0.015	-0.004	-0.045
bipolar	116	0.028	0.050	0.036	0.047	0.055	-0.020	0.104
sexdis	117	-0.096	-0.050	-0.016	-0.007	-0.045	-0.039	-0.040
impulse	118	0.046	0.039	0.063	-0.029	0.119	-0.052	0.088
stress	119	0.037	0.016	0.014	0.005	0.014	0.010	0.075
psyphys	120	0.018	0.003	0.012	-0.041	-0.012	0.100	-0.066
pdis	121	-0.058	-0.089	0.051	0.053	-0.027	-0.039	-0.009
p_cprob	122	0.000	-0.089	-0.056	-0.131	-0.080	0.025	-0.047

	dvrcesep	L.A.fstr	insec	chd_hosp	cm_hosp	par_dead	RGAFCR_M	
	31	32	33	34	35	36	38	
dvrcesep	31	1.000						
L.A.fstr	32	0.101	1.000					
insec	33	0.169	-0.004	1.000				
chd_hosp	34	-0.070	0.003	0.030	1.000			
cm_hosp	35	0.009	-0.032	-0.032	0.535	1.000		
par_dead	36	-0.025	0.080	0.026	-0.024	-0.030	1.000	
RGAFCR_M	38	-0.123	-0.044	0.012	0.051	0.010	-0.051	1.000
RGAFCR_F	40	-0.174	-0.054	0.000	0.003	0.021	0.028	0.360
PREFOURC	43	-0.099	0.161	-0.089	0.072	-0.009	0.015	-0.075
intest	45	-0.059	-0.131	-0.041	-0.121	-0.034	0.041	-0.020
l_diffs	48	-0.021	0.048	0.081	0.122	0.006	0.017	0.029
disrptve	49	0.001	0.048	0.038	0.042	-0.040	0.041	-0.033
refusal	50	-0.002	-0.006	-0.053	-0.018	-0.034	0.047	-0.001
dfficlty	51	0.003	0.003	0.060	0.112	0.045	-0.034	0.039
underach	52	-0.024	0.006	0.079	0.059	0.027	0.051	0.058
peer_rln	53	0.039	0.071	-0.011	-0.027	-0.053	0.023	-0.004
anxiety	54	-0.029	0.033	-0.031	0.038	-0.025	-0.019	0.017
NURSERY	55	0.043	0.029	-0.103	-0.060	-0.035	-0.027	-0.063
PG_BF_TR	56	-0.004	0.014	-0.084	0.010	0.096	-0.023	-0.044
m_afctr	57	-0.004	-0.021	0.003	0.026	0.095	-0.017	-0.122
f_afctr	58	0.035	0.089	0.006	-0.010	-0.012	-0.024	-0.052
s_afctr	59	0.007	-0.082	0.001	-0.056	0.008	-0.010	-0.035
MPROBN	60	0.034	-0.035	-0.056	0.010	0.041	-0.021	-0.444
FPROBN	61	0.078	0.014	0.003	-0.025	-0.047	-0.051	-0.038
MPROBE	62	0.099	-0.013	-0.019	-0.043	-0.008	0.028	-0.460
FPROBE	63	0.166	-0.014	0.086	-0.047	-0.050	-0.037	-0.041
MSPROBE	64	0.102	-0.005	-0.038	-0.035	-0.005	0.025	-0.439
FSPROBE	65	0.146	-0.006	0.073	-0.042	-0.043	-0.026	-0.031
MVSPROBE	66	0.146	0.044	0.005	0.017	0.036	0.141	-0.333
FVSPROBE	67	0.188	0.062	0.098	-0.009	-0.032	0.035	-0.044
MANTISOC	68	0.207	0.094	0.092	-0.050	-0.024	0.135	-0.162
FANTISOC	69	0.341	0.017	0.139	-0.052	-0.043	-0.029	-0.021

		dvrcesep	L.A.fstr	insec	chd_hosp	cm_hosp	par_dead	RGAFCR_M
		31	32	33	34	35	36	38
MANX	70	-0.092	-0.035	-0.035	-0.004	0.009	-0.041	-0.237
FANX	71	-0.070	-0.025	-0.041	-0.018	-0.033	-0.018	0.059
MDEP	72	0.082	-0.098	-0.011	-0.080	-0.032	0.017	-0.301
FDEP	73	-0.043	-0.049	0.026	-0.012	-0.003	-0.042	-0.058
MPROB7	74	0.106	0.093	-0.017	0.062	0.074	0.024	-0.201
FPROB7	75	0.132	0.020	0.138	-0.013	-0.027	-0.027	-0.029
MPROB12	76	0.168	-0.052	0.055	-0.009	0.034	0.043	-0.219
MPROB15	77	0.037	0.017	0.039	0.042	0.001	-0.035	-0.246
MPROB17	78	0.015	-0.059	0.032	-0.030	0.043	-0.054	-0.027
MPROB18	79	0.501	0.004	0.206	-0.048	-0.035	-0.095	-0.092
SESS_INI	80	-0.065	-0.133	0.035	0.016	0.021	-0.067	0.111
SESS_MAX	81	-0.074	-0.147	0.098	-0.000	0.004	-0.080	0.104
n_ther	82	0.006	0.013	0.041	0.002	-0.035	-0.052	-0.062
th_TYP1	83	-0.027	-0.104	0.028	-0.058	-0.010	-0.005	0.086
PG_DR_TR	87	-0.052	-0.079	-0.047	-0.043	0.013	-0.035	-0.057
simp hob	91	-0.070	-0.002	-0.075	0.037	0.057	-0.018	-0.006
sepanx	92	-0.042	0.017	-0.035	-0.007	0.001	-0.014	0.004
genanx	93	-0.040	-0.070	-0.045	-0.031	-0.031	-0.045	-0.039
avoid	94	-0.039	0.013	-0.023	-0.031	-0.023	0.019	0.021
OCD	95	-0.016	0.015	-0.003	0.067	0.022	-0.004	-0.006
depress	96	0.108	0.014	0.086	-0.006	-0.008	0.044	-0.039
sleep	97	-0.060	-0.058	-0.032	-0.004	-0.009	-0.051	0.045
PDD	99	-0.024	0.068	0.032	0.109	0.036	-0.048	-0.069
SDD	100	-0.007	-0.043	0.049	0.050	0.025	0.074	-0.004
ADHD	101	-0.016	-0.003	0.031	-0.039	-0.019	0.040	-0.034
conduct	102	0.059	0.041	0.039	-0.055	-0.023	0.017	-0.008
oppdef	103	-0.030	0.084	-0.035	-0.007	-0.013	-0.023	-0.061
antisoc	104	0.033	-0.003	0.013	0.013	-0.019	-0.038	0.027
eating	105	0.004	-0.033	-0.007	0.027	-0.016	-0.031	-0.010
attch	106	-0.003	0.196	0.017	0.035	-0.020	-0.041	-0.058
wet	107	-0.021	0.043	0.016	-0.011	0.044	0.012	-0.015
encop	108	-0.021	-0.029	0.037	-0.035	-0.027	-0.053	0.055

		dvrcesep	L.A.fstr	insec	chd_hosp	cm_hosp	par_dead	RGAFCR_M
		31	32	33	34	35	36	38
tics	109	-0.036	0.041	-0.000	-0.046	-0.018	0.006	0.010
gender	110	-0.004	-0.025	-0.066	-0.050	-0.012	-0.024	-0.019
speech	111	-0.057	-0.029	-0.003	0.013	0.028	0.004	0.057
habit	112	-0.009	0.080	-0.033	-0.016	-0.013	-0.026	0.028
mute	113	0.090	-0.017	-0.031	-0.033	-0.008	-0.016	-0.057
subst	114	-0.016	-0.010	-0.030	-0.019	-0.005	-0.009	-0.008
schiz	115	-0.036	-0.021	0.034	0.006	-0.010	-0.020	-0.024
bipolar	116	0.085	0.141	-0.030	-0.019	-0.005	-0.009	-0.020
sexdis	117	-0.032	-0.019	-0.061	-0.038	-0.009	-0.018	-0.036
impulse	118	-0.004	0.089	0.006	-0.010	-0.012	0.157	0.001
stress	119	0.064	-0.001	0.040	-0.009	-0.018	0.044	-0.012
psyphys	120	-0.064	-0.001	0.030	0.099	-0.018	-0.036	-0.008
pdis	121	0.019	-0.019	-0.023	-0.038	-0.009	-0.018	0.003
p_cprob	122	-0.049	-0.021	0.007	-0.043	-0.032	-0.015	-0.064

	RGAFCR_F	PREFOURC	intest	l_diffs	disrptve	refusal	dficlty	
	40	43	45	48	49	50	51	
RGAFCR_F	40	1.000						
PREFOURC	43	-0.000	1.000					
intest	45	0.044	-0.145	1.000				
l_diffs	48	-0.024	0.073	-0.190	1.000			
disrptve	49	-0.109	0.063	-0.080	0.398	1.000		
refusal	50	0.010	0.025	0.005	0.292	0.020	1.000	
dficlty	51	0.014	0.032	-0.200	0.387	-0.001	-0.083	1.000
underach	52	0.009	-0.031	0.050	0.489	0.035	-0.010	0.022
peer_rln	53	-0.005	0.044	-0.076	0.549	0.191	0.114	-0.029
anxiety	54	0.003	0.055	-0.037	0.302	0.030	0.163	0.016
NURSERY	55	-0.016	0.124	-0.052	-0.036	0.045	-0.059	-0.003
PG_BF_TR	56	0.059	-0.003	-0.020	-0.027	0.071	-0.015	-0.025
m_afctr	57	-0.021	-0.047	0.067	-0.030	-0.038	-0.025	0.023
f_afctr	58	-0.062	-0.063	-0.053	0.050	0.159	0.028	-0.040
s_afctr	59	-0.051	-0.121	0.122	-0.148	-0.115	-0.061	-0.041
MPROBN	60	-0.048	0.029	0.049	-0.018	-0.027	0.046	-0.063
FPROBN	61	-0.470	-0.053	-0.000	0.001	0.040	0.013	-0.014
MPROBE	62	-0.084	-0.015	0.051	-0.026	-0.062	0.086	-0.057
FPROBE	63	-0.509	-0.070	0.030	-0.030	0.004	0.030	-0.024
MSPROBE	64	-0.065	-0.012	0.054	-0.044	-0.046	0.068	-0.071
FSPROBE	65	-0.471	-0.070	0.040	-0.047	-0.017	0.035	-0.019
MVSPROBE	66	0.016	0.023	-0.000	-0.034	-0.033	0.034	-0.051
FVSPROBE	67	-0.351	-0.034	-0.050	-0.069	-0.035	-0.004	-0.026
MANTISOC	68	-0.085	-0.050	-0.033	0.032	0.081	0.112	-0.021
FANTISOC	69	-0.357	-0.054	-0.065	0.002	0.051	0.024	-0.007
MANX	70	-0.009	0.019	0.009	-0.017	-0.087	0.014	0.015
FANX	71	-0.177	0.024	0.044	-0.058	0.007	-0.009	-0.032
MDEP	72	-0.078	-0.050	0.066	-0.078	-0.071	0.027	-0.044
FDEP	73	-0.284	-0.063	0.069	-0.014	-0.045	0.016	0.006
MPROB7	74	-0.071	0.001	-0.010	0.050	0.032	0.058	-0.024
FPROB7	75	-0.287	-0.029	-0.016	-0.065	-0.007	-0.011	-0.001
MPROB12	76	-0.013	-0.035	0.037	-0.060	-0.064	0.001	0.019

		RGAFCR_F	PREFOURC	intest	l_diffs	disrptve	refusal	dficilty
		40	43	45	48	49	50	51
MPROB15	77	-0.011	0.028	0.021	-0.007	-0.051	-0.029	-0.005
MPROB17	78	-0.063	-0.051	0.105	-0.101	-0.082	-0.046	-0.056
MPROB18	79	-0.207	-0.146	-0.015	0.009	-0.039	0.042	-0.001
SESS_INI	80	0.047	-0.056	0.187	0.024	-0.025	-0.028	0.053
SESS_MAX	81	0.075	-0.081	0.169	0.063	-0.040	-0.014	0.061
n_ther	82	-0.022	0.013	0.008	0.022	0.025	0.039	-0.008
th_TYP1	83	0.037	-0.117	0.115	-0.103	-0.082	-0.035	-0.068
PG_DR_TR	87	0.033	-0.025	0.010	-0.082	0.007	0.000	-0.025
simphob	91	0.045	0.023	0.022	-0.023	-0.086	0.203	-0.078
sepanx	92	0.000	-0.028	-0.013	-0.074	-0.084	0.064	0.008
genanx	93	-0.008	-0.065	0.049	0.011	-0.028	0.041	-0.044
avoid	94	0.003	-0.021	0.019	0.057	-0.060	0.066	0.030
OCD	95	0.019	-0.011	-0.003	0.011	-0.075	0.008	-0.026
depress	96	-0.055	0.009	0.059	0.137	-0.026	0.038	-0.023
sleep	97	-0.057	-0.025	0.034	-0.108	-0.043	-0.082	-0.086
PDD	99	-0.030	0.090	-0.201	0.149	0.110	-0.025	0.064
SDD	100	-0.010	-0.037	-0.129	0.207	0.011	-0.051	0.363
ADHD	101	-0.046	0.065	-0.044	0.114	0.197	-0.007	0.040
conduct	102	-0.080	0.085	-0.033	0.127	0.239	0.005	0.068
oppdef	103	0.001	0.029	-0.048	0.022	0.154	-0.009	0.005
antisoc	104	0.015	-0.047	0.008	-0.051	-0.049	0.028	0.014
eating	105	0.015	0.009	0.021	-0.029	-0.005	-0.035	-0.022
attch	106	0.014	0.150	-0.105	-0.001	0.032	-0.046	0.026
wet	107	-0.005	0.052	0.026	-0.050	-0.046	-0.082	-0.025
encop	108	0.051	-0.039	0.068	-0.004	0.020	-0.008	-0.014
tics	109	-0.035	0.021	-0.011	0.006	-0.014	-0.039	-0.032
gender	110	0.047	-0.048	0.064	-0.056	-0.032	-0.027	-0.040
speech	111	0.045	-0.039	-0.094	-0.026	-0.047	-0.059	0.079
habit	112	0.046	0.073	-0.088	-0.009	0.056	-0.029	0.031
mute	113	-0.039	-0.001	-0.014	0.026	-0.021	0.066	0.034
subst	114	-0.008	-0.005	-0.012	0.002	-0.012	0.134	-0.015
schiz	115	-0.027	0.035	-0.025	0.039	0.030	0.042	0.013

		RGAFCR_F	PREFOURC	intest	l_diffs	disrptve	refusal	dfficlty
		40	43	45	48	49	50	51
bipolar	116	-0.015	0.008	-0.000	0.041	-0.012	0.134	-0.015
sexdis	117	0.012	0.009	0.018	-0.056	0.039	-0.020	-0.030
impulse	118	-0.035	0.016	-0.031	0.035	0.159	0.028	-0.040
stress	119	-0.058	-0.030	-0.002	-0.063	-0.048	-0.004	-0.035
psyphys	120	-0.039	0.029	0.020	-0.023	-0.016	0.032	-0.035
pdis	121	-0.052	0.009	0.016	0.043	-0.024	0.052	-0.030
p_cprob	122	-0.034	0.014	0.030	-0.000	0.032	-0.027	-0.010

	underach	peer_rln	anxiety	NURSERY	PG_BF_TR	m_afctrt	f_afctrt	
	52	53	54	55	56	57	58	
underach	52	1.000						
peer_rln	53	0.144	1.000					
anxiety	54	0.020	0.105	1.000				
NURSERY	55	-0.116	0.071	0.020	1.000			
PG_BF_TR	56	-0.048	0.053	-0.002	0.215	1.000		
m_afctrt	57	-0.019	-0.024	0.035	0.052	-0.026	1.000	
f_afctrt	58	0.004	0.035	-0.020	-0.028	0.027	0.055	1.000
s_afctrt	59	-0.051	-0.044	-0.049	0.069	-0.005	-0.005	-0.004
MPROBN	60	-0.013	0.022	0.013	0.071	0.051	0.149	0.036
FPROBN	61	-0.020	0.015	-0.025	0.003	-0.077	0.047	0.015
MPROBE	62	-0.043	0.039	0.042	0.087	0.072	0.130	0.054
FPROBE	63	-0.012	0.004	-0.021	-0.000	-0.073	0.032	-0.020
MSPROBE	64	-0.065	0.036	0.054	0.077	0.093	0.126	0.069
FSPROBE	65	-0.020	-0.012	-0.029	-0.000	-0.073	0.009	-0.029
MVSPROBE	66	-0.022	-0.004	0.017	0.036	0.066	0.052	0.091
FVSPROBE	67	-0.047	-0.002	-0.038	-0.022	-0.072	-0.005	-0.026
MANTISOC	68	-0.023	0.012	-0.003	0.022	-0.000	-0.001	0.127
FANTISOC	69	-0.042	0.018	-0.003	0.014	-0.046	0.025	-0.034
MANX	70	-0.039	0.062	0.010	0.016	0.069	0.076	0.035
FANX	71	-0.013	-0.040	-0.026	-0.056	-0.032	0.035	0.030
MDEP	72	-0.062	-0.024	0.004	0.065	0.046	0.077	-0.003
FDEP	73	0.016	0.007	-0.020	0.041	-0.021	0.008	-0.032
MPROB7	74	0.016	0.038	0.050	0.097	0.057	0.088	-0.022
FPROB7	75	-0.076	-0.043	-0.012	-0.017	-0.062	0.059	0.044
MPROB12	76	-0.071	-0.007	-0.003	0.076	0.110	0.037	-0.019
MPROB15	77	0.029	0.011	0.036	0.036	0.006	0.092	0.068
MPROB17	78	-0.019	-0.038	-0.062	0.057	-0.010	0.044	-0.030
MPROB18	79	0.010	0.028	-0.068	-0.010	-0.025	0.096	0.019
SESS_INI	80	0.009	0.043	0.007	0.074	0.039	0.066	-0.030
SESS_MAX	81	0.035	0.045	0.039	0.086	0.062	0.042	-0.048
n_ther	82	0.070	-0.041	0.031	0.014	0.037	-0.010	-0.028
th_TYP1	83	-0.060	-0.020	-0.053	0.027	-0.020	0.043	-0.022

