

**EMOTIONAL AND BEHAVIOURAL
DIFFICULTIES; CAUSAL ATTRIBUTIONS FOR
SOCIAL AND WORKING RELATIONS IN GREEK
PRIMARY SCHOOL CHILDREN**

FOTINI PERAMAGELI

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ABSTRACT

Emotional and behavioural difficulties are present in many children's lives. Prevalence and stability estimates have called for early identification and intervention. Several factors have been identified which relate to emotional and behavioural difficulties and conclusions have been drawn on how children with EBDs differ from the non-EBD.

One area which has not been adequately researched is the relationship between emotional/behavioural difficulties and social cognition and more specifically to causal attributions. Children's causal attributions have been found to relate directly to their emotional and behavioural reactivity, so the objective of the present research was to identify the way children with EBDs perceive and interpret social situations of peer rejection and school failure.

Two studies were carried out. The first study dealt with the identification process of emotional and behavioural difficulties in primary school children, aged 8-11yrs old, in Athens, Greece. The Rutter Behaviour Questionnaire for completion by teachers and parents was used for 266 children from 2 state schools. The prevalence rate was estimated at the 35% level. Sex and social class differences were also identified.

Three groups of children were identified in the first study for participation in the second study. One group included children identified by parents and teachers on two occasions (the pervasive and stable group), one identified twice by teachers only and one twice by parents only. Each of the

three groups was matched with a control in terms of sex, age and SES. It was found that children in all the three EBD groups have consistently failed to choose internal self-attributions in comparison to their controls i.e. self-attributions for failure and rejection in social and work relations were mainly external for the EBD groups whereas they were both internal and external for the controls. There were no differences between the two groups for the other attributions i.e. other attributions for failure and rejection in social and work relations were both external and internal, for both the EBD and control groups. No differences were identified between EBD and control groups in terms of children's ability to anticipate others' hurt feelings. However, differences were found between the pervasive EBD and control groups in children's reactions to anticipating hurt feelings. The EBD group children revealed both internal and external reasons, although they were able to realise, that internal reasons hurt more. The control group children only revealed the external reasons.

These results enhance our understanding of the heterogeneity and situation specificity of EBDs and have major implications for assessment and identification measures. They also shed some light on the relationship between EBDs and causal attributions and can have useful educational, social and psychological implications for the children themselves as well as for their significant others.

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GENERAL INTRODUCTION

The present research falls within the general body of work relating social cognition to social behaviour and is based on recent advances in attribution theory. The general focus of the research is to find out how children with Emotional and Behavioural Difficulties (EBDs) construe and interpret social situations, and in particular, how they explain rejection and failure in social and working relations.

Social cognition is currently one of the most dynamic and active areas in psychology. In a general sense, it takes humans and human affairs as its subject and refers to how people think about themselves and others. The emergence of this area of psychology reflects the merging of two hitherto distinct disciplines, namely that of social and cognitive psychology. The study of social cognition integrates a diverse body of knowledge including person perception, sociocognitive perspective taking (role taking), visual perception, affective perspective taking (empathy), self-control and attribution. A basic tenet of social cognition is that the way people think and feel is related to the way they behave. Early attempts to relate social cognition to EBDs have mainly concentrated on deficits in socio-cognitive skills and more specifically on role taking, empathy and problem solving. The general assumption has been that the higher the socio-cognitive abilities the more adjusted the child's behaviour.

One of the areas of social cognition, is attributions, personal explanations of situations and outcomes. Much research in the area has been

concerned with the processes and structures hypothesized to underlie everyday understanding of the social world. Researchers have asked questions like: 'How do people decide why their fellows behave as they do? What information do they work on? How do they make judgements in a social context? How do they perceive and interpret the social world around them?'

A set of theories called attributional theories considers the link between causal attributions about events and people's emotional reactions and behaviours towards them. Most research on children's causal attributions has studied developmental shifts in the reactions to success and failure in the academic and social domain. Many studies indicate that younger children show a greater tendency to display or infer outcome-linked emotions and reactions while older children exhibit or suppose more complex relations including attribution-linked emotions. Within this body of research, studies have dealt with the causal attributions mainly to academic success and failure, made by children with learning difficulties (LD), aggressive, socially rejected and depressive children. However, research in the area is rather limited and results are controversial. More specifically, the way children with EBDs construe the social world around them and the way their construing influences their emotional and behavioural reactions, has not been adequately studied. On the other hand, there is a vast amount of research in the area of EBDs. Most of this research is based on behaviour rating scales completed either by parents, by teachers or by both. Several studies have commented on the situation specificity of EBDs and provided prevalence estimates. Certain behavioural and personality characteristics have been attributed to children

with EBDs and variables such as age, sex, social class, learning difficulties and social relationships have been found to relate to or influence the onset of EBDs. Based on these studies conclusions have been drawn about the ways these children differ from the non-EBD.

Within this context, the objective of the present study is to draw together the two areas of social cognition and EBDs and provide evidence of the significance of socio-cognitive processes in understanding children with EBDs. The goal is to determine the extent to which these children perceive and interpret social situations differently from the non-EBD and also to examine whether children with EBDs form a coherent group with respect to how they construe social situations.

In order to investigate the attributions of children demonstrating EBDs, the research starts with a search for the identification of a group of children with EBDs from a population of two primary Greek schools, through the use of the Rutter scales for parents and teachers. It then examines how these children think about themselves and other children and how they interpret and respond to emotionally arousing situations related to school work and social relations. Children's ability to anticipate the emotional reactions of other children is also examined.

By bringing together information on social cognition and EBDs, the present study aimed to gain a better understanding of how children with EBDs respond to different social situations in school. The intention is to illustrate a pattern of response which might be relevant to understanding how their difficulties are maintained.

CHAPTER 1: DEFINITIONS AND PREVALENCE RATES OF EBDs

Introduction

Chapter one deals with the different definitions of the term EBDs by various researchers and comments on the reasons responsible for the absence of a generally agreed upon definition.

The psychoanalytic, behavioural and ecological approaches are highlighted. Reference is made to the use of the terms maladjustment, psychiatric disorder, disruptive and disturbing children and finally to the term emotional and behavioural difficulties.

The chapter presents results from studies on prevalence rates and refers to factors which affect them (e.g. catchment area of the school, gender, culture, different informants, SES). Reference is also made to similar studies conducted in Greece.

1.1. Definitions of EBDs

The discussion on definitional issues mainly refers to U.S. ideas as they have analysed issues in more depth and U.K. definitions follow.

Currently there is no definition of EBDs that is generally agreed upon and researchers have given a number of reasons for this (Hewart & Orlansky, 1980; Hallahan & Kaufman, 1988; Apter & Conoley, 1984; Knoblock, 1980). The main reason is that so far there is no clear agreement on what differentiates mental health from normal behaviour. Differences in social and cultural expectations make the definitions of EBDs relative to these norms. Secondly, different theoretical approaches use their own terminology and definitions to explain the nature of the difficulties. In addition to that, agents providing services to children with EBDs and their parents (schools, clinics, diagnostic centers, juvenile courts) tend to define children in ways that justify their existence. To put it in Hobbs's words (1975):

"A particular child may be regarded as mentally ill by a psychiatrist, emotionally disturbed by a psychologist, and behaviourally disordered by a special teacher."

Thirdly, there are measurement problems. The measurement devices used so far for the identification of children with EBDs are neither reliable nor precise enough to be generally accepted and provide an adequate basis for definition. Fourthly, EBDs are often associated with other handicapping conditions such as learning difficulties. It is very difficult to identify the primary and secondary causes of the problem. However, there seems to be general

agreement in current definitions on certain common features of the problem:

1. behaviour that deviates extremely from the usual behaviour patterns
2. behaviour that the child exhibits over a long period of time and is not temporary
3. behaviour that violates social and cultural norms and expectations

A number of commonly used definitions have also been introduced by professionals working in the field, for example:

1) A child is disturbed when his behaviour is so inappropriate that regular class attendance, a) would be disrupting for the rest of the class, b) would place undue pressure on the teacher, or c) further the disturbance of the pupil (Pate, 1963).

2) The child who cannot or will not adjust to the socially acceptable norms for behaviour and consequently disrupts his own academic progress, the learning efforts of his classmates, and interpersonal relations (Woody, 1969).

3) A behaviour deviation is that behaviour of a child which a) has a detrimental effect on his development and adjustment and/or b) interferes with the lives of other people (Kirk, 1972).

Reinert (1980), avoids using the terms emotional disturbance, behaviour disorder or mental illness. He proposes the term "children in conflict", since he believes that the problem lies in those children's conflicts with the environment.

He defines them as:

"Children whose manifest behaviour has a deleterious effect on their personal or educational development and/or the personal or educational development of their peers. Negative effects may vary considerably from one child to another in terms of severity and prognosis."

The term most often used to describe problem behaviour, especially in the U.S., has been emotional disturbance (ED) (Reinert, 1972), which crept into the literature about 75 years ago without being defined. Ever since, it has served a variety of needs for those working with children. According to Coleman (1986) for instance, the term ED has served as an umbrella term under which various conditions have been laid, such as childhood schizophrenia, autism, psychosomatic disorders, phobias, withdrawal, depression, anxiety, aggression and other pathologies.

Bower's work in the UK on the early identification of school age children with problems (1960), greatly influenced definitional issues. He initially made a distinction between emotional handicap and emotional disturbance. The term handicap he says has a more lasting and persistent quality, whereas disturbances are often seen as transitory or temporary. He argues that the problem with defining/describing the term lies in the difficulty of describing the affective state called emotion. According to Bower, emotional handicaps can only be inferred from behaviours which may be overtly aggressive, inappropriate, withdrawn or combinations of these.

"One can describe the emotionally handicapped child as a child who is unable or will be unable to take the slings and arrows of life without caring in becoming immobilized or exploding.....
The ability to choose behaviour freely and responsibly rather than being driven by impulses or emotion is a sign of healthy emotional development."
(Bower, 1960)

Hence, according to Bower, the term emotional handicap is considered to be more appropriate than emotional disturbance or social maladjustment because it is more illustrative of the degree and nature of emotional problems

and is more realistically descriptive.

The legal definition of emotional disturbance in the U.S. (Public Law 94-142, 1977), is based on a definition developed by Bower & Lambert (1971), and describes emotionally disturbed children as exhibiting one or more of the following behaviour patterns which have to be demonstrated to a marked extent and over a period of time:

- inability to learn, which cannot be explained by intellectual, sensory or health factors
- inability to build or maintain satisfactory interpersonal relationships with peers and teachers
- inappropriate or immature types of behaviour or feelings under normal conditions
- a general pervasive mood of unhappiness or depression
- a tendency to develop physical symptoms, pains or fears associated with personal or school problems.

The original wording of the definition by Bower has been modified by the addition of the word "seriously" to the term emotionally disturbed. According to the U.S. law the term seriously emotionally disturbed includes children who are schizophrenic, but does not include children who are socially maladjusted, unless it is determined that they are seriously emotionally disturbed as well.

According to Hewett & Taylor (1980), during the 30 years from 1941 to 1969, there has been a definite shift of emphasis in education, from social maladjustment to emotional factors and finally to behaviour disorders. From

a theoretical perspective, the emotional disturbance concept reflects the impact of the psychoanalytic psychology on the study of children with EBDs whereas the behaviour disorder concept represents the influence of the behavioural model. These two theoretical models will be discussed in more detail.

1.1.1. Theoretical perspectives

Although the psychoanalytic perspective emphasizes the role of inner life as the cause of emotional disturbance, both biological forces and early environmental influences are believed to contribute to the pathological condition. According to Reinert:

"From a psychoanalytic point of view, the child has not negotiated, at a successful level, the various intrapsychic and external conflicts faced in the process of psychological and physiological maturation." (Reinert, 1980)

Emotional disturbance is seen as a disorder that arises when something goes wrong developmentally and the child experiences persistent developmental lags or excessive prolonged distress. According to psychoanalytic theory, all children go through brief emotional distress. There are only a few qualitative differences between emotionally disturbed and "normal" children; the differences are mainly quantitative.

In contrast, behaviourism assumes a different conceptualization of behaviour rejecting the medical model. The fundamental principle is the notion that abnormal behaviour or inappropriate behaviour is learned and maintained

in the same way as normal or appropriate behaviour. The frequency, magnitude and social adaptiveness of the behaviour are the only differences between most disturbed and normal individuals. Behaviourists in general do not use the term emotional disturbance. In their terminology, emotional disturbance is maladaptive behaviour. For example, in relation to a behaviour difficulty in school, it is necessary to examine the classroom environment and the behaviour of the teachers and other pupils in order to determine how that behaviour is being reinforced. Implicit to this position is the assertion that it is possible to change the target behaviour by manipulating its consequences or changing the situation in which it occurs.

The emotional disturbance and behaviour disorder controversy are represented in the deviance vs disability perspectives. The advocates of the deviance perspective define disturbance as the violation of social rules and use the behaviour disorder concept. The disability perspective considers inappropriate behaviour as a symptom of underlying disturbances i.e. internal neurological- physiological disorders.

Along the same lines, ecosystemic theories consider that behaviour is best understood in the context of the situation in which they occur, i.e. they study behaviour and emotional problems in schools in terms of the interactions of the persons involved either in schools or in related contexts like the family. Thus, problems are seen as originating from within interactions between pupils and not within the pupils.

According to Apter & Conoley (1984), who adopt an intermediate position, there are strengths as well as weaknesses in both approaches. On

the positive side, the disability perspective tries to provide a culture-fair classification system which can be very useful in identifying abnormal behaviour. The deviance perspective emphasizes the importance of the context in which behaviours occur and can take into account the damaging effect of the labeling process. According to Mack (1985), the term behaviour disorders is often seen as less stigmatizing, less severe, more socially acceptable, and more practical than the term emotional disturbances.

On the negative side, the disability view makes unverifiable assumptions about the underlying pathological states, which cause disagreements about diagnosis. The deviance approach on the other hand, allows conformity to societal rules to become the defining characteristic for diagnosis, thus disregarding the fact that deviant and non-deviant behaviours are culturally as well as individually defined (Newcomer, 1980). Hewett and Taylor (1980), find the discrimination between the terms emotional disturbance and behaviour disorder very difficult to make, and argue that the term "disturbed child" is more precise.

Theorists with an ecological point of view, adopt the term "troubled children" (Apter & Conoley, 1984). They believe that what we know as emotional disturbances or behaviour disorders actually result from discrepancies between a given child's skills and abilities and the demands or expectations of that child's environment.

"While we know that this term -troubled child- also is not without inappropriate connotations, we use it, at least in part, to represent the inadequacy of the labels used more commonly in the field. It should remind us to be very cautious before deciding to refer to a youngster as emotionally disturbed or behaviour disordered. Finally, it can help us remember to think ecologically: troubled children are really representatives of troubled

systems."(Apter & Conoley, 1984)

1.1.2. The use of the term "maladjusted" in US and UK

A major US debate about definitional issues centres on the question of excluding the socially maladjusted children from the legal definition of emotional disturbance. Bower himself (1982) argues that if only seriously disturbed children are to be served the implications are that mildly or moderately emotionally disturbed children will be excluded from receiving services. He contends therefore that the emotionally disturbed child is socially maladjusted in school.

According to Kauffman (1985), there is no difference between children who are socially maladjusted and children who can not relate satisfactorily to peers. In practice, both types of children exhibit similar behavioural patterns and the term behaviour disorders is used by many to include both emotionally disturbed and socially maladjusted children, thus it is difficult to differentiate. Despite the fact that the US Law requires the distinction between the two terms, data in the US suggest that over one-half of school psychologists do not differentiate between seriously emotionally disturbed and socially maladjusted (Clarizio & Higgins, 1986; Mack, 1985).

Several controversies continue to exist regarding the differentiation between socially maladjusted and seriously emotionally disturbed. In a more recent article, Clarizio (1992), states that there is still no commonly accepted definition of the term among US professionals working with serious emotional

disturbances in children. Opinions mainly differ with respect to how broadly or narrowly the term should be defined. He proposes an intermediate position which has been put forward in the DSM III-R (The Diagnostic and Statistical Manual of Mental Disorders, 1987), terminology, and it is the category of the so called anxious-withdrawn-dysphoric students, which includes both socially maladjusted and emotionally disturbed. Thus both categories are eligible for special education provision provided that adverse educational impact is documented (Clarizio, 1992).

The situation in the UK

In the UK, the term maladjustment was introduced as a category of handicap in the 1944 Education Act. According to the Act, maladjusted children are the pupils,

"who show evidence of emotional instability or psychological disturbance and require special educational treatment in order to effect their personal, social or educational re-adjustment."

The Underwood Report (1955), although criticising the official definition, provided an extended discussion of the term. According to these criticisms the term was vague, was not providing exact criteria for identifying the handicap and was not expressed in clinical terms. The official definition was also seen as confined to children who could only be treated within the educational system, thus ignoring young ones not yet at school or older children outside the educational system. However, they did accept the existing definition as sufficient for formal decisions on special educational treatment.

The Report comments on the temporary nature of maladjustment by

saying that it is a term, "describing an individual's relation at a particular time to the people and circumstances which make up his environment." Maladjusted children are characterised as insecure, unhappy, anxious and unable to form personal relationships. Analysing the relativity of the concept of normality and adjustment, they conclude that maladjustment is an individual matter about which it is hard to generalize. "Maladjustment", they state, "does not always show itself in aggressive or troublesome conduct; quiet and passive behaviour may overlay deep emotional disturbanceit may, however, be linked with bad behaviour or delinquency." Recognizing that the official definition was imprecise and narrow, not covering the wide range of symptoms involved, the Report gave six sub-categories based on groups of symptoms as follows: Nervous Disorders, Habit Disorders, Behaviour Disorders, Organic Disorders, Psychotic Disorders and Educational/Emotional Disorders.

In 1978, the Warnock Report (HMSO), proposed the abolition of the existing categories of handicap. However, although it considered criticisms of the term maladjustment, it offered no new insights into the understanding or definition of children in this group (Lennox, 1991), and concluded that the term remains a servicable form of description and should be retained. On the other hand, the term has been seriously criticised by a number of researchers and alternatives have been proposed. For example, Burt (1970), stated that maladjustment as a term is a personal one, and like the legendary chameleon, changes its colour with its context. Wall (1973), also commented on the relativity of the term by saying that :

"One man's maladjustment, is another's normal aberration of behaviour; and indeed, concepts of maladjustment vary markedly from social group to social group as well as from culture to culture, as does the meaning of any particular piece of behaviour."

Professionals, he says, understand each other when the term is used, but everyone has a very personal understanding of it, built up from experience of children who have exhibited behaviour problems (Wall, 1973). According to Ryan (1973), therefore, the term is very vague in educational terms, covering many levels of behaviour and disorder in the same way that the term "sickness" and "illness" are used in medicine.

1.1.3. The use of other terms

There have been attempts to increase our understanding and agreement about EBDs, by the use of other terms. For example, Rutter et al. (1970), prefer the term "psychiatric disorder". Ravenette (1972), talks of a clear distinction between "disturbed" and "disturbing" children:

".....the disturbed and disturbing child. I have in mind the fact that these children attract attention by their failure to respond positively to their teachers' overture. Hence they are disturbing to them. Whether or not they are disturbed in themselves is another matter which is open to enquiry. It may, of course be true that there are some children whom teachers do not find disturbing but who may, in some genuine sense, be disturbed."

Rutter and his associates, in their pioneer study in the Isle of Wight (1967), and in subsequent papers, use the term "psychiatric disorder", to refer to children with EBDs (Rutter, 1985; Rutter et al., 1991). In their early works, Rutter & Graham (1968), state:

"The term refers to abnormalities of emotions, behaviour or relationships which are developmentally inappropriate and of sufficient duration and severity to cause persistent suffering or handicap to the child and/or distress or disturbance of the family or community. Our use of the term does not involve any concept of disease or illness....."

(A more detailed reference to Rutter's work will follow under the introductory section of the first study).

Galloway and Goodwin (1987), have rejected the term maladjusted and suggested the term disturbing as a more accurate way of describing these children because they are those who disturb adults. They criticised the retention of the term by the Warnock Report because the importance of school factors in the origin of learning and behavioural problems was consistently underestimated. They state:

"The term disturbing, implies a recognition of the children's effects on adults, while the term maladjusted and disturbed are too often taken to imply psychological or social characteristics in the child."

This point of view has been criticized by Lennox (1991), on the grounds that there are children who suffer from severe emotional disturbance, but do not in fact disturb adults. Lennox moves along the same lines with Ravenhete and states that perhaps the definition should be widened to disturbing and disturbed.

After the Education Act (1981), the adjective "disruptive" has gained widespread currency in the teaching profession.

" The term maladjustment is incapable of agreed definition and the equally vague term disruptive has become more popular, having the advantage of sounding neither pseudo-scientific nor immutably fixed..... To call a pupil disruptiveimplies that the pupil is disrupting either his/her own efficient learning or the efficient learning of other pupils." (Topping, 1990).

He believes that the term disruptive is the proper one for describing pupils presenting problematic behaviour. Some writers however, draw

distinctive lines between the two terms. For example, Mortimore et al. (1983), state that:

" Definitions of disruptive pupils or behaviour usually exclude children who are designated as maladjusted although there is no clear-cut distinction between disruptive and maladjusted pupils. Rather their behaviour falls at different points along a continuum and it is a subjective decision as to where the line is drawn between the two." (Mortimore et al., 1983).

Lawrence et al. (1984), differentiated the two terms. They claim that the term disruptive is more specific than descriptions such as naughty and troublesome, less clinical than maladjusted and less criminological than delinquent.

" The distinction is made now between the disruptive child and the maladjusted, the latter often seen as being unwell rather than culpable and suffering from a psychiatrically diagnosed disorder. However, it is accepted that the line is blurred between the two types of child, so that, a disruptive child may be temporarily prone to maladjusted behaviours and many so-called disruptive children would be categorized as maladjusted if they underwent the necessary procedures." (p. 16)

Lawrence and his associates refer to the distinction drawn between "problem children" and "children with problems", by many professionals working in the field of education. Children in either group are likely to be disruptive according to the authors. However, as terms, they are considered more promising because they relate the nature of the problems to the nature of the experiences against which the child reacts and take a social-psychological perspective to explain behaviour.

1.1.4. The use of the term emotional and behavioural difficulties (EBDs)

Representing a move away from the medical model which ascribes problems to individual psychopathology, professionals working in the field of education, especially in Great Britain, prefer the use of a more generic term and refer to children having "emotional and behavioural difficulties" (Lennox, 1991; Peagram & Upton, 1990; Hargreaves, 1984; Chazan et al., 1994; Cooper et al., 1994; Farrell, 1995).

The Elton report (DES, 1989), makes use of the term EBD, and deals with issues of definition and treatment, trying to make connections between EBDs and discipline in schools.

"Children with emotional and behavioural difficulties tend to present behaviour problems earlier in their school careers than other difficult pupils, and to behave in a disturbed and disturbing way regardless of which class or teacher they are with. The problems they present also tend to be more severe." (p.150).

The Report however, has been heavily criticized for conceptual confusion and its contribution on the issue of EBD is questionable (Peagram & Upton, 1990; Hanko, 1989).

For those professionals who make use of the term EBDs, although the centre of the problem is the individual i.e. the person in whose behaviour the problems are reflected, appropriate attention is given to various factors which might influence the behaviour of any child. Thus the role of the teachers, the school and the family are considered important in the generation and maintenance of behaviour patterns.

The official definition given by the Circular 23/89 (DES, 1989)

describes children with EBDs as those who:

"... exhibit unusual problems of adaptation to a range of physical, social and personal situations. They may set up barriers between themselves and their learning environment through inappropriate, aggressive, bizarre or withdrawn behaviours. Some children will have difficulty making sense of their environment because they have a severe pervasive developmental disorder or more rarely an adult type psychosis."

"..... have developed a range of strategies for dealing with day-to-day experiences that are inappropriate and impede normal, personal and social development and make it difficult for them to learn." (p.3 Parag. 8-10)

In practice the term has a wider application and it is used to describe children who demonstrate their feelings openly by being antisocial and disruptive - externalizing their EBDs - or children who show their lack of adjustment through internalized or underreacting EBDs, e.g. children who tend to be solitary, distressed, worried. Although this dichotomy between externalized and internalized EBDs is often explicit, it is not uncommon to deal with a mixed type of difficulties (Chazan et al., 1994).

Chazan et al. (1994) use the term EBDs recognizing that this is a broad term which needs amplification in any individual case and according to Lennox (1991), it embodies an acknowledgement that emotional difficulties usually affect behaviour and vice versa :

" With the proviso that criteria for using this term with its implied definition will be likely to differ from school to school it will no doubt continue to be employed - at least until a more imaginative and comprehensive successor takes its place." (Lennox, 1991)

1.2. Prevalence and stability

Prevalence rates apply to the total number of existing cases in a population at a given point in time. It is also used to refer to the percentage of the population that falls into a given category. Most professionals would agree that accurate estimation of the prevalence of children with EBDs is not possible. The effect of vague and inconsistent definitions is considered to be the major difficulty. It has already been mentioned that there is a continuous debate over the definition of the term EBDs, and that many theories describe the nature of the problem using different terminology. Thus it is not surprising that studies give different estimates of the instances they have observed (Apter & Conoley, 1984; Kauffman, 1985).

It is quite common for EBDs to be specific to certain situations. A child for instance, may exhibit disruptive behaviours at school and be a major concern for the teacher, while at home could be considered a docile child. At the same time children can be cooperative and well behaved at school while creating serious problems to parents at home. This situation specificity of the problem is considered to be another problem which complicates prevalence estimates.

We have referred to the different agencies e.g. school personnel, juvenile courts, etc., and to different professionals who tend to view EBDs from the perspective of the services they render. Prevalence estimates vary reflecting the differences between agents or individuals who make predictions about the incidence of EBDs.

The absence of commonly accepted and reliable instruments to identify EBDs is another obstacle to the accuracy of prevalence rates. In relation to this problem is the issue of differing thresholds. Instruments use different thresholds and these thresholds vary in different cultures. Consequently, results on prevalence rates vary greatly (Luk et al., 1991). Demographic factors also influence prevalence estimates. Perhaps not surprisingly, a higher prevalence of EBDs has been found in inner city schools than in suburban or rural areas (Rutter et al., 1975). In an attempt to summarize factors that influence the incidence of EBDs with accuracy, Hallahan & Kauffman (1988), suggest :

- children may have more than one pertinent set of characteristics, for instance they can have both MLD and EBDs, thus not making it possible for an accurate diagnosis and classification of the problem.
- children's intellectual, emotional and physical characteristics can change over time, they can either be alleviated through intervention or gained through accidents or disease. Prevalence estimates should take these changes into consideration.
- when the nature of EBDs is defined by schools there is no accurate way to estimate the prevalence because:
 - a. school performance is the essence of the problem and children could function adequately elsewhere
 - b. many children with EBDs do not attend mainstream schools, thus they are not included in the prevalence studies
 - c. schools place different demands on children - prevalence figures can be

distorted due to parents' reluctance to identify problems in their children.

Credible studies in the UK, US and other countries estimate that at least 6 to 10 percent of school age children exhibit serious and persistent emotional/ behavioural difficulties. However, extreme variation also noted, e.g. in the US, Kirk (1972), reviewed several studies and found estimates ranging from 2 to 22 percent of the population.

The US Department of Education, in 1975, published data showing that about 11 children in every 100 have been identified as handicapped for special education purposes but only 2 percent of these children were identified as seriously emotionally disturbed. These government estimates have been considered very conservative and operating on economic criteria (Kauffman & Kneedler, 1981). As Bower (1982) summarizes:

"It presents the problem as the tip of an iceberg, negating a host of consistent data that indicate that approximately 10% of children in school have moderate to severe emotional problems".

In the UK several studies have been conducted which report prevalence rates for EBD in children. The most detailed ones have been carried out by the National Child Development Study (Davie et al., 1972; Fogelman, 1976) and by Rutter and his associates on the Isle of Wight (Rutter et al., 1970) and in Inner London (Rutter et al., 1975a; Berger et al., 1975). The National Child Development Study which involved a sample of over 11,000 children born between 3 and 9 March 1958, yielded estimates of 22% for children judged by teachers to be unsettled and 14% for children judged to be maladjusted. However, these results were questioned on the basis that no information was included on children's behaviours at home (Davie et al., 1972). The Isle of

Wight study, examined the prevalence rate of EBDs in children aged 10 to 11, and reported that 12.3 percent of the children were identified as having EBDs by either parents or teachers. However, in their later survey Rutter and his associates (1975), obtained an inner city prevalence rate of 19.1% from teachers' questionnaires and 25.4% by teachers' questionnaires and parents' interviews.

Several other studies have provided estimate rates in the UK for children with difficulties. For instance, Kolvin et al. (1981), studying children 7-8 yrs old reported figures as high as 27%. Similarly, Stevenson et al. (1985), studying 8yrs old children obtained reasonably high percentage rates for boys (25%) and girls (17%). Although studies present variable prevalence estimates the incidence of EBDs is quite high.

Many studies have identified variables associated with prevalence rates of EBDs and the most prominent is gender i.e. boys are decidedly more "at risk" than girls, and show far more EBDs than girls (Laing & Chazan, 1987). Overall, boys tend to exhibit more aggression and conduct disorders than girls, though in some cases more girls than boys are rated as presenting internalizing forms of EBDs.

Prevalence rates also depend on who does the rating. Differences will be found between individual teachers in their perceptions of EBDs even within the same school (Harris et al., 1993), depending for instance, on teaching experience. On the other hand, a number of studies have found that parents and teachers may have different perceptions of the same child (Verhulst & Akkerhuis, 1989; McGee et al., 1984). A more detailed discussion on the

differences between parent and teacher perceptions of EBDs is included in chapter two.

Background factors influence prevalence estimates such as parents' educational level and occupation (Douglas, 1964; Rutter et al., 1970, Rutter, 1990), marital discord (Hinde, 1980; Patterson, 1982), psychiatric deviances in family members (Richman et al., 1982; Rutter & Quinton, 1984), overcrowded families and poor housing conditions (Douglas, 1964; Fogelman, 1983; Rutter et al., 1975a).

The catchment area of the school, related to some extent to the SES of the family, can also affect prevalence of EBDs, as well as membership in certain minority groups. In the Swan Report (1984) for instance, it was discussed that some teachers tend to have stereotypes of behaviours considered characteristics of certain minority groups.

In addition to the above mentioned variables, cross-cultural studies have identified different prevalence rates between countries as well as different difficulties exhibited by children (Vikan, 1985; Weisz et al., 1989).

Apart from the immediate adverse effects of EBDs which relates mainly to poor academic performance and poor social relations, follow-up studies of children with EBDs have indicated that the problems shown by children at younger ages tend to continue into later years. For example, longitudinal studies of children with antisocial behaviour have indicated that as adults they contribute disproportionately to the incidence of alcoholism, accidents, chronic unemployment, divorce and physical and psychiatric illnesses (Caspi, Elder & Bem, 1987; Robins & McEvoy, 1990).

A UK study by Richman et al. (1982), followed a sample of 94 three year olds identified as having EBDs. When assessed at eight years of age, 62% of them still showed difficulties in the clinical range (restlessness and hyperactivity), and the nature of the problem continued to be the same i.e. those children who were fearful and unhappy at the age of three continued to have the same characteristics at the age of eight. Similar findings are reported in the US by Egeland et al. (1990), in relation to the nature of the problems. Some 80% of the acting out preschool children and 71% of the withdrawn continued to show the same types of difficulties up to the first three years at school. Many other studies have reported similar findings on the continuity of the problems (Campbell & Ewing, 1990; Fisher et al., 1984; McGee & Silva, 1982).

Longitudinal studies have also indicated that many adolescents and young adults who are persistent offenders or show deviant behaviour had a childhood background of EBDs (Robins, 1991; Mitchell & Rosa, 1981). Continuity seems to depend largely on the nature of the difficulty. Most studies highlight the association between conduct disorders (aggression, hyperactivity, low peer acceptance) and later disorders in adulthood (Rutter, 1989; Soussignan et al., 1992).

A few studies have been conducted in Greece providing prevalence estimates on EBDs. One of them was undertaken in order to investigate teachers' perceptions of child behaviour problems in nursery classes (Papatheodorou & Ramasut, 1993). The overall prevalence rate according to teachers' ratings was 14.3%. Another study examined the prevalence rate of

primary school age children with psychiatric disorders using the Rutter Child Behaviour Questionnaire. Parents have identified 44% and teachers 26.4% of the 603 children in the study as having EBDs.

Concluding, it should be underlined that prevalence and stability estimates are influenced by methodological procedures and raise questions regarding validity and replicability (Vikan, 1985). Extensive reference will be made in chapter 2 on the validity problems in studies using parents and teachers as informants of children's difficulties.

Conclusions

So far, in this review of the literature on EBDs, we have discussed the difficulties surrounding definitional issues. We have also presented evidence from studies on prevalence and stability rates, commenting as well on several factors which relate to EBDs.

From this review, it is obvious that the way each researcher approaches the issue of EBDs reflects a certain theoretical background, which in turn sets the scene for the research methodology they choose to use. The following chapter deals with the process of identification and assessment of children with EBDs and presents the assessment procedures which are most commonly used in the particular area.

CHAPTER 2 : IDENTIFICATION AND ASSESSMENT OF EBDs

Introduction

The identification and assessment of children with EBDs has major implications for the educational provision and placement of children as well as for setting the right guidelines for treating the children and the people in their immediate environment. Thus the present chapter covers a short literature review of those procedures and emphasizes the need for early attention and detection of the problem. Reference is made to the difficulties facing assessment and to the purposes of assessment. The need for standardized assessment is emphasized. The methods of interviewing and observation are briefly discussed whereas an elaborated review of rating scales justifies the use of this method in the present research.

Commenting on the importance of using both parents and teachers as informants of children's difficulties, the chapter concludes with an extensive coverage of relevant studies.



2.1. Identification processes

At a practical level, the identification of children with EBDs is an easier task than the definition of the term. Either in school, home or elsewhere, most children with EBDs are identifiable because their behaviour stands out and most of them do not escape the notice of adults. Teachers in schools are most of the time in a position to tell when a child needs extra help. Especially children with conduct disorders seldom go unnoticed, since they attract attention with their behaviour. However, immature children and those with personality problems sometimes can go undetected because such problems are less obvious and less disturbing, and they do not draw much attention from teachers or parents. Some children can also go undetected in schools because they simply do not exhibit problematic behaviours in the school setting. This case relates to the situation-specificity issue of EBDs.

With younger children the identification of the problem is more difficult because young children's behaviour changes quickly and often, and one cannot detect the problem based on its duration and severity. Thus, the younger the child the more difficult it is to judge the existence of a problem.

Both philosophical and pragmatic considerations have played a role in determining the identification procedures used so far. As Newcomer states in the US context:

"In cases where legal classification of disturbance is sought to secure funds for special education programs, identification procedures usually are specified in state laws. Usually mental health professionals such as psychologists or psychiatrists are given the responsibility for identification. Where legal classification is less important and services are not dependent on categorical labeling, identification procedures might depend largely on

teacher reports of classroom behaviours, perhaps supplemented by additional diagnostic input from counsellors, psychologists, or psychiatrists if those professional services are available." (Newcomer, 1980)

Research has shown that informal teacher judgments are relatively reliable and valid in identifying children with EBDs (Bower, 1982). More recently when formal procedures have been used, teachers' ratings have been proven reliable (Edelbrock & Achenbach, 1984). Further discussion will follow on the use of teachers in the identification process, the validity of their ratings and the differences between their ratings, parents' and professionals' ratings, under the assessment section.

Evidence regarding the prevalence and stability as well as the adverse effects of EBDs in childrens' social and academic lives suggests the need for early attention and detection of the problem. Bower, as early as 1960, mentioned the importance of early identification of emotional disturbances and more recently, Kazdin (1987), provided evidence that intervention at younger ages is more successful and outcomes better than with older children. In general, researchers propose that the first years of primary school provide an opportunity for identifying and helping children with EBDs. During those times children have to cope with new demands and perform new roles which put pressure on them and either create or trigger problematic behaviours (Coie & Dodge, 1983; Ladd & Price, 1987).