		underach	peer_rln	anxiety	NURSERY	PG_BF_TR	m_afctrt	f_afctrt
		52	53	54	55	56	57	58
PG_DR_TR	87	-0.109	0.039	-0.038	0.103	0.124	0.046	0.062
simplob	91	-0.050	-0.025	0.030	-0.056	-0.032	0.006	-0.026
sepanx	92	-0.068	-0.068	-0.013	0.000	0.006	0.092	-0.030
genanx	93	-0.029	0.017	0.132	0.001	0.025	0.070	-0.012
avoid	94	0.006	0.063	0.078	-0.026	0.006	-0.036	-0.018
OCD	95	-0.001	-0.016	0.111	-0.044	-0.041	-0.013	-0.023
depress	96	0.197	0.144	0.040	-0.086	-0.014	-0.046	-0.034
sleep	97	-0.013	-0.049	-0.006	-0.023	-0.033	0.067	0.053
PDD	99	-0.003	0.114	0.035	0.079	0.058	-0.038	0.130
SDD	100	0.113	-0.007	-0.030	-0.011	-0.004	-0.004	-0.036
ADHD	101	0.030	0.033	0.062	0.091	-0.008	0.066	0.078
conduct	102	-0.015	0.039	0.037	-0.055	-0.024	0.002	-0.019
oppdef	103	-0.055	0.037	-0.056	0.012	0.004	0.012	0.005
antisoc	104	-0.031	-0.041	-0.031	-0.044	-0.043	-0.030	-0.015
eating	105	-0.053	0.004	0.029	0.043	0.089	0.032	-0.013
attch	106	-0.081	0.043	-0.034	0.139	0.051	-0.032	0.070
wet	107	-0.002	-0.021	-0.035	-0.050	-0.026	-0.006	0.022
encop	108	0.033	-0.021	-0.010	-0.038	-0.035	-0.042	0.047
tics	109	0.022	-0.009	0.020	-0.041	-0.040	0.023	-0.014
gender	110	-0.059	-0.004	-0.020	0.024	-0.027	0.055	-0.010
speech	111	-0.041	-0.003	-0.044	0.085	0.092	-0.007	-0.021
habit	112	-0.063	-0.009	-0.021	0.068	0.022	-0.020	-0.010
mute	113	-0.038	0.031	0.097	-0.018	0.065	-0.012	-0.006
subst	114	-0.022	-0.016	-0.007	-0.011	-0.010	-0.007	-0.004
schiz	115	-0.012	0.055	-0.017	-0.024	-0.023	-0.016	-0.008
bipolar	116	-0.022	0.085	-0.007	-0.011	-0.010	-0.007	-0.004
sexdis	117	-0.044	-0.032	-0.015	-0.021	-0.020	0.084	-0.007
impulse	118	0.036	-0.004	-0.020	-0.028	-0.027	-0.019	-0.010
stress	119	-0.026	-0.038	-0.030	0.027	-0.041	0.070	-0.015
psyphys	120	-0.005	-0.038	-0.030	-0.043	-0.041	-0.029	-0.015
pdis	121	-0.003	0.019	0.175	-0.021	-0.020	0.084	-0.007
p_cprob	122	-0.003	0.043	-0.023	0.073	0.059	-0.020	-0.025

	s_afcrt	MPROBN	FPROBN	MPROBE	FPROBE	MSPROBE	FSPROBE	
	59	60	61	62	63	64	65	
s_afcrt	59	1.000						
MPROBN	60	0.020	1.000					
FPROBN	61	0.090	0.091	1.000				
MPROBE	62	0.069	0.753	0.063	1.000			
FPROBE	63	0.136	0.066	0.769	0.072	1.000		
MSPROBE	64	0.082	0.678	0.040	0.926	0.062	1.000	
FSPROBE	65	0.156	0.057	0.688	0.057	0.946	0.062	1.000
MVSPROBE	66	0.042	0.209	-0.039	0.495	-0.046	0.522	-0.052
FVSPROBE	67	0.060	-0.031	0.362	-0.020	0.619	-0.024	0.657
MANTISOC	68	0.011	0.131	0.017	0.260	0.065	0.239	0.061
FANTISOC	69	0.052	0.020	0.388	0.030	0.629	0.023	0.608
MANX	70	0.019	0.526	-0.025	0.550	-0.042	0.521	-0.044
FANX	71	0.078	-0.005	0.346	0.018	0.333	0.029	0.275
MDEP	72	0.111	0.432	0.068	0.691	0.104	0.623	0.105
FDEP	73	0.155	0.104	0.331	0.078	0.503	0.053	0.485
MPROB7	74	-0.048	0.313	0.040	0.287	0.023	0.238	0.000
FPROB7	75	-0.044	0.022	0.463	0.039	0.409	0.013	0.356
MPROB12	76	0.011	0.165	-0.010	0.411	0.020	0.398	0.005
MPROB15	77	0.049	0.237	0.006	0.325	0.016	0.331	-0.002
MPROB17	78	0.213	0.021	0.064	0.045	0.083	0.037	0.062
MPROB18	79	0.062	0.123	0.184	0.226	0.258	0.224	0.227
SESS_INI	80	0.020	0.046	0.014	0.063	0.004	0.059	0.003
SESS_MAX	81	0.034	0.041	0.015	0.051	0.023	0.049	0.034
n_ther	82	0.040	0.106	-0.014	0.054	0.069	0.071	0.081
th_TYP1	83	0.047	-0.044	-0.025	0.015	-0.021	0.017	-0.012
PG_DR_TR	87	0.036	0.087	-0.007	0.093	-0.035	0.096	-0.037
simphob	91	-0.041	0.012	0.020	0.008	0.004	0.004	-0.005
sepanx	92	0.023	0.076	0.042	0.084	0.016	0.080	0.014
genanx	93	0.034	0.054	0.089	0.085	0.064	0.098	0.052
avoid	94	0.001	0.042	-0.030	0.099	-0.063	0.091	-0.060
OCD	95	-0.034	0.011	-0.009	0.003	-0.000	-0.005	-0.044
depress	96	-0.011	-0.012	0.018	-0.018	0.051	0.005	0.047

	s_afc	trt	M	F	M	F	M	F
			PROBN	PROBN	PROBE	PROBE	PROBE	PROBE
		59	60	61	62	63	64	65
sleep	97	0.114	-0.003	0.062	-0.001	0.055	0.016	0.076
PDD	99	-0.064	-0.002	0.047	0.002	0.009	-0.002	-0.008
SDD	100	-0.077	-0.023	-0.015	-0.032	-0.028	-0.055	-0.020
ADHD	101	-0.066	-0.011	-0.008	0.011	0.018	0.021	0.021
conduct	102	-0.062	-0.009	0.023	0.008	0.060	0.009	0.053
oppdef	103	-0.065	-0.018	-0.017	0.002	-0.020	0.005	-0.005
antisoc	104	0.033	-0.040	-0.025	-0.053	-0.020	-0.047	-0.009
eating	105	0.062	0.016	-0.029	0.032	-0.008	0.049	0.002
attch	106	-0.026	0.030	-0.002	0.044	-0.040	0.003	-0.048
wet	107	0.045	-0.013	-0.014	-0.021	-0.036	-0.006	-0.042
encop	108	-0.004	-0.065	-0.058	-0.049	-0.088	-0.045	-0.076
tics	109	-0.036	-0.032	-0.001	-0.043	0.009	-0.038	0.021
gender	110	-0.004	0.059	-0.011	0.054	-0.035	0.029	-0.029
speech	111	-0.058	0.019	-0.009	0.003	-0.012	-0.015	-0.025
habit	112	-0.045	-0.057	-0.040	-0.051	-0.053	-0.054	-0.047
mute	113	-0.028	-0.035	-0.025	0.011	0.013	0.019	-0.029
subst	114	-0.016	-0.020	-0.014	-0.026	-0.019	-0.023	-0.017
schiz	115	0.010	0.061	-0.001	0.029	0.011	0.040	0.018
bipolar	116	-0.016	-0.020	-0.014	0.039	-0.019	0.046	-0.017
sexdis	117	-0.032	0.049	0.006	-0.003	-0.018	0.005	-0.033
impulse	118	-0.042	-0.031	0.015	-0.008	0.010	0.003	0.003
stress	119	0.012	-0.006	0.065	0.043	0.063	0.027	0.068
psyphys	120	0.012	0.024	0.047	-0.015	0.024	-0.008	-0.005
pdis	121	-0.032	0.019	0.041	-0.003	0.041	0.005	-0.013
p_cprob	122	-0.004	0.040	0.006	0.020	0.007	0.041	0.009

	MVSPROBE	FVSPROBE	MANTISOC	FANTISOC	MANX	FANX	MDEP
	66	67	68	69	70	71	72
MVSPROBE	66	1.000					
FVSPROBE	67	-0.038	1.000				
MANTISOC	68	0.260	0.024	1.000			
FANTISOC	69	-0.016	0.473	0.136	1.000		
MANX	70	0.116	-0.049	-0.065	-0.077	1.000	
FANX	71	-0.041	0.069	-0.024	0.065	0.066	1.000
MDEP	72	0.320	0.023	0.009	0.047	0.190	0.015
FDEP	73	-0.027	0.260	0.029	0.089	0.008	-0.015
MPROB7	74	0.080	-0.020	0.117	0.060	0.039	0.014
FPROB7	75	0.018	0.226	0.056	0.230	-0.043	0.018
MPROB12	76	0.516	-0.007	0.072	0.045	0.013	-0.053
MPROB15	77	0.308	0.041	0.014	0.015	0.170	-0.025
MPROB17	78	0.047	0.023	-0.010	0.019	0.083	0.055
MPROB18	79	0.152	0.121	0.108	0.303	0.030	-0.015
SESS_INI	80	-0.007	-0.045	-0.078	-0.046	0.074	0.036
SESS_MAX	81	-0.028	-0.038	-0.097	-0.032	0.079	0.013
n_ther	82	0.046	0.025	0.011	0.011	0.031	-0.025
th_TYP1	83	0.001	0.022	0.016	-0.010	0.018	-0.059
PG_DR_TR	87	0.053	-0.057	0.010	-0.002	0.027	-0.009
simphob	91	0.005	-0.046	0.004	-0.005	0.051	0.017
sepanx	92	-0.017	-0.051	-0.011	-0.046	0.104	-0.006
genanx	93	0.037	0.026	-0.043	0.018	0.047	0.022
avoid	94	0.106	-0.033	0.081	-0.041	0.002	-0.020
OCD	95	-0.014	0.004	-0.014	-0.022	0.086	0.061
depress	96	0.000	0.009	-0.025	0.030	-0.056	-0.042
sleep	97	-0.065	0.024	-0.071	-0.015	0.047	0.076
PDD	99	0.006	0.026	-0.001	-0.021	-0.024	-0.052
SDD	100	-0.041	-0.033	-0.028	-0.032	0.017	-0.063
ADHD	101	0.014	-0.021	0.017	0.005	0.009	0.068
conduct	102	0.055	0.044	0.116	0.146	-0.041	-0.051
oppdef	103	-0.013	-0.031	-0.012	-0.015	-0.040	0.062
antisoc	104	-0.044	-0.021	-0.030	-0.053	-0.041	-0.005

eating	105	-0.036	0.035	-0.025	-0.010	-0.025	-0.034	0.079
attch	106	0.006	-0.044	0.054	-0.031	-0.002	0.023	0.018
		MVSPROBE	FVSPROBE	MANTISOC	FANTISOC	MANX	FANX	MDEP
		66	67	68	69	70	71	72
wet	107	0.040	-0.026	-0.059	-0.009	-0.006	-0.060	-0.036
encop	108	-0.047	-0.042	-0.043	-0.075	-0.020	-0.031	-0.013
tics	109	-0.020	0.024	-0.028	0.012	-0.035	0.039	0.010
gender	110	0.061	-0.026	-0.019	-0.034	0.074	-0.026	0.027
speech	111	0.022	-0.029	-0.008	-0.012	0.052	-0.057	-0.013
habit	112	-0.030	-0.027	-0.021	-0.036	-0.045	-0.028	-0.040
mute	113	0.027	-0.017	-0.013	0.046	0.031	-0.017	0.005
subst	114	-0.010	-0.010	-0.007	-0.013	-0.016	-0.010	-0.024
schiz	115	-0.023	0.014	0.070	-0.029	0.010	0.044	0.018
bipolar	116	0.068	-0.010	-0.007	-0.013	-0.016	-0.010	0.056
sexdis	117	-0.021	-0.019	-0.015	-0.026	0.070	0.055	-0.048
impulse	118	0.002	-0.026	-0.019	0.011	-0.042	-0.026	0.027
stress	119	-0.022	0.119	0.068	0.038	-0.012	0.035	0.044
psyphys	120	-0.042	-0.019	-0.029	-0.022	0.065	0.147	-0.037
pdis	121	-0.021	-0.019	-0.015	0.034	-0.032	-0.020	-0.008
p_cprob	122	-0.026	-0.043	0.008	0.055	0.013	0.022	0.014

	FDEP	MPROB7	FPROB7	MPROB12	MPROB15	MPROB17	MPROB18	
	73	74	75	76	77	78	79	
FDEP	73	1.000						
MPROB7	74	-0.013	1.000					
FPROB7	75	0.012	0.066	1.000				
MPROB12	76	0.029	0.085	0.023	1.000			
MPROB15	77	-0.038	0.060	0.021	0.139	1.000		
MPROB17	78	0.127	0.019	0.001	0.041	-0.060	1.000	
MPROB18	79	0.044	0.112	0.168	0.125	0.112	0.035	1.000
SESS_INI	80	0.005	0.009	0.057	0.020	-0.000	0.106	0.031
SESS_MAX	81	0.064	0.005	0.028	0.016	-0.002	0.086	0.029
n_ther	82	0.020	-0.007	-0.003	0.011	0.047	0.036	0.012
th_TYP1	83	0.026	-0.079	-0.022	0.032	-0.050	-0.007	-0.010
PG_DR_TR	87	-0.041	0.014	0.011	0.111	0.017	-0.034	-0.005
simphob	91	0.003	0.014	-0.008	-0.024	-0.006	0.036	-0.081
sepanx	92	0.042	-0.005	0.066	-0.036	-0.046	0.042	-0.005
genanx	93	0.023	0.062	0.005	0.029	0.043	0.061	-0.019
avoid	94	-0.037	0.026	-0.042	0.081	0.048	-0.030	-0.021
OCD	95	-0.015	0.003	0.006	-0.046	0.036	0.017	-0.028
depress	96	0.057	0.077	0.003	-0.025	0.058	-0.061	0.106
sleep	97	0.067	-0.082	0.021	-0.026	-0.006	0.044	-0.014
PDD	99	-0.016	-0.012	0.126	-0.001	-0.009	-0.059	0.008
SDD	100	-0.022	-0.007	-0.002	-0.006	0.065	-0.096	0.021
ADHD	101	0.040	0.006	-0.034	0.017	-0.016	0.018	-0.011
conduct	102	0.011	-0.010	0.096	0.001	0.019	-0.058	0.029
oppdef	103	-0.085	-0.013	-0.047	-0.012	0.025	-0.073	0.006
antisoc	104	0.040	-0.035	-0.034	-0.030	0.016	-0.014	0.011
eating	105	-0.007	0.020	0.022	-0.025	0.036	-0.039	-0.039
attch	106	-0.027	0.153	0.002	-0.033	0.007	0.009	-0.023
wet	107	-0.066	-0.024	0.003	0.018	0.046	0.085	-0.007
encop	108	-0.071	-0.049	-0.017	-0.043	-0.044	-0.019	0.035
tics	109	-0.015	0.011	0.013	-0.028	-0.045	-0.009	-0.049
gender	110	0.015	-0.022	-0.022	-0.019	0.019	-0.030	0.019
speech	111	0.016	-0.019	0.044	0.026	0.002	-0.019	0.003

habit	112	-0.035	-0.024	-0.023	-0.021	-0.032	-0.032	-0.053
mute	113	-0.021	-0.015	-0.014	0.099	0.055	-0.019	0.020
		FDEP	MPROB7	FPROB7	MPROB12	MPROB15	MPROB17	MPROB18
		73	74	75	76	77	78	79
subst	114	-0.012	-0.008	-0.008	-0.007	-0.011	-0.011	-0.019
schiz	115	0.028	-0.019	-0.018	-0.016	-0.026	-0.025	0.039
bipolar	116	-0.012	0.160	-0.008	-0.007	-0.011	-0.011	0.071
sexdis	117	-0.024	0.068	-0.016	-0.015	0.042	-0.022	-0.037
impulse	118	-0.032	0.042	0.044	-0.019	-0.030	-0.030	-0.015
stress	119	0.044	0.051	-0.033	0.019	0.020	-0.012	0.039
psyphys	120	0.013	0.009	-0.033	-0.029	-0.013	0.088	-0.030
pdis	121	0.037	0.068	0.070	-0.015	0.042	-0.022	0.008
p_cprob	122	-0.029	0.069	-0.031	0.037	0.078	0.002	0.021

		SESS_INI	SESS_MAX	n_ther	th_TYP1	PG_DR_TR	simphob	sepanx
		80	81	82	83	87	91	92
SESS_INI	80	1.000						
SESS_MAX	81	0.869	1.000					
n_ther	82	0.071	0.081	1.000				
th_TYP1	83	0.122	0.102	0.016	1.000			
PG_DR_TR	87	0.073	0.042	-0.062	0.051	1.000		
simphob	91	0.053	0.077	-0.025	-0.106	0.003	1.000	
sepanx	92	0.018	0.034	0.002	0.021	0.027	0.109	1.000
genanx	93	0.067	0.055	0.013	0.037	0.040	0.036	-0.030
avoid	94	0.091	0.071	-0.054	0.018	-0.047	-0.020	0.048
OCD	95	0.060	0.068	-0.048	-0.048	0.021	0.037	-0.029
depress	96	-0.048	0.036	0.022	-0.059	-0.097	-0.077	-0.049
sleep	97	0.059	0.029	0.033	0.048	-0.008	0.025	0.010
PDD	99	0.061	0.072	0.013	-0.111	0.075	-0.023	-0.060
SDD	100	-0.019	-0.013	0.082	0.002	-0.018	-0.080	0.035
ADHD	101	-0.008	-0.002	0.099	-0.048	0.058	-0.041	-0.048
conduct	102	0.006	-0.008	-0.008	-0.103	-0.052	-0.051	-0.059
oppdef	103	-0.029	-0.049	0.032	0.013	0.025	-0.069	-0.047
antisoc	104	-0.054	-0.039	-0.015	0.068	-0.053	-0.041	-0.048
eating	105	0.021	0.003	0.031	0.043	0.069	0.009	0.074
attch	106	-0.022	-0.015	0.032	-0.080	0.016	-0.044	-0.052
wet	107	0.036	0.027	0.008	0.071	0.044	-0.040	-0.076
encop	108	0.004	0.007	0.021	0.024	0.076	-0.005	-0.044
tics	109	-0.034	-0.007	-0.011	-0.044	-0.001	-0.038	-0.045
gender	110	0.041	0.039	0.016	0.068	0.005	-0.026	-0.030
speech	111	0.075	0.066	0.063	0.080	0.036	-0.031	0.095
habit	112	-0.069	-0.073	0.012	-0.067	0.021	0.025	-0.032
mute	113	0.004	-0.006	-0.018	-0.047	0.034	0.069	-0.020
subst	114	-0.045	-0.054	-0.011	-0.053	-0.030	-0.010	-0.011
schiz	115	0.005	-0.008	0.029	-0.084	-0.034	-0.022	-0.026
bipolar	116	0.025	0.022	-0.011	0.026	0.045	-0.010	-0.011
sexdis	117	-0.031	-0.045	-0.021	0.012	0.014	-0.020	-0.023
impulse	118	-0.003	-0.019	-0.028	0.008	0.005	-0.026	0.019

stress	119	-0.021	-0.027	-0.013	-0.016	-0.084	-0.002	0.020
psyphys	120	0.026	0.044	0.016	-0.016	0.029	0.035	-0.013
		SESS_INI	SESS_MAX	n_ther	th_TYP1	PG_DR_TR	simphob	sepanx
		80	81	82	83	87	91	92
pdis	121	0.028	0.044	0.037	-0.028	-0.023	-0.020	-0.023
p_cprob	122	0.025	0.019	-0.021	0.011	0.073	0.022	-0.060

	genanx	avoid	OCD	depress	sleep	PDD	SDD	
	93	94	95	96	97	99	100	
genanx	93	1.000						
avoid	94	0.042	1.000					
OCD	95	-0.020	0.024	1.000				
depress	96	-0.062	-0.018	-0.043	1.000			
sleep	97	0.042	-0.020	-0.025	-0.099	1.000		
PDD	99	-0.076	-0.036	-0.013	-0.069	-0.047	1.000	
SDD	100	0.003	0.118	-0.066	-0.022	-0.038	-0.004	1.000
ADHD	101	-0.029	-0.029	-0.036	-0.054	-0.055	-0.030	-0.028
conduct	102	-0.093	-0.036	-0.044	-0.044	-0.045	-0.037	-0.001
oppdef	103	-0.083	-0.071	-0.033	-0.057	0.004	-0.052	0.012
antisoc	104	-0.075	-0.029	0.005	-0.054	0.002	-0.030	-0.028
eating	105	-0.008	-0.024	-0.030	-0.045	0.123	-0.025	0.020
attch	106	-0.060	-0.031	-0.039	-0.059	-0.060	0.101	0.017
wet	107	0.004	-0.029	-0.025	-0.074	-0.030	-0.006	-0.048
encop	108	-0.022	-0.004	-0.050	-0.034	0.005	-0.042	-0.018
tics	109	0.003	-0.027	0.053	-0.051	0.070	-0.028	-0.023
gender	110	-0.012	-0.018	-0.023	0.010	-0.035	-0.019	-0.036
speech	111	-0.005	0.105	-0.050	-0.055	-0.036	0.028	0.348
habit	112	-0.051	-0.020	-0.024	-0.037	-0.037	0.049	-0.038
mute	113	0.023	-0.012	-0.015	-0.022	-0.023	-0.012	-0.023
subst	114	-0.018	-0.007	-0.009	-0.013	-0.013	-0.007	-0.013
schiz	115	0.044	-0.015	-0.019	0.023	-0.029	0.072	-0.030
bipolar	116	-0.018	-0.007	-0.009	0.104	-0.013	-0.007	-0.013
sexdis	117	0.011	-0.014	-0.017	-0.026	0.032	-0.014	-0.027
impulse	118	0.023	-0.018	-0.023	0.054	-0.035	-0.019	0.008
stress	119	0.046	-0.028	-0.035	0.036	0.035	-0.029	-0.054
psyphys	120	-0.025	0.075	0.092	-0.023	-0.024	-0.029	-0.054
pdis	121	0.011	-0.014	0.066	-0.026	-0.026	-0.014	-0.027
p_cprob	122	-0.026	-0.017	-0.060	0.016	-0.074	-0.050	-0.024

		ADHD	conduct	oppdef	antisoc	eating	attch	wet
		101	102	103	104	105	106	107
ADHD	101	1.000						
conduct	102	0.020	1.000					
oppdef	103	0.050	-0.007	1.000				
antisoc	104	-0.023	-0.029	-0.004	1.000			
eating	105	-0.020	-0.024	0.015	-0.020	1.000		
attch	106	0.030	-0.032	-0.013	-0.026	-0.021	1.000	
wet	107	-0.046	-0.057	0.033	-0.046	-0.038	0.011	1.000
encop	108	0.011	0.030	-0.063	-0.033	-0.028	-0.036	0.197
tics	109	0.042	0.077	-0.026	-0.022	-0.018	0.035	-0.008
gender	110	-0.015	0.057	-0.037	-0.015	-0.013	-0.016	0.022
speech	111	-0.033	-0.041	-0.004	0.011	-0.028	0.045	-0.041
habit	112	0.071	-0.020	-0.001	-0.016	-0.013	0.063	-0.031
mute	113	-0.010	-0.012	-0.024	-0.010	-0.008	-0.011	-0.019
subst	114	-0.006	-0.007	-0.014	-0.006	-0.005	-0.006	-0.011
schiz	115	-0.013	-0.016	-0.031	-0.013	-0.011	-0.014	-0.025
bipolar	116	-0.006	-0.007	-0.014	-0.006	-0.005	-0.006	-0.011
sexdis	117	-0.011	-0.014	-0.028	-0.011	-0.009	-0.012	-0.022
impulse	118	-0.015	0.057	-0.037	-0.015	-0.013	-0.016	0.022
stress	119	-0.023	-0.028	-0.057	-0.023	-0.019	0.090	-0.044
psyphys	120	-0.023	-0.028	-0.001	-0.023	0.054	-0.025	-0.044
pdis	121	-0.011	-0.014	-0.028	-0.011	-0.009	-0.012	0.045
p_cprob	122	-0.002	0.073	0.020	-0.039	0.011	-0.008	0.045

	encop	tics	gender	speech	habit	mute	subst	
	108	109	110	111	112	113	114	
encop	108	1.000						
tics	109	-0.031	1.000					
gender	110	-0.021	-0.014	1.000				
speech	111	-0.047	0.015	-0.021	1.000			
habit	112	-0.023	0.078	-0.010	-0.023	1.000		
mute	113	-0.014	-0.009	-0.006	-0.014	-0.007	1.000	
subst	114	-0.008	-0.005	-0.004	-0.008	-0.004	-0.002	1.000
schiz	115	-0.018	0.105	-0.008	-0.018	-0.009	-0.005	-0.003
bipolar	116	-0.008	-0.005	-0.004	-0.008	-0.004	-0.002	-0.001
sexdis	117	-0.016	-0.011	0.183	-0.016	-0.008	-0.005	-0.003
impulse	118	0.114	-0.014	-0.010	-0.021	-0.010	-0.006	-0.004
stress	119	-0.032	-0.021	-0.015	-0.032	-0.016	-0.009	-0.005
psyphys	120	-0.032	-0.021	-0.015	-0.032	-0.016	-0.009	-0.005
pdis	121	-0.016	-0.011	-0.007	-0.016	-0.008	-0.005	-0.003
p_cprob	122	-0.001	-0.037	-0.025	-0.028	-0.027	-0.016	-0.009
schiz	115	1.000						

	schiz	bipolar	sexdis	impulse	stress	psyphys	pdis	
	115	116	117	118	119	120	121	
bipolar	116	-0.003	1.000					
sexdis	117	-0.006	-0.003	1.000				
impulse	118	-0.008	-0.004	-0.007	1.000			
stress	119	-0.012	-0.005	-0.011	-0.015	1.000		
psyphys	120	-0.012	-0.005	-0.011	-0.015	-0.022	1.000	
pdis	121	-0.006	-0.003	-0.005	-0.007	-0.011	-0.011	1.000
p_cprob	122	-0.021	-0.009	0.057	0.033	0.039	0.000	-0.019
p_cprob	122	1.000						

**APPENDIX 5.3. PROPORTION OF TOTAL VARIANCE, ACCOUNTED FOR IN PRINCIPAL COMPONENTS ANALYSIS OF MAJOR PREDICTORS**

FACTOR	VARIANCE EXPLAINED	CUMULATIVE PROPORTION OF VARIANCE		CARMINES THETA
		IN DATA SPACE	IN FACTOR SPACE	
1	5.4077	0.0588	0.0888	0.8240
2	4.3335	0.1059	0.1600	
3	3.9307	0.1486	0.2246	
4	3.0946	0.1822	0.2755	
5	2.4252	0.2086	0.3153	
6	2.3757	0.2344	0.3543	
7	2.1012	0.2573	0.3888	
8	1.9324	0.2783	0.4206	
9	1.8630	0.2985	0.4512	
10	1.7749	0.3178	0.4804	
11	1.6752	0.3360	0.5079	
12	1.5664	0.3530	0.5336	
13	1.5218	0.3696	0.5586	
14	1.4862	0.3857	0.5830	
15	1.4426	0.4014	0.6067	
16	1.4318	0.4170	0.6303	
17	1.3821	0.4320	0.6530	
18	1.3614	0.4468	0.6753	
19	1.3508	0.4615	0.6975	
20	1.3074	0.4757	0.7190	
21	1.2762	0.4896	0.7400	
22	1.2568	0.5032	0.7606	
23	1.2528	0.5169	0.7812	
24	1.2405	0.5303	0.8016	
25	1.1986	0.5434	0.8213	
26	1.1636	0.5560	0.8404	
27	1.1490	0.5685	0.8593	
28	1.1323	0.5808	0.8779	
29	1.1146	0.5929	0.8962	
30	1.1103	0.6050	0.9144	
31	1.0835	0.6168	0.9322	
32	1.0655	0.6283	0.9497	
33	1.0281	0.6395	0.9666	
34	1.0221	0.6506	0.9834	
35	1.0104	0.6616	1.0000	

APPENDIX 5.4. SORTED ROTATED FACTOR LOADINGS

(See Appendix 5.2. for category coding)

		FACTOR1 1	FACTOR2 2	FACTOR3 3	FACTOR4 4	FACTOR5 5	FACTOR6 6
FPROBE	63	0.950					
FSPROBE	65	0.928					
FPROBN	61	0.784					
FVSPROBE	67	0.715					
FANTISOC	69	0.646		0.326			
RGAFCR_F	40	-0.608					
FDEP	73	0.515					
MPROBE	62		0.923				
MSPROBE	64		0.878				
MPROBN	60		0.845				
MANX	70		0.726				
MDEP	72		0.636				
RGAFCR_M	38		-0.506				
dvrcesep	31			0.873			
BREAK_YN	18			0.839			
loss	30			0.735			0.287
MPROB18	79			0.590			
l_diffs	48				0.838		
pēer_rln	53				0.718		
SESS_INI	80					0.927	
SESS_MAX	81					0.924	
PREFOURC	43						0.594
L.A.fstr	32			0.254			0.547
attch	106						0.515
chd_hosp	34						
cm_hosp	35						
medhist	29						
MVSPROBE	66		0.360				

	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6
	1	2	3	4	5	6
MPROB12	76					
n_ther	82					
LIVewith	14					
insec	33					
DEPRIVE	19		0.297			
sdd	100					
dfficlty	51					
depress	96					
par_dead	36					
wet	107					
encop	108					
MPROB17	78					
s_afcrt	59					
conduct	102					
genanx	93					
ALL_CAT	6					
simphob	91					
f_afcrt	58					
adhd	101					
FANX	71	0.259				
p_cprob	122					
pdis	121					
anxiety	54			0.342		
eating	105					
OCD	95					
sexdis	117					
gender	110					
bipolar	116					
avoid	94					
mute	113					
oppdef	103					
stress	119					

	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6
	1	2	3	4	5	6
schiz	115					
tics	109					
antisoc	104					
subst	114					
n_sibs	28					
refusal	50			0.306		
CGAS_DSM	4					-0.271
CATSEV	10					
th_TYP1	83					-0.279
pdd	99					0.377
speech	111					
MPROB15	77		0.330			
MPROB7	74		0.258			
FPROB7	75	0.454				
DSMQAL1	24					
MANTISOC	68					
SEX	12					
habit	112					
sepanx	92					
PG_DR_TR	87					
disrptve	49			0.315		
par_rel	20					
ST_AE_YR	13					
psyphys	120					
sleep	97					
underach	52			0.486		
intest	45					-0.347
PG_BF_TR	56					
m_afctrt	57					
NURSERY	55					0.272
s_class	21					0.272
impulse	118					

		FACTOR7 7	FACTOR8 8	FACTOR9 9	FACTOR10 10	FACTOR11 11	FACTOR12 12
FPROBE	63						
FSPROBE	65						
FPROBN	61						
FVSPROBE	67						
FANTISOC	69						
RGAFCR_F	40						
FDEP	73						
MPROBE	62		0.253				
MSPROBE	64		0.281				
MPROBN	60						
MANX	70		-0.270				
MDEP	72		0.288				
RGAFCR_M	38						
dvrcesep	31						
BREAK_YN	18						
loss	30						
MPROB18	79						
l_diffs	48					0.313	
peer_rln	53						
SESS_INI	80						
SESS_MAX	81						
PREFOURC	43						
L.A.fstr	32						
attch	106						
chd_hosp	34	0.863					
cm_hosp	35	0.743					
medhist	29	0.652					
MVSPROBE	66		0.706				
MPROB12	76		0.684				
n_ther	82			0.864			
LIVEWITH	14			0.832			
insec	33				0.843		

	FACTOR7	FACTOR8	FACTOR9	FACTOR10	FACTOR11	FACTOR12
	7	8	9	10	11	12
DEPRIVE 19				0.780		
sdd 100					0.747	
dficlty 51					0.742	
depress 96						0.719
par_dead 36						
wet 107						
encop 108						
MPROB17 78						
s_afcrt 59						
conduct 102						
genanx 93						
ALL_CAT 6						-0.347
simphob 91						
f_afcrt 58						
adhd 101						
FANX 71						
p_cprob 122						
pdis 121						
anxiety 54						
eating 105						
OCD 95						
sexdis 117						
gender 110						
bipolar 116						
avoid 94						
mute 113						
oppdef 103						
stress 119						
schiz 115						
tics 109						
antisoc 104						
subst 114						

	FACTOR7 7	FACTOR8 8	FACTOR9 9	FACTOR10 10	FACTOR11 11	FACTOR12 12
n_sibs 28						
refusal 50						
CGAS_DSM 4						-0.339
CATSEV 10						
th_TYP1 83						-0.273
pdd 99						
speech 111					0.414	
MPROB15 77		0.343				
MPROB7 74						
FPROB7 75						
DSMQAL1 24						
MANTISOC 68						
SEX 12						
habit 112						
sepanx 92						
PG_DR_TR 87						
disrptve 49						
par_rel 20		0.287				
ST_AE_YR 13						0.359
psyphys 120						
sleep 97						
underach 52						0.407
intest 45					-0.326	
PG_BF_TR 56				-0.253		
m_afcrt 57						
NURSERY 55				-0.309		
s_class 21						
impulse 118						

	FACTOR13	FACTOR14	FACTOR15	FACTOR16	FACTOR17	FACTOR18
	13	14	15	16	17	18
FPROBE	63					
FSPROBE	65					
FPROBN	61					
FVSPROBE	67					
FANTISOC	69					
RGAFCR_F	40					
FDEP	73		0.344			
MPROBE	62					
MSPROBE	64					
MPROBN	60					
MANX	70					
MDEP	72					
RGAFCR_M	38					
dvrcesep	31					
BREAK_YN	18	0.324				
loss	30	0.389				
MPROB18	79	-0.321				
l_diffs	48					
peer_rln	53					
SESS_INI	80					
SESS_MAX	81					
PREFOURC	43					
L.A.fstr	32					
attch	106					
chd_hosp	34					
cm_hosp	35					
medhist	29					
MVSPROBE	66					
MPROB12	76					
n_ther	82					
LIVewith	14					
insec	33					