2.2. Assessment

"The professional use of the term refers to a process of evaluating a person's condition, in an individual or group setting, with a view to determining how the condition should be dealt with." (Hoghughi, 1992)

During the last decade, an awareness of and concern for children's problems has grown. As a result, various forms of assessment have taken an increasingly central position in the field of EBDs. Divergent conceptualizations of human behaviour, the aetiology of EBDs, and classification systems have exercised a powerful influence upon the assessment procedures.

Children with EBDs are a population with unique characteristics and concerns which are considered socially and situationally specific. Thus, the choice of which instrument or technique to use largely depends on the goal or purpose of the assessment. According to Taylor (1989), assessment should be an active and ongoing process that has clearly specified purposes and should be individualized. Johnson et al., (1986), claim that although it is important for the assessor of children's problems to have some theoretical and conceptual framework to guide activities and thinking, it is desirable to "keep an open mind and be willing to view problems from several perspectives". They advocate an eclectic approach in which assessment techniques are determined by a careful consideration of the complexities of the individual case and by what is known regarding the efficacy of each relevant method.

Hogg and Raynes (1987), in following the same line of thought, state that:

"the major problems in assessing behaviour disturbances are caused by their social-relativity and the dependence on the manner in which the

disturbances are manifested on the subjects' mental age." (p. 124)

They suggest that, assessment scales should be adjusted to relevant norms and behaviour repertoires of different populations.

Nevertheless, it is essential to assess, considering the growing number of children with special educational needs. In a more general context, the extent, intensity and the place of a problem in the wider context of the individual and society should be known before any action is taken about the problem. In other words, assessment of the problem is fundamental to deciding on the right intervention.

".....assessment is the cornerstone of accountability and due process, and is essential to the development of a systematic, evidence-based approach to tackling social problems." (Hoghughi, 1992).

Five major purposes of assessment are presented by Taylor (1989):

1. initial identification
2. determination and evaluation of teaching programmes and strategies
3. determination of current performance level and educational need
4. decisions about classification and programme placement
5. development of individual education programmes, including goals, objectives, and evaluation procedures.

When certain criteria apply to assessment techniques regarding reliability, validity and usefulness and as long as assessment is a dynamic and continuous process undertaken with a clearly specified goal in mind, it plays a critical role in decision making and can positively influence present and future plans.

2.3. Standardized measures

The need for standardized measures in child psychopathology has been pointed out by many writers (Achenbach, 1978; Mash & Terdal, 1988; Achenbach & McConaughy, 1987). Standardized assessment of EBDs refers to obtaining reliable and uniform descriptions of children's problems. When assessors focus on common sets of variables standardized assessment can:

1. facilitate inter and intra individual comparisons
2. provide a common language and facilitate communication about children's problems among teachers, psychologists, clinicians
3. could help local authorities to allocate resources
4. result in standard, context specific norms of children's emotional and behavioural development
5. help in making generalizations from research findings within and across cultures
6. link research with educational and clinical practice.

"Unstandardized assessment is vulnerable to a variety of information processing biases. If we obtain different types of data from one case to another, for example, we cannot determine what features best distinguish a particular child from others. We could also be unable to detect the most important similarities between a child and other children with whom experience has previously been gained. Furthermore, if we each use different assessment procedures, we may obtain very different pictures of the same problem." (Achenbach & McConaughy, 1987).

Since in every argument there is the counter-argument, there are criticisms of the use of standardized assessment regarding their validity and reliability and the fact that the individuality and contextual specificity of the child's behaviour is ignored (Kazdin, 1979). A review of the research evidence

about reliability and validity will follow under the section on different assessment methods.

Hoghughli (1992), argues that there are certain criteria for a "good" assessment: reliability, validity, efficiency, relevance and usefulness. These are criteria that cannot be met because children's behaviours are neither wholly constant nor wholly variable.

"If human behaviour were totally constant it would be totally predictable. On the other hand, if behaviour were wholly variable and at the mercy of chance events, there would be no possibility of predicting it. As it is different behaviours and personal characteristics can best be construed as falling somewhere along the spectrum of constancy and variability" (Hoghughli, 1992; p.12)

Considering the above concerns, several writers have noted ways in which psychometric considerations might be applied to assessment of children with EBDs by introducing the method of empirical assessment (Achenbach, 1985; Achenbach & McConaughy, 1987).

2.4. The range of different assessment procedures

The most widely used assessment methods for children's EBDs, have been clinical interviews, observations and rating scales. For the purpose of the present study the first two methods will be briefly discussed whereas rating scales will be more extensively discussed.

2.4.1. Clinical Interview

Interviewing is a diagnostic technique used very often by professionals in the assessment of children with EBDs. It is a means of obtaining data about a child's psychological condition. They can be of different types, varying from highly structured with a predetermined set of questions asked by the interviewer, to completely unstructured where there is an area of interest but the interviewer lets the conversation develop without following specific rules.

Cohen and Manion (1985), describe four kinds of interview: the structured, unstructured, non-directive and the focused. The non-directive has derived from the psychiatric interview with the principal feature being the minimal control exhibited by the interviewer and the freedom of the respondent to express feelings and thoughts.

Traditionally, interviewing as a technique for assessing children's problems has been used by the professionals working along the disability model. The traditional interview aims at unravelling the underlying causes of problematic behaviours, whereas behavioural interview aims to describe the behaviour of the child and develop hypotheses about environmental factors that maintain the behaviour.

There have been considerable efforts to improve interviewing techniques and especially to improve the use of structured interviews. According to Edelbrock and Costello (1988), these efforts have been motivated by dissatisfaction with reliability and validity of the traditional child diagnostic procedures. They maintain that structured interviews have certain

advantages over other assessment procedures such as psychological testing, observation and questionnaires (For a review of interview schedules for children and adolescents read Edelbrock & Costello, 1988).

2.4.2. Observational assessment

For many clinicians, the most accepted and widely used behaviour assessment method is to observe and target behaviours in naturalistic or analogue settings, or clinical laboratories. Ollendick and Hersen (1984), state that:

"direct observation is at the core of child behavioural assessment. It is the process by which human observers, using operational definitions as their guide, record the overt motor and/or verbal behavior of other humans." (p.167)

Taylor (1989), states that observation is perhaps the most objective method of assessment and it is thought to be the most direct method of obtaining assessment data with the least amount of inference by the evaluator.

Observation techniques can be classified as either formal or informal. Formal observation assessment refers to a data collection system with the following characteristics: the agent uses preset and specific categories to summarize direct observations in specified settings over specified time periods; the length of the observational time period, though dependent on the base rate of the phenomena of interest, should be such as to minimize the use of memory by the observer; and the system should allow for some procedure to check the accuracy or reliability of the data collected (Taylor, 1989).

2.4.3. Behaviour Rating Scales

Indirect assessment methods, such as self-reports, self-monitoring and ratings by others, are also common among the methods used to assess children's psychopathology. In a survey in the US in 1980, it was found that 30% of the studies published in the major behavioural journals during the 70's, had employed "indirect methods of assessment" (Bornstein et al., 1980). Even if only 6% of the studies in the survey cited above have used ratings, this assessment method has played an important role in the assessment of child psychopathology.

Ratings by others are mainly scales and behaviour checklists. The terms rating scales and checklists are very often used interchangeably in the literature, so there is some confusion as to whether they refer to the same thing or not. Cone and Hawkins (1977), define a behaviour checklist as a "list of fairly specific, objectively described behaviors whose presence or absence in a learner's repertoire is rated". Other writers (Wilson & Prentice-Dunn, 1981; Mash & Terdal, 1988), distinguish between them on the grounds that behaviour checklists use a binary system to decide on the presence or absence of a behaviour pattern or characteristic, while rating scales use the point scales and account for the variables of frequency and severity. The point scales system has involved as well the use of structured interviews requiring the presentation of a standard set of questions to parents by trained interviewers (Graham & Rutter, 1968).

The development of behaviour problem checklists and ratings scales

began in the 1920s and 1930s when researchers became interested in describing normal and abnormal behaviours and characteristics of children at different ages. Some of these investigators have developed lists of behaviours which were later modified and used for collecting normative data and identifying children with behaviour problems.

For the purpose of the present study, the use of rating scales will be further discussed in relation to the identification of children with EBDs, in the school setting.

2.4.3.1. Rating scales and children with EBDs

Rating scales as screening schedules do not aim to probe into the causes of EBDs which the pupils may exhibit, but merely to provide a structured framework for the rater's impressions of the actual behaviours displayed as an initial step in taking any necessary action.

A number of children's behaviour rating scales have been developed which differ in terms of scope, structure and informants. The majority of scales are concerned with documenting observable behaviours and characteristics. More specifically, they contain items related to behaviour problems. Children at different ages can be assessed on different scales, from preschool age e.g. Preschool Behaviour Checklist (McGuire & Richman, 1988), to adolescence (Achenbach & Edelbrock, 1983). Some rating scales contain items relating to one specific kind of behaviour problem such as hyperactivity, (Conners Parent

and Teacher Rating Scales, 1985), and conduct disorders (Eyberg Child Behavior Inventory, 1980).

On the other hand, there are scales which are more comprehensive in their coverage and assess a wide variety of behaviour problems e.g. Behavior Problem Checklist (Quay & Peterson, 1979). There are a number of rating scales that focus on assessing the positive side of children's behaviours and characteristics and mainly describe adaptive behaviours and competencies e.g. Vineland Social Maturity Scale (Doll, 1964). Boyle & Jones (1985), provide a comprehensive review of the measures of EBDs in children.

Rating scales can vary in terms of their structure. There are four main aspects of variation:

- a. Length - scales can be as lengthy as 150 items or as short as a single item. However, the number of items has to be sufficient enough to reliably assess the behaviour under question and at the same time not be too lengthy and demanding for the respondent.
- b. The number of response alternatives may vary - many writers have suggested that when more than two responses are provided, the reliability and validity of the instrument are increased (Barkley, 1988).
- c. Specificity and clarity of the items - the use of behaviour descriptors rather than global indicators of behaviours, are suggested to increase validity and reliability (Sandoval, 1981).
- d. Temporal factors may vary - the time period used as a frame of reference by the respondent may vary from a short time observation of the behaviour under question to a 6 month period. The time elapsed between observation of

the behaviour can vary as well.

Parents and teachers are most frequently those who refer children with EBDs, and those who have been mostly utilized as respondents in rating scales. Other possible informants are the professionals in the mental health field, peers and children themselves. Some scales have been developed for use with specific informants while others can be completed by any respondent. Several scales use parallel forms for different informants, mainly teachers' and parents' versions e.g. Conners, Rutter. Achenbach and Edelbrock (1981), have argued that parents are the most important informants of their children's behaviours because they are in a position to observe the child in many settings for long periods of time and make comparisons with present and past behaviours. Teachers, however, become more important as children grow up and enter school because they can make comparisons between the children assessed and other children of similar age ranges. Issues concerned with differences among informants will be discussed later in relation to the issues of validity and reliability of the rating scales.

Generally, no specialized training is necessary for the raters to complete the scales, though meanings of terms used may sometimes need clarification for the sake of uniformity of interpretation by different informants.

Behaviour rating scales have been often used by school and educational psychologists (McConaughy, 1985). Research has demonstrated that the combined use of parent and teacher scales can help professionals decide on the placement of children with EBDs (Mattison et al., 1986), and provide measures on the severity of the problem thus helping towards efficient

treatment procedures (Mattison et al., 1990). According to McMahon (1984), there are two areas in which rating scales have been utilized so far: a) in large scale population research studies, usually for epidemiological and classification reasons, b) in clinical settings rating scales have been used for purposes of screening, diagnosis, treatment selection, treatment evaluation and follow-up assessment.

Rating scales have become a popular assessment technique for EBDs mainly because:

- a) They are economical in cost, effort and therapist time.
- b) They are structured so they can provide a comprehensive picture of the problem area and can identify target behaviours that other assessment techniques cannot.
- c) They provide data which is easily quantified. Through factor analysis, dimensions and clusters of behaviours can be identified.
- d) They provide a convenient measure that can be used for evaluating therapy outcome throughout a treatment program.
- e) They do not involve the child directly.
- f) They enable the rater to look at the results in the context of those obtained on other samples e.g. enable teachers to compare children's behaviours in different settings and different teachers can compare their ratings of the same children.

In spite of their advantages, information obtained from rating scales may be affected by idiosyncratic biases of the raters, rating biases or halo effects - the tendency to rate children either too high or too low on the basis

of one outstanding trait - (Barkley, 1988). Furthermore, since they are usually brief, they may not provide a comprehensive view of the children's difficulties.

As for all methods of assessment, adequate reliability and validity are important determinants of the efficiency and utility of rating scales. The types of reliability relevant to rating scales are internal consistency, test-retest and interrater. High internal consistency is necessary when the scale measures a unitary behaviour or set of behaviours. Estimates of the degree of internal consistency provide an indication of the extent to which individual items measure similar types of behaviour. Errors occur when responses are affected by item characteristics not present in the other items designed to measure a particular behaviour. For instance, if a set of items designed to measure anxiety contains an item that is more sensitive to another ratee characteristic such as motivation, then the item will be associated with lower internal consistency. Test-retest reliability is important when the scale focuses on specific behaviours which are rated more than once with a specific time interval. The extent to which the same behaviours are rated twice decides the degree of reliability of the scale. The shorter the interval between assessments, the higher the test-retest reliability of the scale (Achenbach & Edelbrock, 1987). Anastasi (1987), suggested that a reliability coefficient of .80 and above represents good reliability. In most scales, test-retest reliability is adequate. Several writers, however, suggest that it is also necessary to assess whether there are changes over time in relation to the value of ratings (Glow et al., 1982).

Interrater reliability relates to the agreement between different raters

e.g. parents and teachers or mothers and fathers. The variability of behaviour across situations affects the degree of interrater reliability since raters contact the child in different environments. Although reliability coefficients between fathers and mothers have been reported to be at moderate levels (Jacob et al., 1982), agreement between parents and teachers has been found to be very low (Rutter et al., 1975a; Kolvin et al., 1981). A review of the research on interrater reliability measures follows at the end of the section on rating scales.

In terms of the validity measures, there are several types relevant to rating scales: content, criterion related and construct. Many studies have obtained data indicating validity by comparing "deviant" populations with "normal", and showing that these groups differ in their rating scores. Content validity involves the examination of the scales content in order to determine the extent to which they cover a representative sample of the behaviours under observation.

Criterion related validity is useful when it is desirable to draw inferences from the rating of individuals on some behaviour variable of practical importance called the criterion. Criterion related validity indicates the effectiveness of the scales to predict children's behaviours in different situations. Construct validity relates to the extent to which a specific rating scale measures the constructs, behaviours or characteristics that it is supposed to measure. A construct validation is the response to two basic questions. What trait is being measured in an instrument? How well is it being measured?

Direct observation methods have been used to assess the construct

validity of behaviour scales. However, the methods have failed to correlate or have shown low correlations because:

1. ratings are often more vaguely defined than observations
2. ratings are more influenced by variables affecting the informant
3. raters are not usually trained to the extent that observers are (Mash & Terdal, 1988).

In a study by Kazdin et al. (1983), the correspondence of teachers' ratings and direct observation of classroom behaviours of psychiatric inpatient children, was studied. Findings evidenced low correlations between teachers' ratings and observations of overt behaviours.

In addition to the criteria of validity and reliability, there are many practical issues that relate to the efficiency and utility of the rating scales. These include the extent to which items are specific and easy to read, whether the items are too many or too few and whether or not adequate normative data are provided e.g. both males and females over several age groups. Factors that influence the validity and reliability of rating scales include informant's characteristics, their educational, intellectual and emotional status at the time of the assessment and their tendency towards response biases (McMahon, 1984).

Behaviour rating scales have been widely used in empirically based assessment methods. Achenbach and McConaughy (1985), have developed this method in an attempt to better understand children's and adolescents' behaviour problems. They comment that:

"Empirically based assessment does not require a choice between theoretical explanations of why maladaptive behavior occurs. If assessment

validity captures the distinctive features of individual cases, this can improve our basis for developing and testing theory. Because no one theory can explain all the problems, however, we emphasize assessment techniques that do not depend on a single theory." (p.13)

"..... Our approach follows psychometric principles, including the use of standardized procedures, multiple aggregated items, normative-developmental reference groups, and establishment of reliability and validity.....It makes use of multiple sources of data to avoid the limitations and biases affecting each source of data taken alone." (p.16)

They use multiple informants in order to get a complete picture of the children's problem behaviour by integrating the different perspectives that the informants have. They provide data showing that children's functioning often varies from one situation to another, referring to correlational studies between similar and different informants, as well as between self-reports and informants' ratings. They also provide evidence for the variations in the intensity of behavioural and emotional problems (this is the term they use to refer to children with EBDs), which is influenced by the child's age and sex.

Based on these facts they have proposed a model of multi-axial empirically based assessment whose 5 axes provide different types of data: Axis I-Parent Reports; Axis II-Teacher Reports; Axis III-Cognitive Assessment; Axis IV-Physical Assessment; Axis V-Direct Assessment of the child. They have developed empirically based procedures consisting largely of rating scales, in order to gather information on children's behaviours. These are:

- The Child Behaviour Checklist (CBCL), with parents' and teachers' version
- Direct Observation Form
- Semistructured Clinical Interview of the child
- The Youth Self Report

As a measure of general psychopathology in children, as well as of the

more commonly found dimensions of problem behaviour, the CBCL can be very useful. It can also be utilised in forming profile analysis of subtypes of psychopathology and in treatment outcome research. However, there is still more research to be done in terms of the validity and reliability of the scales.

2.4.3.2. Studies using teachers and parents as informants

It is well recognized that a wide range of children's problems either have roots in school experiences or problematic behaviours are caused by other factors and are exhibited in schools. In any case, schools can be appropriate places for identifying and helping children with EBDs. Consequently, teachers are often used to provide information on children's behaviours and characteristics.

Wickman (1928), was the first to make a systematic attempt to measure children's behaviour in the classroom. He published the results of a four-year study of behaviour problems of children as viewed by teachers and mental health workers. He compared their rankings on the seriousness of 50 behavioural items representing the behaviour problem "of any child", and concluded that major differences existed between the attitudes of clinicians and teachers towards children's behaviour difficulties. Revisions of his scales were shown to have good reliability and validity (Ziv, 1970; Harris et al., 1978; Vidoni et al., 1983).

Teachers' role as informants of children's special needs has been

officially recognized and encouraged, in the UK, by the Warnock Report (Britain, DES, 1978). The Warnock Committee considered teachers responsible for perceiving and initiating help for children with special needs in ordinary classes with the ultimate goal of integrating children with physical, learning and behavioural problems into the ordinary classroom.

".....the large majority of children who are likely to require special educational provision will have to be identified. Close and continuous observation of all children by their teachers is therefore essential and for this to be effective teachers must be equipped to notice signs of special help. Moreover, having noticed such signs in a child they must appreciate the importance of early assessment of his needs and must know when and where to refer for special help" (p.227).

Standardized behaviour rating scales have very often been the instruments on which teachers have rated children's behaviour. Potton (1983) has found that 70% of the teachers in his survey have reported that rating scales are a very helpful method for them, sharpening their observations and record keeping. However, certain criticisms have been raised regarding the extent to which teacher based assessment can yield reliable information. Factors such as level of tolerance, sociocultural background, teaching experience, age, job satisfaction and other school and personal related factors can influence teachers' judgments (Achenbach & Edelbrock, 1983; Croll & Moses, 1985).

Parents have also been regarded as very important informants of children's behaviour patterns at home or in other places outside schools in general. Most of the rating scales provide versions for parents as well as for teachers in order to utilise both sources of information and be able to draw comparisons.

The issues of validity and reliability of the teachers' and parents' ratings, as well as issues on teacher-parent agreement, have been the focus of numerous studies.

A) Teachers: Mattison et al. (1990), in the US, have documented the interrater reliability and construct validity of teacher ratings of students in public school classrooms specially set up for children with serious EBDs. The Conners teacher rating scale was used and interrater correlations were .67 on the hyperactivity factor, .73 on the conduct disorder factor and .69 on the total. Similar results are reported from other studies. Correlations of .70 and .62 for hyperactivity and .66 and .72 for conduct problem were reported in Glow (1982) and Taylor & Sandberg (1984). A study by Atkins et al. (1989), has examined the differential validity of teacher ratings on the Conners scale and reported moderately high correlations ($r = .60$).

The discriminant validity of teacher ratings for normal, learning-disabled and emotionally handicapped boys was documented in a study by Ellen (1988). The author refers to previous studies which provide evidence on the validity of teachers' ratings. Proger et al. (1975), have reported teachers' ratings to correspond with clinical diagnoses of aggressive, hyperactive and withdrawn children in 61% of the cases using the Behavior Problem Checklist and in 60% of the cases with the Devereux scale.

Teachers' ratings on the Behavior Problem Checklist were used in the Cullinan et al. study (1979), on educationally handicapped and normal boys. Teachers have identified male pupils as behaviourally disordered, learning

disabled and educable mentally retarded. In a subsequent study (1985), behaviourally disordered and nonhandicapped students of both sexes and three age levels were assessed for adjustment problems, through teacher-completed checklists. Teachers' ratings have shown that on most of the checklist items more behaviourally disordered children experienced problems than nonhandicapped.

Teachers were used as informants in a study by Kahn & Ribner (1982). Their ratings on a brief behavioural scale were used in order to discriminate between neurologically impaired, socially maladjusted, emotionally handicapped and normal children.

Boyles & Jones (1985), reviewed studies using the teacher scale of the Behavior Problem Checklist, the Conners scale and the Louisville school behavior checklist, which report adequate test-retest reliability and internal consistency. Croll and Moses (1985), in their study found that teachers were consistently able to distinguish between different behaviour problems shown by their pupils. Hymel et al., (1990), found teacher ratings of internalizing behaviour in children to be significantly related to shy-anxious behaviour over a period of three years and their ratings of externalising problems to be significantly related to acting out behaviour over the same period.

A number of other studies have examined the validity of teachers' standardised reports by considering whether children identified as having problems by teachers' reports are found to differ on other variables. Studies by Rutter (1985), Cohn (1990), Lochman & Lampron (1986), Luk & Leung (1989), have shown that the children selected by teachers as having problems

show significant atypicalities on other variables, such as family background, parental psychopathology, peer relations and self-esteem.

B) Parents: Interparent agreement has also been investigated in many studies. Quay & Peterson (1979), report a .73 agreement between mothers and fathers. Jacob et al. (1982), report coefficients at .72 and .80. Achenbach & Edelbrock (1983), report coefficients at similar levels. However, the Achenbach & Edelbrock study reported lower interparent agreement for girls than for boys. Hulbert et al. (1985), examined interparent agreement on a sample of 360 clinic-referred children and adolescents. The study reports interparent disagreement and addresses the implications regarding the use of fathers as informants on the Personality Inventory for children. However, in a review, Hulbert (1985), found a broad range of interparent correlations across a variety of instruments from a low - .04 to a high of .81.

Kazdin et al. (1984), examined the extent to which parent rating scales differentiated children according to DSM-III diagnoses. Two parent rating scales were used, the Child Behavior Checklist (Achenbach & Edelbrock, 1983), and the Behavior Problem Profile (Quay & Peterson, 1979). The results indicated generally that parent ratings differentiated among diagnostic groups of conduct disorder, depression and aggression.

C) Parent-teacher: As might be expected, agreement between parent and teacher ratings is less than agreement between mothers and fathers or between different teachers. Emery and O'Leary (1984) examined ratings from

the parent and teacher Behavior Problem Checklist of 132 children in an elementary school. Girls were more likely to show conduct disorders at home (mean=5.3) than at school (mean=3.3), while the boys did not display significant different levels of conduct problems in both settings, (home=5.9; school=6.9).

A study by Holdway and Jensen (1983), examined the differences that might exist between the self-perceptions of the behaviourally disordered children and the perceptions of the child by the teacher and mother. Findings indicated that significantly lower scores were given by all three evaluators for the behaviourally disordered group than for the normal. Using a ranking procedure to compare problem priorities as perceived by parents, regular class teachers and special education teachers of children in a residential treatment centre, Auger (1975), reported significant differences among these raters. Fremont et al. (1976), also obtained significant differences among professionals involved in assessment and identification of individual children.

In contrast, Morris and Arrant (1978), reported no differences between mean ratings of severity of problems for 104 emotionally disturbed children as perceived by their parents and referring teachers. Kauffman et al. (1980), have examined the agreement among parents, teachers, psychologists and educational diagnosticians in their perceptions of the problem behaviour of children with EBDs. The sample was 194 boys and girls with EBDs; of these, 129 were whites and 64 blacks. All four raters agreed on their perceptions of white but not on the black children. However, teacher ratings consistently reflected greater perceived problems than did parent ratings for both black and

white children.

Lindholm & Touliatos (1981), provide evidence on parent teacher disagreement from a study on 1008 white children. Parents reported a greater amount of behaviour disorder in their children than did teachers and the correlations between the ratings were low or low to moderate. Similar results are reported by Hicks et al. (1981), on teachers' and parents' checklist ratings with learning-disabled, hyperactive and children with EBDs. Achenbach and Edelbrock (1987), provide evidence from several studies on correlations between different types of informants. The correlations between parents and teachers ranged from .24 to .42 and were at about the same levels for other kinds of informants e.g. mental health workers and observers.

Teacher-parent disagreement has been explained by both the behavioural and psychodynamic theories. According to the psychodynamic and trait theories, behaviour is determined by enduring personality characteristics which remain consistent from one situation to another. Consequently, the low correlations must result from the unreliability of one or both informants. In contrast, according to the behavioural view, environmental contingencies can cause behaviour to differ from one situation to another and therefore, differences are expected when the child is assessed by different informants in different environments.

Several major studies have provided evidence for this latter point of view. As it was mentioned above this was the philosophical basis on which Achenbach and Edelbrock have based the development of their multi-axial assessment method. For example, Rutter et al. (1970), studied the

agreement between parents' and teachers' ratings. The overlap between the two scales was very small, 7% of all children were identified in both questionnaires and correlation coefficients were very low ($r = 0.18$). Rutter and his associates examined the extent to which differences were due to the situation specificity of the children's behaviour or in variations in the perceptions of teachers and parents. They considered the possibility that teachers were more likely to note behavioural differences in the child with learning difficulties. However, no significant differences were found in reading retardation between parents' and teachers' ratings (24.6% in parents' scale and 34.8% in teachers'). The efficiency of the scales as screening instruments for identifying psychiatric disorder was questioned in trying to explain parent-teacher disagreement. This hypothesis was refuted because both scales have identified about the same proportion of children with EBDs as an independent examination of the child (19.2% were selected by parents' scale and 19.6% by teachers'), however, they have identified different children. The possibility of teachers identifying more externalizing, disruptive behaviours and missing the internalizing ones was examined as another possibility. Analysis of the results showed that there was no significant tendency for teachers to miss neurotic boys but there was a tendency for the parental questionnaire to miss antisocial children. Since all the above possibilities could not explain the teacher-parent disagreement, the lack of overlap was explained in terms of the situation-specific nature of children with EBDs.

Summarizing, the major advantages of rating scales relate to their time, cost and effort effectiveness, to their ability to provide a comprehensive picture

of the child's behaviour and their ability to filter situational variation. These properties have made rating scales a very widely used assessment technique in the field of child psychopathology. Many studies have provided evidence on test-retest and interrater reliability as well as on different types of validity. Many studies using teachers and parents as informants have reported controversial results in terms of differences and similarities between their ratings, and have challenged the validity of their ratings as well. However, parents and teachers continue to be the most essential raters of children's behaviour due to the close relationship they have with them and to a certain extent consistencies and inconsistencies between their ratings are expected if we relate these to the situation specificity of EBDs.

CONCLUSIONS

In this chapter, the importance of assessment as a starting point in helping children with special educational needs in schools has been emphasised. The major purposes of assessment as they relate to early detection of the difficulties, the evaluation of the current performance level and the decisions about future educational provision and placement, have also been noted. The importance of standardized assessment techniques in child psychopathology has also been stressed.

The most commonly used assessment methods in the field of EBDs, interviews and observation, have been outlined. A more extensive discussion

covered the use of ratings scales. Rating scales differ in many dimensions such as length and structure, and can focus on different aspects of child behaviours. These dimensions were further analysed to include the use of different informants and the issues of validity and reliability. Reference was made to previous studies which have dealt with the differences and similarities between different informants' ratings, in particular between parents' and teachers' ratings.

Reference to the most important issues of identification and assessment was considered to be the right step following the definitional issues presented in chapter one. The issues raised in chapter two, have laid the basis for the methodological considerations of the present study, the rationale and aims of which are included in chapter four and five. What follows is the final theoretical chapter which relates EBDs to social cognition and causal attributions.

CHAPTER 3: LITERATURE REVIEW ON SOCIAL COGNITION, CAUSAL ATTRIBUTIONS AND EBDs

Introduction

The present chapter covers the theoretical issues on which the main empirical study is based on, namely those of social cognition and causal attributions. First, terms are introduced, and then reference is made to definitional issues and applications in children, with particular reference to educational applications. The research review covers the relationship between social cognition and causal attributions to EBDs, thus relating those issues to the aims of the present study.

More specifically, different models that explain the nature of social cognition are presented. Reference is made to children's emotional development and to the ways their understanding of emotions alters developmentally. The relationship between social cognition and social behaviour is discussed. Research on sociocognitive skills is covered in relation to EBDs. The major theoretical models on attribution theories are approached (Heider's, Jones & Davis', Kelly's and Jones & Nisbett's). Weiner's attributional theory of motivation is discussed in parallel with its educational applications. Issues on children's causal attributions to success and failure of achievement tasks, are addressed. Empirical evidence is presented relating attribution theories to EBDs.

Social cognition is currently one of the most dynamic and active areas in psychology. In a general sense, social cognition takes humans and human

affairs as its subject and refers to how people think about themselves and others. The emergence of this area of psychology reflects the convergence of two hitherto distinct disciplines, namely that of social and cognitive psychology.

Social and behaviour scientists have regarded the relationship between the cognitive and social spheres of human functioning as a central theoretical issue a long time ago. As early as 1906, Baldwin, referring to the infant-caregiver transactions, has claimed that the dialectic of personal growth is manifest in social interaction. Similarly, in 1934, Mead claimed that both mind and self evolve in social context.

According to Marx (1953), human consciousness is determined by its social being, and human thought is founded in human behaviour and in the social relations brought about by this behaviour. Later on, Vygotsky, in Russia, attempted to root the individual in a social context. According to him (Vygotsky, 1978), social interaction has a critical role in the development of higher mental functioning. All higher functions originate from human relationships, and every function appears first at the social level and then moves to the individual or intrapsychological level. Social relations have also been implicated in cognitive development by Piaget (1932; 1965). According to him, cognitive, social and affective development are inseparable and parallels may be found between cognitive structures and levels of affective or social development. In his early work, he acknowledged an interaction between logical and social development, and social relations. Particularly, peer relations have been implicated in cognitive development. Kohlberg (1969), as well, has argued about the relationship between cognition and social

behaviour, by stating that the child's cognitions of him/herself and others are the primary determinants of his/her behaviour. Along the same lines, Cairns (1979), stated that behaviour is merely a reflection of cognition.

The avenue to the study of the interface between cognitive and social functioning opened when investigators like Flavell in 1968, began to extend Piaget's cognitive development theory to cognition of the self and the social world (Serafica, 1982). On the other hand, Ostrom (1984), argues that in the mid-70's, a number of social psychologists with an interest in person perception and the abilities to represent others (i.e. the ability to infer the thoughts, emotions, intentions and viewpoints of others), came to recognize the relevance of the new developments in cognitive psychology to understanding social processes. Since then, social cognition became a dominant topic for psychology.

The foregoing theoretical propositions have inspired numerous empirical studies which have elucidated further the meaning of the important relationship between social and cognitive psychology. According to Shantz (1975), when social cognition first attained visibility within the scientific world, it was defined as the study of the child's intuitive or logical representation of others, particularly his/her abilities to characterize others and to make inferences about their covert, inner psychological experiences. Some of the early work on social cognition was directed towards identifying developmental trends in children's abilities to represent people and infer their visual perceptions, thoughts, feelings, intentions and motives (e.g. Borke, 1971; Flavell et al., 1981; Wood, 1978). Of particular interest are studies which have

tried to identify relationships between various social inferential abilities and logical operations, structural levels of social development, social behaviour and contextual factors (Keating & Clark, 1980; Turnure, 1975).

In recent years a good deal of scientific research has addressed itself to the study of social cognition (Dunn, 1988; Miller & Aloise, 1989; Pryor & Day, 1985; Pillow, 1991). Ostrom (1984), talked about the "sovereignty" of social cognition and stated that it has positive implications both for social and cognitive psychologists.

The great theoretical and empirical interest in the area of social cognition has raised numerous definitional issues. A brief introduction to these issues is given below.

3.1. Definitions of social cognition

The study of social cognition integrates a diverse body of knowledge including person perception, socio/cognitive perspective taking (role-taking), visual perception, affective perspective taking (empathy), intentionality (motives), self-concept and attribution. It is probably due to this diversity that the definitions of social cognition given by most writers are typically broad. Ostrom (1984), argues that "there is a grievous lack of consensus regarding the use of the term", and that it is impossible to find two definitions that match. Some of the various definitions found in the literature are cited below:

- Wegner & Vallacher (1977), define social cognition as the way people think about people.

- Taylor (1981), defines social cognition broadly, as the way people cognise their social world and social relationships.

- Hamilton (1981), views the field of social cognition as including a:

"consideration of all factors influencing the acquisition, representation, and retrieval of person information, as well as the relationship of these processes to judgments made by the perceiver." (p.136)

- Isen & Hastorf (1982), prefer the phrase "cognitive social psychology" to social cognition, and define it as "an approach that stresses understanding of cognitive processes as a key to understanding complex, purposive, social behaviour." (p.2)

- Hoffman (1981), contrasting social cognition with cognition in the physical domain, regards it as operating "in the context of a complex, mutually facilitative give and take between affective and cognitive processes" (p.78).

- Shantz (1982), argues that the term refers to conceptions and reasoning about people, about self, relations between people, social groups, roles and rules and the relation of such conceptions to social behaviour.

The above mentioned definitions of social cognition are only a representative sample (according to the writer) of those found in the literature. There are many more which, however, tend to include a similar rationale and terminology to those mentioned above (e.g. Forgas, 1981; Damon, 1981; Nelson, 1981).

The variety of definitions provided of the term social cognition, have been influenced by different interpretations of what constitutes theory and

research in social cognition. This becomes clearer if we consider the fact that the field of social cognition has been addressed by a number of social and behavioural sciences (e.g. social, cognitive, developmental psychology, sociology). Thus, a totally inclusive and satisfactory definition of the term cannot be provided and as Ostrom (1984) realistically states:

" Terms get defined by their use and by the kinds of research issues they summarize. Since those issues naturally shift from time to time and from field to field, it seems unlikely that a universally accepted definition of social cognition will ever be adopted." (p.28).

3.1.1. The nature of social cognition

Flavell et al., (1993), discuss three models explaining the nature of social cognition which are complementary to each other emphasizing different facets.

1) Self, other, social relationships model: the products of social cognition according to this model, include person's inferences, beliefs or conceptions about the inner psychological processes or attributes of human being. It also encompasses various relationships and interactions among individual and groups, which include covert (thinking) as well as overt (acting) social cognitions.

2) Existence, need, inference model: according to this model three conditions are needed for a successful execution of any act of social thinking, existence, need and inference.

Existence refers to the person's knowledge of the existence of a particular fact or phenomenon of the social world.

Need refers to the disposition to attempt an act of social cognition.

Inference refers to the capacity to infer a given form of social thinking successfully.

3) Dodge's information-processing model: represented by Dodge (1986). This approach emphasizes the inference component mentioned above and it analyses the processing of social information during social interactions. According to Dodge, the framework for a comprehensive model of social cognition can be found in the writings of theorists in several disciplines including cognitive, developmental and clinical psychology. The model of social cognition he puts forward has borrowed from all three areas:

"The goal of the model is to describe how children process social information in order to respond in social settings. A unique feature of the proposed model is that it describes a set of operations which are thought to occur during each behavioural interaction, but which also may be conceptualized as enduring skills and typical patterns." (Dodge, 1986)

According to this model the child processes and uses social and physical information similarly. Deriving from this stage approach to the development of human mind (i.e. manipulation and processing of social information through encoding, recoding or decoding), he makes predictions about human behaviour, thus relating the cognitive with the social domain. Dodge recently (1991), through his extensive work on aggressive children, has added emotions to his model, i.e. the child's emotional state affects and is affected by each stage of this model. A more detailed discussion by Dodge on the relationship of social cognition to the child's emotional and behavioural

problems follows at the end of the chapter.