	FACTOR13	FACTOR14	FACTOR15	FACTOR16	FACTOR17	FACTOR18
	13	14	15	16	17	18
DEPRIVE 19						
sdd 100						
dficlty 51						
depress 96						
par_dead 36	0.815					
wet 107		0.642				
encop 108		0.625				
MPROB17 78			0.715			
s_afcrt 59			0.578			
conduct 102				0.788		
genanx 93					0.754	
ALL_CAT 6					-0.635	
simphob 91						0.763
f_afcrt 58						
adhd 101						
FANX 71						
p_cprob 122						
pdis 121						
anxiety 54						
eating 105						
OCD 95						
sexdis 117						
gender 110						
bipolar 116						
avoid 94						
mute 113						
oppdef 103						
stress 119						
schiz 115						
tics 109						
antisoc 104						
subst 114						

		FACTOR13	FACTOR14	FACTOR15	FACTOR16	FACTOR17	FACTOR18
		13	14	15	16	17	18
n_sibs	28				0.340		
refusal	50						0.417
CGAS_DSM	4						
CATSEV	10		0.395				
th_TYP1	83						
pdd	99						
speech	111						
MPROB15	77						
MPROB7	74						
FPROB7	75						
DSMQAL1	24						
MANTISOC	68				0.288		
SEX	12		-0.286				
habit	112						
sepanx	92						0.428
PG_DR_TR	87						
disrptve	49				0.415		
par_rel	20						
ST_AE_YR	13						
psyphys	120						
sleep	97						
underach	52						
intest	45						
PG_BF_TR	56						
m_afctrt	57						
NURSERY	55						
s_class	21			-0.268			
impulse	118	0.451			0.251	0.251	

	FACTOR19	FACTOR20	FACTOR21	FACTOR22	FACTOR23	FACTOR24
	19	20	21	22	23	24
FPROBE	63					
FSPROBE	65					
FPROBN	61		0.251			
FVSPROBE	67					
FANTISOC	69					
RGAFCR_F	40					
FDEP	73					
MPROBE	62					
MSPROBE	64					
MPROBN	60					
MANX	70					
MDEP	72					
RGAFCR_M	38					
dvrcesep	31					
BREAK_YN	18					
loss	30					
MPROB18	79					
l_diffs	48					
peer_rln	53					
SESS_INI	80					
SESS_MAX	81					
PREFOURC	43					
L.A.fstr	32					
attch	106					
chd_hosp	34					
cm_hosp	35					
medhist	29					
MVSPROBE	66					
MPROB12	76					
n_ther	82					
LIVEWITH	14					
insec	33					

	FACTOR19 19	FACTOR20 20	FACTOR21 21	FACTOR22 22	FACTOR23 23	FACTOR24 24
DEPRIVE	19					
sdd	100					
dficlty	51					
depress	96					
par_dead	36					
wet	107					
encop	108					
MPROB17	78					
s_afcrtt	59					0.266
conduct	102					
genanx	93					
ALL_CAT	6					
simphob	91					
f_afcrtt	58	0.739				
adh	101		0.734			
FANX	71			0.738		
p_cprob	122				0.714	
pdis	121					
anxiety	54				0.750	
eating	105				0.514	
OCD	95					0.739
sexdis	117					
gender	110					
bipolar	116					
avoid	94					
mute	113					
oppdef	103					
stress	119					
schiz	115					
tics	109					
antisoc	104					
subst	114					

		FACTOR19	FACTOR20	FACTOR21	FACTOR22	FACTOR23	FACTOR24
		19	20	21	22	23	24
n_sibs	28						
refusal	50						
CGAS_DSM	4	-0.257					
CATSEV	10						
th_TYP1	83						
pdd	99	0.357					
speech	111						
MPROB15	77						
MPROB7	74				0.361		
FPROB7	75						
DSMQAL1	24				-0.328		
MANTISOC	68	0.326					
SEX	12		-0.280				
habit	112		0.344				
sepanx	92						
PG_DR_TR	87		0.285				
disrptve	49		0.302				
par_rel	20						
ST_AE_YR	13		-0.317				-0.263
psyphys	120			0.373			
sleep	97						0.425
underach	52						
intest	45						
PG_BF_TR	56						
m_afctrt	57					0.340	
NURSERY	55		0.286				
s_class	21						
impulse	118						

	FACTOR25	FACTOR26	FACTOR27	FACTOR28	FACTOR29	FACTOR30
	25	26	27	28	29	30
FPROBE	63					
FSPROBE	65					
FPROBN	61					
FVSPROBE	67					
FANTISOC	69					
RGAFCR_F	40					
FDEP	73					
MPROBE	62					
MSPROBE	64					
MPROBN	60					
MANX	70					
MDEP	72					
RGAFCR_M	38					
dvrcesep	31					
BREAK_YN	18					
loss	30					
MPROB18	79					
l_diffs	48					
peer_rln	53					
SESS_INI	80					
SESS_MAX	81					
PREFOURC	43					
L.A.fstr	32					
attch	106					
chd_hosp	34					
cm_hosp	35					
medhist	29					
MVSPROBE	66					
MPROB12	76					
n_ther	82					
LIVewith	14					
insec	33					

	FACTOR25	FACTOR26	FACTOR27	FACTOR28	FACTOR29	FACTOR30
	25	26	27	28	29	30
DEPRIVE 19						
sdd 100						
dficlty 51						
depress 96						
par_dead 36						
wet 107						
encop 108						-0.262
MPROB17 78						
s_afcrt 59						
conduct 102						
genanx 93						
ALL_CAT 6						
simphob 91						
f_afcrt 58						
adhd 101						
FANX 71						
p_cprob 122						
pdis 121						
anxiety 54						
eating 105						
OCD 95	0.684					
sexdis 117		0.701				
gender 110		0.678				
bipolar 116			0.753			
avoid 94				0.621		
mute 113					0.721	
oppdef 103						0.799
stress 119						
schiz 115						
tics 109						
antisoc 104						
subst 114						

		FACTOR25	FACTOR26	FACTOR27	FACTOR28	FACTOR29	FACTOR30
		25	26	27	28	29	30
n_sibs	28			0.265			
refusal	50			0.342			
CGAS_DSM	4	-0.272					
CATSEV	10						0.289
th_TYP1	83						
pdd	99						
speech	111				0.366		
MPROB15	77						
MPROB7	74			0.381			
FPROB7	75						
DSMQAL1	24					0.310	
MANTISOC	68						
SEX	12				-0.329		
habit	112						
sepanx	92						
PG_DR_TR	87						
disrptve	49						
par_rel	20					-0.301	
ST_AE_YR	13	0.326					
psyphys	120	0.427					
sleep	97	-0.252					
underach	52						
intest	45						
PG_BF_TR	56					0.322	
m_afctrtr	57		0.278				
NURSERY	55						
s_class	21						
impulse	118						

	FACTOR31	FACTOR32	FACTOR33	FACTOR34	FACTOR35
	31	32	33	34	35
FPROBE					63
FSPROBE					65
FPROBN					61
FVSPROBE					67
FANTISOC					69
RGAFCR_F					40
FDEP					73
MPROBE					62
MSPROBE					64
MPROBN					60
MANX					70
MDEP					72
RGAFCR_M					38
dvrcesep					31
BREAK_YN					18
loss					30
MPROB18					79
l_diffs					48
peer_rln					53
SESS_INI					80
SESS_MAX					81
PREFOURC					43
L.A.fstr					32
attch					106
chd_hosp					34
cm_hosp					35
medhist					29
MVSPROBE					66
MPROB12					76
n_ther					82
LIVEWITH					14
insec					33

	FACTOR31 31	FACTOR32 32	FACTOR33 33	FACTOR34 34	FACTOR35 35
DEPRIVE					
sdd					
dficlty					
depress					
par_dead					
wet					
encop					
MPROB17					
s_afcrtt					
conduct					
genanx					
ALL_CAT					
simphob					
f_afcrtt					
adhd					
FANX					
p_cprob					
pdis					
anxiety					
eating					
OCD					
sexdis					
gender					
bipolar					
avoid					
mute					
oppdef					
stress	0.701				
schiz		0.777			
tics			0.753		
antisoc				0.826	
subst					0.812

	FACTOR31	FACTOR32	FACTOR33	FACTOR34	FACTOR35
	31	32	33	34	35
n_sibs	28				
refusal	50				-0.275
CGAS_DSM	4				0.256
CATSEV	10				
th_TYP1	83				
pd̄	99		0.257		
speech	111				
MPROB15	77				
MPROB7	74				
FPROB7	75	-0.313			
DSMQAL1	24				
MANTISOC	68				
SEX	12				
habit	112				
sepanx	92				
PG_DR_TR	87				
disrptve	49				
par_rel	20		0.297		
ST_AE_YR	13				
psyphys	120				
sleep	97			0.273	
underach	52				
intest	45				
PG_BF_TR	56				
m_afcirt	57				
NURSERY	55				
s_class	21				
impulse	118				

## APPENDIX 5.5. CHILD PSYCHIATRIC DIAGNOSES ASSIGNED TO EACH BROAD CATEGORY

### Category 1 Diagnoses

#### DSM-III-R codes

309.21	Separation anxiety disorder
313.21	Avoidant disorder of childhood or adolescence
313.00	Overanxious disorder
296.20	Major depression, single episode, unspecified
296.21	Major depression single episode, mild
296.22	Major depression, single episode, moderate
296.23	Major depression, single episode, severe, without psychotic features
296.24	Major depression, single episode, severe with psychotic features
296.25	Major depression, single episode, in partial remission
296.26	Major depression, single episode, in full remission
296.30	Major depression, recurrent, unspecified
296.31	Major depression, recurrent, mild
296.32	Major depression, recurrent, moderate
296.33	Major depression, recurrent, severe, without psychotic features
296.34	Major depression, recurrent, with psychotic features
296.40	Bipolar disorder, manic, unspecified
296.70	Bipolar disorder NOS
296.35	Major depression, recurrent, in partial remission
296.36	Major depression, recurrent, in full remission
300.40	Dysthymia
311.00	Depressive disorder NOS
300.21	Panic disorder, with agoraphobia
300.01	Panic disorder, without agoraphobia
300.22	Agoraphobia without history of panic disorder
300.23	Social phobia
300.29	Simple phobia
300.30	Obsessive compulsive disorder
309.89	Post-traumatic stress disorder
300.02	Generalised anxiety disorder
300.00	Anxiety disorder NOS
300.70	Body dysmorphic disorder / Hypochondriasis / Somatoform disorder NOS / Unspecified mental disorder, nonpsychotic
300.11	Conversion disorder
300.81	Somatisation disorder
300.14	Multiple personality disorder
300.13	Psychogenic fugue
300.12	Psychogenic amnesia
300.60	Depersonalisation disorder
300.15	Dissociative disorder NOS
301.13	Psychogenic fugue
307.40	Dyssomnia NOS/Parasomnia NOS
307.50	Eating disorder NOS
309.24	Adjustment disorder with anxious mood
309.00	Adjustment disorder with depressed mood

309.28	Adjustment disorder with mixed emotional features
309.83	Adjustment disorder with withdrawal
309.23	Adjustment disorder with work (or academic) inhibition
301.82	Avoidant personality disorder
301.60	Dependent personality disorder
301.40	Obsessive compulsive personality disorder
313.89	Reactive attachment disorder in infancy or early childhood

#### Category 2 Diagnoses

312.20	Conduct disorder, group type
312.00	Conduct disorder, solitary aggressive type
312.90	Conduct disorder, undifferentiated type
313.81	Oppositional defiant disorder
312.34	Intermittent explosive disorder
312.32	Kleptomania
312.31	Pathological gambling
312.33	Pyromania
309.30	Adjustment disorder with disturbance of conduct
309.40	Adjustment disorder with mixed disturbance of emotions and conduct
301.70	Antisocial personality disorder
314.01	Attention-deficit hyperactivity disorder
-71.02	Antisocial behaviour

#### Category 3 Diagnoses

299.00	Autistic disorder
299.80	Pervasive developmental disorder NOS

#### Category 4 Diagnoses

314.00	Undifferentiated attention-deficit disorder
291.00	Alcohol withdrawal delirium
317.00	Mild mental retardation
315.00	Developmental reading disorder
316.00	Psychological factors affecting physical condition
307.00	Cluttering/Stuttering
307.20	Tic disorder NOS
307.30	Stereotypy/habit disorder
307.60	Functional enuresis
307.70	Functional encopresis
307.10	Anorexia nervosa
307.80	Somatoform pain disorder
310.10	Organic personality disorder
309.82	Adjustment disorder with physical complaints
309.90	Adjustment disorder NOS
313.82	Identity disorder
307.50	Eating disorder NOS

313.23 Elective mutism  
312.39 Impulse control disorder NOS/Trichotillomania  
300.90 Unspecified mental disorder (nonpsychotic)  
301.00 Paranoid personality disorder  
301.20 Schizoid personality disorder  
301.22 Schizotypal personality disorder  
301.83 Borderline personality disorder  
301.50 Histrionic personality disorder  
301.81 Narcissistic personality disorder  
301.84 Passive aggressive personality disorder  
301.90 Personality disorder NOS

APPENDIX 5.6a SORTED ROTATED FACTOR LOADINGS FOR CBCL ITEMS (2-3 YEAR OLDS)

Varimax converged in 10 iterations.

Rotated Factor Matrix:

ITEM	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 6
81	.76658					
40	.7382					
15	.73267					
53	.71963					
44	.69063					
20	.68319					
96	.57621					
85	.54040			.53493		
88	.50984					
6		.72678				
5		.61883				
2		.61731				
92		.59476		.40669		
21		.54898				
80		.52239				
76		.51709				
8			.82299			
16			.80217			
29			.69262			
66			.68116			
10				.76932		
73				.69518		
97				.62807		
37				.58123		

ITEM	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 622	.57905
48					.70459		
38					.68349		
24					.61890		
94					.49866	-.44162	
13					.41559		
90						.67981	
25						.67751	
98					.44610	.54402	
30						.51459	

APPENDIX 5.6b SORTED ROTATED FACTOR LOADINGS FOR CBCL ITEMS (4 YEARS AND OVER)

SORTED ROTATED FACTOR LOADINGS (PATTERN)

ITEM	FACT1	FACT2	FACT3	FACT4	FACT5	FACT6	FACT7	FACT8
24	.604							
66	.566							
104	.558							
23	.552							
12	.450							.300
18	.437			.280				
43	.419							.380
112		.545						
37		.528						
14		.492						
35		.486						
54		.466						
100		.423						
59			.523					
58			.517					
60			.476				.370	
61			.452				.383	
52			.443			.393		
32			.429					
13			.402					
121		.312	.401					
91				.687				
90				.609				
41				.564				
115				.517				
110				.456				
45				.431				
81				.424				

ITEM	FACT1	FACT2	FACT3	FACT4	FACT5	FACT6	FACT7	FACT8
120					.551			
71					.469			
27		.285			.454			
75						.654		
108						.490		
11		.276				.452		
93	.323				.358	.412		
7							.559	
119							.507	
98		.379						.479
10								.488
83								.411
70					.333			.383

## APPENDIX 10.1: A PROSPECTIVE INVESTIGATION OF THE EFFECTIVENESS OF PSYCHODYNAMIC PSYCHOTHERAPY FOR CHILDREN WITH SEVERE ANXIETY DISORDERS

### I. Specific aims.

Regarding the implementation of the National Plan for Research on Child and Adolescent Mental Disorders (PA-91-46), this proposal addresses the need for further research to "determine effective treatment techniques and preventive interventions for mental disorders". The project addresses the need for assessing treatments used in clinical practice which are as yet inadequately tested. It chooses as its focus the effects of dynamic therapy, and proposes the first controlled study in which the long-term effects of dynamic treatment for children may be investigated.

Those working on this proposal have identified and attempted to overcome the substantial obstacles to research in this area. The proposed study aims:

(1) to initiate an urgently needed wide-ranging investigation of the effectiveness of psychoanalytically-oriented psychotherapy for children which, if interim results are encouraging, will eventually be extended across a number of sites with a variety of patient groups.

(2) to provide preliminary data, from a randomised controlled trial, of the effectiveness of intensive and non-intensive dynamic therapy for children with severe anxiety disorders. In this first phase of the project, 90 children aged 7 to 10 years will be randomly assigned to three conditions: intensive and non-intensive psychotherapy, with a control condition involving work with parents (30 children per group).

(3) to continue extensive preparatory work on the research methodology for rigorous evaluation of psychodynamic treatments for children. This includes the development and validation of a manual for psychodynamic treatment, accumulation of normative developmental data on relevant outcome measures, and development of psychometrically sound instruments for diagnostic assessment and monitoring of the process of change in psychotherapy.

(4) to evaluate a dose-response relationship by contrasting the efficacy of intensive (4 or 5 times weekly) and non-intensive (1 or 2 times weekly) psychodynamic treatments, for this group of children.

(5) to test a number of hypotheses about the nature of the effects of intensive and non-intensive treatments, to provide some data on the means by which these effects are achieved, and to investigate whether these effects have a beneficial impact on long-term adjustment.

### II. Background and significance.

#### **i) The outcome of treatment of childhood anxiety disorders.**

Anxiety disorders constitute nearly half of the overall prevalence of psychological disturbances in childhood (e.g. Esser et al., 1990; Yule, 1981). Studies of the natural history of childhood disorders suggest that the course of anxiety disorders is less favourable than had previously been thought. Longitudinal studies (Fischer et al., 1984; Harrington et al., 1990), retrospective studies (Agras, Chapin & Oliveau, 1972; Francis & Ollendick, 1986) and follow-up studies (Cantwell & Baker, 1989) all suggest that

these disorders may have an unstable rather than a benign prognosis. For example, a recent follow-up investigation (Cohen et al., 1993) showed that 47% of children with severe overanxious disorder continued to suffer from the same disorder 2½ years later, almost all still at a severe level.