3.1.2. Social cognition and emotions

It is not appropriate in the present study to go into the different theories of emotional development. However, a modest reference to emotional development is considered essential since a major function of emotions is to change the relation between the individual and the environment and this relation is of ultimate importance to the present study.

Psychologists who study emotional development have recently begun to recognize the central role of the socio-cognitive aspect in the growth of children's emotional lives and thus in their behaviour. A number of investigators have identified relations between the child's capacity to experience emotions and the development of socio-cognitive capabilities such as role taking and decentration (Graham et al., 1984).

Although the view of emotion as secondary to cognition is still evident in the study of emotional development, nowadays, emotions are viewed in a very different light by a number of researchers (Campos et al., 1989). A new working definition of emotion exists, according to which emotions are not mere feelings but rather are "processes of establishing, maintaining or disrupting the relations between the person and the internal or external environment, when such relations are significant to the individual" (Barrett & Campos, 1987). According to this view, there are three processes that make an event

significant for a person: a) the relevance of the event to the goals and striving of the person, b) emotional communication from significant others e.g. facial or gestural actions, and c) the hedonic nature of certain types of stimulation e.g. whether an event produces pleasure or pain.

In other words, the important implications of this new conceptualization is that emotions are given both intrapersonal and interpersonal regulatory consequences and social cognition instead of cognition is held responsible for the elicitation and regulation of emotions. Campos & Barrett (1989), offer explanations of how emotions such as sadness and anger occur as a result of the person-environment relation. In order to understand emotions, one must understand that human beings live in a web of inter-relationships with social and physical objects. Various terms have been introduced which reflect the social networks people live in, e.g. intersubjectivity (Trevarthen, 1984), intersubjective self (Stern, 1983), we-go (as opposed to ego) (Emde, 1988), interfacing of minds (Bretherton, 1985), shared meaning (Brenner & Mueller, 1982), and empathy (Eisenberg & Strayer, 1987). The realization that the emotions of others can directly affect the self, has important implications for understanding the emotional development of children and adults.

Parallel to changes in the conceptualization of emotional development has been research on children's understanding of emotions. This research has sprung out of the consideration of the child as an intuitive psychologist in the 1970's (Taylor & Harris, 1984). Results from developmental research have shown that with age, children become more aware of their psychological processes and more able to exert control over them. Most of these studies

have concentrated on the age variable (Harris & Olthof, 1982; Graham et al., 1984). However, there are many studies investigating those processes within or between specific groups of children, e.g. aggressive and hyperactive children. These studies will be discussed after addressing some issues about the relation between social cognition and social behaviour so that both emotions and behaviour can be seen under the same context.

3.1.3. Social cognition and social behaviour

According to Hartup et al. (1983), a basic tenet of social cognition is that the way people think and feel is related to the way they behave. In the past few years interest in understanding the relationship between social cognition and behavioural processes has increased (Renouf & Harter, 1990). Sroufe & Fleeson (1988), argued that one of the factors responsible for this interest is the recognition that children are active contributors to their social experiences and behavioural organisation. Greenberg & Speltz (1988), proposed that another possible factor is the disappointment from the use of the operant reinforcement and punishment model, particularly in terms of its results with children with various difficulties, e.g. EBDs.

According to Hartup et al. (1983), most developmental research on social cognition consists of an extension of Piaget's developmental theory of cognition about the physical world to the social domain. The two major themes

in social cognition according to these writers have been: a) the way children conceptualize persons and events and b) the way children draw inferences about others' inner psychological experiences. Piaget has essentially postulated that social and cognitive maturation are parallel. As children mature cognitively they move from using prominent observable and surface characteristics in evaluating persons and actions, to more complex and abstract descriptions of others' motives, dispositions and values. As he has pointed out, the way children conceptualize others has more or less direct implications for the ways in which children interact with others. However, several researchers have questioned this parallel development of the social and cognitive processes and have provided support for the distinctive nature of social cognition. Hartup et al. (1983) stated that :

"If cognition in the social domain were indeed congruent with cognition in the physical domain, one would expect individuals to apply the same logical, deductive strategies used in understanding the physical world to the solution of social problems..... Although it appears that age changes in conceptions of social relations are part of a general cognitive shift from an emphasis on external and superficial characteristics of objects to their more abstract qualities, efforts to link the development of cognitive skills in the social and physical domains have failed to reveal a consistent correlation between the two." (p.86).

Since the present study focuses on the relationship between EBDs and social cognition, a review of the research in the area will follow as an attempt to examine whether evidence supports the distinct nature of social cognition or a parallel development of social cognition processes for children with and without EBDs.

3.1.4. Social cognition and EBDs

Early attempts to relate social cognition and EBDs have mainly concentrated on deficits in socio-cognitive skills and more specifically on role taking, empathy and problem solving. The general assumption has been that the higher the socio-cognitive abilities the more adjusted the child's behaviour.

a) Empathy refers to the ability to realize and understand another person's feelings, needs and suffering. Cognitively and emotionally mature children have been considered able to show empathy, behave in more pro-social ways and refrain from aggressive acts. Studies of young aggressive children have dealt with assessing empathy and have hypothesized that children who behave aggressively would be lower in empathy, which in turn would be a sign of emotional and cognitive immaturity (Dunn, 1988; Shantz, 1983).

b) Many developmental researchers have explained socially deviant behaviour in terms of developmental delays and have tried to relate role taking difficulties to socially unacceptable behaviour (Piaget & Inhelder, 1956; Chandler, 1973; Selman, 1976). However, results have been controversial and general conclusions cannot be made about the above relationship (Hartup et al., 1983).

c) Many researchers have hypothesized that children with behavioural difficulties show deficits in their abilities to resolve conflicts that arise from interpersonal situations (Spivack & Shure, 1974). Rubin & Krasonar (1986), argued that the quality of social problem solving abilities is a better predictor of behaviour problems and have produced evidence in relation to socially

withdrawn children.

More recently, several studies have demonstrated an association between socio-cognitive skills and child adjustment (Dodge et al., 1986; Pelligrini & Urbain, 1985; Rubin & Krasonar, 1986; Downey & Walker, 1989). In particular, poor social cognitive skills have been linked with aggression and peer rejection. The two aspects of social cognition that are central to many influential theoretical perspectives and that previous research has shown to relate to aggression and peer rejection, are interpersonal problem solving competency and attributional and aggressive response bias.

Interpersonal problem solving competency refers to the ability to construct effective solutions to interpersonal problems. Spivack & Shure (1974), argue that social adjustment is positively related to the number of solutions that a child can generate to an interpersonal problem.

Attributional bias refers to a tendency to attribute hostile intent to the perpetrator of aggressive experiences even when the underlying intent is ambiguous (Dodge, 1980; Dodge et al., 1986). Reference has already been made to Dodge and the information processing approach to social cognition. Based on this model, he and his colleagues have conducted a number of studies on aggressive children. The question addressed was in relation to the nature of the relationships between social cognition, antisocial behaviour and social maladjustment in children. Dodge reported significant differences between aggressive and non aggressive boys in terms of their responses to negative interactions in which the intentions of other actors were ambiguous.

Taylor & Harris (1984), sought to compare normal and emotionally disturbed children (7-11yrs) in their knowledge about strategies and rules for the display of emotions. They asked children to imagine themselves as the central characters in stories about receiving a gift which they did not like. They had to indicate by means of a picture selection task, the facial expression they would display in order to express their feelings. Children's plans for action in a situation in which aggressive feelings might be aroused but where social norms call for self-control were also assessed. Results have indicated that there is a difference between EBD and non-EBD children's knowledge of strategies for control of behaviour in a conflict situation.

Inhelder & Chipman (1976), shed some light on the development of understanding in children with EBDs. Their findings in research on the psychopathology of thought include description and interpretation of characteristic disturbances, maladaptations, oscillations and discordances shown by neurotic and pre-psychotic children with which responses can be compared. For the pre-psychotic child, Inhelder (1976) wrote:

".....The justifications of these children often reveal a lack of differentiation between the self and the external world and comprise a host of magical representations." (p.225)

Of the neurotic child, she wrote:

".....In the course of a neurotic child's reasoning processes we often find exaggerated oscillations between two successive levels of thought. These oscillations, we feel, can to a certain extent be considered as symptoms of anxiety, indecision, fear to commit oneself, etc. " (p.225)

Lister et al. (1989), in their study revealed the reasoning processes of the children with EBDs in relation to their understanding of conservation. They

found that a large proportion of children with EBDs revealed very marked uncertainty, indecision and lack of confidence in their judgements.

Wood (1988), noted clusters of problem behaviour commonly used to characterize behaviourally disordered children, listing unsatisfactory academic achievement without evidence of sensory or cognitive disability. He also cited emotional disturbance, behaviour excess and deficits, and finally disruptive behaviour. Vosk et al. (1982), reported a significant difference between accepted and rejected children in their ability to perceive the emotions of others correctly from videotaped stimuli. Maheady et al. (1984), studied learning disabled, socially/emotionally disturbed and educable mentally retarded children in order to empirically evaluate previous observations of deficiencies in social perception. Social perception involves the ability to read social messages, i.e. interpret the meanings and significance of the behaviour of others in the environment. According to the results, no significant differences were found between the three groups studied and the control. Maheady et al. (1984), explain this by referring to a number of factors which influence social perception and which can influence the results.

Studies presented so far provide clear evidence of the relationship between social cognition and EBDs, associating socio-cognitive skills to children's behaviour. However, evidence seems to be controversial on whether the deficiencies in the social domain run in parallel with those in the cognitive, or whether they are separate. To a certain extent this controversy in the findings is expected because the theoretical background of each study largely influences the methodology and interpretation of the results. In addition, the

particular area is not adequately researched and there is not enough evidence to help us draw conclusions.

3.2. Attribution - causal attributions

It has already been mentioned that social cognition is an umbrella term under which several research themes can be found, e.g. attention, person perception, memory, prototypes, schemas and biases. As the themes imply, much research in the area has been concerned with the processes and structures hypothesized to underlie everyday understanding of the social world. Researchers have asked questions like, "How do people decide why their fellows behave as they do? What information do they work on? How do they make judgements in a social context? How do they perceive and interpret the social world around them?" These are the prime questions that attribution theory tries to answer or rather as Antaki & Brewin (1982) put it:

" These are the questions that a number of attribution theories try to answer; there is no one theory standing alone and in splendid isolation from the rest of social psychology".

What binds all the theories together is the idea that in ordinary explanations people seek to find the causes of behaviour in their everyday lives. The beginnings of attribution theory are found in the study of person perception back in the 1950s. The Gestalt psychologist Heider (1958) ,with his work on the notion of phenomenal causality led the way to the development of a prodigious literature in the field of attribution theory. No writer in the field

would consider writing about attribution without reference to Heider's work. The major aim of his work was to look at ordinary people's everyday understanding of human behaviour and their establishment of causes of behaviour. There are three basic assumptions on which his theory was based (Heider, 1958; Bennett, 1993).

a) The understanding of people's behaviour requires attention to the way they construe their social world.

b) People's perception is motivated by the needs for prediction and control.

c) The perception of objects and people is not essentially different. In both, people are concerned with establishing the dispositional characteristics which will help them make inferences about the underlying causes of behaviour.

Heider proposed two basic classes of causes, the personal, i.e. motivation and ability, and the environmental, i.e. the physical environment and other people.

According to his analysis, people explain an action either by attributing its cause to something relating to the person who performed it or by attributing it to some external source. He stresses the importance of the concept of intentionality and argues that behaviour should only be attributed to personal causes if its outcome is seen to have been intended by the actor.

"Attributions in terms of impersonal and personal causes, and with the latter, in terms of intent, are everyday occurrences that determine much of our understanding of and reaction to our surroundings" (1958:16).

Personality trait descriptions are an attempt to explain behaviour which cannot be clearly attributed to external conditions. However, he argues that sometimes we can be biased towards explaining behaviour in terms of personal factors. A bias, which according to Eiser (1986), "may be reflected

in the readiness to treat problematic behaviour as a disorder of individual personality". Overall, Heider's work has contributed immensely to relating social cognition and social behaviour and has stimulated a great range of research on attribution.

On the basis of Heider's principles of ordinary explanations, Jones & Davis (1965), proposed the theory of correspondent inference. In their work, they attempted to account for the way perceivers make inferences about others' intentions and dispositions, i.e. how people decide that what a person did was due to some trait the person possessed.

They assume that ability and knowledge are relevant, i.e. the perceiver infers that the actor is aware that his/her actions can bring about certain results. In other words, there is a correspondence between actors' personality and intentions which the perceiver infers. Along the same lines, Kelly (1967), was concerned with the processes by which a perceiver assigns causes and events and attributes observed actions either to personal or environmental causes, or indeed to some interaction between the two sets of causes. What Kelly proposed was that the perceiver relies on three sources of information in order to explain the actor's behaviour.

1. Consistency information: whether the actor has consistent behaviour under similar circumstances over time.
2. Distinctiveness information: how often the actor behaved similarly under different circumstances.
3. Consensus information: how many people acted the same way under the same circumstances.

The central question in relation to these three sources of information is the extent to which behaviours covary uniquely with the actor (Antaki, 1982).

Kelly's version of attribution theory is often called the ANOVA model, "in that the criteria of consensus, distinctiveness and consistency can be regarded, in terms of their predicted separate and combined effects, as analogous to independent variables in a factorial design analysis of variance." (Eiser, 1986)

Jones & Nisbett (1972), using Heider's analysis, draw distinctive lines between actors' and observers' attributions. They argued that, observers' attributions tend to be dispositional whereas actors' situational. In other words, one is less inclined to account for one's own behaviour in terms of personality traits but more inclined to see others' behaviour as due to personal characteristics. They proposed two reasons for this difference. The first had to do with informational and perceptual differences between actors and observers, and the second with ego-involving motivational reasons. They considered the first reason more important and claimed that differences exist because actors have more information available about the history of their actions than their observers. In terms of the perceptual difference, Jones & Nisbett suggest that actors and observers might differ in their explanations not only because they have different information available to them and might want to attribute responsibility to the environment, but also because of the simple perceptual difference in the scene confronting both actors and observers. As Jones & Nisbett (1972), put forward:

"for the observer, behaviours are figural against the ground of the situation. For the actor it is the situational cues which are figural and that are seen to elicit behaviour." (p.93)

Several early studies have supported the actor/observer difference hypothesis but most of them were on adults (Nisbett et al., 1973; Harvey et al., 1975; West et al., 1975). One of the few studies done with children is by Curtis & Schildhans (1980). They studied nursery school children who were presented with questions about themselves and another child. Children were asked to attribute the cause of an event either to the actor's personality or to the situation. Results indicated that children made more personality attributions to others than to themselves for both positive and negative outcomes, when situational attributions did not imply a lack of control over the environment. Most children saw themselves and others as externally controlled.

However, there have been studies which have provided evidence that the actor/observer differences may be not only a function of differences in the kind of information available but also to information attended to by actors and observers (Taylor & Fiske, 1975). McGuire & Padower-Singer (1976), found that children tended to describe themselves more often in terms of traits which distinguished them from their classmates. Van der Pligt (1981), proposed that the difference between situational and dispositional attributions may be related to the evaluation of the event and can reflect response uncertainty. Further evidence was provided on the importance of evaluation (Pligt, 1984).

If we are to summarize the basic attribution principles formulated by the four major theories discussed so far, these would be:

1. an attribution is arrived at by a search for the causal candidate which is most closely associated historically with the event being explained (Kelly's

central idea).

2. people use information about persons' behaviours and their consequences, in order to arrive at a decision about personal dispositions (Jones & Davis's central idea).

3. the differences between actors' and observers' explanations may be due to informational differences or to differences in what they are attending to (Jones & Nisbett's central idea).

3.2.1. Children's knowledge about the causes of behaviour

The process of arriving at causal attributions, according to developmental and cognitive psychologists, is directly related to the understanding of how the mind works. This understanding brings order to social events around us. It provides explanations of others' behaviours and allows us to make predictions about actions by referring to beliefs, desires, perceptions, thoughts, emotions and intentions. This is what researchers have called children's theory of mind (Wellman, 1990, Flavell, 1993).

Wellman (1990), expanded on the argument that children have a theory of mind by combining ideas from the philosophy of mind, philosophy of science and cognitive developmental research on children's theory formation. There are, however, developmental theorists who believe that children's understanding of mind is not a theory at all (Hobson, 1991; Butterworth, 1991). Another notable position is the one taken by Johnson (1988). He proposed

that children do not need a theory because their own subjective experiences provide all the information they need about the mind. Based on these experiences, children can get information about others' inner states (for a recent review on the arguments between a theory of mind and not a theory of mind, refer to Leekan, 1993).

Flavell (1993), cites five postulates of the theory of mind. The child learns that a) the mind exists, b) it has connections to the physical world, c) is separate from and differs from the physical world, d) can represent objects and events accurately or inaccurately, e) actively mediates the interpretation of reality and the emotions experienced (Flavell, 1993).

From research in the area it has become clear that not only do adults construe concepts of themselves, others and situations, but children do as well. Young children begin to explain behaviour, by appealing to desires, beliefs, emotions and percepts. Developmental psychology in order to explain the developmental course of this process, firstly addresses the question of human volition, i.e. intentionality. The importance of the concept of intentionality had been considered further back by Heider (1958), - whose contribution to attribution theory has already been discussed - when he argued, that behaviour should only be attributed to personal causes if its outcome is intentional. The acquisition of the concept of intentionality is considered essential for the development of children's attributions for two reasons (Flavell, 1993). Firstly it helps children to understand how people differ from objects since only human behaviour is caused by intentions, and secondly, because knowledge about the intentions is indispensable for

understanding responsibility and morality (Astington, 1991). It is by the age of 4-5yrs, Astington claims, that children can conceptualize prior intention and understand the causal link between intentions and actions.

The concept that sets the beginning of the notion of intentionality is that of **agency** (Shultz, 1991). Human beings move and behave independently of external causes. This concept of agency at preschool age is linked to that of animism. The picture is then completed with the inference of internal mental states that guide behaviour. Research on children's understanding of intentionality sprang out of Piaget's work on moral reasoning (1932). For a long time researchers have accepted that children below the age of 8-9 yrs old follow what Piaget called moral realism.

"The tendency to regard duty and the value attaching to it as self-subsistent and independent of the mind, as imposing itself regardless of the circumstances that the individual finds himself in." (1952)

It was only after that age that children move into the stage of moral relativism, i.e. their reasoning is dependent on intentions and situational variables. However, several investigators have disputed Piagetian thinking and have shown that even younger children (7-8yrs old) are able to recognize intentions (Shultz et al., 1980; Astington, 1991).

Although intentionality is generally agreed to be well understood by primary school age children, some children fail to develop this understanding adequately, and are at risk for various problematic social behaviours. We have already discussed Dodge's information processing model and how it relates to social cognition and social behaviour. His work on social aggression is a good example.

As Flavell (1993) says, an intent is a very general psychological cause of behaviour. The second question that psychologists pose in reference to the attributional process, relates to the developmental course of children's understanding and detecting of specific psychological causes. Nearly all children's early causal attributes refer to the social world rather than to the physical (Bloom & Capatides, 1987). At about preschool age, children can predict the effects of a variety of emotions, abilities, beliefs and motives of someone's behaviour. It is not until middle or late childhood that they can clearly differentiate related causes such as ability and effort (Skinner, 1990; Stipek & MacIver, 1989). More subtle psychological causes such as underlying motivation, are fully understood in early adolescence (Miller & DeMarie-Dreblow, 1990).

The third question in relation to children's knowledge of the causes of behaviour, addresses the issue of differentiating situational from dispositional causes of behaviour. We have already referred to Jones & Nisbett's perceptual proposition and the differentiation drawn between actors and observers. For a long time and approximately until ten years ago, researchers believed that young children tended to describe others in terms of their appearance and behaviour, relying on facial expressions for emotional cues and associated intentionality with desirable outcomes (Flavell, 1993). In general terms, it was believed that as children grow older they tended to move from an external stance to an internal.

Recent research evidence has challenged this developmental shift from external to internal attributions by indicating that even preschoolers prefer

internal psychological causes to explain behaviour, unless the relevant information for making this inference is too complex or subtle (Lillard & Flavell, 1992; Miller & Aloise, 1989). Deriving from similar results, professionals working with children have considered the degree of experience with familiar behaviour in question as well as cultural factors, as important determiners of children's attributions.

Generally, recent developmental theories suggest that most of children's understanding about mental states is in place by the end of preschool years (Wellman, 1990; Perner, 1991). According to Leekan (1993), there is not much research regarding the understanding of mind and its functions in older children. However, a few relevant suggestions have been made. For instance, Perner & Davis (1988), suggested that school age children (6-9yrs) come to understand what he calls second-order mental states, i.e. can attribute beliefs about beliefs, intentions about beliefs. Children gain the ability to apply mental states recursively and can understand embedded mental states, e.g. John knows Mary does not know the teacher is arriving. They also gain the ability to attribute higher order mental states and understand social concepts like trust and commitment.

Summarizing, the theory of mind can serve as an explanatory framework which accounts for human functioning. According to Leekan (1993), there are other aspects of the theory which are very useful as well. Having a theory of mind, he cites, is very important for the understanding of social, moral and emotional situations. Having already referred to the relationship between social cognition and social behaviour, Leekan's comments on the

relationship between social /antisocial acts and the ability to understand others' minds, seems to add a piece to the puzzle of the process of arriving at attributions.

The American researchers Eisert & Kahle (1986), presented an interesting developmental model of social attribution, integrating research on probability concepts and logical structures. Their model follows a three-level process. In the first level, called preoperational subjectivism, the child lacks certain logical structures and in order to understand social behaviour, uses probabilistic reasoning. In the second, operational objectivism, the child uses logical structures, and at the same time probability concepts remain dormant. During the final operational subjectivism level, probability and logical concepts are integrated, and used in conjunction to help children understand and explain the social behaviour of self and others. They commend:

"Our goal is to present a model of attribution development that considers probability and logical concepts and describes how the child uses these concepts in making attributions." (p.62)

Behavioural phenomena, they claim, are probabilistic in nature and since attribution theories are concerned with explaining behavioural and causal phenomena, there is a relationship between them and probability concepts. The role of probabilistic thinking in the development of attribution skills is manifested in the child's realisations that behaviour is not always determined and stable, i.e. it varies across situations and time and it is also influenced by personality and environmental variables. When children from a specific set of observations draw general attributional conclusions and realise that these conclusions are probabilistic (depend on), they are engaged in inductive

reasoning, what Eisert and Kahle call probabilistic reasoning. The concept of logic is tied to the principle of deductive reasoning which applies to attributions when children deduce a dispositional trait from a set of behaviours. What they argue is that mature social attributions require the dialectical synthesis of these two kinds of reasoning. In order to illustrate the relationship between their model and social attributions they refer to research on personal versus situational causes of behaviour (e.g. John & Nisbett's model of actors and observers).

So far, the literature and research has made clear that attribution theory is a theory of how people reach a decision about what causes personal and others' behaviour. It has important implications for the understanding of why and how people come to conclusions about the causes of social phenomena. However, this is only half of the story about attributions. The second half includes the theories which consider the effects these attributions have on people's feelings and behaviour (Antaki & Brewin, 1982).

3.2.2. Attributional theories

This second set of theories is called attributional theories and considers the link between causal attributions about events and people's emotional reactions and behaviours towards them. The two most important attributional theories are Weiner's theory of motivation (1974, 1979, 1980, 1982), and Seligman's theory of learned helplessness (1975). For the purpose of the

present study a detailed discussion will follow on Weiner's theory since it is more relevant to the theoretical framework of the study, while reference will be made to Seligman's theory whenever it is essential.

Heider (1958), was concerned not only with the way attributions are formed but also with the influence they have on feelings and behaviour. Borrowing from his ideas, Weiner has formulated an attributional theory of motivation which has had many applications in education, known as the attributional model of achievement related behaviour. Weiner has been influenced by theoretical models of achievement motivation, principles of which he has applied to attributional theories. The basic idea is that a previous motivation to do something, is a function of how well the person has done the same thing in the past and to what he/she attributes success and failure. An individual's motivation to engage in any particular task on which it is possible to either succeed or fail, is a function of the extent to which he/she expects to succeed and of the value placed on actually obtaining success. People, according to this model, are thought to respond not simply to experiences of success or failure as such, but to their interpretations of their success or failure. These are largely determined by the causes they hold responsible for them (Weiner et al., 1971; Weiner, 1974). There are a variety of causes people use to explain success or failure on achievement tasks. Weiner (1979), classified them in three dimensions.

1. He adopts Heider's internal/external cause division. Some causes like ability, effort, personality, and mood which are believed to originate within the person, are considered internal. Other causes like task difficulty, luck,

environmental conditions, are considered external since they originate outside the person.

2. Stability dimension : differentiates causes in terms of being stable over time and across situations, e.g. ability, task difficulty, or unstable e.g. effort, luck, mood.

3. Controllability dimension : (borrowed from Heider) causes like effort, attention, and help can be brought under someone's control, whereas causes like luck and ability cannot.

In his last work, Weiner (1985), introduced a possible fourth dimension, that of intentionality (intentional vs unintentional). This dimension differs from the controllability dimension in that it involves foresight and purposive negligence.

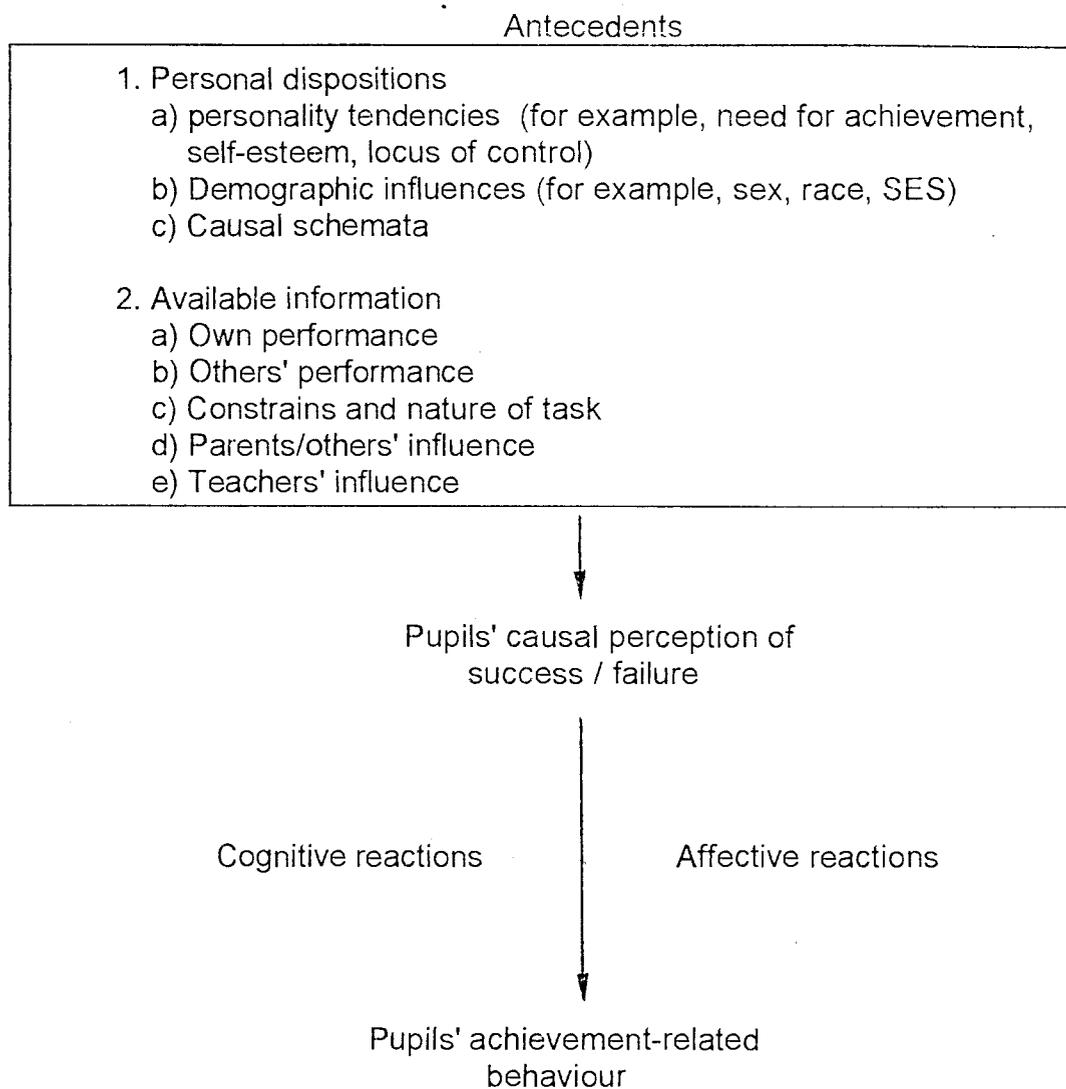
The above described dimensions have important consequences relating to peoples' affective (such as self-esteem), cognitive (such as future expectations) and behavioural (achievement related behaviour) reactions. In particular, future explanations of success or failure are influenced by the stability dimension. Ascription of an outcome to unstable causes produces greater shifts in expectancy of achievement to the desired outcome than does ascription to stable causes. Thus, failure at an achievement task attributed to unstable causes may result in expectations for eventual success, since unstable cause might change. On the other hand, failure to stable causes is expected to continue, since these causes are believed to remain. Similarly, if success was attributed to stable causes, continued success would be expected.

Weiner's model has found a wide application in education for analysing pupils' behaviour and more specifically for addressing the question of how pupils decide what causes are responsible for academic achievement. He proposes two general categories of antecedents that influence pupils' causal attributions: **a.** personal dispositions, **b.** external information available.

Each of these categories is divided into subcategories. The first category includes: personality tendencies, demographic status and causal schemata.

The second includes: own performance, others' performance, constraints and nature of the achievement task, parents' and teachers' influences. Bar-Tal (1982) depicts the list of antecedents Weiner proposes in Table 1.

Table 1: Antecedents of causal perception mediating achievement-related behaviour (after Bar-Tal, 1982).



Bar-Tal (1982), summarizing the results from studies based on Weiner's attributional model concludes that, pupils who tend to attribute success to internal-unstable-controllable causes, tend to exhibit adaptive, mastery-oriented achievement behaviour. Pupils who make the opposite attributions i.e. success to external, failure to internal causes, tend to exhibit maladaptive, helpless achievement behaviour.

Theories of attribution and attributional theories have not only educational applicability. Evidence is provided by a number of studies that self-esteem relates to differences in attributional style (Ickes & Layden, 1978; Dweck et al., 1978). For example, previous research has related attribution theories to depression (Kaslow et al., 1984; Leitenberg et al., 1986). A research review of studies relating causal attributions to children's behaviours and more specifically to school performance, depression and EBDs follows.

3.2.3. Research on attributional theories and children

Early research on the development of social cognition (Shantz, 1975), has shown that children younger than 7-8 yrs old tend to rely on the most salient external cues when describing emotions of others; they seem to interpret only very global positive (e.g. happy) and negative (e.g. sad) affective cues. According to their findings, a child at about 6 yrs described in a story as having succeeded or failed, was believed to experience the affective reactions of being happy or sad. Children at about the age of 10 yrs, used informational cues to infer different emotional states such as pride, gratitude and shame.

According to Graham & Weiner (1986), attribution theory has proved to be a useful framework for the study of emotional development. The attributional approach to emotion contributed much to the area of developmental psychology. Weiner and his colleagues have done a lot of research within the area of social cognition, guided by the advances in

attribution theories. In one of their studies in which they studied 6-10 yrs children (1980), they identified a developmental shift in the reactions to success and failure. Younger children showed a greater tendency to display or infer outcome-linked emotions, while older children exhibited or supposed, more complex relations including attribution-linked emotions.

According to Graham & Weiner (1986), there is a linkage between thoughts and feelings and there is ample empirical evidence to support that with adults. Through a number of studies, they tried to prove that this linkage is present in children as well. In an early developmental investigation (Weiner et al., 1982), of children 5-9 yrs, there was evidence that the emotions of pity and anger were cues to causal attributions for achievement and failure. What their study indicated was that there was a linkage between anger and failure due to lack of effort for all ages, and pity and failure due to lack of ability only for the 9 years old.

In subsequent studies of 6-12 years old children (Weiner et al., 1982; Graham et al., 1984), they found that anger was evoked by controllable causes for all age groups. Children reported feeling angry toward another child, following social rejection, physical aggression or intentional goal frustration. Pity was elicited given uncontrollable causes of outcome without developmental differences. Expanding the two way relationship between affect and causal attributions, Weiner & Handel (1985), examined the linkage among causal attributions, affect and behaviour, in children 5-12 yrs old. They provided supportive evidence for correlations among the three variables as well as developmental differences. Correlations increased with age suggesting

that among older children affective reactions were more predictive of intended social behaviour than for the younger children. They explained developmental differences on the basis that children are becoming more sensitive to a variety of cognitively based cues, including emotional feedback and their behaviour becomes more and more responsive to higher-order processes.

Expanding on the work done by Weiner and colleagues, Rholes et al. (1988), examined the relationship between conceptions of disposition and behaviour in 7-8 yrs old children. Using two groups of children, one with a stable conception of traits and one with an unstable, they studied their reactions to success and failure (they gave children puzzles on which the experimenters contrived that the children either succeeded or failed, and measured children's persistence on the tasks). Results indicated that success or failure had more influence on children who had a stable conception of disposition and this group showed relatively more persistence when they succeeded and less when they failed.

Curtis & Schildhams (1980), studied nursery school children. They were presented with questions about themselves and another and were asked to attribute the cause of an event either to the actor's personality or to the situation. Results indicated that children made more personality attributions to others than to themselves for both positive and negative outcomes, when situational attributions did not imply a lack of control over the environment.

Benenson & Dweck (1986), studied 5-10 yrs old children in order to investigate their trait explanations and self-evaluations in the academic and social domain. This yielded three major findings. First, use of trait explanations

emerged earlier in the social domain than in the academic. Second, trait explanations emerged earlier for success than for failure, and third, self-evaluations became less positive in both the social and academic domain and less similar across them, in the upper grades.

Wigfield (1988), assessed how children's achievement attributions were influenced by age, attentional focus, gender and success or failure experience. When children succeeded at a task, effort tended to be the most important cause of their performance. When they failed, failure was mostly attributed to the difficulty of the task. Few sex differences in attributions were reported. In terms of age, younger children attributed both success and failure more to luck than did the older children.

Miller & Aloise (1989), reviewed the preschool social cognition literature on children's understanding of the psychological causes of behaviour. They disputed the common conclusion that young children understand external causes of behaviour better than internal ones, and prefer them to internal ones. According to them, preschoolers have a rudimentary knowledge of psychological states, they often tend to assume that behaviours have a psychological cause (usually an intention), and do not evidence a general preference to external causes. The evidence for the external/internal developmental trend is weak as they claim, and it is limited to certain domains and assessment methods. They propose more differentiation among types of external/internal causes in order to clarify the nature of developmental changes in social causal reasoning.

3.2.4 Special populations and causal attributions

A considerable amount of research has dealt with the causal attributions to success and failure made by children with special needs. Bogie & Buckhoit (1987), in US, investigated the reactions of gifted and Educable Mentally Retarded (EMR) children to success and failure, in comparison to average. They explored attributions, persistence of effort following failure, willingness to attempt a task following failure and future expectations for success. According to the results of the study, gifted students did not attribute success to ability but to a low level of task difficulty. EMR students rated the level of task difficulty as less responsible for their success and tended to attribute their performance to internal reasons. All students blamed failure on the difficulty of the task, EMR students rated low effort as relatively more responsible than did average and gifted children.