There have been very few systematic studies of the effectiveness of any psychosocial treatment for anxiety disorders, although the situation is fortunately improving in the area of cognitive-behavioural treatments. There have been many single case studies of behavioural and cognitive treatment of anxiety disorders (see Kendall et al., 1988, and Silverman & Kearney, in press, for reviews), but few reports of series of cases, fewer still with any control condition. There are some large-scale studies mostly of school phobia, with inconclusive results (e.g. Miller et al., 1972). The psychosocial treatment literature is not only small, it is also narrowly focused, emphasizing evaluation of short-term and highly structured treatments. There is a conspicuous gap in the area of non-behavioural treatment, especially psychodynamic therapy as it is normally practised. This has been borne out by many meta-analytic studies of child treatment (Casey & Berman, 1985; Weisz, Weiss, Alicke & Klotz, 1987; Kazdin, Bass, Ayers & Rodgers, 1990; Weisz, Weiss, Morton, Granger & Han, 1992). The meta-analytic literature has recently been comprehensively reviewed by Weisz & Weiss (1993). Those studies which compared effect sizes of behavioural and nonbehavioural treatment found that behavioural treatment was significantly more effective. In the Weisz, Weiss, Alicke & Klotz (1987) meta-analysis, this difference (0.88 vs 0.44) ceased to be significant after removing those studies which used outcome measures seen as excessively similar to treatment activities. However, in a later survey of recent studies (Weisz, Weiss, Morton, Granger & Han, 1992) the behavioural-nonbehavioural difference (0.8 vs 0.32) did remain significant after this correction.

Shirk & Russell (1992), in a recent review, have previously questioned these negative conclusions on the outcome of non-behavioural (particularly psychodynamic) treatment for children. Their objections centred on the demonstration that the few studies including a nonbehavioural condition had used forms of treatment very unlike what is normally practised clinically. For instance, most had used short periods (under 20 sessions) of group therapy, although several surveys of clinicians have found that they do not value or use group therapy (Kazdin et al., 1990; Koocher & Pedulla, 1977; Silver & Silver, 1983). Shirk & Russell (1992) showed that the average effect size for non-behavioural group treatment was significantly smaller than for individual therapy (0.27 and 0.56 respectively).

Outcome research is therefore out of line with the pattern of current clinical practice, and certain child therapies (such as intensive psychodynamic psychotherapy) have in fact never been evaluated in a way which would allow them to be included in meta-analytic surveys of treatment effectiveness. This situation is mainly due to the slowness of psychodynamically-oriented clinicians to interest themselves in large-scale outcome research. It also results from some specific difficulties in evaluating this form of therapy using current methodology, which are addressed below. The present proposal, if successful, will initiate the first controlled study of the effectiveness of intensive or non-intensive psychodynamic treatment for childhood anxiety disorders.

There are several reasons for believing that evaluation of psychodynamic treatment of

children is necessary. The first is that psychodynamic therapy appears to be the form of psychosocial treatment most frequently used and most highly regarded amongst child psychiatrists and psychologists in the USA (Kazdin et al., 1990; see also Koocher & Pedulla, 1977; Silver & Silver, 1983; Snow & Paternite, 1986). A second reason is that recent controlled studies, at any rate in the adult literature, have suggested that the long-term outcome of relatively brief, non-intensive, psychosocial treatment for emotional disorders may be less favourable than originally thought (Shea et al., 1992). There may be some individuals (particularly those with severe disorders or additional personality disorders: Shea et al., 1990) for whom the benefits of such treatments are limited, and an intensive approach is required for long-term improvement.

There is already some empirical evidence to support this. There have been suggestions of a dose-response relationship between treatment intensity and effectiveness; Howard et al. (1986) showed a linear relationship between likelihood of improvement in adult psychotherapy and the log of the number of treatment sessions. This association remained when time between assessments was controlled for. The dose-response function differed for different types of pathology (as in the NIMH collaborative study of depression, personality disorder did not respond well to short-term therapy). More recently, Howard and his colleagues have studied the course of longer treatments (up to 400 sessions, rather than the 26 sessions in their earlier study) and found evidence of distinct phases in long-term therapy (Howard et al., 1993): first, enhanced well-being, then symptom reduction, eventually more profound, enduring changes in personality and adjustment. The longer the time in therapy, the greater the likelihood of reaching the third phase.

Turning to the psychodynamic treatment of children, Heinicke & Ramsey-Klee (1986) experimentally showed a link between treatment intensity and improvement in children with learning difficulties. We also found strong indications in our retrospective study (Target & Fonagy, in press; see Section III,ii,(a)) that children with severe, pervasive emotional disorders required intensive treatment to show improvement in psychotherapy. A priori, one would expect intensity to be specifically important for children, because of their less developed memory and meta-memory functions, and the importance of strong relationships with adults in their development (social learning).

Should it be the case that certain children require intensive, long-term treatment to achieve lasting improvement, then it is essential to try to identify this group. Such treatment is expensive and time-consuming, and can only be justified for children who are likely to benefit considerably, and who have not been shown to benefit from alternative, usually more cost effective treatments.

A third reason for attempting to evaluate child psychotherapy is the increasing (and justified) emphasis on funding treatments only if they are of proven efficacy. In the absence of scientific evidence of effectiveness, there may be a shift in clinical practice away from psychodynamic treatment, not because of evidence that it is ineffective, but because this effectiveness has never been evaluated.

#### **(ii) Psychodynamic treatment for children**

Child psychoanalysis has proved to be a powerful explanatory framework with far-reaching influence in modern society, although it has yet to be subjected to rigorous

research. The approach has been developing since Sigmund Freud wrote of Little Hans (Freud, 1909). Child psychoanalysis became popular as a treatment in the 1930s, '40s and '50s and was codified by Anna Freud and coworkers in Sandler et al (1980); it has informed all psychodynamic treatments of children.

Child analytic theory and practice inform our knowledge of psychopathology (both of adults and of children). They also inform our knowledge of the therapeutic process, and of treatment technique (not just in psychodynamic treatment, but in a wide variety of other individual and family therapies) (Daws & Boston, 1981; Graham, in press). Many clinicians believe that intensive treatment has an important, perhaps unique, role in the treatment of particular groups of children. There is, however, a notable absence of evidence on a) how effective the treatment is in general, and b) for which groups of children it is suitable (e.g. Barnett et al., 1991).

A further important question, which we begin to address in the proposed study, is whether there is a difference in effectiveness according to intensity, i.e. frequency of sessions. There are two reasons for not simply evaluating the efficacy of the most intensive form of this therapy. The first is that, in practice, non-intensive therapy is usually the only form of psychodynamic treatment available to children needing this help. Full psychoanalysis is extremely expensive and time-consuming for both family and therapist, and there are anyway few child analysts to provide this form of treatment, in relation to the potential demand. Once or twice weekly treatment using the same principles is, on the other hand, fairly widely available. In the U.K., child psychotherapists are employed by the health and education services. The provision is, however, quite inadequate to cope with the level of referrals, even though these are often made as a "last resort", after trying cheaper alternatives. It is, therefore, of considerable service relevance to evaluate the usefulness of this form of therapy, and to identify groups of children most likely to benefit, so that scarce resources can be targeted efficiently. A second reason for evaluating non-intensive as well as intensive treatment is to test a hypothesis, based on theoretical and empirical work described below, that there is a difference in the level at which change is likely to occur according to treatment intensity. If this were found to be the case, we would expect certain clinical groups to respond equally well to either intensive or non-intensive treatment, whilst others would require intensive therapy to show clinically significant or sustained improvement. We would predict that developmental changes (particularly in the areas of social cognition and attachment) will be facilitated more by intensive therapy, and that this will be related to better long-term adjustment and resilience.

#### ii) Obstacles facing research in this area.

Although the reluctance of psychoanalysts since Freud to be concerned with research in general, and outcome research in particular, may account for the absence of scientific evidence of efficacy (Wallerstein, 1988), it is also partly due to formidable practical difficulties (Luborsky, Barber & Beutler, 1993). Despite this, research on dynamic psychotherapy with adults has increased in recent years; Beutler & Crago's (1991) survey of active psychotherapy research programmes shows that almost 50% of these are now devoted to dynamically-oriented therapy research. This shift is not reflected in research on psychosocial treatments in childhood.

One hurdle to be overcome is specification of the treatment technique, or **manualisation**, of this theoretically complex, long-term and intensive treatment (e.g. Kazdin, 1988; Barrnett et al., 1991). Given adequate consideration by senior clinicians, the manualisation of dynamic therapy has been shown to be possible for adult psychotherapeutic treatment (Luborsky, 1984) and for conduct disorders in children (Kernberg & Chazan, 1991). It is also at an advanced stage at our own centre for psychotherapeutic treatment of emotional disorders, especially those involving anxiety (see section III,iii,(b)). The choice of an appropriate and feasible **comparison group** has also caused major problems for researchers; the long-term nature of the treatment has meant that a placebo or untreated comparison group has been seen as unethical, and no alternative treatment has yet been clearly demonstrated to be effective with children.

A further problem concerns the design of suitable **outcome assessments** for analytic treatment. Ideally, comprehensive evaluation should include measures of personality change, which is the declared target of psychodynamic intervention, in addition to measures normally applied in the evaluation of other therapies, such as change in symptoms. Finally, a clinical trial of this form of therapy requires a relatively large number of **trained practitioners** of the therapeutic technique. The Anna Freud Centre, with over 40 trained and experienced child analysts, has the "critical mass" to mount such a programme.

### III. Preliminary studies.

#### i) Child psychotherapy at the Anna Freud Centre.

a) The contributions of Anna Freud. The Anna Freud Centre, formerly known as the Hampstead Child Therapy Course and Clinic, was established in 1947 by Anna Freud; she was a daughter of Sigmund Freud, and a pioneer in her own right in the field of the psychoanalytic study and treatment of children. The Centre has for decades been acknowledged worldwide as a leading organisation in this field. Anna Freud's work forms the backbone of this application. Over a thirty year period, she initiated and refined a technique of intensive (4 or 5 times weekly) dynamic psychotherapy for children which has set the standard for this form of treatment in Europe and the United States. In addition to her influence through her writings, she exerted a powerful, direct influence over child psychotherapeutic technique. A large number of young psychiatrists and psychologists from child mental health centres worldwide came to train in London. Returning to their base, many developed child psychotherapeutic services based on Anna Freud's model.

Clinical work at the Anna Freud Centre represents a combination of insight-oriented therapy and "developmental help", based on the model of psychopathology outlined by Anna Freud (1965, 1981). Briefly, Anna Freud's model assumes that emotional disorders of childhood arise as a consequence of the arrest or distortion of one or more lines of normal affective and cognitive development. Such developmental deviations create special difficulties for the child, for which he or she may find maladaptive solutions, resulting in emotional difficulties. Developmental anomalies are thus conceived by Anna Freud as risk factors for neurotic disorders. Neurotic disorders themselves begin with the emergence of distorted mental representations involving the self, or important

figures for the child, most frequently associated with sexual or aggressive aspects of relationship experiences. The anxiety created by such representations may call forth psychological defences which, if effective, remove mental representations from consciousness or alter them, thereby reducing the anxiety and preventing the emergence of mental disorder. Neurotic disorders involve failed, sometimes exaggerated, defensive manoeuvres, the continued prominence of distorted mental representations, and consequent intensification of anxiety.

Whereas there have been developments to Anna Freud's technique at many centres, dynamic treatment of children remains rooted in Anna Freud's approach. The worldwide importance of her contribution was recognised by numerous international foundations, including NIMH, which considered her work of sufficient relevance to local developments to support her work from overseas.

b) The codification of the Anna Freud Centre approach.

Under Anna Freud's influence, the Centre developed a particular approach to the collection of child psychoanalytic data. Material contained in the weekly written reports of the therapist is subjected at regular intervals to a detailed categorisation and classification called "indexing". The procedures for indexing a case together with categories and definitions are described in Bolland & Sandler (1965). After years of indexing, all index cards (over 3000 items) which pertained to the section of the Index on Treatment Situation and Technique were reviewed by three senior clinicians, in conjunction with Anna Freud. A book describing the essential features of the treatment technique of the Hampstead Child Therapy Clinic emerged from this review (Sandler, Kennedy & Tyson, 1980). The book describes the framework of treatment (scheduling and attendance, interruptions, change of setting and change of therapist), the therapeutic relationship (treatment alliance, resistance, insight and self-observation, reactions to interpretations, transference and other uses of the therapist), the child's modes of expression (analytic material, acting out and behaviours within the session), therapeutic interventions (introducing the treatment, clarifications and confrontations, interpretation, interventions supporting interpretations, selection and timing of interpretations, working through interpretations, restrictions on the child, physical contact and gratification, permitted modifications of standard technique, extra-analytic contact and termination of treatment). The book also includes discussion of the aims of dynamic psychotherapy with children, and the way such considerations inform assessment and follow-up.

ii) **Background data collection.**

(a) The effectiveness of dynamic therapy for children with emotional disorders (Target & Fonagy, in press). This was a chart review study examining the effectiveness of intensive and non-intensive psychodynamic treatment for children and adolescents with DSM-III-R diagnoses of anxiety or depressive disorders. 352 charts were reviewed and independently rated for a wide range of demographic, clinical, process and outcome measures. Using the Children's Global Assessment Scale (CGAS) as the main indicator of treatment outcome, the study showed that (i) 72% of those treated for at least 6 months showed reliable, clinically significant improvement in adaptation, and only 24% had a diagnosable disorder at termination; (ii) phobic disorders were most likely to remit, and depressed children least likely to return to normal CGAS levels; (iii) children

under 11 years were significantly more likely to be well at the end of treatment; (iv) whereas treatment length was associated with outcome, intensive treatment led to greater improvements independently of the child's age and length of treatment; (v) intensive treatment was significantly more helpful for children who presented with more severe disturbance, in terms of multiple diagnoses or CGAS scores below 45.

A number of demographic and clinical variables helped to identify children most likely to improve. These included higher IQ, younger age, longer treatment, good peer relations, poor overall adjustment of the mother (GAF score), the presence of anxiety symptoms in the mother, concurrent treatment of the mother, and absence of a history of maternal antisocial behaviour. Groups of children with depressive, overanxious and specific anxiety disorders had different predictors of favourable outcome, underscoring the heterogeneity of this group, and the different processes at work in their psychotherapeutic treatment.

(b) The efficacy of psychoanalysis for children with disruptive disorders (Fonagy & Target, in press). This was part of the same chart review study. Here 135 children with disruptive disorders were matched on demographic, clinical and treatment variables with children presenting with emotional disorders. Overall improvement rates were lower for disruptive disorders: 56% for oppositional defiant disorder, 36% for attention deficit hyperactivity disorder and 23% for conduct disorder showed reliable improvement in CGAS score. Nearly one third of the children treated terminated within one year of starting treatment. Premature termination was associated with age, non-intensive treatment, less well-functioning mother (GAF score), fewer learning difficulties at school and lack of concurrent parental guidance. Of those disruptive children who remained in treatment, 69% were no longer diagnosable on termination. Predictors of improvement included the presence of an anxiety disorder, absence of other comorbidity (particularly developmental disorders), younger age, intensive treatment, longer treatment, maternal anxiety disorder, child having been in foster care, psychotherapeutic treatment of mother.

(c) Clinical implications of the retrospective study of child psychoanalysis and psychotherapy at the Anna Freud Centre (Fonagy & Target, in preparation). This paper summarises the practical and theoretical implications of the retrospective study of 763 case records for the implementation of psychoanalytically orientated treatment programmes for children. The outcome of treatment is examined with reference to the natural history of childhood disorders, and diagnostic and demographic of those groups for whom treatment is most likely to be effective are identified. Adjuncts to treatment, support to parents and children in addition to psychotherapeutic care, which were shown to contribute to good outcome are listed. Treatment strategies which are most likely to maximise adherence to the treatment protocol are considered. A theoretical framework is offered which might help explain differences in treatment responses to intensive and non-intensive treatment across diagnostic groups (see III,iv).

### iii) Development of methodology.

(a) Studies of intensive treatment with children suffering from brittle diabetes (Moran et al., 1991). These studies explored the effectiveness of intensive dynamic treatment, and the relationship between therapeutic process and metabolic control, in children with very poorly controlled diabetes.

The first report (Moran & Fonagy, 1987) was a single case study of a diabetic adolescent girl. Process reports were rated for the presence of dynamic themes. The association of these themes with independently obtained measures of diabetic control was examined using time-series analysis. The study revealed a close statistical relationship between week to week fluctuations of metabolic control and the presence of key themes in the patient's analytic material. Most significantly, the analytic narrative predicted the child's subsequent diabetic control: the presence and interpretation of unconscious emotional concerns in the analytic material was reliably followed by an improvement in diabetic control one to three weeks later.

The second study (Moran et al., 1991) compared two equivalent groups of 11 diabetic children with grossly abnormal blood glucose profiles necessitating repeated admissions to hospital. Patients in the treatment group were offered an intensive inpatient treatment programme which included three to four times weekly psychoanalytic psychotherapy. Treatment was relatively brief, lasting on average 15 weeks. Patients in the comparison group were offered only inpatient medical treatment. The children in the treatment group showed considerable improvements in diabetic control, maintained at one year follow-up. The comparison group children, in contrast, returned to pre-treatment levels of metabolic control within three months of discharge from hospital.

The third of these studies (Fonagy & Moran, 1990) was an independent series of experimental single case investigations. These assessed the impact of treatment on growth rate (measured by changes in height and bone age) in three children whose height had fallen below the 5th percentile for age. In all three cases, treatment was associated with an acceleration of growth and a substantial increase in predicted adult height.