There are many studies which have generally shown that low-ability students take more personal responsibility for failure, than do average students (Frieze & Snyder, 1980; Stipek & Hoffman, 1980). Similarly, McMillan (1980), reported that EMR pupils blamed themselves when they failed to complete a task.

Pearl et al. (1980), studied Learning Disabled (LD) pupils and reported that internal reasons contribute very little to their success. Butkowsky & Willows (1980), reported that below average reading ability students, attributed failure to lack of ability, whereas they took little personal responsibility for success. Compas et al. (1991), in a study of four groups of young adolescents

(normal subjects, internalizing disorders, externalizing disorders and mixed disorders), among other variables, studied children's causal attributions for success and failure. They used four parameters on which success and failure were attributed to, skill, effort, luck and task ease. Results did not indicate any significant difference between the four groups. Similar results were reported by Cohen et al. (1985), and McConaughy et al. (1988). However, Schneider & Leitenberg (1989), compared children displaying problems of aggression, withdrawal and aggression-withdrawal, to a control group in terms of their attributions to ability and lack of ability following success and failure in social, academic and athletic situations. The control group attributed success to ability more than the aggressive and withdrawn group, whereas no significant differences were found among the groups in attributing failure to lack of ability.

Relative recent research has studied the causal attributions of aggressive and socially rejected children. Dodge and his colleagues (Dodge, 1980, Dodge & Feldman, 1990), provided evidence suggesting that these children may be deficient in their encoding of social cues and consequently when confronted with ambiguous circumstances, interpret social events as if they result from hostile intentions of other peers. In a later study, Dodge & Tomlin (1987), reported that aggressive children differ from non aggressive in the way they utilize informational cues in interpreting peers' behaviour. Aggressive children were found to be less likely to utilize relevant cues and more likely to rely on past negative experiences.

Waas (1988), also addressed the question of how high aggressive, low aggressive and rejected children, evaluate social information when making

causal attributions. Results were similar to Dodge's but only in the absence of relevant social information. Groups reported more hostile responses than the control. However, when social information was available on which attributions could be based upon, aggressive children altered their attributions in a similar manner to the non aggressive group.

Early studies have related causal attributions to self-esteem. Ickes & Layden (1978), for instance, suggested that high self-esteem subjects appear to internalize their success outcomes and externalize their failure outcomes, more than low self-esteem subjects do. Similar conclusions were reached by Weiner (1979).

Within the domain of social cognition and causal attributions, depression in children has been studied. This particular population shares certain characteristics with the EBD population in terms of affective, cognitive, behavioural and developmental symptoms (e.g. school phobia, enuresis etc.) thus reference to empirical evidence is considered relevant to the present discussion. Most of the research in the area of children's depression has been guided by adult studies which stress socio-cognitive variables as central to depressive symptomatology. The general idea is that depressed persons are systematically biased in their thinking leading to negative self-esteem and negative future perspectives. Among others, Kaslow et al. (1984), investigated depressed children's self esteem and their negative expectancies for future performance, based on the model of learned helplessness (Abramson et al., 1978; Seligman, 1975). The hypothesis that depressed children should make internal, stable and global attributions for failure and more external, unstable

and specific for success, found supportive evidence.

Based on Beck's cognitive theory of adult depression (1976), Leitenberg et al. (1986), studied negative cognitive errors in children with depressive symptoms and low self-esteem. Through the use of a self-repoted questionnaire (Children's Negative Cognitive Error Questionnaire), they identified causal attribution differences between depressive and non-depressive children as well as between low and high self-esteem children. According to the results, both depressed and low self-esteem groups, were more likely than the control to attribute failure outcomes to internal, global and stable defects such as lack of ability. However, no faulty logical thinking processes were identified in the depressive and low self-esteem group. They concluded that both control and target groups might make the same cognitive errors but in opposite directions i.e. the control group made more self-enhancing and positive distortions whereas the target group made more negative distortions.

Conclusions

In the present chapter an attempt has been made to relate the theories of social cognition and attribution to children with EBDs. Research in the area of social cognition and EBDs has been mainly concerned with children's deficits in sociocognitive skills (empathy, problem solving, role taking), antisocial behaviour and social maladjustment. Based on the assumption that

the higher the sociocognitive abilities the better the children's behaviour, most of the studies have reported differences between EBD and non-EBD children. Children with EBDs have been described as cognitively and emotionally less mature and consequently, with poorer sociocognitive skills. These differences would lead to: a) behaviour problems (aggression, maladaptations), b) problematic interpersonal relationships (peer rejection) and c) feelings of uncertainty and low self-esteem.

The process of arriving at causal attributions to success and failure has also been looked at in relation to EBDs. Research in the area is not extensive and mainly covers children with learning difficulties, aggressive and rejected children and children with depressive symptoms. Since these populations share certain characteristics with the EBD population, findings may be relevant and up to a point applicable to children with EBDs. Results from these studies have identified differences between the control and experimental group. The low ability and depressed students seem to take more personal responsibility for failure and attribute success to external factors. In other words, research has supported the hypothesis that these students use external attributions and they do not perceive events contingent upon behaviour. The result is that they have little incentive in trying to succeed and are prone to develop communication problems.

However, results are not consistent and there are studies which have not reported any differences between the EBD and control group in their attributions to academic success and failure. Since evidence is limited, let alone controversial, the extent to which children with EBDs differ from the non

EBD in the way they interpret and explain the world around them, is under question and undoubtedly needs more research.

In chapter five, an attempt is made to throw more light in the specific area by studying EBD in comparison to non-EBD groups. The aim is to add more information and empirical evidence to the existing knowledge relating to the subject.

CHAPTER 4: FIRST STUDY: IDENTIFICATION OF CHILDREN WITH EBDs IN TWO PRIMARY SCHOOLS

Summary of the first study

The term EBDs is an umbrella term which is used to describe children with various difficulties. It can be used for example to describe withdrawn and shy children, disruptive and aggressive children, children who play truant or suffer from school phobia as well as children who are hyperactive, provided that their behaviour deviates from the usual behaviour patterns and is exhibited over a long period of time. Although children with EBDs experience problems with their interpersonal and intrapersonal relationships, at school, at home, in the neighbourhood, schools have been the most commonly used places for the identification and remediation of EBDs. Evidence regarding the prevalence, stability and adverse effects of EBDs on children's social and academic lives, has called for early attention and detection of the problem. .

Based on this rationale, the present study is designed firstly to identify a sample of children with EBDs in two primary schools in Athens. The Rutter Child Behaviour Questionnaire (CBQ) is used as the identification tool.

Credible evidence from research studies has related certain environmental and in-child factors to EBDs. Factors in the family for example, include family style, housing conditions, parental involvement in education, marital status, SES, etc. School factors include classroom size, teacher attitudes, teachers' age, gender and teaching experience, etc. In-child factors include child's age, gender and school achievement. Deriving from the

viewpoint that EBD are the result of the interaction between the children and the environment in which they live, and recognizing the importance of these factors, the present study gathered data relating to these variables.

The subjects were 266 children aged 8-11, their mothers and 11 teachers. Applying the Rutter cut-off points, the prevalence rate of children with EBDs according to both parents and teachers in the two schools studied was found to be 35.3%. Teachers have identified more children than parents. The correlation between the two scales was moderate (.40) and the four month re-test reliability coefficient was significantly high (parents = .85; teachers = .67). Childrens' gender was found to be associated with EBDs. More boys were identified with more frequent and severe problems than girls. There was a tendency for more behavioural difficulties in boys and more emotional difficulties in girls. The social class variable in terms of parents' educational level and occupation and in relation to the school area was found to relate to EBDs. No age differences were identified. Although the children in the EBD group had average attainment records, they were found to function at a lower achievement level than the controls.

Introduction

The main purpose of the first study was to identify a group of primary school age children with EBDs and describe the nature of EBDs, from a population of two schools, in Athens, Greece. This involves two aspects:

- a) the identification and description of subgroups within the EBD group, and
- b) the identification of factors which relate to the onset of EBDs. Information on background factors associated with EBDs was collected (socio-demographic factors). All data were used for further work with the children themselves.

4.1. The use of the term EBDs

The conceptual and operational definitions of EBDs have been extensively reviewed in Chapter 1. The importance of early detection has been substantiated by research findings relating EBDs to low academic achievement and later life vulnerability. Prevalence rates have been reported as well. Assessment techniques were reviewed and the focus was placed on behaviour rating scales.

For the purpose of the present study the term emotional and behavioural difficulties (EBDs) will be used in order to refer to children who exhibit a variety of emotional and behavioural problems in their every day lives. The term EBDs is a generic one which is mainly used in school related studies. It will be used as an umbrella term to include a heterogeneous group of children with different behaviour patterns which, however, cause children and the people in their immediate environment distress and call for intervention and specialized help.

The term EBDs will also be used in order to avoid using varying definitions loaded with implications about the nature of difficulties. It has been mentioned that the major theoretical approaches explain the nature of children's problems differently i.e. deviance and disorder perspectives. However, the complexity of the problem calls for a more eclectic approach and indeed many studies have provided evidence for the situation-specificity of

children's problems and the importance of the interaction between environment and the child. Thus the adoption of the term is consistent with the ecological lines of thought, and accepts the mutual interplay of intra and inter personal factors in the development of children's problems.

4.2. The choice of schools as a place of study

Schools are a very important social context in the socialization of children which has been well documented by a number of theories and studies (see chapter one, definitions section). Children spend a large part of their time in schools. A wide variety of behaviour patterns is exhibited in schools and some of them are problematic. These behaviours may have roots in a child's educational experiences or may be exacerbated in the school setting. At school also, children can be compared with other children of their age group and expected norms and patterns of behaviour can be identified.

4.2.1 The mainstream school as a place of study

Special Education in Greece started to develop systematically during the late 70s when the first special schools were established and special education courses were offered to teachers. The 1981 Act (1143/30-3-81), established Special Education as a part of the Educational System for the first time. The idea of special class units was introduced, and units were developed wherever there were needs. Those units are situated in mainstream school buildings. Basically they accept children who have learning difficulties and/or behavioural problems. Those children receive extra special help 3-6 hours a week outside their ordinary class. Referrals to these units are mainly based on teachers' perceptions. There are no specific assessment procedures verifying teachers' perceptions and identifying children's difficulties except from very extreme cases when children are sent for an assessment in clinics or in mental health centres.

The 1566/1985 Act has improved the legislation for special education. It has expanded the development of special class units and has provided for the gradual placement of specialized staff, i.e. psychologists, speech therapists, social workers, physiotherapists. There are no precise statistical figures about the prevalence rate of children with special needs, let alone about prevalence rates of particular types of problems e.g. mental retardation, EBDs.

"In our education planning we accept, as it is internationally accepted, that our pupil population of 1.800.000 children of school age, includes 10% of children with special educational needs i.e. 180.000 children." (Ministry of Education, Department of special needs, 1988).

Most of these children, more than 90%, according to the Department of SEN, are integrated in mainstream schools because their special needs are minimal. Children whose needs are catered for are:

- a. the blind; b. the deaf; c. physically handicapped
- d. mentally retarded; e. socially maladjusted

According to 1987-88 figures, the number of children attending special education schools were 6,929. Future estimates expect the numbers to raise to 8,200 for 1988-89. Two percent of these 6,929 children are identified as socially maladjusted which is the term used in Greece to refer to children with severe EBDs.

So far there is no official definition of EBDs, let alone special provision for children with EBDs or standardized procedures through which children are identified. As we have noted, children with EBDs are a heterogeneous group. Some of these children are found in special schools, as the figures show, in the mainstream schools with some help from the special classes when these are available, in psychiatric institutions for very extreme cases whereas there is a number of them which remains unidentified.

In recent statistics of pupils with special needs in schools collected by the local education authorities (1990-91), social maladjustment was not included in the categories of children with special educational needs. Instead,

as we can see from table 1, the category of learning disabled children was introduced which accounts for 55.6% of the special needs population in Greece. Since these figures are not further analysed, most probably children with EBDs have been included in this broad category. According to the statistics, from a total school population of about 1.8 million children (aged 4-18yrs) in 1990-1991, 12,383 or 0.68% were receiving special education in special education units, mainly at the elementary level of schooling (table 2).

Table1: Greece, pupils with special needs by disability and as a percentage of pupils with SEN and of the total population, 1990-1991 (Report prepared for the OECD/Ministry of Education, Netherlands International conference, Kalsteel, Vaalsbroek, The Netherlands 1-3 December 1993).

Special needs	No. of pupils	% of special needs population	As % of total school population
Blind/visual impairment	108	0.69	0.01
Deaf/hearing impairment	722	4.60	0.04
Physical handicap	430	2.75	0.02
Mentally retarded	2.400	15.31	0.13
Learning difficulties	8.723	55.62	0.48
Others (15+ in workshops)	1.600	10.20	0.09
Severely handicapped (outside education)	1.700	10.84	0.09
Total	15.683	100.00	0.86

The logistics of using mainstream schools to identify children with EBD depends on three factors:

1. insufficient provision for this particular group of children
2. no standardized identifying procedures
3. vague and inadequate official definition of these children

4.3. Children's age range

Children at the age of 9-11 were selected for study for the following reasons:

1. Children at that age have already spent three years at school and have normally gained what we can call "school consciousness". In other words they have experienced the transitional period from home to school which very often brings psychological turmoil. Children have to adjust to new situations, cope with new demands and perform new roles. They have to learn teachers' expectations and rules and come to terms with the intellectual and behavioural requirements of the school classroom and school setting in general. Three years after those first experiences, children are expected to have accommodated to the new situation. Thus by studying children at that age the temporary negative effects of the first school years are eliminated and only children whose problems are persistent over time are detected.

2. Children after the age of 11 yrs, enter another period of their lives i.e. adolescence, which brings inevitable emotional and behavioural changes. Again these changes cannot be accommodated by all children and some of them go through a phase of "storm and stress" as many developmental psychologists would call it. By studying younger children these parameters are left out and again the inclusion of false positives is decreased.

3. Children by the age of 9 years have normally developed language and communication skills which enable them to negotiate with their environment. Thus they are able to comprehend and follow instructions as well as to provide accurate information about themselves. These are the children's skills which are needed by the second part of the study.

4.4. The choice of an instrument

Many studies have positively correlated factors such as gender, school attainment and social class to EBDs. Data relating to these parameters were collected for all children and their parents. Information on children's behaviour and emotional state was gathered through the means of behaviour rating scales completed by teachers and parents. Since a large number of children was to be studied, the instrument had to be short so that teachers could complete it fairly quickly. It should also include a parallel parents' version, be

concerned with behaviours occurring in a school and family setting and be able to discriminate among different types of EBDs, be able to differentiate between children who have difficulties and those who do not. It also had to be suitable for the specific age group and be culture fair.

The choice of the Rutter CBQ was based on the above principles. This is an instrument widely used not only in the UK but internationally e.g. Norway, New Zealand, Korea, Australia, etc. It has been the means by which a great deal of similar studies have investigated the prevalence rate of EBDs in children.

4.5. Aims and research questions

The overall aim of the first study was the identification of a group of Greek primary school children who could justifiably be described as demonstrating EBDs. Deriving from the overall aim the study focused on describing as accurately as possible the characteristics of the EBD group in two ways. First by studying the factors which potentially could influence the onset of the difficulties (in terms of the children's age, gender, social class and school attainment) and second by identifying different subgroups within the sample either in terms of the internalizing/externalizing dichotomy or in terms of the situation specificity of the difficulties (i.e. children identified by parents

or teachers only).

In order to achieve these aims, a series of research questions were formulated.

A: In relation to the use of the Rutter scales

- Are the scales relevant to the Greek context?
- Can they be helpful in identifying EBDs in children?
- Do Greek children appear to manifest such problems?

More specifically:

- Can Greek teachers and parents understand and apply the Rutter CBQ?
- How do teachers define EBDs? Can they differentiate between emotional and behavioural difficulties? Is the way they define these terms of any relevance to the CBQ items?
- What cut-off points do teachers and parents use to identify EBDs?

B: A second set of questions focused on the identification of different subgroups.

- Do parents and teachers identify the same children with EBDs?
- Are there differences in the distribution of EBDs scores estimated by parents and teachers?
- Does the degree of severity of the problem vary from parent to teacher?
- What kind of factor structure is there in the CBQ according to Greek parents' and teachers' ratings?
- Are there subgroups, and if so, what is the prevalence of difficulty within subgroups?

C: The third set was relating to the additional information gathered for parents and children as part of outlining the profile of the children with EBDs.

- Is there a relationship between EBDs and child's sex?
- Is there a relationship between EBDs and the child's age?
- Is there a relationship between EBDs and school attainment?
- Do factors such as parents' education and occupation and the school catchment area relate to EBDs?
- What individual behaviours described in the CBQ are more frequently exhibited by children in Athens?

4.6 PILOT STUDY

4.6.1. Rationale and aims

A pilot study was essential in order for the research to proceed with confidence about the suitability of the instrument, the process of administering the scales, as well as the communication patterns with the respondents.

The aims of the pilot study were:

1. to find out the extent to which the Rutter Children's Behaviour Questionnaire (CBQ), is applicable to the Greek context. In other words whether the CBQ scales can be used meaningfully with Greek schools, teachers and parents. Can the respondents understand the questions and format? Do they have any problems with specific questions?
2. to find out the extent to which children viewed as having EBDs by their teachers and parents, would be identified by the CBQ scale scores.
3. to get an indication of the suitability of the Rutter cut-offs for application to the present study.

4.3.2. Subjects

Fifteen Greek primary school teachers were randomly selected from three inner city mainstream schools, seven female and eight male. They all agreed to participate in the research. All of them had the same educational background i.e. 2 years in the Pedagogical Academy and 2-5 years teaching experience. Five of them were teaching grade C (ages 8-9), 5 grade D (ages 9-10) and the rest grade E (ages 10-11).

The mothers of the 15 children identified by the teachers, were given the equivalent parent questionnaire. Information on mothers' educational level was collected (Table 3).

Table 3 (mothers' educational level)

<u>No of subjects</u>	<u>Educational level</u>
1	Higher education
2	Intermediate school
3	High school
6	Elementary school
3	Have not finished elementary school

4.6.3. Measures

Rutter's Child Behaviour Questionnaire (CBQ)

According to Rutter (1967), behaviour questionnaires completed by teachers are regarded as very useful screening instruments for children's behaviours and are considered the first step in an overall psychiatric assessment of the child. He had been critical about the utility and validity of the so far existed scales and he had identified the need for a more suitable instrument.

" It appeared that there was a need for a reliable and valid short questionnaire suitable to be used with children in the middle age range, which teachers could complete fairly quickly (so that they might reasonably be expected to fill in the scale for a whole class of children for survey or other purposes), which concerned behaviour occurring in a school situation, and which could be used to discriminate between different types of behavioural or emotional disorder, as well as discriminating between children who show disorder and those who do not." (Rutter, 1967).

He developed the Child Behaviour Questionnaire (CBQ). The teachers' questionnaire (TBQ) was developed in parallel with the parents' (PBQ). The scales have been slightly modified in 1970, by Rutter et al., and the wording of a few items has been changed in order to increase clarity. The modified versions were used in the present study after being translated into Greek.

Rutter states that if both the TBQ and the PBQ are combined, they provide a very efficient screening procedure for the child's behaviour at home as well as at school. They are designed for children aged 7-13 and can mainly identify two groups of children, those with emotional and those with

behavioural difficulties.

The TBQ consists of 26 items describing the child's behaviour at school. Items are rated on a three point scale "certainly applies", "applies somewhat", "doesn't apply", scored respectively with 2, 1, 0 points. By summing up the scores of items 7, 10, 17, and 23 (often worried, worries about many things; often appears miserable, unhappy, tearful or distressed; tends to be fearful or afraid of new things or new situations; has had tears on arrival at school or has refused to come into the building in the past twelve months), we obtain the neurotic subscore. An anti-social subscore is obtained by summing the scores of items 4, 5, 15, 19, 20, 26 (often destroys or damages own or others' property; frequently fights or is extremely quarrelsome with other children; is often disobedient; often tells lies; has stolen things on one or more occasions in the past twelve months; bullies other children).

Pilot studies have been carried out to establish the items included, the method of scoring as well as the cut-off points. For the TBQ a score of 8 or more on either of the two diagnostic categories or in both, has been taken to indicate some kind of disorder. The children with equal neurotic and antisocial subscores remain undifferentiated and form a third group with "mixed disorders".

The parents' scale (PBQ), consists of 31 items, 23 of which are identical to the TBQ. Additional items relating more to home situations were included. The scale comprises of 3 sections. The first relates to the child's health problems and includes 8 items rated in terms of frequency of occurrence

("never" scores 0; "occasionally" scores 1; "at least once per week" scores 2). The second section relates to the child's habits and is rated by parents as "No", "Yes-mildly", "Yes-severely". This extra information is not scored. The third section includes 18 behaviour descriptions and parents rate the child on the same 3 point scale as in the TBQ.

The neurotic subscore is obtained by summing the scores of items B, G, V, 6 and 15 (has stomach-ache or vomiting; has tears on arrival at school or refuses to go into the building; does he/she have any sleeping difficulty; often worried, worries about many things; tends to be fearful or afraid of new things or new situations). The antisocial subscore is obtained by summing the score of items III, 3, 13, 17 and 18 (does he/she ever steal things; often destroys own or others' belongings, is often disobedient, often tells lies, bullies other children). Children with a total score 13 or more are designated as showing some disorder.

Reliability was tested for both scales. For the PBQ two months test retest reliability yielded a correlation coefficient of 0.74. The product moment correlation between mothers' and fathers' total scores was +0.64 (children were rated simultaneously but independently). Two months later correlation was 0.63. For the TBQ, re-test reliability coefficient with a two month interval between ratings was 0.89. Inter rater reliability coefficient with a 2-3 months interval was 0.72. Children attending psychiatric clinics for EBDs were used as the criterion group to test the discriminative power of the scales.

4.6.3.1. Summary of the Isle of Wight study

It was the Isle of Wight study (Rutter et al., 1970) the major study that used the Rutter CBQ. The study was concerned with the distribution of EBDs in all 10-12 yrs old children living in the area. The study did not make use of the term EBDs in order to define its population. Deriving from a clinical-diagnostic approach, the researchers chose the use of the term psychiatric disorder which they defined as "an abnormality of behaviour, emotions, or relationships which is sufficiently marked and prolonged to cause handicap to the child himself and/or distress or disturbance in the family or community" (Rutter, 1970). However, they do refer to emotional and behavioural difficulties or disorders as they call them and the Rutter behaviour scales have been widely used to identify those specific difficulties.

A two stage procedure was followed in order to identify children with EBDs. In the first stage, parents and teachers had identified children through the CBQ. When findings suggested that a group of children might have the condition under consideration, this group was further studied through psychiatric interview with the child and parent. Additional information was gathered from teachers on behaviour in and out the class, attitudes to teacher and to other children, problems in school or elsewhere.

Through the first stage of the study, 12.3% of the total population studied (n = 2,199), has been identified as having EBDs on either teachers' or

parents' scales. When the study proceeded to the second stage, 5.4% of the children were finally diagnosed as having clinically significant EBDs. The possibility that a considerable number of children with EBDs might have scored below the cut-off point on the questionnaires (false negatives), was considered. On this basis a further 20% of the children has been identified and the prevalence rate had been corrected and reported as 6.8% .

Of the 157 children identified on the teachers' scale, 64 were finally diagnosed as having EBDs (59.2% false positives). Of the 133 children selected on the parents' questionnaire, 66 were finally diagnosed (50.4% false positives). The parental and the teachers' scale selected about the same proportion of children (6.0% the parents, 7.1% the teachers). The correlation between the two scales although statistically significant, was very low ($r = 0.18$), and the overlap between the groups selected on the two scales was quite small (ten boys and nine girls). Of the 19 children selected on both questionnaires, 14 were finally diagnosed as having EBDs.

Children who were finally diagnosed were classified into seven main groups: neurotic disorders, antisocial or conduct disorders, mixed neurotic and antisocial disorders, developmental disorders, hyperkinetic syndrome, child psychosis, and personality disorder. Neurotic and conduct disorders were the most frequent conditions. Further information on the results on the groups identified as well as on age, sex, social class and marital status variables, will be discussed in relation to the results of the present study.

4.6.4 Translation

The Rutter CBQ for teachers and parents was translated into Greek. According to Brislin (1980, 1986), there are four basic translation methods which can be used either alone or in combination, depending on the needs of the research: back translation, bilingual technique, committee approach, pre-test procedures.

For the purpose of the present study, the back translation method was used and the final version was pre-tested during the pilot. First, both questionnaires were translated into Greek by the researcher. Then three bilingual teachers, unfamiliar with the original version, translated the scales moving back and forth between languages. This is the basis of descending according to Brislin (1980), since no language is the center of attention.

The last back translation was compared with the original and the necessary changes were made until there were no differences between them. The final version was pre-tested during the pilot study, in terms of the ambiguity of the terms, the presence of colloquialisms and in order to insure that respondents comprehend the material to which they were expected to respond.

4.6.5. Procedure

Stage 1 :

All teachers (n=15) were approached in schools and asked whether they were willing to participate in a study which would demand some of their time. The purpose of the study was explained to them i.e. they would be asked to provide specific information on a child in their class who in their view had EBDs. All 15 teachers were willing and interested themselves in helping with the research. In order to explore their own perceptions about children with EBDs, the following written set of questions was given to them to answer for the following day.

1. Do you have children in your class that create/have problems? If yes,
2. What sort of problems?
3. How would you characterize children with problems?
4. Can you describe a child with emotional difficulties?
5. Can you describe a child with behavioural difficulties?

Stage 2 :

The following day they were given the RB2 (teachers' scale). They were asked to select one child in their class who according to their opinion was exhibiting EBDs. Three days later, questionnaires were collected in schools. Through an informal interview teachers were asked the following questions

about the scales.

1. Were there any questions you had problems with? e.g. you did not understand.
2. Do you think the questionnaire reveals characteristics of children you have in your class?
3. What do you think about the test in general terms?

Stage 3 :

The parents of the children selected by teachers as demonstrating EBDs, were invited to schools by letter. They were asked whether they were willing to provide certain information about their children by responding to a questionnaire. The confidentiality of their responses was assured. All 15 parents agreed to participate in the study. They were then given the RA2 (the parents' scale), and were asked to return it three days later themselves. Nine parents attended the meeting. The remaining six were called again and came to a subsequent meeting.

4.6.6. Findings

Stage 1. Teachers' responses on the first set of questions

All teachers reported that they deal with children who have or create problems. As we can see from table 4, all of them mentioned learning difficulties as a problem in the classroom and nearly all behaviour problems.

Responses are presented by school in the table below.

TABLE 4: Kinds of problems faced by teachers in the three schools

School 1

1. Learning difficulties (LD), indifference, carelessness.
 2. LD, behaviour problems, family problems.
 3. LD, indifference, disobedience, absent-minded.
 4. LD, indifference, aggressiveness, carelessness.
 5. LD, behaviour problems.
-

School 2

1. Dyslexia, dysgraphia.
 2. LD, family problems.
 3. LD, behaviour problems.
 4. LD, behaviour problems.
 5. One girl and two boys in my class very often talk during the lesson and disturb their fellow pupils. They do not behave themselves. Two girls are very slow in reading and writing.
-

School 3

1. LD, family problems.
2. Problems in reading and writing.
3. LD, behaviour problems.
4. One child with mental retardation, behaviour problems.
5. One boy and two girls when they do not answer correctly to a certain question and without any offending remarks from me, they burst to tears. One girl does not participate in class at all, just daydreams. One boy is hyperactive. One boy has physical disabilities.

Teachers' answers to the question relating to the characteristics of these children, were of different types:

- a. descriptions of behaviours, i.e. late in class, do not bring books, talking during the lesson, hitting, swearing, etc.
- b. labels of overt or covert behaviour characteristics, i.e. hyperactive, maladjusted, careless, aggressive, naughty, etc.
- c. labels of personality characteristics, e.g. egocentric, indifferent, sensitive, shy, unhappy, nervous, etc.
- d. school-performance related characteristics, e.g. dictating mistakes, short attention span, poor vocabulary.

Teachers' actual responses are presented in Table 5.

TABLE 5: Characteristics of children who have/create problems according to the teachers, in the three schools used in the pilot.

School 1

1. Some are just visitors without any interest for the lessons.
2. Aggressive, egocentric, maladjusted, indifferent, hyperactive.
3. Do not pay attention during the lesson, disturb others, hit, swear, late in class, forget their books.
4. Do not participate, absence of initiative, coquettish, inactive, naughty.
5. Hyperactive, indifferent, spoilt, young rebels.

School 2

1. Bad pronunciation, dictating mistakes, easily distracted.
 2. Careless, hyperactive, aggressive, timid, easily distracted.
 3. Timid, immature, speech difficulties, do not participate,
 4. Slow learning rate, sensitive, easily insulted, talking during the lesson, distracting others, hyperactive.
 5. Difficult to cope with, difficult to co-operate, uninterested in learning.
-

School 3

1. Poor concentration, short attention span, maladjusted.
 2. Difficulty in making friends, poor vocabulary, low level of comprehension.
 3. (no answer)
 4. Unable to learn due to hereditary problems.
 5. Hyperactive, unhappy, careless, over-shy.
-

In relation to the definitions of emotional and behavioural difficulties (Tables 6, 7), teachers were quite able to provide a variety of descriptors. In general, they seemed able enough to differentiate between behavioural and emotional difficulties. They attributed more overt behaviour patterns to the children with behavioural difficulties. These childrens' behaviour seems more disturbing to the running of the class than the behaviour of the children with emotional difficulties. Characteristics such as low self esteem and insecurity were identified for the children with emotional difficulties. It is very interesting to mention that most of the definitions teachers provided, are similar to the items in the RB2 questionnaire.

TABLE 6: Teachers' definitions of children with emotional difficulties in the three schools used in the pilot

School 1

1. Low confidence, over-shy
 2. Sensitive, emotional, timid, without initiative, non-participant in class, lives in his own world, day-dreams.
 3. Miserable, unhappy.
 4. Worried, unhappy, fearful, low self-esteem.
 5. Fearful, sensitive, without initiative, exploited by others, shy, distant.
-

School 2

1. Unhappy, low self-esteem, insecure, afraid of new things and situations.
 2. Timid, easily distracted.
 3. Shy, without confidence, insecure.
 4. Isolated, unhappy, bad relationships with others.
 5. Shy, sensitive, cries easily.
-

School 3

1. Insecure, emotionally deprived, attention seeker.
 2. Unpopular, unhappy, nagging.
 3. Clinging behaviour, cry easily, low self-esteem.
 4. Stereotyped movements, bad relationships with others.
 5. (no answer)
-

Table 7 below presents teachers' definitions of children with behavioural difficulties.

Table 7: Teachers' definitions of children with behavioural difficulties, in the three schools used in the pilot.

School 1

1. Fighting, aggressive.
 2. Do not participate in class, do not follow the lesson, disturbing others, complaining and getting easily annoyed.
 3. Lying, stealing, fighting.
 4. Disobedient, aggressive.
 5. Egocentric, nervous, unmanageable.
-

School 2

1. Nervous, overactive, talkative, rude.
 2. Irritable, swearing, antisocial behaviour.
 3. Egocentric, maladjusted, fighting.
 4. Antisocial behaviour, fighting, bad relationships.
 5. Cannot adjust to the environment, without any help from their families.
-

School 3

1. Aggressive, disobedient, always complaining.
 2. Antisocial behaviour, fighting, swearing, overactive, stealing.
 3. Fighting, hyperactive, lying.
 4. Cannot adjust, talkative, disobedient, disturbing.
 5. (no answer)
-

Stage 2 : Teachers' responses to the second set of questions

All teachers returned the questionnaires completed three days later. They all said that they had no problems with the format and the meaning of the questions. There were comments about the second item on the questionnaire "Truants from school". Nearly all teachers said that children at those ages do not normally truant from school, however, they had come across children who leave the class and wander around or children who refuse to enter class.

Teachers overall agreed that the questionnaire helped them identify children with problems. Two teachers mentioned that the scales should not be used with children older than 11 years of age, because then adolescence starts and that brings inevitable behavioural and emotional changes. Three teachers said that the scales can point to specific problems e.g. items on mannerisms or tics of the face or body, speech difficulties, which need further exploration and specialized help. Two teachers said the scales helped them understand individual differences and made them more sensitive to certain behaviours. Nearly all teachers mentioned that measures like these should be used for early detection of children at risk.

However, teachers referred to some behaviours which were not included in the questionnaire and which they thought were important. They had come across children who hurt themselves and children who day-dream and have fantasies, which are descriptions not included in the Rutter questionnaire. Results on the scales will be presented later on, in relation to the parents' scale.

Stage 3: Findings from parents' questionnaires

Collecting the parents' questionnaires was a more time consuming procedure than collecting the teachers'. Only 5 parents reported that they had no problems whatsoever with understanding and answering the questions. Six parents had brought the questionnaires with them asking for help and completed them at school with help from the researcher. They said that they

could not understand the instructions and how to use the ratings. The remaining (4) had returned them incomplete because they had not understood that all questions had to be marked even when the behaviour did not exist, i.e. mark the "does not exist" answer. Those difficulties have been taken into consideration and will be discussed under the methodology section of the first study.

4.6.7. Results from both questionnaires

According to the procedure followed, the 15 teachers selected one child each, who according to their own view was exhibiting EBDs and completed the RB2 for him/her. From the 15 children, 10 were boys and 5 were girls. Fourteen of the children were identified with scores above the Rutter cut-off (above 8), and one had a score of 8 (Table 8).

Table 8: Children's overall scores on the parents' (RA2) and teachers' (RB2) scales (n=15).

<u>Children identified by teachers as having EBDs</u>	<u>Teachers' scores (RB2)</u>	<u>Parents' scores (RA2)</u>
1	14	23
2	12	17
3	11	14
4	11	13
5	10	14
6	9	16
7	8	13
8	11	15
9	10	13
10	14	13
11	11	14
12	11	13
13	9	14
14	9	13
15	10	13

Rutter cut off for RB2=8, for RA2=13

In relation to teachers' responses, the most frequently occurring behaviours were restlessness, fighting, irritability, poor concentration, worrying. Five types of behaviour were not marked at all, truancy, stuttering, tears on arrival at school, stealing and soiling self.

The more frequently occurring behaviours among parents, were, eating difficulties, tantrums, complaining of headaches, fighting, poor concentration,

over-particular child. Seven behaviours were not marked at all, soils self, wets, cries on arrival at school, truants, stuttering, not liked by other children.

The ratings for both respondents were used in accordance with the cut-off points that have been established by the Rutter studies i.e. 9 points for the teachers and 13 for the parents. Fourteen teachers out of the 15 used have given children an overall score of 9 points or above. All parents have given children 13 points or more.

The correlation coefficient between teachers' and parents' responses was significant at $p < .01$ ($r = .61$). Correlation coefficients were also calculated for each behaviour separately, first in terms of the presence of difficulty and secondly in terms of the degree of difficulty. Table 9 below presents the results.

TABLE 9: Correlation coefficients of parents' and teachers' responses at the 5% level (n=15)

Behaviours	Percentage of difficulty	Degree of difficulty
Restless	0.38	0.42
Truants	n.c	n.c
Fidgety	0.46	0.15
Destroys	0.85	0.55
Fights	0.29	0.20
Not liked	0.33	0.20
Worried	0.46	0.68
Solitary	0.85	0.84
Irritable	0.60	0.52
Miserable	0.75	0.23
Twiches	0.32	0.32
Sucks thumb	1.00	0.93
Bites nails	1.00	0.78
Disobedient	0.19	0.49
Poor concentr.	0.72	0.70
Fearful	0.19	0.11
Fussy	0.39	0.49
Lies	0.85	0.72
Steals	n.c.	n.c.
Soils	n.c.	n.c
Complains of pains	0.42	0.55
Tears on arrival	n.c.	n.c.
Stuttering	n.c.	n.c.
Speech difficul.	0.28	0.27
Bullies	0.35	0.35

n.c. = not calculated

The most significant correlations were mainly for overt behaviours, e.g. nail biting, thumb sucking, destroying things, solitary play. Parents and teachers interestingly enough were found to agree on their ratings on the poor concentration item which is mainly school related. Lower coefficients, but nevertheless significant, were found for less overt behaviours such as, unhappy, worried, fidgety child. Correlation coefficients were higher when behaviours were analysed in terms of the presence of the problem rather than when they were analysed in terms of the degree of difficulty.

4.6.8. Discussion

According to the results, we can say that the aims of the pilot study have been fulfilled to a satisfactory level. The Rutter questionnaire has been found by all teachers to be understandable and a valuable assessment tool. Nearly all of the problems the teachers referred to when describing emotional and behavioural difficulties, were included in the TBQ. These findings validate the instrument because they show that it relates to the problems that the Greek teachers are dealing with. The findings show as well that the instrument is not culture biased, since Greek teachers seem to define emotional and behavioural difficulties in a very similar way to the questionnaire items.

The major problems reported by teachers were related to children's learning difficulties in terms of reading and writing and also to their behavioural characteristics. Most of the characteristics attributed to children related to aggressive and hyperactive behaviours and to a lesser extent to emotional problems. Teachers have provided a variety of descriptors differentiating emotional from behavioural difficulties. More overt behaviour characteristics were attributed to children with behavioural difficulties, of an antisocial and hyperactive type i.e. fighting, lying, disobedient, overactive etc. On the other hand, characteristics such as, shy, miserable, unhappy, fearful, isolated, insecure, were mentioned for children with emotional difficulties.

With the teachers, the procedure followed for the collection of data and the establishment of the initial rapport, has proved efficient. Problems,

however, arose with the procedure followed by the parents. Most of them had difficulties with comprehending the instructions, although great attention had been paid to translating them with precision and clarity. As mentioned before, only three parents had any previous experience with completing questionnaires. Most probably this must have been one reason for their difficulties. In addition, as was mentioned above, most of the parents had low educational levels and that could have influenced their ability to comprehend and complete the questionnaire successfully.

At the same time, parents have not been very reliable in returning the questionnaires on the agreed day and a second appointment had to be made. However, to a certain extent this was expected since parents had to spend more time coming to school. Maybe the whole procedure was an extra burden in terms of their time. Consequently, parents were found in need of help with completing the questionnaire. Perhaps the questionnaire completion should have taken the form of a structured interview where the researcher would help and guide parents in responding to the questions and in explaining any unclear points. That would have guaranteed greater reliability of the responses. Again it seems that parents should have been asked to give the minimum of their time and not be called too many times at school.

In relation to the third aim of the pilot i.e. to get an indication of the suitability of the Rutter cut-offs for application to the present study, we may say that it has been achieved to a fair extent. All parents and teachers identified the children with EBDs when the same cut-off scores as the Rutter

CBQ were used. The present results are in accordance with findings on cut-offs in the Papatheophilou et al. study (1989). The most appropriate cut-off points for Greece were studied through ROC analysis and it was found to be 9 points for the teachers and 13 for the parents. Presently ROC analysis could not be run since we do not have a criterion measure against which to compare parents' and teachers' scores. Thus, since the same cut-offs have been examined and used before in Greece, and parents and teachers in the present pilot identified children according to them, it is considered fairly safe to use them for the selection of the sample.

High correlations were found for the parents' and teachers' overall ratings as well as for most of the individual items. For most items correlations were higher when calculated in terms of the presence rather than in terms of the degree of the difficulty. In other words, teachers and parents agreed on the presence of certain problems but when they were asked about the degree of difficulty, they had different opinions. Nevertheless, in both cases - presence and degree of difficulty - correlations were significant. High correlations can be explained by the fact that the subjects in the pilot study, were not randomly selected from the school population. Teachers were asked to choose a child with EBDs for whom they had to complete the CBQ. Findings suggest that they have chosen children whose EBDs were very outstanding and independent of environmental factors.

Overall, we could say that the instrument has been found applicable to a Greek context and quite efficient in identifying children with EBDs in Greek

mainstream primary schools. Attention should be given to the procedure followed with parents. A structured interview technique should be used with them in order to avoid the problems faced during the pilot study.

4.7. STUDY ONE

Introduction

Considering the results from the pilot study, the main part of study one is a search for a specific group of children who could justifiably be described as demonstrating EBDs and who will be further studied in the social cognition study. The methodology and data analysis follows.

4.7.1. Subjects

Two inner city primary schools were selected. Schools were selected by the researcher on the basis of their geographical proximity to her work and place of residence. One of them was located in a middle (school 2) and the other in a working class area (school 18). Eleven ordinary class teachers were used all together, five from school 2 and six from school 18. All teachers asked, agreed to participate in the study.

4 teachers from class C (ages 8-9)

3 teachers from class D (ages 9-10)

4 teachers from class E (ages 10-11)

Teachers completed questionnaires for all children in their classes. The

total number of children was 266 (133 boys/133 girls), 134 from school 18 (68 boys/66 girls) and 132 from school 2 (65 boys/67 girls) and that was a complete sample of the ages 8-11 in both schools. Information was gathered on childrens' school attainment based on teachers' performance reports.

The parents of all children completed the parents' questionnaires. All respondents were mothers. Additional information was collected on parents' educational background and occupation.

4.7.2. Procedure

Ordinary class teachers were approached in schools during normal school hours. On the first meeting, the purpose of the study was explained to them and were informed about the completion of the questionnaires for all the children in their classes. Teachers were seen on a subsequent visit, given the questionnaires and asked to complete them with as precise information as possible. They agreed to return them completed in two weeks time. Respectively, parents were sent a letter inviting them to school. A short paragraph explained to them that research of psychological interest was to take place in their children's school and that their help was needed.

Parents during the pilot have encountered problems in completing the questionnaires on their own. Thus it was decided that the presence of the researcher during the completion was necessary. The idea was that parents

would be invited to school in groups of 10 so that there would be time and space for any questions or difficulties to be overcome. However, the respondent's rate was not the expected and parents had to be called again in order to finally get a 73% response rate from school 18, and 79% from school 2.

After a four month interval, the parents of the children who according to teachers and parents have been identified as showing some kind of EBDs, were invited again to schools and were asked to complete the questionnaire for a second time. The same procedure was followed for the completion of it. Since the number of identified children was much smaller than the original sample i.e. 38 children from school 2 and 57 from school 18, it was easier and quicker to collect the 95 questionnaires.

Teachers were asked again to complete questionnaires for the initially identified children. The questionnaires and the forms were collected after a week's time.

The 95 children from the EBD group were matched with a control in terms of age, gender, school class, grade, school attainment and parents' social class. Matching was done according to cut-off scores, i.e. control cases scored below the CBQ and TBQ cut-off point.

4.7.3. Data analysis

Outline

The analysis of data was divided into two parts. In part one data from the whole sample (n=266) were analysed and in part two only data from the identified EBD group (n=95) and the control was considered since this was the core sample for the social cognition study.

In part one, the distribution of scores and the prevalence rate of children with EBDs in the two schools is estimated in relation to the children's school, age and gender. An item analysis was carried out in order to identify the most prominent behaviours exhibited by the children in our sample. The identification of the most frequent difficulties enables us to examine what the pattern is and how it compares with other studies. It also allows for drawing a profile of the children's characteristics thus more accurately describing the sample for the social cognition study. The differences identified from the item analysis between boys and girls, different ages as well as the differences between schools, were statistically examined through three way ANOVA.

The factor structure of the CBQ according to parents' and teachers' ratings is examined looking for the identification of different subgroups (neurotic, antisocial, mixed). Correlations were run between parent-teacher scores which could add information on the situation specificity issue of the EBDs.

In part two, analysis is confined to the children with some indication of EBDs according to parents' and teachers' ratings (n=95) and their control group, since the research focuses on the social constructions and causal attributions of these children.

The reliability of teachers' and parents' ratings was measured with a four month interval. Analysis of variance accounted for the significant differences between time-1/time-2, gender and schools. Re-test correlation coefficients were calculated as well, for parents' and teachers' scores.

Part one (n=266)

4.7.3.1. Distribution of scores and prevalence rates

Data from the whole sample of 266 children were included.

The distribution of scores on both scales was examined (Table 10). Figure 1 shows the distribution on the PBQ (parental scale), in both schools. The highest obtained score for school 2, was 23. The Rutter cut-off point for parents is 13 and twenty three (23) children were above it (17.4% of the sample). A high percentage of children had 0 score (35.6% of the total 132) and the remaining 46.9% had scores ranging from 1 to 12.

Table 10: Distribution of parents' and teachers' overall scores on the CBQ.

	Parents			Teachers		
	0	1-12	13+	0	1-7	8+
Sch. 2 n=132	47	62	23	39	60	33
	35.6%	46.9%	17.4%	29.5%	45.4%	25%
Sch. 18 n=134	28	69	37	29	61	44
	20.9%	51.5%	27.6%	21.6%	45.5%	32.8%

In school 18 the highest score was 36 and thirty seven (37) children were above the Rutter cut-off (27.6%). A rate of 20.9% of the children had 0 scores and the remaining 51.5%, had scores from 1 to 12.

Figure 1: The distribution of scores on the parental scale (PBQ).

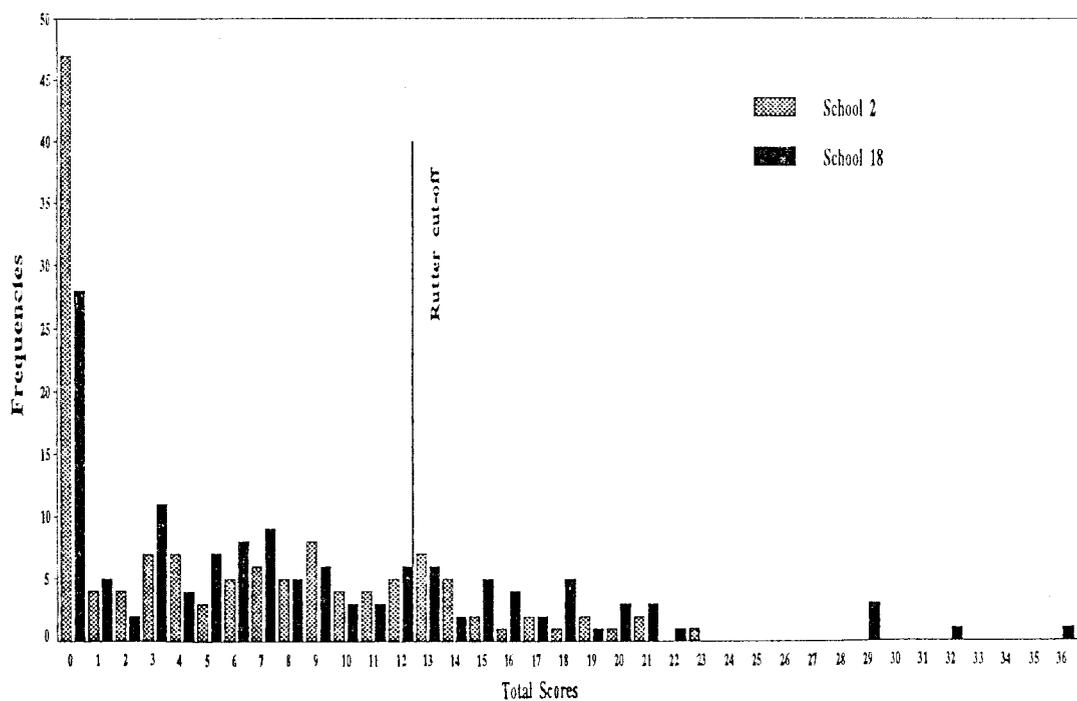
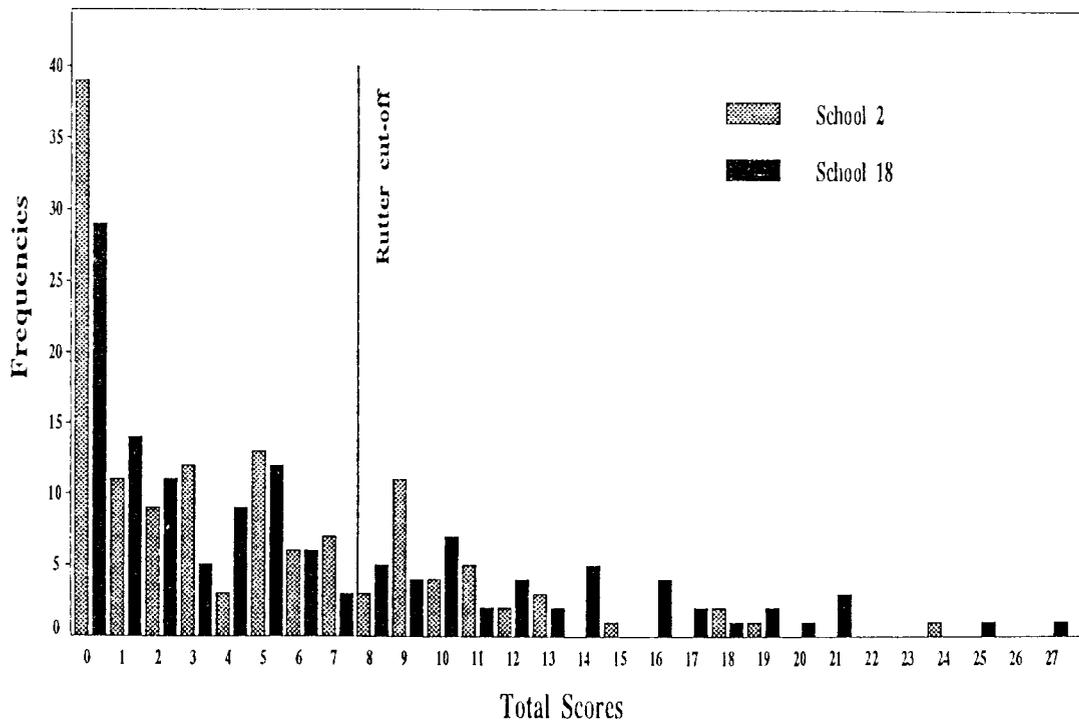


Figure 2 presents the distribution of scores according to the teachers' responses on the TBQ. In school 2 the highest obtained score was 24. The Rutter cut-off for teachers was 9 with 33 children having scores above it (25% of the total 132); 29.5% had 0 scores and 45.4% had scores from 1 to 7. In school 18 the highest score was 27 and 32.8% of the sample had scores above the Rutter cut-off, 21.6% had 0 scores and 45.5% had scores from 1 to 7. The mode score for both schools was 0.

Figure 2: The distribution of scores on the teachers' scale (TBQ).



Parents in both schools have identified less children than the teachers. Overall, in school 18, more children were identified than in school 2. Table 11 shows the prevalence rate for boys and girls with EBDs on the parental and the teachers' scale and the overlap on both scales. In school 2, from the 33 children (n= 132) identified by teachers as having EBDs, 22 were boys and 11 were girls. From the 23 children identified by parents (17.4%), 17 were boys and 6 were girls. From the 39 boys identified by parents and teachers, the overlap on both scales was 14 (10.6%), and from the 17 girls, the overlap was 5 (3.78%). In school 18, parents have identified 37 children of the 134 (27.6%), 22 boys and 15 girls, and teachers 44 children (32.8%), 25 boys and 19 girls. Only 24 children (15 boys and 9 girls) were identified by both scales i.e. 17.9%. More boys than girls were identified by parents and teachers (47 boys and 34 girls in school 18, 39 boys and 17 girls in school 2).

Table 11: Distribution of scores for boys and girls identified by teachers, parents and by both, above the Rutter cut-off.

	School 2			School 18		
	parents	teachers	both	parents	teachers	both
boys	7	10	15	3	8	14
	5.2%	7.5%	11.2%	2.3%	6.0%	10.6%
girls	6	10	9	1	6	5
	4.5%	7.5%	6.75	0.7%	4.5%	3.8%
total	13	20	24	4	14	19
	9.6%	15%	17.9%	3.0%	10.6%	14
overall prevalence	57 (42.5%)			37 (28%)		

4.7.3.2. Item Analysis of CBQ

Data from the whole sample of 266 children were analysed.

A. Parents' CBQ

Table 12 shows the distribution of responses for each item on the parental CBQ of the whole sample in each school. In both schools the least frequent items were tears at school (1.5%), truants (1.4%), and stuttering (3.0%). The most frequently occurring behaviour for both schools was eating difficulties (43.1% in school 2, 44.7% in school 18).

High percentages of frequency were also reported on the following items: disobedient (34.8% in school 2, 41% in school 18), temper tantrums (32.6% in school 2, 44% in school 18), irritable (33.3% in school 2, 36.2% in school 18), restless (24.9% in school 2, 42.5% in school 18), fussy (27.9% in school 2, 38.8% in school 18), fights (25.7% in school 2, 35.9% in school 18), worried (28.7% in school 2, 33.6% in school 18), headaches (25% in school 2, 32.8% in school 18).

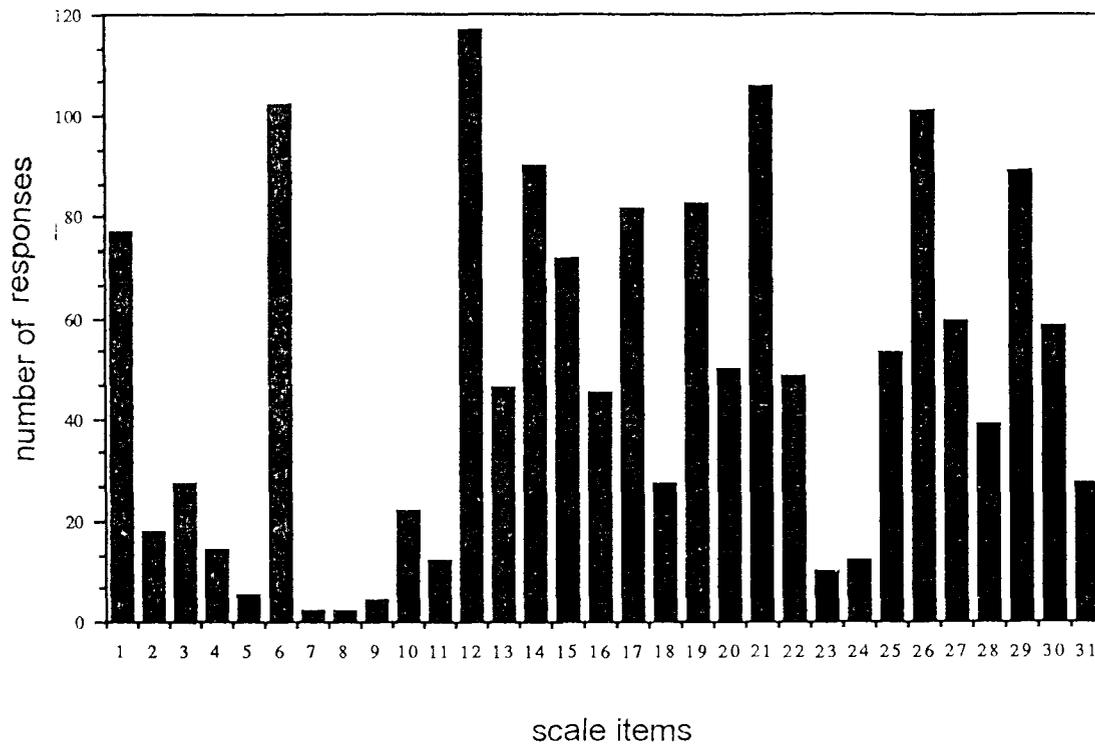
The most prominent behaviours are also shown in Figure 3 which is a graphic representation of how many times each behaviour was marked by parents. Figures 4 (school 18) and 5 (school 2) in Appendix A (p. 327) show the picture in each of the two schools.

Table 12: Percentages of parents' overall responses on each item of the parental CBQ, in both schools.

ITEMS	School 2 (n=132)		School 18 (n=134)	
	sometimes apply	certainly apply	sometimes apply	certainly apply
Headaches	24.0	20.8 (9)	27.6	5.2 (9)
Stomach-aches	6.0	0.0	4.5	3.0
Billiousness	8.3	0.0	10.4	1.5
Wets bed	3.0	2.3	2.2	3.0
Soils	1.5	1.5	0.0	0.7
Temper tantrum	15.9	16.7 (4)	24.6	9.4 (2)
Tears at school	0.0	0.0	0.0	1.5
Truants	0.0	0.0	0.7	0.7
Stuttering	0.0	0.0	3.0	0.0
Speech difficulties	6.8	0.0	9.7	0.0
Steals	3.8	0.0	5.2	0.0
Eating difficulties	38.6	4.5 (1)	35.0	9.7 (1)
Sleeping difficulties	11.3	0.7	18.6	3.7
Restless	15.9	9.0 (10)	21.6	20.9 (3)
Fidgety	24.2	3.0 (7)	20.1	6.7
Destroys	12.1	3.8	11.2	6.7
Fights	20.4	5.3 (8)	28.4	7.5 (7)
Not liked	6.1	1.5	9.7	3.0
Worried	24.2	4.5 (5)	17.9	15.7 (8)
Solitary	10.6	5.3	15.7	6.0
Irritable	25.0	8.3 (3)	29.8	6.4 (6)
Miserable	9.8	3.0	16.4	6.7
Twiches	2.3	0.7	2.2	2.2
Sucks thumb	2.3	1.5	1.5	3.7
Bites nails	9.8	9.8	11.9	8.2
Disobedient	31.0	3.8 (2)	32.0	9.0 (4)
Poor concentration	17.4	3.8	14.9	8.2
Fearful	12.9	1.5	11.9	3.0
Fussy	21.9	6.0 (6)	26.9	11.9 (5)
Lies	14.4	0.7	23.1	5.2
Bullies	7.6	0.0	9.0	3.7

Numbers in brackets represent the rank order of the behaviours

Figure 3: Bar chart representing the number of parental responses in both schools, on each scale item (n=266).

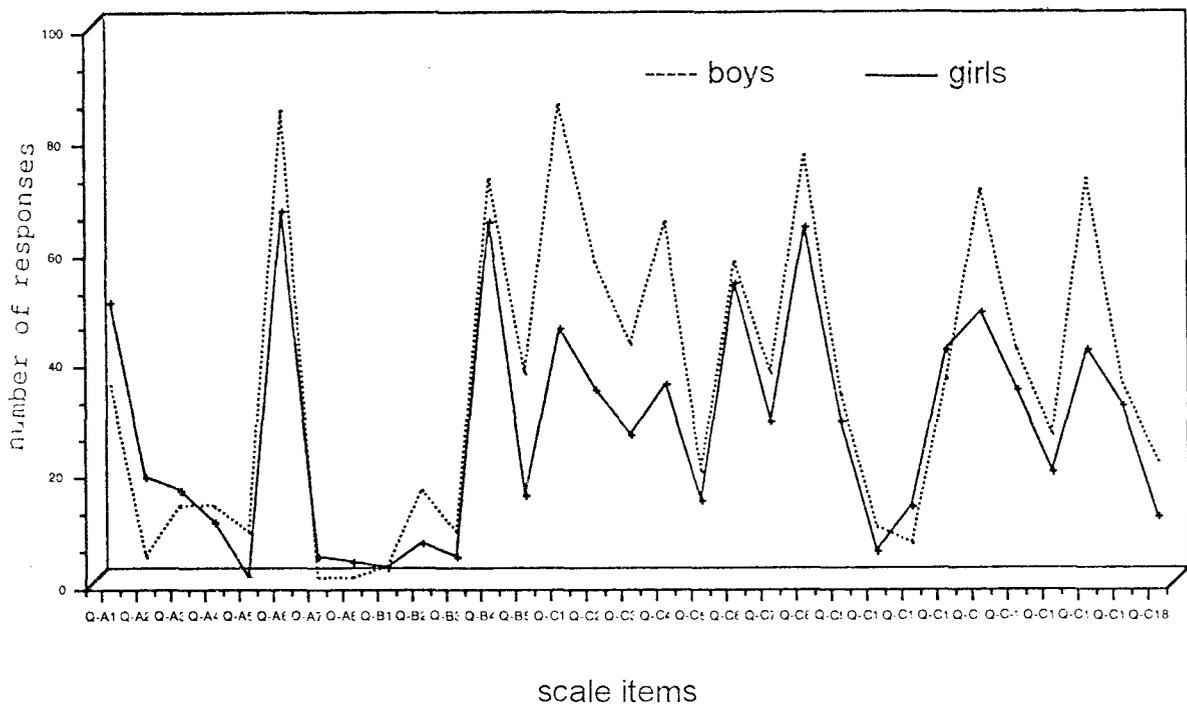


Parents in both schools seem to agree overall on which behaviours are less or more frequent in their children. However, the rank order of the behaviours is different. As table 12 shows, the percentages of the most frequent behaviours were higher in school 1 than in school 2, e.g. restless 24.9% in school 2, 42.5% in school 18 - fussy 28% in school 2, 39% in school 18 - tempers 33% in school 2, 44% in school 18.

Gender

Parents' data were examined for differences between boys and girls. Figure 6 gives a graphic representation of the actual number of responses on each scale item. Table 13 shows the percentages of boys and girls in both schools who show some indication of EBDs.

Figure 6: Line graph of the number of parental responses on each scale item, for boys and girls in both schools (n=266).



(scale items correspond to the 31 questions in the parental questionnaire.)

Most behaviours were more frequent for boys than for girls with the exception of stomach aches (item A2), billiousness (item A3), sucks thumb (item C11).

TABLE 13: Percentages of boys and girls in both schools who show some indication of EBDs on the parental questionnaires.

ITEMS	School 2		School 18		Chi square value
	boys n=65	girls n=67	boys n=68	girls n=66	
Headaches	15.9	33.3 (2)	31.2 (7)	34.3 (7)	1.82
Stomach aches	3.8	8.7	3.1	11.4	0.06
Billiousness	9.5	7.2	10.9	12.9	0.30
Wets bed	7.9	2.9	6.2	4.2	0.31
Soils	6.3	0.0	1.5	0.0	0.0
Temper tantrums	47.6 (4)	18.2	45.3 (3)	42.8 (3)	4.33*
Tears	0.0	0.0	0.0	2.8	0.0
Truants	0.0	0.0	0.0	2.8	0.0
Stuttering	0.0	0.0	3.1	2.8	0.0
Speech difficulties	14.3	0.0	10.9	8.6	5.50*
Steals	7.9	0.0	4.7	5.7	3.87*
Eating difficulties	50.8 (2)	35.2 (1)	45.3 (3)	44.3 (2)	0.71
Sleeping difficult.	22.2	2.9	31.2 (7)	14.3	2.35
Restless	41.3 (5)	10.1	46.9 (2)	38.6 (5)	6.08*
Fidgety	36.5 (8)	18.8 (5)	29.7 (5)	24.3 (13)	0.91
Destroys	30.2 (10)	2.9	20.3 (10)	15.7	7.19*
Fights	38.1 (7)	14.5 (9)	43.7 (7)	28.6 (9)	1.29
Not liked	11.1	4.3	12.5	12.9	1.34
Worried	39.7 (6)	18.8 (5)	29.7 (8)	37.1 (6)	4.59*
Solitary	14.3	17.4 (7)	29.7 (8)	14.3	2.54
Irritable	52.4 (1)	15.9 (8)	42.7 (5)	48.6 (1)	9.38*
Miserable	20.6	5.8	20.3 (10)	25.7 (11)	5.27*
Twiches	4.8	1.4	6.4	2.8	0.08
Sucks thumb	1.6	4.2	3.7	5.7	0.60
Bites nails	22.2	17.4 (7)	14.0	25.7 (12)	2.27
Disobediend	49.2 (3)	21.7 (4)	42.3 (3)	40.0 (4)	3.43*
Poor concentration	27.0 (11)	15.9 (8)	21.9 (9)	24.3 (13)	1.43
Fearful	22.2	7.2	15.6	14.3	2.31
Fussy	32.7 (9)	23.2 (3)	48.4 (1)	30.0 (8)	0.07
Lies	17.5	13.0 (10)	29.7 (8)	27.1 (10)	0.13
Bullies	11.1	4.3	17.2	8.6	0.08

(numbers in brackets represent rank order of frequency) * significant at the 5% level

In school 2, three items were not marked at all neither for boys nor for girls, i.e. tears on arrival, stuttering, truants. In nearly all items boys had higher percentage rates than girls with the exception of the incidence of headaches; 17% more girls than boys were identified with the specific symptom.

The most prominent behaviours for boys, ranging from 52.4% to 30.2% were: irritable, eating difficulties, disobedient, tempers, restless, worried, fights, fidgety, fussy, and destroys. For girls, less behaviour symptoms were identified at high percentage levels which ranged from 36.2% to 18.8% and these were: eating difficulties, headaches, fussy, disobedient, fidgety and worried (Figure 7 , Append. A, p.328).

In school 18 (Figure 8, Append. A, p.328), in most items boys' ratings exceeded girls' and for certain items differences were distinct, i.e. one in three boys was found to have sleeping difficulties whereas only one in seven girls. Boys were found to fight 15% more than girls and were more fussy (18.4% more than girls). Girls' ratings exceeded boys' in some items but only slightly, e.g. headaches 3% more, stomach aches 8.3% more.

Comparing the two schools, the most obvious difference is that girls seem to exhibit more problematic behaviour in school 18 than in school 2. For boys the situation is about the same in both schools and only a few items differ, not in terms of occurrence but in terms of percentage rates, i.e. the same cluster of behaviours was identified in both schools but the incidence was higher in school 18.

Chi square values were calculated for the differences in incidence rates between schools and gender. As it is shown in table 13, the 9 items found to differ at the 5% level are : temper tantrums (chi square 4.3), speech difficulties (chi square 5.5), steals (chi square 3.9), restless 9 (chi square 6.1), destroys (chi square 7.2), worried (chi square 4.6), irritable (chi square 9.4), miserable (chi square 5.3), disobedient (chi square 3.4). Chi square results indicate that the girls in school 18 have difficulties at a higher rate than girls in school 2, in the above mentioned areas.

B. Teachers' CBQ

As we can see in Figure 9 and table 14 below, according to teachers' responses in both schools, the behaviours which were more often marked were: poor concentration, restless, fights, irritable, fidgety, disobedient, worried, fearful, fussy, miserable.

In school 18 the most frequently occurring behaviours in children in 18, were: poor concentration (46.6%), restless (45.8%), fighting (38.3%), irritable (34.6%), disobedient (32.3%), worried (30.7%), fidgety (28.6%). The least frequent items were, truants, not liked, twiches, sucks thumb, bites nails, absent, soils, tears at school, stuttering. Stealing was not reported at all.

In school 2 the most frequently occurring behaviours were: fighting (37%), restless (34.8%), poor concentration (33.2%), fidgety (25%), irritable

(25%), worried (24.2%). The least frequent behaviours were: truants, destroys, twitches, sucks thumb, bites nails, absent, lies, soils, tears at school, stuttering. The items of stealing and speech difficulties were not reported at all.

As with parental responses, teachers in both school tend to agree on the least and most frequently occurring behaviours. However, the percentages of the behaviour occurrence are higher in school 18 than in school 2, e.g. disobedience (32.3%) in school 18, (18.9%) in school 2 - poor concentration (46.6%) in school 18, (33.2%) in school 2 - pains (20.2%) in school 18, (8.3%) in school 2 - irritable (34.6%) in school 18, (25%) in school 2.

Figure 9: Bar chart of the number of teachers' responses on each scale item in both schools and in each school separately.

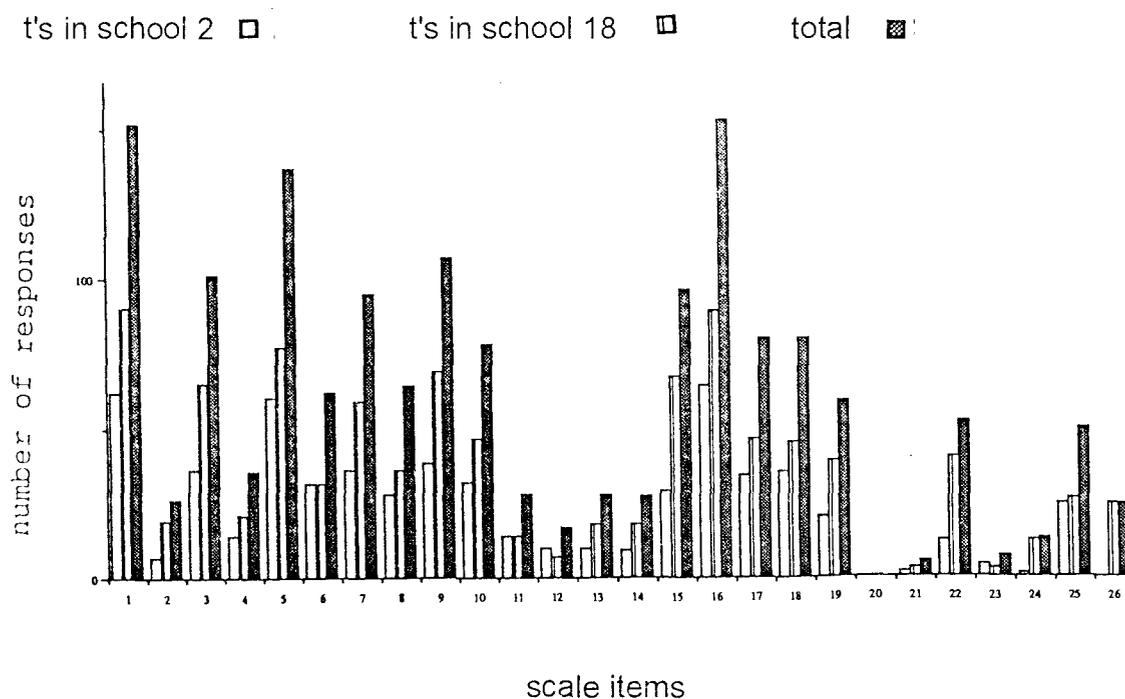


Table 14 : Percentages of teachers' overall responses on each item of the teachers' CBQ, in both schools.

ITEMS	School 1 n=134		School 2 n=132	
	Sometimes apply	Certainly apply	Sometimes apply	Certainly apply
Restless	29.3	16.5 (2)	22.7	12.1 (2)
Truants	7.5	3.7	0.7	2.3
Fidgety	20.3	8.3 (7)	22.7	2.3 (4)
Destroys	10.5	1.5	6.0	2.3
Fights	27.8	10.5 (3)	25.7	11.3 (1)
Not liked	9.0	3.7	12.9	5.3
Worried	25.5	5.2 (6)	21.2	3.0 (6)
Solitary	16.5	1.5	15.1	3.0
Irritable	21.8	12.8 (4)	21.2	3.8 (5)
Miserable	19.5	2.2 (10)	22.7	0.7 (8)
Twiches	4.5	0.7	9.0	0.7
Sucks thumb	3.7	0.7	7.6	0.0
Bites nail	7.5	2.2	7.6	0.0
Absent	8.3	2.2	3.8	1.5
Disobedient	21.8	10.5 (5)	15.9	3.0 (10)
Poor concen.	34.6	12.0 (1)	18.1	15.1 (3)
Fearful	22.5	1.5 (8)	21.2	2.3 (7)
Fussy	13.5	9.8 (9)	17.4	4.5 (9)
Lies	18.8	2.2	9.0	3.0
Steals	0.0	0.0	0.0	0.0
Soils	2.2	0.0	1.5	0.0
Pains	17.2	3.0	7.6	0.7
Tears	1.5	0.7	0.0	1.5
Stutter	6.8	0.0	0.7	0.0
Speech	9.8	1.5	0.0	0.0
Bullies	12.0	0.0	15.1	1.5

(numbers in brackets represent the rank order of the behaviours)

Gender

Data were examined for gender differences in the teachers' questionnaires (Table 15). As we can see in Figure 10, the greatest differences between boys and girls are for the following items: restless (item 1), fights (item 5), disobedient (item 15). On ten items (not liked, solitary, miserable, sucks thumb, bites nails, poor concentration, fearful, lies, pains, tears), behaviours were more frequent for girls but the differences were not great. On the remaining 13 items behaviours were more frequent for boys and the differences were great. Thus, it seems to be that emotional items are marked more often for girls and behavioural items more often for boys.

Figure 10: Line graph of the number of teachers' responses for boys and girls on each scale item in both schools (n=266).