Taken together, these studies illustrate one important method of verifying the clinical efficacy of psychoanalysis. They have the advantages of a readily definable client group who tend to respond poorly to alternative treatments, and a clinically relevant outcome variable robust to contamination from the treatment process. These almost unique advantages, however, also impose limitations on the generalizability of the findings. Of particular interest in the context of this proposal are the development of a methodology (time series analysis) for process studies which offer indications of the effective component of the treatment.

(b) The Hampstead Manual of Child Psychoanalysis (Fonagy et al., unpublished manuscript). This manual develops the codification presented in Sandler et al. (1980). It was written specifically for this investigation, with advice from Dr Kazdin as to structure and content. It currently consists of 14 chapters, each taking an important aspect of technique, providing a definition, the aims the analyst should have in mind in using that form of intervention, the ways in which it is implemented, and finally situations in which it is not likely to be helpful. The Manual has made extensive use of the many years of work at the Centre spent in systematising child psychoanalytic treatment. Work on validating the Manual is in progress: individual chapters of the manual have been subjected to formal assessments of comprehensibility, accuracy and comprehensiveness with current senior and junior Centre staff (Miller, 1993).

(c) The Weekly Rating Scale. This scale represents an attempt to quantify the psychoanalytic experience of children treated at the Centre. The instrument was inspired by Enrico Jones' Psychotherapy Q-sort (Jones and Windholz, 1990) which we adapted for use on child analytic material. The Anna Freud Centre Weekly Rating Scale has 339 items which cover the following dimensions: general stance to the analysis, manifest ideational content, manifest affective content, behavioural content, manifest mental functioning, analytic understanding, non-interpretive stance, interpretive interventions, rater's judgement of the quality of the analysis. The scale is intended to provide a measure of the content and quality of the work with each patient, which may help to identify what type of treatment was most successful in which sort of case. It also offers a way of excluding cases where the therapeutic work, for whatever reason, did not conform to the technique described in the treatment manual.

(d) The Hampstead Child Adaptation Measure (Target, Fonagy & Mayes, unpublished manuscript). This is a measure developed to assess the general adjustment of a child. It is a manualization and amplification of the CGAS instrument developed by Shaffer and colleagues (1983) and like the CGAS it involves placing a child on a scale of 1 to 100, where scores above 70 represent normal levels of functioning. One aim was to devise a scale which would reflect prosocial functioning as well as impairment, and which would not measure impairment mainly in terms of psychiatric symptoms or diagnoses. The background to this was partly our own experience of using the CGAS in the retrospective study (above), which was reinforced by criticisms of the CGAS in the literature (Steinhausen, 1987; Bird et al., 1990). A second aim was to improve the reliability of CGAS ratings by writing a manual in which many of the dilemmas involved in rating were explicitly addressed.

The thinking behind the new measure was influenced by the psychoanalytic approach of Anna Freud, in particular her diagnostic profile and concept of developmental lines (Freud, 1962, 1963). The form of the measure was influenced by the HSRS (Luborsky, 1962) as well as the CGAS. The rating procedure using parameters of adaptation owed much to a measure of structural change developed by Wallerstein and his colleagues for use with adult patients (Wallerstein, 1988).

(e) The use of childhood narratives as an indicator of the representational world of the child (Hammond, Steele & Fonagy, unpublished manuscript). This project was developed on the basis of the MacArthur Narrative Group led by Robert Emde. Several studies have been performed in our laboratory using the methodology of asking children to elaborate on standardized narrative stems. An initial study looked at children's accounts of emotive interactions taking place in the Centre's Nursery. Story stems, based in part on those developed by Professor Emde's team have been administered to children commencing psychoanalytic treatment as part of their assessment. Story stems are also administered in the five-year follow-up of the attachment study described below. We have developed a manual for coding the developmental maturity of conflict resolution based on narratives of five year olds, which was found to be associated with the security of the child's attachment to mother at one year, and the security of the mother's internal working model before the birth of the child.

#### (iv) **The development of theory**

(a) The development of secure emotional ties between the infant and caregivers (Fonagy et al., 1991 a & b; Fonagy et al., 1993c). We are engaged in a longitudinal study with a cohort of 100 first-born children whose parents were interviewed in the last trimester of mother's pregnancy. This has informed the theoretical framework of the present proposal in a number of ways. The pre-natal interviews included a measure of the parents' representations of their own childhood, the AAI, devised by Mary Main (Main and Goldwyn, 1991). The analysis of AAI data gives an indication of the nature of an individual's generalised expectations about relationships, what Bowlby (1981) termed 'the internal working model'. The results at one year and 18 months follow-up showed that parents' representation or working model of relationships predicted the security of their child's relationship to them as measured in the Strange Situation one year later.

One of the most interesting findings, which highlighted the importance of the measurement of the mental representation of relationship patterns in psychotherapy outcome studies, concerned the failure of commonly used questionnaire measures of personality, psychopathology and current and past relationships (EPQ, GHQ, IQ, MFPS, SOSE, DAS) to predict infant security. Further, in a post-hoc examination of interview transcripts it was found that parents' capacity to meaningfully reflect upon their own and their caregivers' state of mind was the most powerful predictor of attachment security in the infant. This finding focused our attention on the importance of "mentalizing" (Morton & Frith, in press), the capacity to accurately represent and understand mental states of belief, desire and intention in self and other. We believe this to be an important component of the therapeutic efficacy of psychoanalysis (see section (b)).

Interestingly, hierarchical log linear analysis of the relationship of mother's and father's security of attachment and the security attachment of the child to the parents indicated that the attachment security of each parent had an independent and powerful predictive effect on the child's relationship with that parent alone. This finding not only makes an account of intergenerational concordance in terms of infant temperament or general environmental factors improbable but also implies that more than one internal working model of relationships may exist. The development, or activation, of a secure working model in the context of a therapeutic relationship may be an important component of individual therapy. In further post-hoc analysis of our data we found that infant insecurity was only associated with indicators of hardship in the mother's history for women whose mentalizing or reflective capacity was rated as low (Fonagy et al., in press). The mentalizing and reflective capacity enhanced by child psychotherapy may therefore be important in increasing resilience.

(b) The nature of change in child psychotherapy (Fonagy & Moran, 1991; Fonagy et al., 1993b). Our work with case records in conjunction with our exploration of the determinants of early relationships has led us to extend certain psychoanalytic assumptions concerning the nature of psychic change in child analysis. In these papers we delineated two models of the psychoanalytic treatment of mental disturbance. The first (the synthetic model) describes the mechanism by which the patient is helped to recover threatening ideas and feelings which had been repudiated or distorted as a result

of conflict and defence. The second model (the mental process model) draws attention to the therapeutic effects of engaging previously inhibited mental processes within the psychoanalytic encounter. This engagement tends to occur primarily through patient and analyst focusing on the thoughts and feelings of each person, and how the child understands these. The two models entail distinctions between two types of pathology, requiring two types of analytic work, with different predicted rates of change.

The notion of unutilized mental processes offers a conceptual bridge between psychoanalytic work with children and advances in cognitive science; it also stresses the therapeutic value of a mentalizing or reflective capacity, which independently emerged as important in the parent-child attachment relationship (see section (a)). Furthermore, it offers a theoretical explanation of a long-established clinical finding, that children with marked developmental or personality disturbances require longer treatment, with modifications of classical psychodynamic technique (e.g. A. Freud, 1965). This theoretical basis leads us to predict that there will be clear differences in technique, levels of change, and rates of change depending on the depth of personality disturbance in a child.

(c) Inhibition of mental functioning in borderline personality disorder (Fonagy, 1991; Fonagy et al, 1993a). The theoretical ideas outlined above, concerning a connection between disturbed attachment, inhibition of mental processes and personality pathology, have been examined in a study of borderline personality disorder (BPD). The hypothesis was that an early and sustained history of trauma and abuse in these individuals would be associated with inhibition of their capacity to envisage mental states (reflective self function). This has been supported by both a cross-sectional and a longitudinal investigation. Patients who met Gunderson's criteria for BPD were rated as having lower reflective self function than control groups of patients with non-psychotic psychiatric disorders of equal severity. The inpatient psychotherapeutic treatment of BPD patients was associated with an improvement in reflective self function in all cases who showed substantial symptom reductions in response to the treatment. These findings offer preliminary support for the hypotheses that a) part of the disturbance of BPD patients may be understood in terms of a deficit of mentalizing functions, and b) that these functions are inaccessible to such patients, but may be recovered in the course of psychotherapeutic treatment.

#### IV. Research design and methods.

##### A. OVERVIEW

This section covers the first phase of what is envisaged as a comprehensive, multi-site investigation of the effects and processes of psychodynamic treatment of children with mental disorders. Among the highlights of this proposal are the following:

- a) the recruitment of an ethnically diverse, clinical population of children with at least one diagnosis of severe anxiety disorder;
- b) extensive assessments of important background and outcome variables;
- c) experimental manipulation of treatment intensity, with a therapist cross-over design;

- d) a three-group comparison design (intensive treatment, non-intensive treatment, parent guidance only);
- e) homogeneity of therapist training, in a codified and manualised form of treatment, and plans for monitoring the consistency and integrity of all treatment components;
- f) strategies for keeping families in long-term treatment, especially relevant to those with low SES backgrounds;
- g) comprehensive long-term follow-up.

## B. SUBJECT RECRUITMENT AND SELECTION.

The recruitment will emphasize sources for patients representative of the more severely impaired children, and of the spectrum of children normally referred for child psychiatric help with a principal diagnosis of an anxiety disorder (DSM-IV categories). The geographical characteristics of the sample frame will ensure diversity across gender, ethnicity, and SES, whilst yielding a sample that will meet stringent inclusion and exclusion criteria.

### i) Selection criteria.

Inclusionary criteria for participants will be as follows:

1. A primary diagnosis of **anxiety disorder** established via structured parent interviews.
2. **Severity** of disorder indicated by surpassing of cut-offs on standardised rating instruments from both parents and teachers (CBCL, TRF, HCAM). The severity criterion is imposed to ensure that the child's impairment is pervasive (cross-situational); it is proposed that children included are shown to surpass cut-offs on both parent (CBCL) and teacher (TRF) scales. It seems that cross-situational disorders have poorer prognoses and are more challenging to treat than those confined to either home or school.
3. **Age of subjects between 7 and 10 years at intake.** This age restriction has several purposes: first although some sources of heterogeneity, such as comorbid diagnoses or ethnic diversity, are seen as desirable parts of this protocol, heterogeneity with respect to too many variables may prove problematic in view of the relatively small size of the sample. Second, treatment protocol would be difficult to keep consistent across too wide an age band; as under-fives and adolescents tend to require modifications of the treatment techniques outlined in our Manual. Third, our preliminary investigations demonstrated that this age group responds well to psychosocial treatment of the type offered. Fourth, excluding older children avoids the potential confound associated with puberty. Fifth, by making the age limits seven to ten years, children will be homogeneous as to their social context (junior school), and sociometric appraisals in class-rooms can be performed in a uniform format. Sixth, this age range represents the largest group of children referred for psychiatric treatment.
4. **Duration of disorder of at least one year** in order to confirm the seriousness of the presenting problem. The cases in the severe category within the corresponding retrospective study sample all had a duration of disorder of at

least one year, often much longer.

Exclusionary criteria will include:

1. IQ scores below 80.
2. Pervasive developmental disorders, movement disorders, (including Tourettes syndrome), psychotic disorders, on the grounds that these disorders require substantially different interventions, and showed poor response to psychodynamic treatment in the retrospective study here.
3. Major medical or neurological conditions which require ongoing treatments and special alterations in the treatment approach, e.g. diabetes, severe sensory disorders.
4. As providing interventions in languages other than English is problematic, each family will need to converse fluently in English.
5. The parents do not undertake to ensure their own and their child's attendance for treatment and research assessments. Normally parents bring their child for each treatment session, and so their ability to make this commitment is essential.
6. The child is assessed at the Anna Freud Centre as unsuitable for at least one of the available treatment conditions. This assessment is a clinical judgement of the child and family's accessibility to and need for intensive or non-intensive treatment, and for parent guidance. If the diagnostic assessment strongly suggests that the family would not in fact support the treatment, or that one of these treatments would be unhelpful, then the child could not be entered into the study. (An example of the latter would be if the diagnostic team felt that a child could not continue to cope with his symptoms without direct treatment, then parent guidance only would be seen as ethically unacceptable. The child would then be treated outside the study as allocation could not be random.)

#### ii) Recruitment.

Recruitment will occur through clinics which provide services for children with emotional or behavioural disorders, most notably four Child Guidance Clinics, which are the main state provision for children with mental disorder. Appropriate referrals made directly to the Anna Freud Centre will also be included. Staff at these settings estimate that there are at least 30 children referred each year who meet the selection criteria outlined above. Thus, through these referral sources, an appropriately large sample for the present study could be generated. These centres serve inner city areas with large percentages of low-income families, so that wide distributions of ethnic and SES families will be yielded.

#### iii) Multiple gating procedures for subject selection.

To use resources efficiently, subject selection will follow a multiple gating procedure (Patterson, 1982), beginning with broad screening of relatively large numbers of children using appropriately trained child experts (clinicians, teachers, educational psychologists) and progressing to more time-consuming and detailed assessments.

#### Phase I.

All referrals in the designated age group to the participating Centres are screened on

a DSM-IV checklist of key symptoms; this may be completed on the basis of telephone contact with either the parent or the primary care referrer. Permission is sought to contact the child's school and teacher questionnaires are sent.

#### Phase II.

Those who on the checklist meet the diagnostic inclusion and exclusion criteria are interviewed by clinicians from the participating clinics, and further information is collected with regard to chronicity, comorbidity, and other criteria, e.g. language, physical disorder, etc.. Those meeting these criteria are given an explanation of the protocol, and are given a selection of self-administered instruments to establish severity criteria.

#### Phase III.

The families of children who meet the severity criteria are seen by a member of the research team, and structured interviews, IQ and achievement tests are performed, and a neurological examination is carried out. Children who meet selection criteria are formally recruited for the study; additional explanations of the protocol are given, and a full explanation of the protocol with consent forms are presented to parents.

#### Phase IV.

Families who sign the consent form are invited to attend for the clinic-based assessments (these are listed in Table 2, section C.iv).

#### **iv) Projected ethnic and gender distributions of sample.**

With respect to projected distributions of the sample by gender and ethnicity, we anticipate that at least one-third of the sample will be female; furthermore, one fourth of the sample are likely to be from ethnic minority groups, primarily Afro-Caribbean or Asian. This expectation is based on the ethnic profile of the clinical populations in the geographical areas from which the sample will be drawn, which has higher proportions of minority youth than other areas of the UK. SES will be determined on the basis of the UK Registrar General's classification of occupations, which maps quite closely onto the Hollingshead-Redlich scheme used in the US. The overall distribution of the sample is likely to reflect the UK SES distribution.

### **C. PSYCHOSOCIAL TREATMENT COMPARISONS**

#### **i) The treatment and control groups**

Once consent forms have been signed, random assignment of subjects to psychosocial treatments will occur, between three treatment conditions: i) intensive treatment group; ii) non-intensive treatment group; iii) parent guidance group. It is estimated that 80-90% of the families will consent to the psychosocial intervention phase given a) the large number of steps in which the family will have already participated, and b) the financial incentives offered to families and teachers for five years' participation.

Families in each condition will be offered at least two years of continuous intervention, which is the average length of treatment for this age group at the Centre. It is expected that treatments in all three groups will vary in length between six months and four years (see Table 10.2 for estimated treatment durations). Because length of treatment cannot be dictated by the research design, independent assessments of outcome will

	Year 1	Year 2	Year 3	Year 4	Year 5
Intensive treatment	recruit & select 20 subjects	assume 5 subjects terminate their treatment & recruit a further 10 subjects: 25 subjects in concurrent treatment	assume 7 further subjects terminate treatment from the first cohort, and 3 from Year 2 cohort: 17 subjects concurrently treated	assume 8 subjects terminate from Year 1 cohort and 3 from Year 2 cohort, leaving 5 subjects in intensive treatment	assume all subjects from Year 1 cohort have terminated, and 4 from Year 2 finish, thus no subjects remain in treatment
Non-intensive treatment	recruit & select 20 subjects	assume 5 subjects terminate their treatment & recruit a further 10 subjects: 25 subjects in concurrent treatment	assume 7 further subjects terminate treatment from the first cohort, and 3 from Year 2 cohort: 15 subjects concurrently treated	assume 8 subjects terminate from Year 1 cohort and 4 from Year 2 cohort, leaving 3 subjects in non-intensive treatment	assume all subjects from Year 1 cohort have terminated, and remaining 3 from Year 2 terminate, thus no subject remains in treatment
Parent guidance	recruit & select 20 subjects	assume 6 subjects terminate their treatment & recruit a further 10 subjects: 24 subjects in concurrent treatment	assume 10 further subjects terminate treatment from the first cohort, and 3 from Year 2 cohort: 11 subjects concurrently treated	assume 4 subjects terminate from Year 1 cohort and 6 from Year 2 cohort, leaving 1 subject in parent guidance	assume all subjects from Year I cohort have terminated, and 1 from Year 2 terminates, thus no subject remains in treatment
Post-treatment Assessment		16 from year 1 only	33 assessments, 24 from the first cohort, 9 from the second	32 further assessments, 20 from the first cohort, 12 from the second	9 assessments, all from year 2
One-year follow-up			16 from first cohort	24 from year 1, 9 from year 2	20 from first cohort, 12 from second
Two-year follow-up				16 from first year	24 from Year 1, 9 from year 2

Table 10.2. Provisional timetable for the investigation.

occur throughout the treatment at six-monthly intervals. For children whose treatment has terminated, the schedule of assessments will continue for a period of five years from the start of treatment. For long-term (2-year) follow up we await supplemental funding, beyond the scope of this proposal. We anticipate 1-year follow up data for two-thirds of the treated sample by the end of five years.