----- boys ——— girls

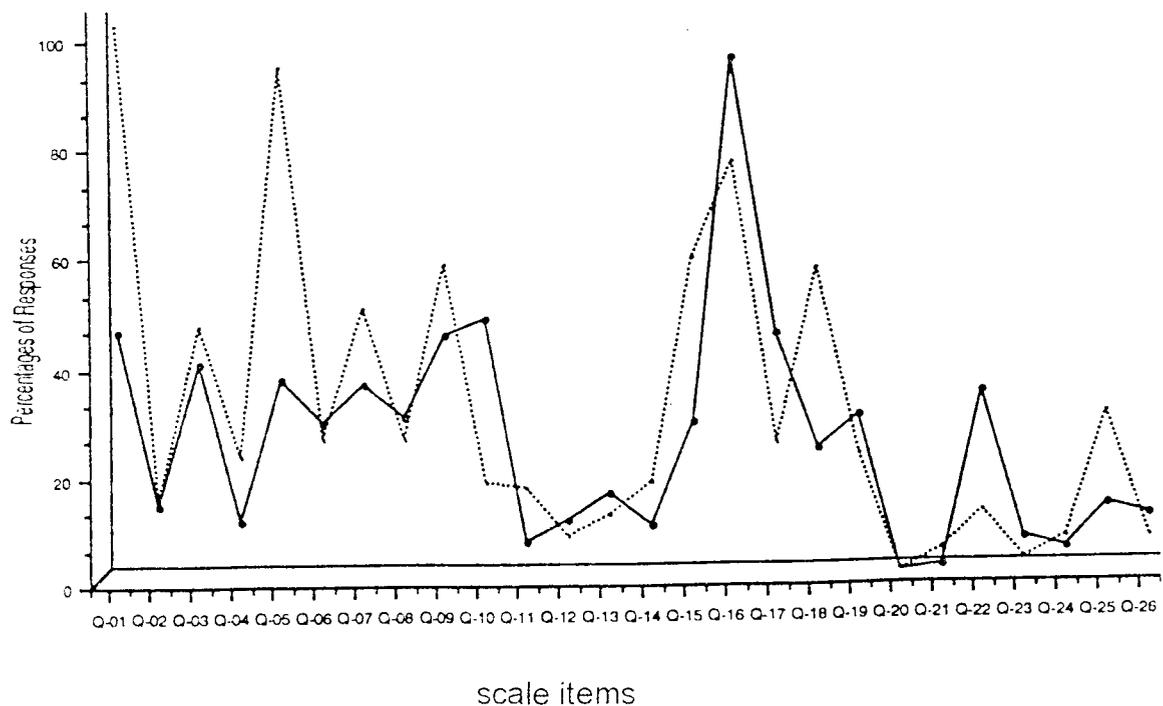


Table 15 : Percentages of boys and girls in both schools who show some indication of EBDs on teachers' questionnaires

ITEMS	School 18		School 2	
	Boys n=65	Girls n=69	Boys n=63	Girls n=69
Restless	60.3 (1)	32.8 (2)	57.1 (2)	14.5
Truants	7.9	14.3	6.3	0.0
Fidgety	30.2 (7)	27.1 (6)	30.2 (5)	20.3 (3)
Destroys	15.9	8.6	12.7	4.3
Fights	52.4 (3)	25.7 (7)	59.6 (1)	15.9
Not liked	11.1	14.3	17.4	18.8
Worried	36.5 (5)	25.7 (7)	30.1 (5)	18.8
Solitary	20.6	15.7	17.4	18.8
Irritable	36.5 (5)	32.8 (2)	33.3 (4)	17.4
Miserable	12.7	30.0 (4)	14.3	31.9 (1)
Twiches	9.5	1.4	12.7	7.2
Sucks thumb	3.2	5.7	6.3	8.7
Bites nails	9.2	10.0	4.7	10.1
Absent	15.9	5.7	4.7	5.8
Disobedient	42.9 (4)	32.8 (2)	33.3 (4)	5.8
Poor con.	53.9 (2)	40.0 (1)	39.7 (3)	27.5 (2)
Fearful	15.9	31.4 (3)	19.0	27.5 (2)
Fussy	34.9 (6)	12.8	33.3 (4)	11.6
Lies	19.0	22.8	9.5	14.5
Steals	0.0	0.0	0.0	0.0
Soils	3.2	1.4	3.2	0.0
Pains	11.1	28.6 (5)	6.3	10.1
Tears	3.2	1.4	0.0	2.9
Stuttering	7.9	5.7	1.6	0.0
Speech dif.	14.3	8.6	0.0	0.0
Bullies	9.5	14.3	27.0 (6)	7.2

numbers in brackets represent rank order of frequency

In school 2 (Figure 11, Append. A, p.329), very low percentage rates were reported for boys and girls on the items: truants, absent, steals, soils, tears, stuttering and speech difficulties. Boys' percentages were higher than girls on most items. The most distinct differences were on the following items: restless (42.6% more boys), fights (43.7% more boys), disobedient (27.5% more boys), fussy (21.7% more boys). Girls had higher rates on a few items but differences were not great. The largest difference was for being miserable, with 17.6% more girls than boys. Boys' behaviour profile according to the incidence rate was (from 59.6% to 27%): fighting, restless, poor concentration, disobedient, fussy, irritable, fidgety, worried, bullying. Girls' profile included the following items (from 31.9% to 20.3%): miserable, poor concentration, fearful, fidgety. On the other items percentages were low.

According to teachers' responses in school 18 (Figure 12, Append. A, p.329), boys' percentage rates tend to exceed girls' on most of the items. The most distinct differences were on the following items: restless (27.5% more boys), fighting (26.7% more boys), fussy (22% more boys) and poor concentration (14% more boys). Girls on the other hand, were reported to be miserable (17.3% more girls), fearful (15.5% more girls), and complaining about pains (17.5% more girls). Low percentage rates for both boys and girls were reported on the items: twiches, soils, steals, sucks thumb, tears on arrival and stuttering. The most frequently occurring behaviours for boys ranging from 60.3% to 20.6% were: restless, poor concentration, fights, disobedient, worried, irritable, fussy, solitary. The most frequently occurring behaviours in girls ranging from 40% to 22.8% were: poor concentration, restless, irritable, disobedient, fearful, miserable, complaining of pains, fidgety,

fights, worried, lies.

Both schools have identified approximately the same behaviours as more or less frequent for boys and girls. However, girls in school 18 were reported with higher incidence rates than in school 2.

Chi square values were calculated for gender differences in both schools (Table 15). Only two items were found to differ significantly at the 5% level : truants (chi square 5.4), disobedient (chi square 3.4). According to teachers' ratings, girls in school 18 are more disobedient and truant more often than girls in school 2.

Age

Teachers' responses were also analysed in terms of children's age range (Table 16, Append. A, p.322). In both schools children seem to share certain behavioural characteristics in all three ages groups, which however, vary in terms of frequency. The most frequent behaviours are: restless, poor concentration and fighting. The least frequent behaviours are: truants, steals, soils, tears on arrival and stuttering. Teachers' reports in the two schools do not seem to agree on which of the ages presents more problems. According to results from school 18, grade D children (ages 9-10) have problems more often than the other two age groups whereas in school 2 this is the case for grade C children (ages 8-9).

4.7.3.3. Statistical test of difference between schools, gender and age for the total scores.

Data from the whole sample of 266 children were analysed.

The relationship between the school, gender and age variable was examined through analysis of variance (ANOVA) for both parental and teachers' responses. Tables 17 & 18 in Append. A (p.323-324), show the overall mean scores for the three age ranges, for the two sexes and for the two schools, for teachers' and parental responses respectively.

Three way analysis of variance was performed on the total EBD scores for teachers' and parents' ratings separately, with school, age and sex as factors. Table 19 presents the F values of the teachers' and parents' scores. Differences between childrens' sex were found to be significant at the 1% level ($F = 10.39$, $df = 1$, $p < 0.01$) according to teachers (boys $\bar{x} = 6.4$, girls $\bar{x} = 4.2$). School differences were also significant at the 5% level ($F = 4.72$, $df = 1$, $p < 0.05$), school 18 $\bar{x} = 6.0$, school 2 $\bar{x} = 4.5$. However, the major difference was found in the interaction between the age and school variables which was also significant at the 1% level ($F = 6.15$, $df = 2$, $p < 0.01$). This significant interaction represents a different pattern of teachers' scores in the two schools. In school 2, the 9-10yrs group had the lowest scores and in school 18 the highest. The 8-9yrs group had the highest scores in school 2, and the lowest in school 18. For parents' scores the only significant differences were between schools at the 5% level ($F = 5.19$, $df = 1$, $p < 0.05$), school 2 $\bar{x} = 5.8$, school 18 $\bar{x} = 8.4$.

Table 19 : F values of the factors analysed (age, sex, school).

Factors	Teachers' F value	Parents' F value
Age (A)	2.02 NS	0.29 NS
Sex (B)	10.39 **	3.57 NS
School (C)	4.72 *	5.19 *
Interaction A+B	0.89 NS	1.04 NS
Interaction A+C	6.15 **	0.12 NS
Interaction B+C	0.04 NS	0.98 NS
Interaction ABC	0.00 NS	0.16 NS

NS = not significant * = $p < 0.05$ ** = $p < 0.01$

4.7.3.4. Factor Analysis

A factor analysis was performed in order to identify different subgroups within the total sample of the 266 children. Principal component analysis with varimax rotations were performed on the data obtained from the use of the CBQ by teachers and parents in Greece.

Teachers' CBQ

Seven factors with eigen values loading at or above 1.00 emerged which accounted for 62.4% of the total variance. The first factor accounted for 24.6% of the overall variance (eigen value 5.89) with eight items loaded at or above 0.35, restless, fights, fidgety, destroys, irritable, disobedient, fussy,

bullies (table 20). Four of the items, i.e. fights, destroys, disobedient, bullies, belong to the Rutter antisocial subscale.

The second factor (10.7% of the overall variance, eigen value = 2.55), included six items i.e. truants, destroys, not liked, absent, poor concentration, lies. Two items belong to the Rutter antisocial subscale (destroys, lies). The third factor (variance 6.7% , eigen value = 1.61) included seven items namely, fidgety, worried, solitary, miserable, poor concentration, fearful, complains of pains. Three of the items belong to the Rutter neurotic subscale (worried, miserable, fearful).

The fourth factor (variance 5.8%, eigen value = 1.38) included three items: twitches, bites nails, bullies. One item is included in the antisocial Rutter subscale (bullies). The remaining three factors are very small and include only two items each. .

Table 20: Factors, factor loadings, eigen values and percent of variance, in the teachers' CBQ.

	eigen value	F 1	F 2	F 3	F 4	F 5	F 6	F 7
		5.89	2.55	1.61	1.38	1.33	1.09	1.07
		24.6%	10.7%	6.7%	5.8%	5.6%	4.5%	4.5%
ITEMS								
restless		.79						
truants			.64					
fidgety		.43		.47				
destroys		.37	.57					
fight		.80						
not liked			.47					
worried				.71				
solitary				.47			.51	
irritable		.81						
miserable				.74				
twiches					.68			
sucks thumb								.84
bites nail					.48			.45
absent			.63			.41		
disobedient		.74						
concentration			.52	.54				
fearful				.73				
fussy		.84						
lies			.72					
steals								
soils								
pains				.41				
tears						.81		
stutter								
speech dif.							.75	
bullies		.42			.62			

(Rotated loadings < 0.35 omitted)

Parents' CBQ

One large and six small factors emerged from the principal component analysis of the parents' data (Varimax rotations failed to converge in 24 iterations), which accounted for 52.6% of the total variance (eigen values at or above 1.00, table 21).

In the first factor (variance 22.5%, eigen value =6.97) the items not included were the following: stomach aches, wets, soils, tears, truants, stammer, sucks thumb, speech diff., steals, solitary, bites nails. The remaining 21 were included. Five items were included in the second factor (variance 6%, eigen value = 1.85), stomach aches, biliousness, tears, truants, bullies. Two items are from the Rutter neurotic subscale (stomach aches, tears) and one from the antisocial (bullies). Only three items were included in the third factor (variance 5.7%, eigen value = 1.75), solitary, sucks thumb, fearful. The item fearful is from the Rutter neurotic subscale. Four items were included in factor four (variance 5.1%, eigen value = 1.58), stammer, speech difficulties, twitches, bites nails. Only two items were included in factor five, steals, not liked (variance 4.7%, eigen value = 1.46). In factor six , three items were included: soils, stammer, twitches (variance 4.4%, eigen value = 1.37).

Table 21: Factors, factor loadings, eigen values and percent of variance, of the parents' CBQ.

		F 1	F 2	F 3	F 4	F 5	F 6	F 7
	variance	22.5%	6.0%	5.7%	5.1%	4.7%	4.4%	4.2%
	eigen value	6.97	1.85	1.75	1.58	1.46	1.37	1.28
ITEMS								
headaches		.45						
stomach aches			.53					
billiousness		.38	.35					
wets								.65
soils							.51	.41
tempers		.57						
tears			.62					
truants			.54					
stammer					.55		.43	
speech					.48			
steals						.37		
eating difficulties		.48						
sleeping dif.		.44						
restless		.64						
fidgety		.71						
destroys		.62						
fight		.66						
not liked		.44				.43		.39
worried		.56						
solitary				.35				
irritable		.66						
miserable		.51						
twitches		.38			.38		.42	
sucks thumb				.62				
bites nails					.41			
disobedient		.68						
concentration		.63						
fearful		.37		.58				
fussy		.71						
lies		.56						
bullies		.51	.36					

(Rotated loadings < 0.35 omitted)

4.7.3.5. Correlations between parent and teacher scores

Data from the whole sample of 266 children were analysed.

Correlation coefficients were calculated for the overall scores in both scales as well as for the school, gender and age variables (Table 22).

Table 22 : Correlation coefficients for the overall scores in both parental and teachers' scales, for each school separately, and for boys and girls in the three age groups.

overall N = 266 r = .40**
 boys N = 128 r = .44**
 girls N = 138 r = .27**
 8-9yrs N = 103 r = .11
 9-10yrs N = 72 r = .49**
 10-11yrs N = 91 r = .40**

School 2 n=132 r=0.44**			School 18 n=134 r=0.36**		
boys	n=63 r=0.49	girls n=69 r=0.24	boys n=65 r=0.44	girls n=69 r=0.27	
8-9yrs	n=28 r=0.57**	n=30 r=0.35*	n=26 r=0.35	n=19 r=0.44*	
9-10yrs	n=16 r=0.56*	n=16 r=0.46*	n=11 r=0.42	n=29 r=0.35*	
10-11yrs	n=19 r=0.34	n=23 r=0.15	n=28 r=0.50**	n=21 r=0.46*	

** values significant at the p <0.05

* values significant at the p <0.01

The overall correlation of scores between parental and teachers' scales (n = 266), was found to be significant at the 0.01 level (r = .40). The correlation

coefficient for the 128 boys included in the study, was significant as well ($r = .44$ $p < 0.01$). For the 138 girls, the correlation of scores between both scales was lower than for the boys', ($r = .27$) although statistically significant. However, z scores did not reveal a significant difference between the two coefficients.

For the 103 children of the 8-9yrs group, the correlation of scores was found not significant ($r = .11$). Correlations were significant for the 9-10yrs ($n = 72$) and 10-11yrs group ($n = 91$) with coefficients $r = .49$ and $r = .40$ respectively. The calculation of z scores revealed significant differences between the 8-9yrs and 9-10yrs coefficients ($z = 3.49$ for $p < 0.05$), as well as between the 8-9yrs and 10-11yrs coefficients ($z = 2.23$).

Correlation coefficients were calculated for parental and teachers' scores in each school separately. For both schools (school 2 $n = 132$, school 18 $n = 134$), correlations were significant. Although there was a difference between the two coefficients ($r = .44$ in school 2, $r = .37$ in school 18), this difference was not significant.

Correlation coefficients were calculated for boys and girls only, in each school separately. Coefficients were significant for boys at the .01 level in both schools ($r = .49$ in school 2, $r = .44$ in school 18). Coefficients were lower for girls in both schools and significant only at the .05 level ($r = .24$ in school 2, $r = .28$ in school 18). The differences between boys' and girls' coefficients in each school were not significant and neither were the differences between boys and girls across schools.

Correlation coefficients were calculated for the three age groups for

boys and girls separately in the two schools. In school 2, in all three age groups, boys had higher coefficients than girls. The correlation was significant for the 8-9yrs group ($r = .57$ $p < 0.01$), as well as for the 9-10yrs but at the .05 level ($r = .56$). Parental and teachers' scores correlated significantly only for the girls' 8-9yrs group at the .05 level ($r = .35$). No significant differences were revealed when z scores were calculated for boys' and girls' coefficients. In school 18, boys again had higher coefficients than girls however, r was significant only for the 10-11yrs group ($r = .50$). Correlation coefficients were significant ($p < 0.05$) for girls in all three ages. Differences between boys' and girls' coefficients were not found significant.

Part two (n=95)

4.7.3.6. Test-retest reliability of ratings

From the 266 children included in the study, 95 were identified in both schools (57 in school 18 and 38 in school 2), by either teachers only, parents only or by both. For these 95 children parents and teachers completed the CBQ again. According to the second time responses about the 95 children, 39 were identified twice by teachers and parents, 4 identified twice by teachers once by parents, 3 twice by parents once by teachers, 30 twice by teachers only, 15 twice by parents only, and 4 once by teachers only.

Data from the EBD group and their control were analysed.

Mean scores and standard deviations were calculated for the first and second time ratings (tables 23, 24; Append. A, p.325-326), and statistical tests were performed to test the significance of the main effects (ANOVA) as well as the interactions between the school, sex and age factors. Correlation coefficients of the scores in both scales were also calculated and differences were tested between coefficients.

There were no great differences between mean scores and standard deviations of teachers' scores from the first to the second time. Mean scores are slightly lower the second time and nearly all are around 9 points (the lowest 8.5 for 8-9yrs, the highest 10.5 points for 9-10yrs). Differences between standard deviations are not very different either. Scores are less widely spread the second time (Standard deviations ranging from 2.3 to 4.6 the second time and from 2.9 to 6.9 the first).

For parents' scores, very small differences exist between first and second time mean scores. The major difference is between first and second time ratings for boys in school 2 ($\bar{x} = 12.1$ time 1 ; $\bar{x} = 9.8$ time 2). The first time mean scores range from 9.8 to 13.6 and the second from 10.8 to 13.7. The standard deviations are relatively high both times, with no great differences in the spread out between time 1 and time 2. The major differences were identified for girls ($\bar{x}_1 = 8.4 - \bar{x}_2 = 6.7$), 9-10yrs ($\bar{x}_1 = 7.9 - \bar{x}_2 = 4.2$), 10-11yrs ($\bar{x}_1 = 10.3 - \bar{x}_2 = 8.7$), school 18 ($\bar{x}_1 = 9.0 - \bar{x}_2 = 6.8$) and for boys and girls in school 18 accordingly.

Analysis of variance did not reveal any significant differences or interactions between the factors analysed (time 1-time 2, sex, school), neither

for parents' nor for teachers' scores (Table 25 below). The highest F value for the teachers' scores was between time 1 and time 2 ($F = 3.23$) which was not significant. The highest F value for parents' scores was between schools ($F = 2.77$) and it was not significant.

Table 25: F values of the factors analysed (time 1- time 2, sex, school).

Factors	Teachers' F value	Parents' F value
Time (A)	3.23	0.00
Sex (B)	0.52	1.27
School (C)	1.70	2.77
Interaction AXB	0.02	0.05
Interaction AXC	0.27	0.03
Interaction BXC	0.09	0.01
Interaction ABC	1.05	0.17

(none of the F values is significant)

Retest correlation coefficients were calculated (four month interval), and highly significant correlations were found for teachers' and parents' scores (Table 26). The overall correlation coefficient for teachers ($n = 95$), was $r = .67$ and for parents $r = .85$.

Table 26 : Correlations between teachers' (time 1- time 2) and parents' scores (time 1- time 2) for the EBD group (by school, sex and age).

	Teachers n=95 r= 0.67	Parents n=95 r= 0.85
overall boys n=57	r= 0.74	r= 0.69
overall girls n=38	r= 0.64	r= 0.86
age 8-9 n=38	r= 0.76	r= 0.81
age 9-10 n=27	r= 0.57	r= 0.88
age 10-11 n=30	r= 0.79	r= 0.90
school 2 n=38	r= 0.81	r= 0.85
school 18 n=57	r= 0.62	r= 0.86
sch. 2 boys n=25	r= 0.83	r= 0.81
sch. 2 girls n=13	r= 0.79	r= 0.91
sch. 18 boys n=32	r= 0.63	r= 0.86
sch. 18 girls n=25	r= 0.64	r= 0.88

(all values are significant at the $p < .01$)

According to teachers' scores, in terms of age, the correlation coefficient was higher for the 10-11yrs group ($r = .79$) and lower for the 9-10yrs ($r = .57$). In terms of schools, it was much higher in school 2 ($r = .81$) than in school 18 ($r = .62$). In school 2, scores for boys correlated at a higher level ($r = .83$) than for girls ($r = .79$) whereas in school 18 there were no differences between them. Those differences were not found to be significant when z scores were calculated. The highest correlation coefficient was for boys in school 2 ($r = .83$) and the lowest for the ages 9-10 ($r = .57$).

Parents' scores between the first and second time responses were found to correlate at higher levels than teachers' scores. The highest coefficient was .91 for the girls in school 2, and the lowest .69 for the boys

overall. Correlation coefficients for the two schools were almost the same (.85, .86) and coefficients between ages did not differ either. However, correlation coefficients did differ for boys and girls, with boys scores correlating at the $r = .69$ level and girls at the $r = .86$. The difference was found to be significant when z score was calculated ($z = 2.06$, $p < 0.05$). All coefficients were significant at the $p < 0.01$ level.

The differences between the coefficients were also calculated and z scores were significant for a) the differences between parents' and teachers' overall correlation coefficient ($z = 3.02$, $p < 0.05$), b) for the correlations between parents' and teachers' scores in school 18 ($z = 2.95$, $p < 0.05$), c) between the correlation coefficients of the ages of 9-10 ($z = 2.52$, $p < 0.05$).

4.7.3.7. Analysis of data on school attainment

Data from the EBD and control group were analysed.

According to the Greek grading system, children are given grades within the range of 5-10. Five or below is given by the teachers only in extreme cases when pupils are completely indifferent or have severe learning difficulties, 6 and 7 is below average, 8 is average, 9 is above average, 10 is very good and excellent. Grades are given three times in a school year at the end of each term. Ten subjects are included in the curriculum: language, maths, religion, history, geography, physics, political education, art, music, P.E.

The grades of the 95 children in the EBD group and of the 95 in the control group were taken from teachers' records. They correspond to all ten subjects and represent pupils' achievement during the second term of the school year.

The statistical analysis included t-tests (for independent samples). Table 27 below gives the mean scores of both groups for each subject and the t values.

Table 27: Mean scores of the EBD and control groups for each subject and t values.

Subjects	EBD x	Control x	t	df
Religion	8.66	9.22	3.22*	152
Language	8.08	9.10	5.78*	152
Maths	8.46	9.06	3.53*	152
History	8.64	9.28	3.76*	152
Physics	8.70	9.01	1.86	152
Political Educ.	8.83	9.00	1.02	152
Geography	9.85	9.26	2.37	152
Music	9.86	10.00	1.03	152
P.E.	9.83	9.76	0.82	152
Art	9.48	9.76	2.80	152

* significant at the .001

Although there are no considerable differences between the mean scores of the actual grades, the children in the EBD groups tend to have slightly lower grades than the children in the control groups. The differences are significant for the subjects of religion, language, maths and history, suggesting that the children in the EBD groups are achieving slightly lower in

those subjects, than the children in the control groups.

Overall, according to the teachers' grades, children from the EBD group do not seem to be low achievers since their mean scores in all subjects are above 8, which is considered an 'average to good performance'. This finding suggests that they do not have severe difficulties in learning, in terms of the Greek assessment framework.

4.7.3.8. Analysis of the data on parents' social class

Data on parents' social class were collected relating to both parents' education and occupation for both the EBD and control groups. There were four parameters for the operational definition of the social class variable, i.e. father's education, mother's education, father's occupation, mother's occupation. Data on parents' education were gathered under five categories and occupation under seven, which were adopted from the Greek National Population Census results (1981). In the Census results, there are nine occupational categories in total, but two of them, i.e. farmers, loggers and related workers and the "occupation not declared" category, did not apply in the present study, thus, they were not included. The remaining seven are:

- 1) Professional, technical and related workers
- 2) Administrative, executive and managerial workers
- 3) Clerical and related workers

- 4) Tradesmen and sales workers
- 5) Service workers
- 6) Craftsmen and labourers (not in agriculture) and operators of means of transport.
- 7) Workers not classifiable by occupation

The educational categories are six :

- 1) With a higher education degree, 2) With a certificate of an intermediate college, 3) Graduated high school (six years), 4) Graduated elementary school (six years),
- 5) Have not finished elementary school.

Raw data from both schools and for both the EBD and control groups is presented in Figures 13, 14, 15, 16, in Appendix A (p.330-333).

According to raw data, there seems to be a social class difference between the EBD and control groups. Most parents of the EBD group belong to the last two educational and last three occupational categories, whereas the control group parents are more evenly spread out and many of them belong to the top educational and occupational categories. Differences between the two groups are more distinct for parents' educational level, especially for fathers'. It also seems that differences between parents on the four parameters are more obvious in school 18 than in school 2.

A chi-square analysis revealed significant differences between the parents of the EBD and control group. As Table 28 shows, chi square values for all social class parameters (for the total number of parents n=190) are significant at the 5% level. The most significant difference was identified

between fathers' educational level. Differences between parents' occupational levels were not found to be significant in each school separately.

Table 28: Chi-square values for the differences between the parents of the EBD and control group on the four social class parameters.

	Fathers' education chi square	Mothers' education chi square	Fathers' occupation chi square	Mothers' occupation chi square
school 18 n=116	39.6* df=3	14.6* df=3	12.5 df=6	5.8 df=6
school 2 n=74	9.4* df=3	12.7* df=3	6.3 df=5	9.7 df=6
total n=190	29.5* df=3	17.2* df=3	16.1 df=6	13.7* df=6

* significant values at $p < 0.01$

There are obvious differences between schools. In school 18 there are higher levels of significance for the differences in all parameters except for mother's occupation. This finding was expected since school 18 is situated in a lower-class area whereas school 2 in a middle-class area.

It can be concluded that parents of the EBD group have mainly an average to low educational level and occupy jobs in the middle to low occupational categories. Parents from the control group, seem to be more educated and have better jobs. The differences between the two schools indicate that it is not only the social class variable that is associated with differences between the EBD and control groups but also the school variable. These issues will be elaborated in the discussion section.

4.8. Discussion

The first study of the research was designed to identify a group of primary school age children who exhibit EBDs, for further study. In order to provide an accurate profile of the EBD group which is the core group of the second study, the study examined variables that potentially or directly influence EBDs and provided information on the relation between gender, social class, school attainment, and emotional/behaviour characteristics. Data analysis has provided a number of findings which address the above issues.

Overall, 35.3% children were identified by both teachers and parents as having EBDs (6.4% parent only, 12.8% teacher only, 16.1% overlap). The mode for both respondents was 0, mean score for parents was 7.0, and for teachers 5.2, with standard deviations 7.0 and 5.5 respectively.

The present study provides evidence on prevalence rates of EBDs only in the two schools studied and thus it cannot be directly compared to epidemiological studies. It provides, however, an indication of the situation in Athens and does not deviate enormously from other larger scale studies. For example, in the McGee et al. (New Zealand, 1984) study which applied the Rutter cut-offs, the reported prevalence rate was 30.7% on the basis of both scales. The difference with the present study is that parents identified a larger number of children than teachers (22.8% by parents, 14.4% by teachers) and also the overlap between the two scales was much lower (5.5%). As for the situation in Athens, in the Papatheofilou study (1989), parents identified more children than the teachers (44.1% in the overall sample, 38.7% in a more

representative sample, by parents 26.4% and by teachers 19.3%).

In a recent study undertaken in Greece (Papatheodorou & Ramasut, 1992), the overall prevalence rate identified by teachers was 14.3%. Even though the study was investigating teachers' perceptions of children's behaviour problems in nursery classes, present results on the prevalence rate identified by teachers are very similar.

Results showing that parents identify more children than teachers have been explained on the basis that parents may be less accepting of difficult behaviours or that children show more EBDs at home than at school (Touliatos & Linholm, 1981). However, present findings present a reversed picture with teachers identifying twice as many children as parents. Whether these findings relate to a) teachers being in a better position to identify EBDs, b) children exhibiting more problems at school, c) cultural variables affecting EBDs, or d) teacher - related variables affecting EBDs, is an issue that requires further investigation in a larger scale study in Athens.

Prevalence rates were estimated for each school separately as well as in relation to the child's sex. In the lower class area school, 57 (42.5%) children were identified (9.7% by parent only, 15% by teacher only, 17.9% by both) and in the middle class area 37 (28%) children (3% by parents only, 10.6% by teachers only, 14.4% by both). These results are discussed later on in this section.

Results from item analysis

Parents' and teachers' ratings on each item were analysed in order to examine which behaviours were more frequently exhibited by children. According to parental responses the items occurring most frequently were mainly overt behaviour characteristics such as: disobedience, temper tantrums, restlessness, fighting and items relating to physical symptoms i.e. headaches and eating difficulties. The latter was the most frequently occurring item.

Teachers on the other hand, have identified not only behaviour but emotional difficulties as well. The behaviour difficulties were related to disruptive, hyperactive and aggressive behaviour. The fact that parents have identified eating difficulties as the most frequent problem, is most probably related to the Greek reality. Many Greek mothers place an enormous importance on providing food to their children, sometimes to the point that they become obsessed with it. It is still an everyday picture outside schools, to see mothers feeding their children. Although there is no research covering this specific area, public opinion and the media have often explained the phenomenon as having its origin in food deprivation during the war. It has predominantly been a characteristic of low socio-economic background families.

There are many possible explanations why parents have mostly identified items relating to BDs (behavioural difficulties). One possibility is that EDs (emotional difficulties), can sometimes go undetected since they are not very obvious and disturbing to parents, unless very severe. So parents may

recognise BDs more readily than EDs.

Alternatively, BDs might be more common at home than EDs. The identification of BDs also relates to parental levels of tolerance, i.e. parents may find it difficult to tolerate aggressive or antisocial behaviour which is exhibited on a frequent basis. Finally, parents may be less willing to recognize EDs in their children since these are more difficult to be understood and probably more threatening to be realised.

Previous studies, mainly done in the US, have reported similar findings with parents identifying BDs in their children. Paraskevopoulos & McCarthy (1970), reported mothers identifying items related to conduct and immaturity factors. Auger (1975), has found that parents were more concerned with delinquent behaviours. Touliatos & Lindholm (1981), reported that parents have noted significantly more deviant behaviour in their children than did the teachers.

In the present study teachers have identified both BDs and EBs in the children. This result is in contrast to other findings which have indicated that teachers are more likely to identify antisocial and aggressive behaviour and underestimate EDs (Ziv, 1970; Merrett & Wheldall, 1984; Hallahan & Kauffman, 1988). In the Rutter et al. study (1970), it was suggested that teachers place greater emphasis on childrens' aggressive, acting out and disobedient behaviour whereas they tend to miss less disturbing and neurotic children. However, this suggestion was not supported by their findings and teachers have identified items relating to EDs.

Other studies, have provided evidence on teachers' ability to detect

EDs. Fremont et al. (1976), found that teachers did not differentiate between personality and conduct problems in their priority ratings. Similar results were found by Kaufman et al. (1979) and Hutton (1985).

In the present study items were analysed for each school separately in order to account for differences between them. Approximately the same items were identified by parents and teachers in both schools. However, percentage rates on all behaviours even on the least frequent ones, were much higher in the lower social class area school. This was mainly the case for parents' ratings and to a lesser extent for the teachers'. Results may imply a social class influence, i.e. either children from the low socioeconomic backgrounds tend to have more frequent and more severe EBDs, or mothers from this background find it more difficult to handle their childrens' behaviours and overestimate the severity and frequency of their EBDs.

Association between gender and EBDs

Respondents' ratings on individual items were analysed in order to account for gender differences. According to parents, in the lower class area (school 18), boys had higher rates on most items. According to the rank of difficulty, both EDs and BDs were identified for boys and girls, but there was a slight tendency for more BDs in boys and more EDs in girls.

Approximately the same pattern existed in the middle class area (school 2). In both schools, there seems to be a gender difference with boys having higher rates of behaviour difficulties than girls. The major difference

which was statistically significant was that girls from the lower class area (school 18) had greater EBDs than those in the middle class area (school 2). Items that were significantly different included, tempers tantrums, speech difficulties, restless, destroys, worried, irritable, miserable, disobedient.

According to teachers in the middle class area school, there was a tendency to identify more EDs for girls and more BDs for boys. Boys had higher percentage rates than girls, in terms of the frequency of occurrence on nearly all the items. In school 18 (lower class area), while boys still had higher percentage rates of behaviour occurrence than girls, there were no specific gender related items and both boys and girls had a mixed EDs and BDs profile. Teachers as well as parents, have identified differences between the girls in the two schools. However, only two items were found to differ significantly: truanting, disobedient.

In a study done in Athens (Papatheofilou et al., 1989), 603 children aged 6-8yrs were studied in order to estimate the prevalence rate of "psychiatric disorder". Similar results were found with major gender differences. Boys were mainly identified as hyperactive and aggressive, and girls as anxious and phobic.

The finding that teachers have identified less differences in the interaction between school and gender than parents, implies that the respondents' attitudes or difference in experiences with children, may have influenced their ratings. On the other hand the findings in relation to the two schools differences may imply a social class difference, i.e. a) the lower the social class, the less differences exist between boys and girls and b) the lower

the social class the smaller the tendency for gender specific characteristics. In any case there is a clear cut difference for the degree of difficulties between boys and girls.

In the Rutter et al. study (1970), poor concentration, motor items, irritability and temper tantrums were found to be more frequent in boys on both scales. Although not significant, differences were found with some neurotic traits, e.g. nail biting, thumb sucking, twitches and aches, were more frequent in girls on both scales. The present findings, mainly from the middle class school, are similar to the Rutter study.

Previous studies have reported a similar tendency for BDs to be more common in boys and EDs slightly more common in girls (Weisz et al., 1989; Edelbrock et al., 1989; McGee et al., 1984; Laing, 1984; McQuire & Richman, 1986a; Luk et al., 1991). It is common to attribute behaviour differences between boys and girls to learned sex roles (Stott et al., 1975). According to Fontana (1988), children learn what is expected of them as boys and girls and tend to adhere to these stereotypes as they grow older. The high rates of perceived conduct problems in boys which interfere with the teaching/learning process, could result from conflicts between socialized behaviour and school expected norms in relation to academic achievement (Clarizio & McCoy, 1983). Since such behaviours tend to be more overt than the withdrawn behaviours displayed by either boys or girls, they tend to focus teachers' attention on boys (Fry, 1983; Morgan & Dunn, 1988).

Association between age and EBDs

Analysis of variance of teachers' ratings revealed significant gender and school differences. The major interaction was found between age and school which suggested that in the lower class school the 9-10yrs group had the highest scores and the 8-9yrs group the lowest. In the middle class school the situation was reversed. In both schools the age of 8-9yrs seems to be critical either because most problems are exhibited by children (in the middle class school), or because the least problems are present (in the lower class school), in relation to the other two age groups.

Whether this is evidence of an actual age - social class relationship, needs further investigation. Other variables such as teacher's perceptions or classroom environment, could have contributed to this finding. This possibility sounds even more plausible considering the fact that there was not a similar interaction identified by parents. We should also take into consideration the fact that the age differences between the three groups are not great and the number of children in each group is not large enough to allow for generalizations to be made.

Factor Analysis

In the development of the CBQ Rutter (1967, 1970), did not use factor analysis in order to form the subscales. The neurotic and antisocial subscales were not derived from analysis of data obtained from the scales. He used the already established clinical diagnostic subgroups and the scores were derived from comparing the items which scored positively for neurotic and antisocial children (referred to the clinic). The mixed subgroup was derived from the Isle of Wight study. Children with behaviours from both subscales belonged to this third group.

A factor analysis was performed in the present study (principal component analysis followed by varimax rotations), in order to examine the factor structure in relation to the Rutter subscales and compare it with results from similar studies.

Behar and Stringfield (1974), in a study with normal and EBD preschool children, provided evidence of three factors: hostile-aggressive, anxious-fearful and hyperactive-distractible. Fowler and Park (1979), studying normal children have identified two factors, aggressiveness-distractibility-hyperactivity and anxious-fearful. Venables et al. (1983), studied 8yrs old children and identified two factors as well: 1) characterized by aggressiveness and hyperactivity (fights, destroys, irritable, restless, disobedient, bullies, lies, steals, not liked, fidgety, fussy), 2) anxious-fearful (miserable, fearful, worried, poor concentration, solitary, pains). Schachar, Rutter & Smith (1981), in a reanalysis of the original Isle of Wight study, found that a hyperkinetic factor

emerged separately from aggressiveness including the items, restless, poor concentration, fidgety. McGee et al. (1985), have identified three factors: 1) aggressive-antisocial (irritable, disobedient, lies, bullies), 2) neurotic (worries, solitary, miserable, fearful, fussy), 3) hyperactivity (restless, poor concentration, fidgety). However, they only included 14 items in the analysis since the rest were reported too infrequently to be included.

Similar studies in the US using scales equivalent to the Rutter scales e.g. RFCL (Referral Form Checklist), Conners Rating Scale, (Behaviour Problem Checklist), have revealed comparable findings with three major factors present in studies with EBD and normal children: aggressive-hostile, anxious-withdrawn, inadequacy-immaturity or inattentive-passive (Werry et al., 1975; Kaufman et al., 1979).

The present results are very similar to the above mentioned studies. If they are compared with the Mc Gee and Vernables studies (table 29), it becomes clear that factor 1 is an antisocial-aggressive factor and factor 3 an anxious-neurotic. Factor 2 seems to be an antisocial-hyperactive factor.

Table 29: Results from factor analysis of the CBQ from the Mc Gee et al. study (1985), the Vernables et al. (1983) study and the present study.

Mc Gee et al. (1985)

Factor 1: fights, bullies, irritable, disobedient, not liked, lies

Factor 2: worries, fearful, miserable, fussy, solitary

Factor 3: disobedient, fidgety, restless, poor concentration

Vernables et al. (1983)

Factor 1: fights, destroys, irritable, restless, disobedient, bullies, lies, steals, not liked, fidgety, fussy

Factor 2: miserable, fearful, worries, poor concentration, solitary, pains

Factor 3: truants, absent, fearful, lies, tears

Present study

Factor 1: restless, fidgety, fights, irritable, disobedient, fussy, bullies

Factor 2: truants, destroys, fidgety, absent, poor concentration, lies

Factor 3: not liked, worried, miserable, poor concentration, fearful, pains

Concerning the analysis of the parents' ratings, a direct comparison cannot be made with other studies since most of them have conducted a factor analysis only of the teachers' ratings. However, if the present results are compared with those from the factor structure of the actual CBQ, a clear neurotic or antisocial factor, according to the Rutter subscales, has not been revealed. Factors 1 and 2 seem to be mixed antisocial and neurotic factors and factor 3 rather of the neurotic type.

The present results could relate to the fact that the subjects were children from ordinary schools and not children referred to clinics or other assessment centers thus, their difficulties were not very clear-cut in the first place. Results could also relate to parents' characteristics (such as their social background and child rearing practices), or to culture specific factors. Since the present study is not a large scale one, further research is needed to test

the extent to which the structure presented here can apply to larger populations of inner Athens school age children.

Parent-teacher agreement

The overall correlation between parents' and teachers' scales was moderate and statistically significant (.40), which means that there seems to be some agreement between parents and teachers on the way they rated children. This is a much higher correlation than the one reported in the Rutter study (.18). There has not been a consistency in the results reported by previous studies on correlations between different respondents. Taking into consideration the use of different behaviour scales, different research populations, different ethnic groups and in general, different research conditions, this is to be expected. Studies that have reported low to moderate correlations are from either clinic or general population samples (Bierman et al., 1991; McGee et al., 1985; Touliatos & Linholm, 1981; Rutter et al., 1970; Morris & Arrant, 1978; Verhulst & Akkerhuis, 1989).

Moderate to average correlations have been reported by Atkins et al. (1984) (.60), Schavgency & Lahey (1985) (.53), Achenbach & Edelbrock (1986) (.44), Emery & O'Leary (1984) (.43). Higher correlations were reported by studies which have calculated coefficients in relation to behavioural categories, i.e. conduct and hyperactive factors (Mattison et al., 1990; Taylor & Sandberg, 1984; McGee et al., 1985; Goyette et al., 1978).

In the present study, correlations between parents' and teachers' ratings were also significant for the overall number of boys (n=128) and girls

(n=138). Parents and teachers seem to have reached a higher agreement on boys than girls. However, z transformations of the scores did not reveal significant differences. In the present study there was a tendency for boys to have more BDs, and girls more EDs.

Since BDs are more easily detected than EDs, a plausible explanation for the higher correlations for boys could be their actual EBDs profile. Verhulst & Akkerhuis (1989), reported a lack of a sex effect on the level of parent-teacher agreement. However, the number of items that significantly correlated was larger for boys than for girls. In the Touliatos & Linholm study (1981), correlations tended to be higher for boys and differences were significant for items relating to conduct problems and social delinquency. Ackerman et al. (1983), reported higher correlations for boys as well.

Parents and teachers seem to agree on their responses for the age groups. Other studies have not identified major differences between parents' and teachers' agreement in relation to childrens' age. Verhulst (1989), for example, identified a weak tendency for the older age group to show higher agreement, and Touliatos & Linholm (1981), found that correlations between parents' and teachers' ratings for the social delinquency factor, rose from the lower to the higher age groups. When correlations were calculated for each school separately no differences were found, since in both schools the correlations were high. Thus, we may say that the social class variable relating to the area of the schools did not seem to affect parent-teacher agreement for children's age.

Results form the second part of the analysis

Since the children identified by teachers and parents with some indication of EBDs were going to be further studied, the second part of data analysis focused on the EBD group only.

The reliability of teachers' and parents' ratings for the EBD group was tested by distributing the questionnaires to the respondents again after an interval of four months. Mean scores for the EBD children were found to be slightly lower the second compared to the first time, without significant differences in terms of age, sex and school. Retest reliability was verified and significant correlations were found for all factors involved.

Summarizing, the age, school and gender variables were not found to influence parents' and teachers' reliability of ratings. However, results imply that difficulties identified by parents, especially in the lower class area, seem to be more persistent over time than those identified by teachers. Most of the previous studies have also reported high retest reliability (Rutter, 1970; Vikan, 1985; Achenbach & Edelbrock, 1986).

Social class

In the Isle of Wight study, a slight association was found between social class and EBDs and this finding was in accordance with earlier epidemiological studies reporting a slightly increased prevalence rate in working-class children (Mulligan, 1964; Mitchell, 1965). There are, however, US studies (Achenbach

& Edelbrock, 1981), which obtained clear cut relationships between EBDs and children from low SE background or working class. Numerous other studies have shown that children who come from homes or schools that are disadvantaged or deviant in some respect tend to exhibit various kinds of behaviour problems (Hinde, 1980; Rutter & Madge, 1976; Rutter & Giller, 1983).

Findings from the study undertaken in Greece (Papatheodorou & Ramasut, 1992), do not provide evidence for a relationship between the child's socioeconomic status and behaviour problems. On the other hand, many studies have considered not only family and social determinants of pupil's problems but educational and school determinants as well (Reynolds, 1989; Good, 1986). Upton (1982), for instance, talked about within school factors which influence children's emotional and social development.

The present results could well be related to: a) factors operating within the particular school or school area e.g. teaching styles, school discipline, disadvantaged area, schooling conditions, i.e. small and crowded classrooms, and/or b) to adverse family circumstances, e.g. child neglect, marital discord, parental attitudes, child rearing practices, parental educational level or occupation.

As Rutter (1985) argues, the effects of family and school on behavioural development vary markedly across individuals and across different ecological contexts. Nevertheless, since the present findings follow a similar pattern for parents' and teachers' ratings, there seems to be an implication of a social class and EBDs relationship as well as a relationship between the

disadvantaged school area and EBDs, which again needs further examination.

Results from data on school attainment

Epidemiological surveys such as the Isle of Wight and London studies (Rutter, 1970; Rutter & Yule, 1974; Sturge, 1982; Chazan, 1985), established a relationship between learning difficulties, in particular reading problems, and EBDs.

For example, in a large scale study of English pupils in primary schools, by Croll & Moses (1985), it was found that 2/3 from the children identified with EBDs, had associated learning difficulties. In the Sturge (1982) study, 31% of the identified EBD boys had reading difficulties. In the Cantweel et al. study (1982), 33% of the EBD children had deficits of one year or more with spelling deficits been the most common. Most subjects who were deficient showed generalized underachievement rather than a specific disability. Along the same lines are results from the Epstein & Cullinan study (1983), who suggested that behaviourally disordered students tend to show better academic performance than do learning disabled age-peers.

The present results have indicated that children from the EBD group are performing at a satisfactory achievement level according to teachers' grades which are based on achievement tests and classroom performance. However, they appear to function at a lower academic level than their controls. Differences in their mean scores were significant for language, maths, religion and history. According to the present results, children from the EBD group cannot be characterized as exhibiting learning difficulties, but at the same time

there seems to be an association between EBDs and lower achievement especially in the areas of language and maths, when grades are compared to the control group.

Conclusions

The present study has identified a group of children aged 8-11yrs who according to their parents and teachers exhibit EBDs. A prevalence rate of 35.3% was reported in the two school population, with teachers identifying more children than parents. Parents have mainly reported BDs in their children whereas teachers have identified both EBs and BDs. Correlations between parents' and teachers' ratings were moderate. The key question many similar research studies have tried to answer, relates to the nature of EBDs and has been the extent to which we regard childrens' difficulties as more or less stable traits, independent of situational and informant factors or as behaviours influenced and determined by situational factors. The present study provides evidence regarding the situational variation in child behaviour as well as evidence regarding the importance of informants' factors. Different informants have different perspectives and attitudes in appraising child behaviour. Presently, mothers and teachers have rated children according to their experiences, attitudes and ways of thinking, in different environments and under different circumstances. Instead of questioning the extent to which one of the two respondents has provided more or less valid information than the

other, it is wiser and more productive to evaluate the factors that have influenced the respondents' answers. Consistencies as well as inconsistencies between parents' and teachers' reports are expected and this is the rationale for a multi-variate way of assessing childrens' difficulties.

The factors which have been found to associate with EBDs are, gender, school and social class differences. More boys were identified than girls and there was a slight tendency for boys to exhibit more BDs and girls more EDs. Higher prevalence rates were reported in the lower class area school than in the middle class area, as well as higher degrees of frequency of the identified difficulties. There was also a greater reliability of ratings in the lower class area school. It seems that childrens' difficulties in the middle class area school, vary more in terms of frequency and severity, and are not as predominant and stable characteristics of children's behaviour as is the case in the lower class school. An interesting finding is that the differences between boys and girls in the middle class area school were much sharper than in the lower class school. At the same time, the parents of the EBD group seem to have a lower educational and occupational level than the parents from the control group.

Certain issues raised by the present study and results obtained, need further elaboration. For example, a larger scale research is needed in order to validate the applicability of the Rutter cut-offs. The evidence on geographical differences in terms of prevalence rates also needs further investigation. Overall, more research is needed in Athens to provide additional relevant information and enable us to comment on the cultural milieu and ethnic influences on the present results.

In the second study of the present research, the children identified by parents and teachers as demonstrating EBDs, will be interviewed and their responses will be compared to those of a control group. The three EBD groups identified, i.e. teachers' only, parents' only and parent-teacher, will be studied separately in order to account for differences between them. All information on children's EBD profile, the aims and research questions of the second study are presented and discussed in chapter 5.

CHAPTER 5: THE CAUSAL ATTRIBUTIONS OF CHILDREN WITH

EBDs

Introduction

The literature review covered in chapter 3 has provided the theoretical basis on which the methodological considerations of the second study are based. It has already been mentioned that although there is a vast number of studies on children with EBDs, there are very few attempts to relate the field of EBDs with children's social cognitions. Thus the major aims of the present study are a) to investigate the ways in which children with EBDs construe reality in relation to school social situations, and b) to examine EBD children's abilities to anticipate others' hurt feelings.

Research questions dealt with are in relation to whether children with EBDs use internal or external psychological attributions and to what extent they differ from other children. The research further elaborates on whether children with EBDs can anticipate other people's hurt feelings and whether they can realize the affective consequences of causal disclosure, in comparison to non EBD children.

The subjects are the children identified by parents and teachers in the first study of the research and a control group matched in terms of age, sex and SES.

Based on the principles of personal construct theory (Kelly, 1963), the first stage of the second study concentrated on eliciting constructs - situations from a sample of children aged 8-11yrs, relating to their everyday school lives

which make them feel uncomfortable and uneasy. According to children's responses and content analysis, the situations elicited were related to peer relationships during school work and play.

Based on these situations, a questionnaire was developed. It consisted of ten hypothetical scenarios describing peer and school related situations, which were read to the child. In the first five situations the child was refusing to allow another child to do a certain task. Three internal and three external reasons were given as explanations. In the second five scenarios, the situation was reversed and it was the child him/herself who was refused and rejected by another classmate. Children were asked questions about whether they were likely to communicate the reasons for rejection to the other child. They were also asked questions about the degree of hurt feelings of the other child if they were to communicate the true reasons for rejection.

5.1. Aims and research hypotheses of the second study

The following sets of questions apply to all three groups studied (pervasive and stable $n=45$, parent-only identified $n=18$, teacher-only identified $n=14$), since one aim of the study is to look for differences as well as for similarities among these three groups.

The main research questions which are dealt with are:

- Do the children in the three EBD groups differ with respect to the way of perceiving and interpreting behaviours, feelings and situations which evoke

negative emotions?

- Do they differ from the control group in construing and reacting to school social situations?

Deriving from these research questions more specific sets of questions are put forward.

a) Does the way children in the EBD groups explain their own personal failure or peer rejection in work and play situations differ from how they perceive others' failure and rejection?

- What reasons do they give to explain these situations?

- What are the differences between their attributions and those of the control group?

b) In school situations when they reject a classmate, does the nature of the reason (internal vs external) they reject him/her, influence their withholding or revealing of the reason?

- Are there any differences between the EBD and control group in that respect?

c) What is the extent to which they can anticipate other children's hurt feelings?

- How do they think their classmates feel when reasons for rejection are communicated?

- Does the expected degree of hurt feelings influence the revealing or disclosing of the reasons? Does that relate to the internal or external nature of the reasons?

d) How do children with EBDs feel when they themselves are refused by a

classmate or face school failure?

- Are they equally hurt by external and internal reasons?
- What is the situation for the control group?

The three stage process followed in order to achieve these aims is explained in the next sections.

5.2. Stage one: Elicitation of constructs for questionnaire development

The major objective of stage one is to identify aspects of school life which create negative feelings in children and interfere with their everyday school activities. Based on the principles of personal construct theory (Kelly, 1963), it was considered appropriate that those negative aspects of school life should be identified and evaluated by the children themselves in order to be as representative and realistic as possible of their age, culture and personal experiences.

The fundamental tenet of personal construct theory is that humans - in this case children - make their own interpretations of events. The theory attempts to explain the way in which individuals experience the world, to understand behaviour in terms of what it is designed to signify and to explore how we negotiate our realities with others (Bannister & Fransella, 1989). In other words, the theory aims at examining the subject's phenomenological world which is also the aim of the first stage of the present study.

Group discussions were considered appropriate for the reasons mentioned above. As it is mentioned later on in the discussion section, this

method for the elicitation of constructs by children, has been used by many researchers and has shown to be comprehensive and systematic.

Thus, children participated in group discussions in order to, a) elicit situations which create negative emotions and b) elicit their interpretations and reactions to them. The ultimate goal was the use of the constructs elicited, for the development of an instrument through which data would be collected for the present research purposes.

5.2.1. Subjects

Six groups of children participated in the process, i.e. three groups from school 18 and three from school 2. All groups consisted of 8 children, 4 boys and 4 girls. There were two groups from each grade (C, D, E). From the 8 children in each group, 4 were from the EBD group identified in the first study, 2 boys and 2 girls. The children from the EBD group were the first four from their group in alphabetical order. The other 4 children were from the control group, the first four from the teacher's list of class names. They were matched for sex, age and SES, and were selected from the same class. The total number of children that participated was 48.

5.2.2. Procedure

Each group of children met with the researcher in an empty classroom during school hours. Children knew the researcher already and that proved to be a positive factor concerning their interaction. They were told that their help was needed in order to complete the research. Children were told specifically: "I want to discuss with you the things that happen at school and upset you or make you feel bad. I would like you to think of situations which usually put you in a difficult or uncomfortable position and give me some examples if you can. While you talk I will take notes so that I will not forget the things you are going to say."

The role of the researcher was to keep the discussion going by encouraging all the children to talk about their experiences, and to make sure that they were not changing the subject of the discussion. The session lasted for about an hour. At the end of the hour the children were thanked and they returned to their classrooms.

5.2.3. Findings

Children talked about a variety of situations they disliked at school which created negative feelings and emotions such as, disappointment, confusion, anger, pity, inadequacy, shame and rejection. Table 30 (p.223) includes the different situations children talked about and the frequency with

which they referred to them.

Children in all six groups talked extensively about situations relating to their school work, and how their failure in certain requirements influenced the way they feel and the way their peers and the teacher treat them. Many children have reported instances when they have not done their homework or have failed a test and how the teacher and other classmates have insulted them. They referred to how stressful exams are for them and how much pressure their parents exert on them to get good marks.

Children also talked about problems encountered with their peers. Difficulties with forming and maintaining friendships and rejection during group work assignments or games seemed to be the most serious problems they were faced with. Rejection or denial to "play with" or "work with", was considered by many children a negative experience and as a result they either considered themselves clumsy, unlucky, stupid, or simply "not good at it". Some children made comments on how their classmates made fun of them and/or bullied them because of their physical appearance (fat, short) or because of the way they dress.

The four most frequently mentioned negative situations were: no co-operation with peers in school assignments, exclusion from games, rejection from friendships, difficulties with learning and homework.

Table 30: The number of negative situations the children talked about during group discussions.

Behaviours	gr.1	gr.2	gr.3	gr.4	gr.5	gr.6	total
Bullying	1	1	2		2	1	7
No cooperation with peers	3	1	2	2	2	1	11
Test-anxiety	1	1	3	1	1	1	8
Fighting	2	1	1	3		1	8
Insults from teachers		2		1		2	5
Exclusion from games	2	3	2	2	1	1	11
Rejection from friendships	2	1	2	1	2	2	10
Difficulties with learning	2	2	3	2	2	2	13
Conflicts with teachers		2		2			4
Difficulties in making friends	1	1			2	2	6
Relations with the other sex			1		2		3

5.2.4. Development of questionnaire

The aim was to follow a structured interview procedure during which the questionnaire was to be read and answered by the subjects, in the presence of the examiner. In such a way one can guarantee that all questions are answered and subjects are given help with reading and understanding the questions, whenever necessary.

The literature so far has pointed out that a structured interview should be comprehensive and of moderate length. Presently, in order not to make the children tired and at the same time provide them with alternative responses covering a wide range of causal explanations, the following actions were taken.

Group discussions with the children led to the formulation of five situations relating to the most frequently mentioned negative situations. The themes of the situations were the original examples provided by the children during the elicitation of constructs procedure. Two situations were peer related, two school work related and one both peer and work related. The situations were written in a hypothetical context, i.e. "Pretend that a child.....".

For each situation, it was considered more appropriate by the researcher, to give six alternative statements explaining the outcome of the story. They were constructed based on the same rationale as in the Weiner study (1988), following the internal/external dimension and were tested for reliability and validity by two school psychologists and three teachers (Table 31, p.223).

The questionnaire

A questionnaire was constructed based on the five situations with the six alternatives mentioned above. The five situations were to be used twice with each child. The first time (situations A), the protagonist of the story is the

child interviewed and he/she is refusing a classmate to do a certain task. The second time (situations B), the situation is reversed and the protagonist is a classmate refusing the subject interviewed to participate in an activity. The alternatives proposed remain the same in both A and B situations.

The first and second vignettes are related to peer collaboration in play situations. The third and fourth are related to peer collaboration in school work and the fifth is school work related. The questionnaire is presented below.

Two school psychologists and three special class teachers volunteered to look at the situations and categorize the responses in terms of the internal/external dimensions. The order of the responses in the situations was mixed and different for each situation (e.g. for situation A1: ext. int. int. ext. ext. int., for situation B2: int. ext. ext. int. int. ext.) and there was no indication of whether responses were external or internal.

They were given the following instructions:

" There are a variety of causes people use to explain success or failure on certain tasks. One of these is the external/internal dimension. Some causes like ability, effort, personality and mood which originate within the person are considered internal. Other causes like task difficulty, luck and environmental conditions are considered external since they originate outside the person.

You are given below five hypothetical scenarios with a choice of six responses on each one. Please read them carefully and indicate which of the six responses you consider internal or external according to the following rationale.

Reasons for rejection and failure are:

- a) internal, when they refer and are due to the person who is being rejected or has failed
- b) external, when they are imposed on the person who rejects or fails by external factors."

According to table 31 below all five respondents had the same views and were in agreement with the original categorization of external/internal reasons.

Table 31: Psychologists' and teachers' categorization of external/internal explanations.

EXPLANATIONS	Psy 2	Psy 1	T 1	T 2	T 3
Situations A					
1 You are sick with a bad cold	ext	ext	ext	ext	ext
2 He/she has a bad reputation in school	int	int	int	int	int
3 He/she is never good at games	int	int	int	int	int
4 Your parents have asked you not to play with him/her	ext	ext	ext	ext	ext
5 The teacher has asked you to do something for her	ext	ext	ext	ext	ext
6 Your classmate has been mean to you before	int	int	int	int	int
Situations B					
1 He/she is a trouble maker	int	int	int	int	int
2 The team has a full number of players	ext	ext	ext	ext	ext
3 He/she hasn't got the right outfit	ext	ext	ext	ext	ext
4 He/she is not a skillful player	int	int	int	int	int
5 He/she does not know the rules of the game	int	int	int	int	int
6 There were other children waiting before	ext	ext	ext	ext	ext
Situation C					
1 You have already done the work at home	ext	ext	ext	ext	ext
2 You have promised someone else to work with	ext	ext	ext	ext	ext
3 He/she has refused to work with you before	int	int	int	int	int
4 You prefer working on your own	ext	ext	ext	ext	ext
5 You do not like his/her behaviour	int	int	int	int	int
6 He/she is not good at maths	int	int	int	int	int
Situation D					
1 He/she has been rude and mean to you	int	int	int	int	int
2 His/her house is too far away	ext	ext	ext	ext	ext
3 He/she has never been of any help to you	int	int	int	int	int
4 You know that this child does not care about school	int	int	int	int	int
5 You have made other arrangements	ext	ext	ext	ext	ext

6 Your parents will not let you	ext	ext	ext	ext	ext
Situation E					
1 He/she got sick	ext	ext	ext	ext	ext
2 Did not know how to do it	int	int	int	int	int
3 Relatives have visited and had no time	ext	ext	ext	ext	ext
4 Lost his/her notebook	ext	ext	ext	ext	ext
5 Did not trust him/her self	int	int	int	int	int
6 Overwhelmed with anxiety	int	int	int	int	int

The actual Questionnaire is given below.

1. Situation A

Pretend that a boy/girl from your class asks you if you would like to go out and play with him/her during the break. You decide to say no because:

-external

- a. you are sick with a bad cold
- b. your parents have asked you not to play with that child
- c. the teacher has asked you to do something for him

-internal

- d. your classmate has been mean to you before
- e. he has a bad reputation in school
- f. he is never good at games

Situation B

Pretend that you ask a boy/girl from your class to come out and play with you during the break. He/she refuses because:

(the same alternatives as in situation A)

2. Situation A

Pretend you are playing a basketball game with your friends during the P.E hour. A boy/girl from your class asks if he/she can join in. You say no because:

-external

- a. the team has a full number of players
- b. he hasn't got the right outfit
- c. there are other children waiting before him

-internal

- d. he does not know the rules of the game
- e. he is a trouble maker
- f. he is not a skillful player; seldomly scores

Situation B

Suppose that the children of your class are playing a basketball game during the P.E hour. You ask them to join in and they refuse

(the same alternatives as in situation A)

3. Situation A

Pretend that a boy/girl in your class asks you to work together on a maths assignment. You refuse because:

-external

- a. you have promised someone else to work with
- b. you prefer working on your own
- c. you have already done the work at home

-internal

- d. you do not like his/her behaviour
- e. you know he/she is not good at maths
- f. he/she had refused to work with you before

Situation B

Suppose that you ask a classmate to work on a maths assignment with you. He/she refuses because:

(the same alternatives as in situation A)

4. Situation A

Suppose that a child in your class is absent. The teacher asks for a volunteer to visit him/her and give the homework. You do not volunteer because:

-external

- a. you know your parents will not let you go
- b. his/her house is too far away from yours

c. you have arranged to do other things that evening

-internal

d. you know this child does not care about school work

e. he/she had never been of any help to you

f. he/she had been rude and mean to you

Situation B

Every time a child is absent in your class the teacher asks for volunteers to visit the child and give the homework. Last time you were sick no one came to visit you because:

(the same alternatives as in situation A)

5. Situation A

Suppose that the teacher has given the children homework for the weekend. One of your classmates has not done it because:

-external

a. he/she got sick

b. relatives have visited and did not have time to do it

c. has lost his notebook

-internal

d. did not know how to do it

e. did not trust him/herself that it was correct

f. he/she was overwhelmed by anxiety and could not finish it

Situation B

Pretend that the teacher has given you an assignment to complete during the weekend. You did not do it because:

(the same alternatives as in situation A)

5.3. Stage two: Pilot

5.3.1. Rationale and aims

In order to proceed with the collection of data through the means of the developed questionnaire, a pilot study took place. The major aims were to test the practicality of the instrument and decide on the final procedure for its administration. More specifically, the format and the wording of the stories included in the questionnaire had to be examined in order to ensure that the children can understand the social situations presented to them as well as the interview situation. Decisions had to be made as well in terms of the length of the questionnaire and the time needed for its completion.

In general terms, the pilot study had to examine whether it was possible to collect the data needed for the study based on the questionnaire developed during the first stage of the study.

5.3.2. Subjects and procedure

Sixteen children from school 18 participated in the pilot (8 boys, 8 girls; mean age 9.8yrs.) Eight children were from the EBD group (the first five children of the group). The eight non-EBD children were selected, based on the alphabetical order of the teacher's name list i.e. the list was continued from where it stopped for the children selected for the group discussions.

Both EBD and non-EBD children were interviewed in order to account for possible difficulties manifested in any of the two groups. Children were interviewed one at a time in an empty classroom. They were explained what to do and were given a printed paper with the situations to read. The researcher said: "I want you to read the stories and then choose one of the explanations provided that you agree with."

Children first read situation A (refusing a classmate), with the alternative answers. Then they read situation B (a classmate refusing the child interviewed), with the same alternatives. At the end of each situation the child was asked: "Would you reveal to your classmate the reason you refuse?" When the answer was "Yes", the child was asked: "Do you think your classmate would be hurt? Show me how much." The child was then presented with the following scale on a piece of paper: not at all, a bit, so and so, a lot, very much (when data was analysed the scale numbers were 1-5). If the answer was "No", the child was asked: "Let's say you reveal the reason, would your classmate be hurt?" The scale was again given to the child to choose from. The interview lasted for about thirty minutes.

5.3.3. Findings and discussion

All 16 children co-operated very well throughout the interview. They did not seem to encounter any major difficulties with understanding the directions. The wording of the situations was clear to them. However, five of the children asked the researcher to read the situations to them because, as they said, they were not good readers and were afraid of making mistakes (2 EBD, 3 non-EBD).

A point that needs attention relates to the alternatives provided. When children were asked to choose one of them, six children wanted to choose more than one because as they said, more than one alternative was true (1 non-EBD, 2 EBD).

In addition to that, children seemed to have difficulties with differentiating between situations A and B and also between the alternatives they chose for each one situation. Five of them thought that there was a mistake and they were reading the same situation twice. They had to read the situations again in order to understand the difference but even so, they tended to choose the same alternatives for both A and B (3 EBD, 2 non-EBD).

Children had no problems with understanding and responding to the scale corresponding to hurt feelings. Data collected from this part of the questionnaire were comprehensive and straight forward.

Data were not statistically analysed since the ultimate goal of the pilot was to evaluate the procedure to be followed and the practicality of the questionnaire (format, length, wording). However, an overview of the data

showed that there were more internal than external reasons given by children to explain both A and B situations.

Considering the findings, it was decided to make certain changes in the administration as well as in the actual format of the questionnaire. In the first place it was decided that it would be better if situations are read by the researcher, so that children will not feel as if they are tested on their reading abilities. The researcher will probably need to explain to the children that what they do is not an exam.

An additional change relates to the order of the situations which needs to change so that children could more easily differentiate between situations A and B. Thus, it would be better if all situations A are given first followed by situations B. The wording of the alternatives needs to be changed as well, whenever possible, and be different from situations A to situations B.

In order to maximize the validity of the data and to enable a finer grained analysis, another two points needed to change: a) it would be better to allow children to choose two from the six alternatives provided and b) use probing questions so that data on children's responses on both internal and external explanations can be collected and analysed. The aim would be to have data for two external and two internal explanations. These issues become clearer in the main study.

5.4. Stage three: Main study

5.4.1. Subjects

From the 95 EBD children identified in the first study, only 77 participated in the second study. During the four month interval between study one and two, ten children had left the schools mainly because of moving to a different area and eight had participated in the pilot, thus they were not included in the main study.

The total number of children involved in the study is 154, the 77 children identified by parents and teachers in the first study of the research (experimental group) and 77 non-EBD children (control group). The children from the control group (control cases scored below cut-off), were matched with the EBD group in terms of age, sex, grade, school class, social class and school attainment (refer to the subjects section in chapter 4 for information on these variables). I.Q. tests were not administered since none of the existing ones is standardized in Greece and school performance records were used instead. From the 77 EBD children 33 were from school 2 and 44 from school 18. Three groups were formed for the analysis of data:

- a) pervasive and stable over time i.e. identified twice by parents and teachers (n=45)
- b) parent identified i.e. identified twice by parents only (n=18)
- c) teacher identified i.e. identified only by teachers twice (n=14).

Concerning the nature of EBDs in the three groups, the parent/teacher

group (pervasive and stable), included children with mainly behavioural difficulties. The most prominent behaviours were: restlessness, fighting, being fidgety, having poor concentration, disobedience, worrying, bullying and temper tantrums. For the teacher-only identified EBD group the rank order of frequency of the difficulties was: poor concentration, restless, fighting, not liked, irritable, miserable, fussy, disobedient, fidgety, worried, fearful. According to teachers' ratings, this group is more of a mixed EBD type (according to the Rutter subscales), including two antisocial and three neurotic items. For the parent-only EBD group, the behaviours with the higher frequency were: irritable, disobedience, fussy, temper tantrums, restless, headaches, fidgety, eating difficulties, fights, lies. Parents have mainly identified behaviour items relating to hyperactivity and conduct problems. Overall, children in the parent-teacher EBD and parent-only groups are mainly characterized by antisocial behaviour and hyperactivity whereas children in the teacher-only group have difficulties of a mixed antisocial-neurotic type, including items on inattentiveness.

5.4.2. Procedure

The children and the class teacher were informed by the researcher three days in advance about the visit and the interview. The headmasters of both schools had provided an empty classroom. Children were interviewed one at a time, alternating from the control to the EBD group, i.e. one from the control, one from the EBD. They were introduced to the task in the following way: "We are going to read some short stories which relate to your school life. I want you to pay attention and make sure you understand what we read. This is not a test or an exam and there are no right or wrong answers. Feel free to ask any kind of questions, especially if what we read is not clear to you. I will make some notes while we go on, so that I will not forget the information you give me."

The questionnaire paper was placed in front of each child and the researcher read it through while the child was looking at it. All situations A (refusing others) were given first followed by situations B (refusing self). When each situation was read through with the six alternatives, the child was asked: "For which of these reasons would you say no to your classmate? You can choose two."

After choosing the two reasons for refusal, a second question followed: "Would you reveal the reason for your refusal to your classmate?" Children responded with a "Yes-No". If the answer was "Yes", a scale written on a piece of paper (not at all, a bit, so and so, a lot, very much) was shown to the child and the question was asked: "How much do you think would your friend

be hurt? Show me on this paper." If the answer was "No", the child was asked: "If you reveal the reason, would your classmate be hurt?" If the answer was "yes", the child was asked how much would the classmate be hurt.

Two probing questions followed. If the child had chosen two external reasons, then two internal ones were proposed or vice versa, so that at the end of the session there were two answers on internal and two on external reasons. The probing question was : "Let's say that the reason you refuse is , would you reveal it to your classmate?" The same procedure was followed with the five-point scale for assessing the degree of hurt feelings.

Each session lasted approximately forty-five minutes. Children were thanked and returned to their classes. The final form of the questionnaire is given in Appendix C (p.366).

5.4.3. Data analysis

In order to proceed with the analysis, data were divided into four levels. Each level deals with the three EBD groups and their controls. Data from the two schools were analysed separately in order to account for differences between them since children from school 18 were from a lower socioeconomic background and had lower grades than children in school 2.

Level A: children's responses on the two sets of situations are analysed i.e. their choices of external or internal reasons for refusing others (situations A) and refusing self (situations B). The major objective of this part of the analysis is to identify any possible differences between the EBD and the control groups in terms of their choices of internal or external reasons, as well as to identify any possible differences between the two sets of situations.

Level B: children's responses on whether they would reveal or not reveal the reason for refusal, are analysed. The objective is to find out the extent to which the nature of the reason for refusal (i.e. external or internal) influences children's behaviour.

Level C: data from children's perceptions of the degree of other's hurt feelings (situations A), are analysed. The intention is to identify possible differences between the extent to which the EBD and control groups can anticipate other's hurt feelings and do not reveal the reasons of refusal.

Level D: children's responses about the degree of their own hurt feelings (situations B) from the revealing of external/internal reasons, are analysed. The objective is to identify possible differences between the EBD and control groups in terms of the degree of their hurt feelings from revealing external or internal reasons of rejection.

Level A

This analysis of data derives from children's choices of external and internal reasons provided for both situations A (refusing others) and B (refusing self). The three variables included in the analysis are:

- a) EBD group / non- EBD group
- b) external / internal
- c) situations A / situations B (refusing other/refusing self)

The main aim at this level is to identify any differences that might exist between the EBD and control groups in terms of their choices of external/internal reasons. The aim is also to investigate whether their choices differ when the situations relate to themselves from when they relate to others.

1. Parent-teacher group (n = 45)

Table 32 in Append. B (p.334), presents the raw data collected on the above variables as well as the mean scores and standard deviations of children's choices of external and internal reasons. When we look at the total number of responses and their mean scores (both schools), we notice that:

- a) there are no differences between the EBD and the control group for situations A (refusing others). Both groups gave slightly more external than internal reasons and
- b) there is a greater difference between the EBD and control group for situations B (refusing self) with far more reasons being external for the EBD group ($\bar{x} = 6.20$ for external, $\bar{x} = 3.80$ for internal). There were still more external reasons chosen by the control group but the difference

is much smaller ($\bar{x} = 5.46$ for external, $\bar{x} = 4.53$ for internal).

A three way analysis of variance (2b, 1w), was conducted on the data from each school, to account for the interaction of the three variables (table 33).

Table 33: F values of the factors analysed (EBD/Control, External/Internal, Situations A/B).