This choice of treatment groups has been arrived at after two years of careful consultation with colleagues at Yale University, and appears to be optimal for this stage of the investigation. The design does not allow isolation of specific components of the treatments offered, with the exceptions of intensity of psychodynamic treatment and the impact of parent guidance alone (the families in the intensive and non-intensive treatment conditions will also receive parent guidance). However, we would agree with Kazdin (1988) that it is necessary to establish the effectiveness of a thorough, intensive form of a treatment before attempting to identify its most effective elements.

It could be argued that this could be better done with either a treatment-no treatment comparison or a treatment-placebo comparison (such as intensive / non-intensive play therapy). There are substantial ethical and practical problems with establishing an untreated control group of referred children. The children would need to remain untreated for a period of years, to provide a comparison with the long-term outcome of either intensive or non-intensive child psychotherapy. We considered the inclusion of a non-referred, untreated control group for comparison with the natural history of severe anxiety disorders. However, several objections present themselves. The strongest is that these children would not in fact be representative of children with severe anxiety disorders, and the natural history might well be different. It is very likely that severely anxious children who have not been brought for treatment come from very different families from those with similar symptoms whose parents are seeking help. A second problem is that they might very well seek or be offered treatment during the period of the study, obscuring the intended comparison. It is also possible that, having identified these children, the researchers might feel ethically bound to ethically bound to encourage the parents to seek professional help. On a practical level, it would be very expensive and time-consuming to find a large group of comparable, non-referred children, and the families (having perhaps already refused offers of referral) might be likely to refuse to cooperate with lengthy, repeated research assessments, of no benefit to themselves.

Although a placebo control is an attractive alternative, it raises the ethical issue of offering a long-term inert treatment. In any case, the status of play therapy as a placebo (similar in form but without the analytic content) would certainly be questioned by those who advocate this form of treatment (e.g. Schaefer & Cangelosi, 1993). Further, the heavy costs may not be justified in the absence of existing evidence that psychodynamic therapy is effective. If the present investigation provided such evidence, then funding could be sought for a study controlling for attention-placebo effects.

A further alternative would be to contrast psychodynamic treatment with an alternative treatment of proven efficacy, such as cognitive-behavioural therapy or interpersonal psychotherapy. However, no treatment has in fact been shown to be effective for severe anxiety disorders, particularly overanxious disorder which is likely to be the most

common diagnosis in the proposed sample. Although cognitive-behavioural treatment seems promising, there is as yet no evidence to demonstrate that it is an effective treatment for pervasive anxiety in children. The cognitive element might anyway be of limited usefulness in children of this age. Interpersonal psychotherapy is a possibility, in that it is standardized and has been used with adolescents but this has two problems: first, it has not been used with children of this age, and second, it might be seen as too similar to psychodynamic therapy to provide an appropriate contrast.

Work with parents is the most commonly used treatment for this group of children in the UK. Husain & Kashani (1992), as well as pointing out the lack of evidence for any specific treatment with this group, state from clinical experience that "parental counselling and education aimed toward an improved understanding of the nature of the child's temperament is very effective in minimizing or removing environmental stresses" (p.80). We suggest that it is an ethically acceptable minimal treatment control group for this investigation.

#### **ii) Random assignment to conditions.**

Random assignments will take place after Phase IV of the intake procedure. A key issue of random assignment for groups of such relatively small size will be whether to stratify, i.e. block children on certain key variables prior to the assignment. Amongst the advantages of stratification is the reduction of error terms (associated with heterogeneity) and enhancement of comparability between the groups.

Arguing against the appropriateness of stratification is the arbitrary nature of selecting certain variables to be used, (e.g. age, gender, IQ, family structure, etc.) from a potentially large set of such variables. Further, there exists a problem of stratification on the basis of continuous variables (e.g. IQ), which may distort the actual distribution of subjects on a variable of interest. In addition, there are practical problems with stratification, in that recruitment for the study will be a continuous process, which will not readily permit the matching of children between groups. For all these reasons, we favour basic random assignment to conditions, with statistical control (e.g. analysis of covariance) to be applied in case of significant inequalities arising on critical variables. Indeed, according to Maxwell et al. (1984) ANCOVA provides greater statistical power than does blocking, in nearly all instances. Thus, the only constraint envisaged on random assignments to treatments is that equal number of subjects begin in each of the three conditions for the first two years of the study.

#### **iii) Description of intervention conditions.**

**1) Intensive psychoanalytic psychotherapy.** This treatment will consist of four or five times weekly individual sessions, each lasting 50 minutes, for 45 weeks per year. The rationale and technique of treatment is fully described in a manual written for the present study (see section III,iii,(b)).

This treatment involves the use of toys, games and other devices to engage children in a process of self-exploration with an adult who is friendly but tries, within a trusting relationship, to draw attention to the unconscious determinants of the child's behaviour. The therapist uses the child's fantasy, imaginary games and spontaneous associations, in conjunction with other sources of data from the family, school etc, to

construct a hypothetical picture of the child's unconscious mental life and current emotional concerns. In this way the therapist aims to help the child to understand his overwhelming emotional responses, confusions about his feelings, concerns about his bodily integrity, the unconscious meaning of symptoms for the child, his anxieties about unconscious aggressive or sexual impulses, worries about the nature of his evolving relationships with his caregivers, siblings and peers, etc.

A variety of external circumstances exacerbate the child's tendency to develop distorted representations; the most important of these involve relationships, such as conflict between the parents, or exaggerated reactions to the child (in terms of either unpredictability, hostility or over-involvement) on the part of the child's caregivers, in which the child's anxieties tend to be magnified rather than contained. Family or wider social circumstances may create further problems of intrapsychic adaptation for the child, and may make it more difficult to cope with an already existing problem, by, for example, undermining his psychological defences. Intervention does not aim to modify the child's social context, but rather to strengthen the child's capacity to deal with sometimes highly abnormal situations. However, commonly, guidance is provided to the parents (see section 3)) to help them identify the ways in which they unintentionally contribute to their child's difficulties, at times offering them insight as to the possible non-conscious reasons why they find themselves doing so. This form of guidance will be offered to the parents of all children in the individual treatment conditions.

Intensive psychotherapeutic treatment involves the elaboration of distorted and, in part, non-conscious mental representations. The therapist, on the bases of the child's verbalisation, non-verbal play and other behaviours attempts to construct a hypothetical model of the child's conscious and unconscious mental representations and, using this model, helps the child obtain insight into how and why the child's thoughts and feelings frequently seem irrational, inappropriate and inaccurate. Such understanding may result in the reorganisation of the child's mental world, and the integration of developmentally earlier modes of thinking into a more mature, developmentally appropriate framework.

In addition to facilitating insight, the therapist also performs what may be seen as a rehabilitative function of gradually removing the obstacles which have impeded the normal lines of emotional and cognitive development. This is conceived by us (Fonagy et al., 1993b) in terms analogous to those of Vygotsky (1978), as the therapist creating a social framework, or "scaffolding", which encourages the normal evolution of the child's mental function. Anna Freud identifies several lines of development which may be of importance in creating a "fertile breeding ground" (1981, p.109) for psychopathology. Current thinking at the Centre holds that the most important of these is the capacity to attribute mental states (beliefs, desires and intentions) to self and others; this has been referred to within developmental psychology as the "mentalizing function" (Morton & Frith, in press). The establishment of an intensive relationship focusing on the mental world of the other is essential for this rehabilitative function of therapy to be effective. This is achieved through the interpretation of the so-c

transference, ie. the patient's presumed conscious and preconscious thoughts and feelings concerning the therapist. Also of great importance are the therapist's feelings and thoughts concerning the patient, and particularly the patient's perception of these.

2) **non-intensive psychotherapy.** Non-intensive dynamic psychotherapy shares many features with intensive treatment, including the model of psychological disturbance. Its focus, however, is more likely to be the identification of distorted thinking and patterns of relationships, together with the meaning of the child's symptoms to him. The relationship between therapist and child is less central. The material the therapist uses to identify maladaptive thinking is identical to that used in intensive treatment i.e. the child's play and drawings, as well as narrative. The therapeutic experience is, however, expected to be qualitatively different in intensive and non-intensive treatment. With less frequent sessions, the patient's perceptions of the therapist's and his/her own mental states are rarely monitored with the same degree of accuracy and consistency. The child's adaptation to the world external to the therapeutic situation, and to stressful situations at home and at school tend to be prominent. Treatment addresses the immediate causes of the child's mental disorder, but is thought to be unlikely to tackle developmental anomalies which underpin the child's vulnerability. Thus, we anticipate that a difference in treatment outcomes between the two treatment intensities, particularly reflected in measures of the child's 'internal working model' of relationships, social cognition, and resilience in the face of life events following termination. We also anticipate that any such differences will become more evident at long-term follow-up.

3) **Parental guidance.** The rationale for this form of intervention, in terms of a psychodynamic model of childhood emotional disorder, has already been described in section 1), and will not be repeated here.

Parents are seen (normally fortnightly) for fifty minutes. Wherever possible, both parents are seen although it is more common for mothers to be seen alone, with occasional attendance by the father. Following Graham (in press) we expect these discussions to include: a) The opportunity for the parents to describe the problems as they perceive them, and express feelings associated with them. b) Acknowledgment of the parents' positive and negative feelings about the problems, and of whatever steps they may already have taken to deal with them. c) Encouragement to parents to recognise the individual needs of their children. d) Helping parents to make connections, e.g. between stress and somatic symptoms, between marital strains and emotional symptoms in children. Some stresses can be removed, others not, but even here ways of limiting damage may be found. e) Improvement of communication, both within the family and perhaps more widely, such as between home and school. f) Whereas the focus of these meetings is invariably the child, and the parents' contribution to the child's disturbance, inevitably at times the reasons for particular actions on the part of the parents become the focus of the meeting. At these times, the therapist may attempt to convey his or her understanding of a parent's behaviour in terms of current or past events in the parent's life, and the parent's unconscious tendency to transmit difficulties in their lives to the child. This may involve repetition of the parent's own childhood experience, or displacement of affect, particularly hostility, from the partner to the child. In arriving at formulations of the parent's

behaviour, and communicating these to the parent, the therapist's aim is to elaborate the parent's perception of the child, significant distortions in this perception, the origins of these distortions, and the way such distortions influence the parent's feelings and behaviour towards the child.

For all families in conditions 1) to 3), a case manager will be assigned, whose responsibility will be to coordinate and integrate clinical intervention with the collection of process and outcome evaluations. The case manager will probably be the social worker providing parent guidance. The case manager will also be the key figure in identifying difficulties which emerge external to the treatment which may endanger the child's continued attendance. Regular team meetings will be held, where the treatment of each case will be discussed at least once per month. The team meeting will include the child's therapist, the case manager, a representative of the research team and senior consultants at the Centre. The child's teacher will also be invited to these meetings. Note that although none of these individuals will be blind to the child's treatment, it is not envisaged that any of them will be involved in providing data for central outcome variables.

#### iv) Outcome measures.

Naturally, measures applied in the evaluation of other therapies, such as change in symptoms, can and should be used to assess the outcome of psychodynamic treatment. However, if a fair test is to be made of the theoretical claims of psychoanalysts that dynamic treatment does more than reduce observable symptoms, then an attempt must be made to measure parameters which are identified by psychoanalysts as pertinent to their work (e.g. measures of intrapsychic functioning). In order for such measures to be acceptable, they have to meet a further criterion of relevance, viz previous empirical studies should have shown such parameters to be associated with the healthy development of children. Some such measures are: the quality of object relationships (internal working models), adaptiveness of defences (coping styles), the range and regulation of the child's emotional responses, the development of morality, and social behaviours. This poses a formidable task, in that normative data are not yet available on many measures. Our approach to this problem is to make more extensive use of recent progress in developmental psychology, and adopt measures which were devised to chart the cognitive and social development of children, and collect pertinent normative data on these measures for the purposes of comparison.

Given the page limitations, we are not able to list all relevant scales and variables for these measures, nor the reliability and validity information available on them. Each measure proposed, however, has satisfactory reliability and established validity for the assessment of emotional disorder. All measures not previously standardised for a British population are at present undergoing field tests for repeated longitudinal presentations on a sample of 120 school children from the same population. Here, we will briefly present the rationale for using the principal measures proposed.

The measures are not of equal importance to the study. For ease of consideration, we have divided the measures into 13 domains, only 9 of which relate closely to the study hypothesis. We have identified domains as being of high priority if they have a) immediate service relevance, or b) evidence exists to link the domain to subsequent

resilience to stress-related disorders. A second set of domains we have designated as medium priority domains. Variables have been included here if a) on the basis of the therapeutic literature, they may be expected to show improvement although such improvements would not necessarily be considered of high priority by families or referrers, or b) evidence linking these domains to the child's resilience is speculative or poorly supported by data. A third set of domains pertain to exploratory studies undertaken in conjunction with the examination of the main hypothesis under investigation. Included here are predictors of outcome and contextual variables which may help explain observed differences in outcome that do not pertain to the main hypothesis under investigation, and where statistical power is too weak to permit the drawing of definitive conclusions. We anticipate that there will be strong observed relationships between the outcome domains, which in many instances are linked theoretically within dynamic as well as other major theoretical frameworks.

We attempted to identify domains where, within our own theoretical framework, improvements may be expected to be to some degree independent of one another because the underlying processes differ. Thus, for example, improvements in symptomatology, e.g. anxiety, may be partly independent of the development of prosocial behaviours. In order to determine whether the effects we are observing are independent of one another, we propose to take a multivariate approach to the testing of statistical significance of treatment effects. We will examine the effect of psychodynamic treatment on lower priority domains by statistically controlling for change observed in higher priority domains. Thus, we control for symptomatic change when looking at social adaptation, and both of these when looking at changes in self-esteem.

The fourth set of domains concerns the dose-response relationship of therapy and outcome. Individual differences in outcome should relate to the presence of a specific and limited set of process variables, which are assumed to be crucial to therapeutic improvement by psychodynamic therapists. Such therapeutic process goals will be defined by expert clinicians, on the basis of the dynamic formulation of the case, at the outset for each child. This will be done using the treatment manual and the instrument used to monitor it.

There are a large number of measures proposed, raising a number of serious problems for the study. Firstly, the tolerance of families (particularly parents) and teachers to measurement is limited. It should be noted that it will be possible to administer some of these measures to many of the parents whilst they wait during the child's treatment sessions. If measures are to be eliminated because of the tolerance of a caregiver is exceeded, measures would be eliminated in order of priority. Secondly, the validity of the statistical treatment of the data is threatened by the large number of measures. The adoption of Bonferroni significance levels would substantially reduce the power of the statistical design, and is not seen as appropriate here. Two alternatives are proposed: post hoc analysis will permit the combination of measures on the basis of a) latent variables, and b) composite measures put together on the basis of theoretical considerations. The latter alternative is preferred, and the domains are specified to facilitate the creation of such composite measures, given that the coefficients of consistency observed (Cronbach, 1964?) permit such aggregation. Thirdly, priorities may not be the same for all families. To enhance the appropriateness of measures to an

individual child, parents, children, referrers and assessors will all be asked to review the domains we propose to examine, and rank-order these according to importance for a particular case. The rank orders will be combined in the light of the description of the case by independent experts at the admissions case conference for each child, in order to create a personalized set of goals. This procedure will enable us to look at outcomes across children in "critical" domains, in terms of effect size.

### High priority domains

#### *Symptomatology:*

The measures in this domain aim to monitor changes in the presence and severity of problem behaviours, using standardised measures, in order to provide a measure of comparability with the effects of other forms of treatments for similar disorders. We predict that symptomatology will improve in psychodynamic treatment at a faster rate and to a greater extent than in parent guidance alone. We further predict that the rate and extent of symptomatic improvement in psychodynamic treatment will be related to the extent to which the psychodynamic goals set at the stage of diagnostic assessment are achieved, within each treatment, when the two intensity groups are combined. As mentioned previously, these goals concern the content and process of therapy, determined for each child on the basis of areas of difficulty identified in the psychoanalytic formulation of the case. These will be reviewed and finally established after three months of treatment. Extent of symptomatic change will be assessed in terms of number of symptoms reported on the CBCL, summed across informants.

#### *Social adaptation:*

The treatment is expected to have significant impact on the child's social behaviour and competence, independently of symptomatic improvements. Within a psychodynamic model of anxiety disorders, unevenness of social and emotional development is seen as the most relevant risk factor for the development of anxiety disorders. Thus, a particular emphasis of this assessment is the way that treatment enhances prosocial behaviours in the child and facilitates maturational processes which are indexed by the emergence of age-appropriate behaviours, and the balance between development in different areas. We predict that psychodynamic treatment will advance the social maturity of the child, in comparison with parent guidance, and the extent of change will be related to the achievement of psychodynamic goals. We expect the strongest relationship to occur in interpersonal domains of peer relationships, including popularity, and unevenness of social maturity to be better addressed by dynamic treatment than by parent guidance.

#### *Self-esteem:*

Low self-esteem is a very common feature of anxiety disorders, which may be secondary to mental disorder and peer reactions to the child's behaviour, or in more severe cases be an indication of developmental pathology and a deficit in the evolution of self-structure. We anticipate that improvements in self-esteem will be in line with improvements in symptomatology and social adaptation in children with mildly impaired self-esteem. In children with severe impairments of self-esteem, improvements in this domain will be an independent goal of treatment. In the latter group of children, in psychodynamic treatment, we expect maximum change in the child's self-reported

view of himself. In parent guidance, we expect parents' views of the child to change more than the child's view of himself.

### Medium priority domains

#### *Child personality:*

There is no agreed framework for the study of personality in children. Measurement of personality is complex and strongly influenced by situational and informant effects. Data from direct (rating or self report) or indirect (projective) measures tend to relate poorly. In the present study a multi-measure approach will be taken. The explicit aim of intensive intervention is to bring about change in the child's personality structure. Abnormalities in the child's personality structure are regarded as the predisposing factors for mental disorder. It is expected that psychosocial treatment will reduce extremes of personality and enhance favourable traits. Major changes in personality structure do not emerge as an immediate consequence of treatment, but we expect that personality development in the longer term will be less deviant for the psychodynamically treated group than for children who only receive parent guidance.

#### *Educational performance:*

Anxiety disorders frequently impede the child's adaptation at school. Anxiety and depression are particularly likely to interact negatively with attentional and learning processes. In addition, we anticipate that many of the children in this study will have concurrent disruptive disorders, which also have a strong relationship with poor attendance, attention and performance at school. Beyond these changes, which we expect to be strongly related to symptomatic improvement, on the basis of our dynamic hypothesis of anxiety disorder, we anticipate that some children will defensively inhibit their educational performance because of fear of competition (unconscious concerns about damage to other children), etc.. We expect that, even in children in whom symptomatic reduction is limited, there will be an improvement in educational performance associated with dynamic treatment and the achievement of psychodynamic goals.

#### *Social cognition:*

Within our theoretical framework, inhibitions upon social cognitive processes place the child at risk because they reduce his capacity to deal with family and social conflict, as well as his own emotional distress. Because of this, we anticipate that the development of social cognitions will be retarded and distorted in most severely emotionally disordered children. The specific aspects of social cognition which are most likely to be affected include: moral development, emotional processing and the capacity to accurately represent beliefs, desires and intentions in self and other, and the capacity to make accurate attributions concerning the behaviour of others (latent cognitive structures). These domains are now amenable to objective assessment, using one of two paradigms: a) the child's narratives, and b) experimental procedures aiming to assess perceptual processing and memory biases. We anticipate that improvements in these domains will be related to certain aspects of treatment process, in particular, the accuracy of the therapist's perception of the child's mental state, within the treatment, which will be independently assessed. We predict that changes in social cognition will be associated with the presence of these aspects of dynamic treatment, and that these

changes will reduce the likelihood of the recurrence of symptomatology during the follow-up period.

### Low priority domains

#### *Family relations:*

Poor and difficult relationships amongst family members can be a consequence of mental disorder but are more commonly seen as causally linked to the development of emotional problems in the child (see section IV,c,iii). The psychotherapeutic treatment of emotional problems has also been shown to result in the worsening of family relationships in some studies (Szapocznik, 1989). Intensive and non-intensive treatment together with parental guidance is expected to improve family functioning in general, and parent-target child relationship in particular. Parental stress should decrease and the parent's representation of the child should be more complex and favourable. In the case of intensive treatment, we would expect the child's representation of the relationship to the parent to become more complex, secure and positive in affect tone.

#### *Intercurrent treatment:*

In the comparison groups, and in some individuals treated in the two psychosocial treatment groups, we may expect parents of the child to seek alternative or additional treatment. The monitoring of intercurrent treatment is particularly important in case children who respond positively to treatment do so because of intercurrent treatment. We propose to interview parents, teachers and general practitioners, as well as the therapists, as to intercurrent treatment throughout the study, including medication, other psychosocial treatments (cognitive-behaviour therapy, psychotherapy, family therapy), special educational help, use of general practitioner, use of social services, special support groups, etc.. We will attempt to codify the extent of help received in any of these contexts in terms of the duration of the child's attendance, and ask for a report from the duration involved in administration of such intercurrent treatment. We are particularly interested if successful treatment leads to a reduction in the use of other services. This factor would feature importantly in a cost-effectiveness analysis.

#### *Physical health:*

Children with anxiety disorders are known to present more frequently with a variety of physical illnesses, including gastro-intestinal, upper respiratory tract, immune system-related disorders and accidental injuries. Evidence from the adult psychotherapy literature suggests that effective psychosocial treatment may result in a reduction in the use of general medical services [ref]. We propose to monitor the child's physical health based on parental reports monthly throughout the study (SF36 Health Survey 6 monthly).

#### *Conditioning variables:*

We propose to monitor a number of domains which are likely to affect outcome of treatment, and may need to be controlled for in any statistical analysis of the data. These variables are all known to aggravate emotional disorders, and cannot be controlled in the study. These domains are: parental psychopathology; the treatment of parental psychopathology; parents' physical health; life events for the child and for the family, both stressful and positive; marital relationship of the parents.

**Parent report:** CIS-R (Lewis & Pelosi, 1990) followed by full SCID for cases (yearly). Social Adjustment Scale (Cooper et al., 1982) (yearly) to monitor the parents' capacity to cope with life events. Short form of LEDS for the parent, and Goodyer Life Events Schedule for the child (yearly). SF36 to monitor the parents' health (6 monthly). Checklist for monitoring parent treatment (yearly). Adult Attachment Interview (2 yearly). Dyadic Adjustment Scale (Spanier, 1986) (yearly).

Table 10.1 (Chapter 10) showed the measures to be used in each domain, the main references, rationale for inclusion in the study, informants and frequency of administration.

v) **Critical Issues regarding design.**

a) **Sample size** needs to be sufficient to permit the detection of a statistically significant difference between the groups in a reasonable proportion of instances. Following Cohen (1988) we set power at 0.80, and alpha at 0.05. We believe that a difference between intensive treatment and a minimal treatment control is of little interest clinically or theoretically unless the size of the effect observed is fairly large. We assume that a difference in means of 0.8 standard deviations is the smallest difference of interest, even though it is classified as a large effect size by Cohen. Power calculations indicate that a mean difference of this size at alpha set at 0.05, and power at 0.80 requires a sample size of 26 per group, in a one-way analysis of variance. This sample size permits each of the treatments to be contrasted with the control group; a large effect size cannot be assumed in contrasting intensive and non-intensive psychosocial treatments. Here, a more appropriate strategy might be to examine dose-response relationships in terms of the correlation between outcome and the extent to which processes judged by clinicians to be pertinent to the case were addressed in the treatment. By combining the two intensity groups, a sample size of 60 should be sufficient to examine the significance of  $r$ , with alpha set at 0.01, to adjust for the increased likelihood of type I errors, in the light of the number of comparisons.

b) **Prevention of attrition.** A crucial issue for this study is the prevention of subject attrition. We recognise that this could dramatically reduce both the internal and the external validity of the proposal. Flick (1988) considered a wide range of issues related to clinical trials. We address several of his recommendations concerning data analytic procedures below, but we intend to take a number of measures to minimise the danger of attrition. These will be:

1) we propose to allocate \$400 per family per year for compensation payments to the subject and the teacher. It is felt that, whilst payment for treatment per se is not indicated, the motivation for the ongoing data requirements (see above) should be actively reinforced. We plan to pay families \$150 at six-monthly intervals for completion of questionnaires and participation in the assessments for the first two years of the study, and an equivalent sum for all subsequent assessments. The sum does not provide realistic reimbursement for time off work, but could help with transportation and child-care costs, and make a significant difference for lower SES families, which the project needs to recruit and keep. Teachers will be paid \$100 per year for collaborating with the collection of data, which we regard as a realistic compensation for the time involved.

2) Families will be offered either transport facilities to the Centre for treatment and assessment sessions, or reimbursements based on their actual transportation and parking costs. Although this will amount to a substantial sum, particularly for the intensive treatment group, we anticipate that without such reimbursements lower SES families simply could not afford to participate in an intensive treatment which in some cases will take place an hour's travelling time from their home.

3) At each stage of the recruitment process, the need to make a commitment to attend for treatment will be stressed, while this may skew the sample somewhat towards those most motivated to obtain help, our experience suggests that it is parents with the most chronically and severely disturbed children (i.e. our target group) who are most likely to make such undertaking. It is also true that the parents of these children need continued and active support to maintain the child in treatment; our Centre has extensive experience in offering this, even to highly disturbed and disorganised families.

In general, it cannot be over-emphasized that the project needs to make an active investment of time, money and effort in keeping the families engaged in the protocol. We will make extensive and energetic efforts to obtain the collaboration and financial assistance of statutory bodies responsible for the child's welfare, and on the basis of our experience we expect that assistance with transportation costs might be forthcoming in a small number of cases.

c) **Monitoring of treatment integrity.** The first issue regarding the viability and integrity of treatments pertains to the need for intensive staff training. All therapists participating will have had at least three years of full-time training in child psychotherapeutic techniques. In addition, participating therapists will attend a two week full-time training course based on the manual of child therapy used. The training course will include extensive case discussions, and the reviewing of videotaped clinical material for highlighting technical issues related to insight-oriented and developmental interventions. This training programme will be run by senior clinicians at the Centre who were involved in the drawing up of the treatment manual.

Treatment integrity will be monitored by the therapist completing a treatment content schedule after certain therapeutic sessions. This instrument is being developed on the basis of our treatment manual specifically for the purpose, and currently consists of over 400 items, organised hierarchically into content areas, which may or may not apply to a specific session. We have found that this way of recording therapy content greatly improves the reliability and validity of therapist's reports. In order to continuously monitor the validity of the report, sessions selected randomly will be videotaped. Neither therapist nor the patient will know in advance or during the session that the session has been videotaped. Videotaped sessions will be independently rated on the session content rating scale, and in case of persistent and significant discrepancies between independent ratings and the therapist's report, the therapist's work will be continuously monitored, and special supervision will be arranged. Normally, senior therapists at the Centre will monitor therapists' reports, and videotaped sessions in order to identify significant deviations from the treatment manual.

d) **Data analysis.** Space allows only brief coverage of the many issues related to data analytic plans. The following are viewed by us as the most important: 1) the ascertainment of pre-inclusion and post-inclusion attrition; 2) the analysis of individual subject response to the treatment, in addition to average group data; 3) clinical in addition to statistical significance of post-intervention and follow-up outcomes. 4) An evaluation of the representativeness of the intervention sample that remains after the multiple gating assessment procedures is essential to determine the extent to which findings are generalizable to other populations.

By obtaining preliminary data including demographic as well as clinical information in the first phase of the assessment, from the family, teacher and family practitioner, we are able to perform comparisons between those who proceed to Phase II and those who either opt out or are screened out. We can continue to perform increasingly detailed comparisons of stayers vs non-stayers at each stage of assessment, right down to comparing those who continued with treatment once started with those who dropped out within 6 months and will be replaced by other children. Particularly important will be the reasons for not taking up the offer of treatment or terminating it prematurely. Soliciting the reasons why some families decide not to participate will help to specify the population to whom subsequent intervention results will be generalizable.

Comparison across the three psychosocial intervention conditions will commence with the establishment of a pre-intervention baseline of the four groups in order to establish comparability. This necessary because of the strategy of random assignment without stratification we plan to adopt. One-way ANOVAs, with careful attention to the homogeneity of distributions across the sample, will facilitate such comparisons. This approach is viewed by us as more appropriate than a multivariate strategy at this stage, in view of the need to statistically control for any discrepancies which emerge, which may be obscured by either artificially lowering alpha levels with Bonferroni adjustments or exploring only global differences using a MANOVA model (see Huberty & Morris, 1989, for a discussion of the advantages of multiple ANOVAs). We will then turn to the analysis of any attrition that will inevitably occur despite our efforts to keep families engaged (see Flick, 1988, on post-inclusion attrition). Attrition may be viewed as an outcome variable, but it is nevertheless a major threat to the experimental nature of the design. Even if attrition rates were comparable between the groups, the reasons for attrition may be different (e.g. treatment demand in the intensive group and insufficient treatment in the other three groups). Therefore, completers-only analysis of the data would be biased. Flick recommends coding attrition as a dummy variable, in order to examine significant interaction between dropout and condition. In the absence of interaction effects, we may proceed with a standard outcome analysis. If an interaction is identified, we propose to supplement standard outcome analysis with end-point analysis and the replacement of missing data through multiple regression strategies (see Flick, 1988, p 508-512). Assuming that no systematic bias is identified, we will examine the differences between groups using a condition x time MANOVA / ANOVA model, using BMDP5V for unbalanced repeated measures models. Attrition will obviously affect the power of these analyses, which is why we have decided to replace subjects who have dropped out within the first six months of treatment. After this time, we propose to include dropouts with the treated group, and endeavour to obtain data from them at all critical time-points for hypothesis testing. We anticipate

that these data will be forthcoming on high priority variables, given the relative brevity and non-intrusive nature of these assessments. Our sample size of 30 per group will permit data loss at 13% before the statistical validity of the design is threatened.

This programme can be supplemented by the general univariate and multivariate analysis programme (4V) from the same suite, in analyses of data where missing observations are negligible (Schluchter, 1988). We will be able to perform a trend analysis extracting linear and quadratic trends to see if rate of improvement is comparable between groups. If baseline differences exist, pre-intervention levels will be used as covariates (see Maxwell et al., 1984). Planned contrasts will be used to compare groups at specific time points if a significant interaction time and condition is found on a particular dependent variable. We will naturally take care to ascertain per-comparison alpha levels (Huberty & Morris, 1989).

Demographic variables and family characteristics, and variables relating to the treatment (e.g. therapist experience) may be used within these models as additional independent variables in order to ascertain important subject x treatment interactions. Site of recruitment, for example, may be an important factor to examine. In the light of the relatively small sample, interaction variables will be selected with care, and could be analyzed only singly in order for power to be maintained at acceptable levels. Some of the critical variables will include gender, ethnicity and comorbidity. In the latter domain, the presence or absence of conduct or other disruptive disorders may be of particular importance. For example, on the basis of our retrospective study and pilot investigations, we estimate that 15% of the sample will have concurrent disruptive disorder (ODD / CD), and 20% learning disabilities.

For the analysis of outcome, the clinical significance of gains that are made will need to be addressed. This is best done through the examination of obtained pre- and post-treatment differences, relative to normative data which we have collected separately. This is the empirical strategy suggested by Jacobson & Truax (1991), which we plan to implement on the basis of longitudinal normative data which we are in the process of collecting on these measures. We will contrast changes observed associated with treatment with changes which might be expected on the basis of our normative data set. This will enable us to examine the proportion of subjects across the conditions who experienced a clinically significant benefit for a given outcome measure.

Kazdin (1991) pointed to the paucity of information in child psychotherapy research with respect to the processes responsible for improvement. Measures used to monitor treatment integrity will enable us to explore the relationship of treatment outcome (measured as effect size relative to the normal population) and the presence of factors assumed by us to be critical in the treatment of severe anxiety disorder. For example, a key prediction links a specific form of transference interpretation, the exploration of the patient's view of the therapist as a mental entity, to the capacity of patients to deal with the psychological world in general. We hope that detailed study of individual cases, the time course of psychic change related to therapeutic intervention will help us to further our understanding of the therapeutic process, and will allow us to develop hypotheses to be tested by further investigation. Of course, such correlational analysis does not imply causation, but the use of time-series techniques may help in strengthening the case that the presence of certain types of therapeutic interventions

lead to changes in outcome variables, and not the other way round.

**vi) Feasibility.**

The Anna Freud Centre is an internationally respected treatment, training and research centre devoted to child psychoanalysis and psychotherapy. The permanent trained staff of over 40 individuals provides the capacity to deal with the sample size specified for the relatively long durations of treatment we envisage. The Centre's own training programme in child psychotherapy is expected to facilitate recruitment if additional therapists are needed, and local graduates of the Centre give a further pool of possible therapists. The Centre is housed in three large buildings with over 30 treatment rooms, some already equipped with video facilities. The Centre's Board and Executive including its Director are fully behind the project, and are prepared to commit the Centre's resources to its implementation. We regard the current study as a first step, establishing the methodology for multi-site studies of the outcome of psychoanalytic child psychotherapy.

The feasibility of the study is further ensured by the collaboration with Yale University (Alan Kazdin) and the Yale Child Study Centre (Donald Cohen and Linda Mayes). We envisage the setting up of a Steering Committee for the study, convened and co-chaired by Drs Kazdin and Cohen, co-opting other expert members as appropriate from within the United States and The United Kingdom. This collaboration will ensure that the study maintains the highest scientific rigour. In addition, psychoanalytic scholars and clinicians at the Child Study Centre will provide a massive additional resource for the independent assessment of case material and the rating of outcome interviews. We propose to ensure close collaboration by regular scheduled meetings between the Yale and London sites, organised at least three times a year. Assistance in the measurement of therapeutic process has been provided by Dr Paulina Kernberg (Cornell University). Consultation on statistical issues is available from Dr James Hampton, Head of the Department of Psychology, City University (London).

Additional advice on research methodology would be available from a number of sources in London. Professors Michael Rutter (Institute of Psychiatry), Philip Graham (Institute of Child Health), Israel Kolvin (Tavistock Clinic) and Ian Goodyer (University of Cambridge) have already given advice on various aspects of this proposal. Additional statistical advice will be available via the Department of Psychology, University College London (Dr A.R. Jonckheere).

The establishment of a psychoanalytic research centre in the Psychoanalysis Unit of University College London, where four or five of the most eminent psychoanalytic researchers will organise workshops each summer, provides a further useful resource for consultation as well as independent rating. In addition, the Centre's affiliation with University College London ensures the presence of doctoral students under supervision at the Centre (there are currently seven doctoral research students at various stages of the programme). Further, highly qualified graduate students in the clinical psychology programme at University College London could provide input into the assessment and coding functions. There are currently 75 students enrolled.

**vii) Dissemination.**

Publications from the study will be overseen by the Steering Committee (see above). In view of the significance of the research for clinical practice, we hope to disseminate the findings both in peer-reviewed psychiatric and psychological journals. A technically less elaborate summary of the findings would be presented for publication in psychoanalytic publications. The manuals and measurement instruments specially developed for the programme would be made available in DTP versions for other laboratories, to enhance the possibility of a subsequent multi-site investigation.