Factors	School 18 F value	df	School 2 F value	df
EBD/control (A)	0.01	1.48	0.40	1.38
External/Internal (B)	11.64*	1.48	7.41	1.38
Situations A/B (C)	0.00	1.48	1.60	1.38
Interaction AXB	6.93*	1.48	0.31	1.38
Interaction AXC	0.05	1.48	0.40	1.38
Interaction BXC	12.49*	1.48	1.84	1.38
Interaction ABC	1.98	1.48	2.09	1.38

* significant values at $p < 0.05$

As we can see from table 33, for school 18, there is a significant interaction between factor A (EBD/ other) and factor B (external/internal), ($F=6.93$; $df=1,48$). According to the findings, the EBD group has chosen more external than internal reasons ($\bar{x} = 5.94$ for external, $\bar{x} = 4.06$ for internal), whereas the control group has given approximately an equal number of internal/external responses ($\bar{x} = 5.10$ for external, $\bar{x} = 4.90$ for internal) (Figure 17, Append. B, p.353)

A significant interaction was also found between factor B (external-internal) and C (situations A/B), ($F=12.49$ $df=1,48$) in school 18. Both the EBD and the control group have given the same number of external and internal

reasons for situations A (refusing other) ($\bar{x} = 5.06$ external, $\bar{x} = 4.94$ internal). There was, however, a great difference between external and internal reasons for situations B (refusing self) with considerably more external reasons being chosen ($\bar{x} = 5.98$ for external, $\bar{x} = 4.02$ for internal). This interaction is represented in Figure 18, Append. B (p.353).

The only significant value revealed from the analysis for school 2, was for an overall difference between external and internal reasons ($F=7.41$; $df=1,48$), ($\bar{x} = 5.45$ external, $\bar{x} = 4.55$ internal) showing that more external reasons were overall selected by both the EBD and control groups.

According to the results so far, EBD children seem to fail to choose internal explanations. Overall, they tend to choose far more external than internal reasons for both "refusing self" and "refusing other" situations. In particular, a) they have chosen far more external than internal reasons for the refusing self situations, b) an equal number of internal and external reasons was chosen for the refusing other situations. EBD children tend to attribute personal school failure and negative relationships to external factors, whereas they use both external and internal reasons when the failure relates to another child. On the other hand, the control group considers external and internal reasons as equally responsible for personal and peer related failure.

These results are far more obvious in school 18. The only statistically significant finding in school 2 relates to the difference between external and internal reasons attributed i.e. more external. This school difference will be discussed later in relation to results from subsequent levels of data analysis.

2. Parent only group (n = 18)

According to the mean and raw scores (table 34, Append. B, p.340), in school 2, the EBD group has chosen slightly more external than internal reasons for the refusing others situations (A), ($\bar{x}=5.16$ ext. - $\bar{x}=4.82$ int.). In school 18 the difference between the mean scores for external/internal is greater ($\bar{x}=5.91$ ext. - $\bar{x}=4.08$ int.). Considering the refusing self situations (B), children have chosen more external than internal reasons in both schools (sch. 2: ext. $\bar{x}=7.33$, int. $\bar{x}=2.66$ - sch. 18: ext. $\bar{x}=5.91$, int. $\bar{x}=4.08$). According to the EBD group, failure and rejection in school and play relations, seems to relate to external factors. When the situations relate to personal rejection, the difference between external and internal reasons is greater (more external), than when situations relate to refusing others. In school 2 these differences are more obvious.

The control group on the other hand, have chosen slightly more internal reasons to explain a classmate's rejection in both schools (sch. 2: $\bar{x}=4.16$ ext., $\bar{x}=5.83$ int. - sch. 18: $\bar{x}=4.91$ ext., $\bar{x}=5.08$ int.). For the refusing self situations, the control group gave a similar number of external/internal responses in school 2 ($\bar{x}=5.00$), and more internal reasons in school 18 ($\bar{x}=4.58$ ext.- $\bar{x}=5.41$ int.).

A three way analysis of variance (1 between, 2 within), was conducted to examine the possible relationships among the variables. Table 35 presents the F values of the analysis.

Table 35: F values of the variables analysed (EBD/control, external/internal, situations A/B), in both schools.

Factors	school 2 F value	df	school 18 F value	df
EBD/control (A)	n.c	1.10	n.c	1.22
Ext/Int (B)	8.06*	1.10	1.36	1.22
Situations A/B (C)	n.c	1.10	n.c	1.22
Interaction AXB	32.26*	1.10	4.16*	1.22
Interaction AXC	n.c	1.10	n.c	1.22
Interaction BXC	7.57*	1.10	0.13	1.22
Interaction ABC	1.50	1.10	0.13	1.22

* significant F values $p < 0.05$

n.c. not calculated (values were too low to be estimated)

As we can see from table 35, a number of significant relationships emerged from the analysis. In both schools a significant interaction exists between factor A (EBD/control) and factor B (external/internal), ($F=32.26$ with $df=1,10$ in school 2 - $F=4.16$ $df=1,22$ in school 18). The EBD group has chosen more external than internal reasons. The situation is reversed for the control group (Append. B - Figure 19, p.354).

Factors B and C interact significantly in school 2, indicating that there are mainly external reasons chosen for situations A (refusing other), whereas there is a very similar number of external and internal reasons chosen for the refusing self situations (B) (Figure 20, Append. B, p.354). In school 18, the only significant F value was for the interaction between factors A & B ($F=4.16$, $df=1,22$). The EBD group has chosen overall more external reasons whereas the control group provided a similar amount of internal and external reasons.

The difference between external and internal reasons for the EBD group is greater than for the control.

According to the results so far, the parent-only EBD group has shown the same sensitivity towards attributing rejection to internal reasons, as the pervasive and stable EBD group. They have chosen more overall external reasons for the refusing others situations and even more external reasons for the refusing self situations. Differences are greater in school 2, where the control group seems to consider both external and internal reasons responsible for rejection and failure in social and work relations, with a slight tendency for more internal reasons.

3. Teacher only group (n = 14)

According to mean scores (table 36, Append. B, p.336), the EBD groups in both schools provided more external (\bar{x} =6.28 sch. 2 - \bar{x} =6.71 sch. 18) than internal reasons (\bar{x} =3.71 sch. 2 - \bar{x} =3.28 sch. 18). It seems that for the EBD group, personal and others' failure and peer rejection are mainly attributed to external reasons.

The control groups gave more internal (\bar{x} =5.57 sch. 2 - \bar{x} =5.42 sch. 18) than external (\bar{x} =4.42 sch. 2 - \bar{x} =4.57 sch. 18) reasons for both situations, but differences are not great.

A three way analysis of variance was performed (1 between, 2 within). Table 37 gives the F values of the variables included.

Table 37 : F values of the variables EBD/control, external/internal, situations A/B, in both schools.

Factors	school 2 F value	df	school 18 F value	df
EBD/control (A)	n.c.	1.12	n.c.	1.12
External/Internal (B)	1.42	1.12	14.14*	1.12
Situations A/B (C)	9.57*	1.12	5.09*	1.12
Interaction AXB	n.c.	1.12	n.c.	1.12
Interaction AXC	n.c.	1.12	n.c.	1.12
Interaction BXC	0.07	1.12	0.28	1.12
Interaction ABC	1.63	1.12	0.00	1.12

n.c. not calculated

* significant values at $p < 0.05$

The interactions present in both schools are between factors A (EBD/control) and B (external/internal). According to these findings, the EBD group has chosen more external than internal reasons to explain both personal and others failure and peer rejection, whereas the control group has chosen more internal reasons in school 2, and a very similar number of external and internal ones in school 18 (Figure 21, Append.B, p.355).

For the control group, the reasons of failure are equally external and internal ones. The teacher-only EBD children consistently show a sensitivity towards attributing internal reasons to failure and rejection in social and working relations, as it is the case for the parent-teacher and parent-only groups.

Summarising level A findings for the three groups

Results are consistent for the control groups, i.e. external and internal reasons are equally responsible for personal and others' failure. All three EBD groups tend to attribute personal failure to external reasons and they consider internal reasons responsible for others' failure.

Level B

This analysis of data derives from children's reveal/not reveal answers to the question : "Would you reveal the reason you refuse to your classmate?" The analysis includes the answers chosen by the children themselves and those proposed by the researcher (probing).

The variables included in the analysis are:

- a) EBD / control
- b) reveal / not reveal (mean scores of children's responses)
- c) external / internal

The aim of this part of the analysis is to identify the extent to which the external/internal nature of refusal will influence the subjects' revealing or withholding of reasons).

1. Parent - teacher group (n = 45)

Results in both schools on children's own choices, as well as on the probing questions, seem to follow a specific pattern (Table 38, 39, Append. B, p.337-338). That is, the EBD group mostly reveals the reasons for rejection (school 2: $\bar{x}=3.30$ reveal $\bar{x}=.70$ not reveal - school 18: $\bar{x}=3.44$ reveal $\bar{x}=0.56$ not reveal). The control group on the other hand, has given an equal number of reveal and not reveal responses (school 2: $\bar{x}=1.97$ reveal, $\bar{x}=2.02$ not reveal - school 18: $\bar{x}=2.02$ reveal, $\bar{x}=2.12$ not reveal).

For the EBD group there is no big difference in the distribution of revealing for external and internal reasons ($\bar{x}=3.10$ int., $\bar{x}=3.55$ ext.). On the contrary, for the control group, nearly all external reasons are revealed ($\bar{x}=3.75$) and all internals are not ($\bar{x}=3.70$). If we are to look at results in terms of percentages, the EBD group gave 23.8% not revealing responses and 76.1% revealing for the internal reasons while the control 89.5% and 10.5% respectively. A 7.2% of the children from the EBD group do not reveal external reasons and 92.7% of the children do reveal them. A 10.1% of the children from the control group do not reveal external reasons and 89.9% of the children do reveal them.

The conclusion drawn is that both groups seem to agree that when the reason you reject someone is external to him/her you tend to reveal it. However, groups have a completely different behaviour as to whether you reveal the reason when it relates to internal characteristics of the person. The EBD children tend to reveal it, but the children from the control group tend not to.

A 3 way analysis of variance (2 within, 1 between) showed significant interactions and differences between the factors involved. As shown in table 40, in both schools and for the probing as well, there is a significant F value for factor B (reveal/not reveal) ($F=48.92$, $df=1,38$ in school 2 ; $F=40.90$, $df=1,48$ in school 18) i.e. there were more reveal than not reveal overall responses. There is also a significant interaction between factors A (EBD/control) and B (reveal/not reveal), ($F=48.92$, $df=1,38$ in school 2; $F=47.04$, $df=1,48$ in school 18).

Table 40: F values of the EBD/control, reveal/not reveal and internal/external factors, in each school.

Factors	sch. 18 F value	probing F value	df	sch. 2 F value	probing F value	df
EBD/control (A)	0.96	0.75	1.48	n.c.	2.00	1.38
Reveal/not (B)	40.90*	34.11*	1.48	48.92*	52.23*	1.38
Int/Ext (C)	0.70	0.09	1.48	0.10	1.27	1.38
Interaction AXB	47.04*	23.75*	1.48	48.92*	53.99*	1.38
Interaction AXC	1.10	0.82	1.48	0.88	1.66	1.38
Interaction BXC	104.23*	158.73*	1.48	116.83*	135.15*	1.38
Interaction ABC	44.40*	49.54*	1.48	53.87*	52.52*	1.38

n.c. : not calculated

* significant values at $p<0.05$

A highly significant interaction was also found between factors B and C ($F=104$, $df=1,48$ school 18 ; $F=116.83$, $df=1,38$ school 2). In both schools there is a big difference between reveal and not reveal for the external reasons (more reveal responses), whereas for the internal reasons the difference is smaller.

The F values of the interactions found above, account for the significant interaction among all three factors in both schools as well as for the probing questions ($F=44.40$, $df=1,48$; probing $F=49.54$, $df=1,48$ school 18), ($F=53.87$, $df=1,38$; probing $F=52.52$, $df=1,38$ school 2). Figures 22, 23, 24, 25, in Append. B, (p.356-357), represent the nature of the interactions.

Overall, findings suggest that, the pervasive EBD children mainly reveal the reason for refusal and they do not seem to make a distinction between revealing internal and external explanations. The control group on the other hand, makes a clear distinction between external and internal reasons and most of the time reveals the external reasons while withholding the internal ones.

When children of the pervasive EBD group are placed in a position to reveal or not reveal the reason they reject a classmate, the internal or external character of the reason does not seem to influence their behaviour. However, the extent to which EBD children can anticipate others' hurt feelings when a reason is revealed, is to be examined in the following level C of data analysis.

2. Parent only group (n = 18)

In both schools, children from the parent only EBD group, mainly reveal the reasons for refusal when they are external (sch. 18: reveal $\bar{x}=4.10$; not reveal $\bar{x}=.66$ - sch. 2: reveal $\bar{x}=3.16$; not reveal $\bar{x}=.50$ - table 41 Append. B, p.339). When reasons are internal, there is a different pattern in the two schools. In school 18 there are similar mean scores (reveal $\bar{x}=1.91$; not reveal $\bar{x}=1.33$). In school 2 there are more reveal than non reveal answers (reveal

$\bar{x}=1.16$; not reveal $\bar{x}=2.83$). EBD children in school 18 appear to have greater insensitivity to internal explanations than the EBD children in school 2. For the control group findings are consistent in both schools. Children tend to chose more overall internal than external reasons for rejection, and they do not reveal the reasons when they are internal, while they do so when they are external. As for the probing questions, scores followed the same pattern as the results from children's own choices (table 42; Append. B, p.340).

A three way analysis of variance was conducted (1 between, 2 within).

Table 43 presents the F values for the variables involved.

Table 43: F values of the EBD/control, reveal/not reveal and internal/external factors, in each school, for children's own choices and for the probing questions.

Factors	sch. 2 F value	probing F value	df	sch. 18 F value	probing F value	df
EBD/control (A)	1.00	n.c.	1.10	n.c.	n.c.	1.22
Reveal/not (B)	0.16	7.76*	1.10	8.83*	5.66*	1.22
Int/Ext (C)	2.62	5.68*	1.10	0.23	2.51	1.22
Interaction AXB	3.40	0.03	1.10	10.43*	0.52	1.22
Interaction AXC	1.91	2.05	1.10	2.84	3.68	1.22
Interaction BXC	89.26*	94.23*	1.10	43.70*	123.20*	1.22
Interaction ABC	4.02	1.92	1.10	5.62*	22.63*	1.22

* significant F value at $p<0.05$ n.c. not calculated

According to the results of the analysis in both schools the key finding is the interaction between factors B (reveal/not reveal) and C (internal/external). There are mainly not reveal responses for internal reasons and reveal for external reasons .

In school 18 there were more significant interactions identified among the three factors than in school 2. There is a significant F value for the two levels of factor B which indicates that children mainly reveal their answers ($F=8.83$, $df=1,22$). An interaction also exists between factors A (EBD/control) and B (reveal/not reveal) ($F=10.43$, $df=1,22$). The EBD group mostly reveals the reasons for rejection whereas the control has an almost equal number of reveal/not reveal responses. A significant interaction was found as well among all three factors ($F=5.62$, $df=1,22$) (Figures 26,27 ; Append. B, p.358)

Overall, the parent- only identified EBD children in this part of the analysis, mainly reveal the reasons they reject a classmate but the nature of the reason appears to influence their behaviour. The difference between revealing or not an internal reason is very small. Thus, EBD children occasionally reveal the internal reasons. Differences between schools are not great. The control groups have a consistent behaviour across schools i.e. they only reveal the reasons when they are external.

3. Teacher-only group (n = 14)

According to the mean scores, in school 18 (tables 44, 45, Append. B, p.342-343), the teacher-only EBD group mostly reveals the reasons for rejection ($\bar{x}=3.35$ reveal, $\bar{x}=.64$ not) which were mainly external ones ($\bar{x}=1.56$ int, $\bar{x}=2.42$ ext). There is no difference in not revealing for the internal/ external reasons ($\bar{x}=.85$ int, $\bar{x}=.42$ ext), whereas there is a difference in revealing between the internal and external explanations ($\bar{x}=2.28$ int, $\bar{x}=4.42$ ext.).

The control group on the other hand gave an almost equal number of reveal ($\bar{x}=2.07$) and not reveal responses ($\bar{x}=1.92$), and of internal and external reasons ($\bar{x}=1.85$ int, $\bar{x}=2.13$). Most of the internal reasons are not revealed and most of the external reasons are.

Concerning the probing questions in school 18, there are still more reveal than not reveal responses ($\bar{x}=2.42$ reveal, $\bar{x}=1.57$ not). The reason for more internal than external reasons relates to the fact that since children have chosen more external reasons, the probing questions were internal. In contrast to the results from children's own choices, there are more not reveal than reveal responses for internal reasons ($\bar{x}=2.00$ reveal, $\bar{x}=3.14$ not). There is no great difference between the reveal ($\bar{x}=2.00$) and not reveal responses ($\bar{x}=2.85$) for the internal reasons, whereas a difference does exist for the not reveal responses ($\bar{x}=3.14$ int, $\bar{x}=0.00$ ext).

In both schools for the EBD group there are more overall external reasons (ext $\bar{x}=2.59$, int $\bar{x}=1.42$), and also more reveal responses ($\bar{x}=2.85$ reveal, $\bar{x}=1.14$ not reveal). However, in contrast to school 2, in school 18, there are more not reveal responses for the internal reasons ($\bar{x}=2.00$) than reveal ($\bar{x}=0.85$). There is a clear cut distinction between revealing internal and external reasons ($\bar{x}=0.85$ int, $\bar{x}=4.85$ ext). The same pattern of findings was found for the control group (reveal internal $\bar{x}=4.00$; reveal external $\bar{x}=3.14$). Results from the probing questions and the control group are very similar to those from school 18.

A three way analysis of variance (2 within, 1 between) showed significant interactions and differences between the variables involved. Table

46, presents the F values.

Table 46: F values of the EBD/control, reveal/not reveal and internal/external factors, in each school.

Factors	sch. 18 F value	probing F value	df	sch. 2 F value	probing F value	df
EBD/control (A)	n.c.	n.c.	1.12	n.c.	n.c.	1.12
Reveal/not (B)	21.05*	0.62	1.12	4.55	0.91	1.12
Int./Ext. (C)	17.05*	2.42	1.12	8.91*	2.96	1.12
Interaction AXB	2.70	4.59*	1.12	0.42	0.69	1.12
Interaction AXC	0.68	0.97	1.12	3.79	4.65	1.12
Interaction BXC	99.10*	134.21*	1.12	196.00*	102.32*	1.12
Interaction ABC	18.97*	10.68*	1.12	0.44	5.05*	1.12

n.c. not calculated

* significant values $p < 0.05$

Only in school 18 there is a significant difference between the two levels of factor B , ($F=21.05$, $df=1,12$) i.e. there are more reveal than not reveal answers. A significant interaction was found for factors A and B in both schools. The EBD group seems to reveal the reasons for refusal most of the times whereas for the control group there is an almost equal number of revealing and not revealing behaviour. A highly significant interaction between factors B and C was found across schools and for the probing questions, showing that the external reasons are mainly revealed whereas the internal ones are mainly withhold. The interaction among the three variables was found to be significant ($F=18.97$, $df=1,12$ - $F=10.68$, $df=1,12$ probing, Figures 28, 29, Append. B, p.359).

Overall, the control group shows a consistent behaviour across schools, towards revealing the external reasons of rejection and not revealing the internal ones. For the EBD group the behaviour pattern is not consistent. Although they tend to choose more overall external reasons and their responses are mainly to reveal the reasons, they seem to be influenced by the nature of the reasons. They do not reveal the internal ones in school 2 whereas in school 18 they occasionally reveal them.

Summarising level B findings for the three groups

The insensitivity of the EBD group towards the internal reasons indicated in the parent-teacher and parent-only groups is not so obvious for the teacher-only group. The differences between the EBD and the control group are fewer than before and the nature of the reason for rejection seems to influence their behaviour. However, the control group draws clear distinctions between the revealing and not revealing of the internal reasons whereas the EBD groups do not. This is consistent for all three control groups.

Level C

This analysis of data is based on children's responses in situations A only (refusing other). It relates to the following variables:

- a) EBD/control
- b) internal/external
- c) reveal/not reveal the reason

Variable C relates to the children's responses on the question "How much would your classmate be hurt when the reason is revealed?" Children's answers were rated on a five point scale. The mean scores of all reveal/not reveal answers for external/internal reasons, are the data for variable C.

At this point of the analysis we wanted to find out whether there are differences between the EBD and control groups in terms of anticipating others' hurt feelings and the extent to which they will withhold a reason in order not to hurt another persons' feelings.

1. Parent-teacher group (n = 45)

Mean scores were calculated for the three variables (tables 47, 48, Append. B, p.344-345). In both schools results are approximately the same for the probing and for the children's own choices. For the EBD group, mean scores are higher for the reveal (\bar{x} =1.42 sch. 18, \bar{x} =1.82 sch. 2) than for the not reveal answers (\bar{x} =.81 sch. 18, \bar{x} =.84 sch. 2) suggesting that, EBD children although they realise that feelings are hurt more when the reason is revealed,

they still reveal it. They also seem to realise that internal reasons hurt more than external ones when revealed (internal \bar{x} =2.41 sch. 18, \bar{x} =1.72 sch. 2- external \bar{x} =1.33 sch. 18, \bar{x} =1.09 sch. 2). The control group as well considers that revealing the reasons hurts more than not revealing them and because of that, in contrast to the EBD group, they tend to withhold them. Accordingly, there is a higher overall mean score for all the not reveal than the reveal answers (reveal \bar{x} =0.56 school 18, \bar{x} =0.61 school 2 - not reveal \bar{x} =2.17 school 18, \bar{x} =1.96 school 2). The same rationale applies to the degree of hurt feelings from the revealing internal versus external reasons. The control group does not reveal internal reasons because they hurt a lot (int. not reveal \bar{x} =3.30 sch. 18, \bar{x} =2.87 sch. 2)

Analysis of variance was performed (1 between, 2 within), to test the interaction of the three variables and a number of significant interactions were revealed (table 49).

Table 49: F values of the EBD/control, external/internal and reveal/not factors (mean scores of scale numbers), in each school separately and for the probing questions as well.

Factors	sch. 18 F value	probing F value	df	sch. 2 F value	probing F value	df
EBD/control (A)	0.93	0.92	1.48	0.09	0.29	1.38
Ext/int (B)	15.96*	116.84*	1.48	45.99*	87.16*	1.38
Reveal/not (C)	5.24*	9.47*	1.48	4.46*	0.99	1.38
Interaction AXB	0.35	0.52	1.48	0.13	3.31*	1.38
Interaction AXC	32.76*	141.32*	1.48	84.51*	46.01*	1.38
Interaction BXC	12.44*	22.63*	1.48	12.68*	5.75*	1.38
Interaction ABC	15.14*	41.43*	1.48	15.67*	17.99*	1.38

* significant values at $p < 0.05$

A significant interaction exists between factors A and C in both schools. As shown by the mean scores, the EBD children in both schools reveal external and internal reasons, regardless of the person's hurt feelings. By contrast, the control group reveals the reasons when feelings are not hurt but withhold them when they are hurt.

A significant interaction was found between the external/internal and reveal/not reveal factors suggesting that when external reasons are revealed they do not hurt the other person's feelings. When reasons are internal they are mainly withhold because it hurts to reveal them. There is a general tendency for internal reasons to hurt more than external ones.

The interaction which is of overriding importance, exists among all three factors (Figures 30, 31, Append. B, p.360). According to the results which are consistent across schools, the EBD group in most of the situations reveals the reasons regardless of being internal or external. They realise, however, that feelings are hurt more when internal reasons are revealed. The control group on the other hand, has given considerably more not reveal answers to the internal reasons than to the external ones, because when internal reasons are revealed they hurt a lot.

These results add evidence to the finding that EBD children seem to be very insensitive to dealing with internal reasons. More specifically, they seem to realise the degree of others' hurt feelings, but they have difficulties in relating hurt feelings with the non disclosing of the reasons accordingly.

2. Parent-only group (n = 18)

For the EBD group in both schools, mean scores of childrens' responses, are higher for the not reveal (sch. 2 \bar{x} =1.95 ; sch. 18 \bar{x} =1.37) than for the reveal responses (sch. 2 \bar{x} =.75 ; sch. 18 \bar{x} =.94). The EBD children seem to realise that when the reasons for refusal are revealed they hurt, thus they tend not to reveal them in general. Children in school 18 seem to realise that internal reasons when revealed hurt more than the external ones (\bar{x} =.34 ext, \bar{x} =1.17 int). Despite that they occasionally reveal them (table 50, Append. B, p.346)

For school 2, internal reasons (\bar{x} =1.50), if revealed, according to the EBD group, hurt nearly as much as external ones (\bar{x} =1.25). There is a small tendency however, for internal reasons to be withhold occasionally (table 51, Append. B, p.347).

For the control groups, results are consistent, i.e. not revealing of the internal reasons, because they hurt a lot (sch. 18 \bar{x} =.75 reveal, \bar{x} =3.32 not reveal ; sch. 2 \bar{x} =.33 reveal, \bar{x} =3.33 not reveal).

A three way analysis of variance was conducted (1 between, 2 within). Table 52 presents the F values.

Table 52: F values of the EBD/control, external/internal, and reveal/not (mean scores of scale numbers) factors, in each school separately and for the suggested reasons as well.

Factors	sch. 2 F value	probing F value	df	sch. 18 F value	probing F value	df
EB/control (A)	0.93	1.97	1.10	1.98	17.84*	1.22
Ext/Int (B)	14.68*	23.63*	1.10	7.52*	84.49*	1.22
Revel/not (C)	19.87*	18.13*	1.10	15.98*	26.70*	1.22
Interaction AXB	0.17	0.03	1.10	2.19	3.94	1.22
Interaction AXC	0.09	0.44	1.10	5.21*	3.30	1.22
Interaction BXC	9.60*	18.24*	1.10	4.28*	43.98*	1.22
Interaction ABC	5.00*	0.25	1.10	6.18*	14.94*	1.22

* significant values ($p < 0.05$)

There is a significant difference between the two levels of factor B (external/internal) across the schools ($F=14.68$, $F=23.63$, $F=7.52$, $F=84.49$) indicating that there are more internal than external reasons chosen. The same findings apply to factor C, ($F=19.87$, $F=18.13$, $F=15.98$, $F=26.70$), i.e. there are more no reveal than reveal responses. Only in school 18 there is a significant interaction between the EBD/control and reveal/not reveal factors, i.e. the EBD and the control group gave more no reveal answers but the difference between reveal and not reveal is clearer for the control than for the EBD group.

Significant F values were found for the interaction between external/internal and reveal/not reveal factors across schools. According to the results, most of the time, internal reasons are not revealed because they hurt a lot whereas external reasons are revealed since they hurt less.

The interaction of overriding importance exists among the three factors, across schools, with the exception of the probing reasons in school 2 (Figures 32, 33 and 34 show the interaction in Append. B, p.361-362)

According to the results, the control groups in both schools consider the revealing of reasons, in particular the internal ones, very hurtful, thus they do not reveal them. In the case of school 18, they even consider external reasons hurtful sometimes, thus they do not reveal these either. The EBD groups mostly do not reveal the reasons especially when they are internal because they hurt a lot. However, sometimes they do reveal them even if they are hurtful.

Findings from this section of the analysis are consistent with the previous levels of analysis which indicated that the EBD group is to a certain extent influenced by the nature of the revealed reasons. However, although they realise that the revealing of internal reasons hurts a lot, sometimes they do reveal them. According to these findings, the parent-only identified EBD group appears to fail to choose internal reasons in comparison to the pervasive and stable (teacher/parent identified EBD children).

3. Teacher-only group (n = 14)

Means and standard deviations of the three variables were calculated and are presented on tables 53 (school 2) and 54 (school 18) in Append. B (p.348-349).

According to the mean scores, the EBD group in school 2, realises that

the revealing of the reasons for rejection hurts a lot, and tends to withhold them ($\bar{x}=0.84$ reveal, $\bar{x}=1.84$ not reveal). There is a mean difference between the withholding of external ($\bar{x}=0.85$) and internal reasons ($\bar{x}=2.83$). However, there are times that internal reasons are revealed because children think they do not hurt a lot (int $\bar{x}=1.07$ reveal, int $\bar{x}=2.83$ not reveal). The same pattern is followed for the probing questions.

In school 18 there is a different pattern. Mean scores for reveal and not reveal are almost the same ($\bar{x}=1.34$ reveal, $\bar{x}=1.40$ not reveal), suggesting that although children realise that it hurts to reveal a reason, very often they do so. They also seem to anticipate that internal reasons hurt more when revealed, but they still do so. Similar results were found for the probing questions.

For the control groups, results indicate that internal reasons are rarely revealed and this is only when they are not considered hurtful (sch. 2 $\bar{x}=0.86$ reveal, $\bar{x}=3.23$ not reveal ; sch. 18 $\bar{x}=0.35$ reveal, $\bar{x}=3.06$ not reveal).

A three way analysis of variance was conducted (1 between, 2 within), the F values are presented in table 55.

Table 55: F values of the EBD/control, external/internal, and reveal/not (mean scores of scale numbers) variables, in each school and for the probing questions.

Factors	sch. 2 F value	probing F value	df	sch. 18 F value	probing F value	df
EBD/control (A)	0.26	1.67	1.12	0.01	0.46	1.12
Ext/Int (B)	10.88*	23.63*	1.12	14.40*	150.66*	1.12
Reveal/not (C)	0.20	0.43	1.12	0.66	4.19	1.12
Interaction AXB	17.30*	20.308*	1.12	4.66	11.21*	1.12
Interaction AXC	0.85	0.42	1.12	3.73	2.62	1.12
Interaction BXC	13.21*	8.46*	1.12	0.38	30.38*	1.12
Interaction ABC	0.52	4.75	1.12	7.30*	5.49*	1.12

* significant values at $p < 0.05$

There is a significant F value across schools for factor B i.e. there are more internal reasons chosen than external ones. The F values are also significant for factor C in school 2 and for the probing questions in both schools i.e. there are more no reveal answers, because revealing a reason hurts a lot. An interaction between factors B and C is found in school 2 and for the probing situations in both schools, indicating that the internal reasons are mainly not revealed because they hurt considerably more than external ones. Only in school 18 the three factors are found to interact for the children's own reasons ($F=7.30$, $df=1,12$) as well as for the suggested ones ($F=5.59$, $df=1,12$). The control group does not reveal the internal reasons because they hurt more than external ones, while the EBD group reveals them although children still realise that they hurt a lot more than the external ones (Figures 35, 36 , Append. B, p.362-363).

Summarizing, the children in the teacher-only EBD group in school 18

appear to be more sensitive to internal reasons than children in school 2. In school 18 children can anticipate the degree of hurt feelings from the revealing of a reason, especially an internal reason. However, they seem to have difficulties in relating hurt feelings with disclosing the reasons accordingly. In school 2, the EBD group is much closer to the control, and both do not reveal internal reasons most of the time because of the degree of perceived hurt.

Summarising level C findings for all three groups

The children in the parent/teacher EBD group, although they realize that when internal reasons for rejection are revealed hurt a lot, they tend to reveal them. The children in the other two groups i.e. parent only and teacher only, seem to anticipate hurt feelings from internal reasons and do not always reveal them. The children in all three control groups consistently do not reveal internal reasons for rejection.

Level D

Analysis of data is related to all situations B, i.e. when the child is refused by a classmate. The variables involved are the following:

- a) EBD/control
- b) the child's negative feelings on the 5 point scale (means) from the revealing of external or internal reasons.

The intention of the analysis is to find out whether there is a difference

between the degree of hurt feelings of the EBD and the control group when the reasons for refusal are external versus internal.

1. Parent-teacher group (n = 45)

In both schools, for children's own choices and for the probing questions, mean scores are very similar (table 56, Append. B, p.350). Both groups have higher mean scores for hurt feelings from internal reasons (\bar{x} =2.52 school 2, \bar{x} =2.44 school 18), than from external ones(\bar{x} =1.12 school 2, \bar{x} =0.86 school 18). There is a difference however, between the mean scores of hurt feelings derived from external reasons in the EBD (sch. 2 \bar{x} =1.60 ; sch. 18 \bar{x} =1.27) and control groups (sch. 2 \bar{x} =0.65 ; sch. 18 \bar{x} =0.46).

A two way analysis of variance (1 Between, 1 Within), revealed significant results as it is shown in table 57.

Table 57: F values of the variables EBD/control and hurt feelings in each school for the probing questions and for children's own responses.

Factors	sch. 18 F value	probing F value	df	sch. 2 F value	probing F value	df
Ext/Int (A)	140.61*	301.31*	1.48	56.48*	292.44*	1.38
EBD/control (B)	2.12	7.86*	1.48	2.15	1.17	1.38
Interaction AXB	21.298	23.39*	1.48	12.96*	16.318	1.38

* significant values at $p < 0.05$

Findings in both schools follow the same pattern. A highly significant difference was found between the two levels of factor A ($F=140.61$, $df=1,48$ school 18 ; $F=56.48$, $df=1,38$ school 2). The significant interaction between the groups and the hurt feelings from external and internal reasons suggests that, internal reasons definitely hurt more than external ones when revealed. However, it is found that for the control group there is a clear cut distinction, i.e. children are hurt a lot when the reason is internal and very little when it is external. On the other hand, for the EBD group the difference between hurt feelings from external and internal reasons is not so great. What the results suggest is that the EBD children seem to be hurt mainly by the fact that the reason of rejection is revealed to them and not by the nature of the reason (internal vs external). Figures 37, 38, in Append. B (p. 363,364) represent the interactions graphically.

2. Parent-only group (n = 18)

According to the mean scores presented in table 58 (Append. B, p.351), findings follow the same pattern across schools for the EBD and the control groups. Both groups agree that internal reasons when revealed hurt more than external. There are higher mean scores for both groups for the reveal internal ($\bar{x}=2.74$ EBD, $\bar{x}=3.03$ control, in school 18 - $\bar{x}=2.80$ EBD, $\bar{x}=2.54$ control, in school 2), than for the reveal external ($\bar{x}=0.82$ EBD, $\bar{x}=0.41$ control, in school 2 - $\bar{x}=0.77$ EBD, $\bar{x}=0.67$ control, in school 18).

A two way analysis of variance (1 within, 1 between), revealed

significant interactions as expected. Table 59 presents the F values of the analysis.

Table 59: F values of the variables EBD/control and hurt feelings, in each school (probing and children's own choices).

Factors	sch. 2 F value	probing F value	df	sch. 18 F value	probing F value	df
EBD/control (A)	0.92	0.73	1.12	0.08	0.11	1.22
Hurt feelings from revealing ext/int reasons(C)	143.68*	656.83*	1.12	491.07*	362.74*	1.22
Interaction AXB	0.25	1.91	1.12	11.84*	4.22	1.22

* significant values ($p < 0.05$)

There is a highly significant difference between the two levels of factor B across schools. The interaction between the two factors is significant only in school 18 ($F=11.84$, $df=1,22$). It seems that when external reasons are revealed, children in the EBD group are hurt more than children in the control group. On the other hand, it seems that when internal reasons are revealed, children in the control group are hurt slightly more than children in the EBD group. (figure 39, Append. B, p.364). There is a slight tendency in this direction, in the probing questions in school 18.

Results from this section of analysis are not consistent with results from the same analysis conducted for the EBD group identified by both parents and teachers. The parent-only EBD group seems to draw a clear distinction between hurt feelings from external and internal reasons i.e. internal reasons hurt more than external ones.

3. Teacher-only (n = 14)

Table 60 (Append. B, p.352), presents the mean scores, in both school for children's own choices and for the suggested reasons as well. There were no big differences between the EBD and control group, in both schools. Children are hurt more when the revealed reason is internal (\bar{x} =2.22 EBD, \bar{x} =2.46 control, in school 18 - \bar{x} =1.62 EBD, \bar{x} =2.86 control, in school 2), than when it is external (\bar{x} =0.63 EBD, \bar{x} =0.85 control, in school 18 - \bar{x} =0.75 EBD, \bar{x} =0.42 control, in school 2). The difference between mean scores for hurt feelings from internal versus external reasons are slightly greater for the control than for the EBD group.

A two way analysis of variance (1 within, 1 between) revealed significant results as it is shown in table 61.

Table 61: F values of the variables EBD/control, and hurt feelings, in each school and for the probing questions.

Factors	sch. 18 F value	probing F value	df	sch. 2 F value	probing F value	df
EBD/control (A)	1.26	0.04	1.12	3.31	1.53	1.10
Hurt feeling from revealing int/ext reasons (C)	24.93*	189.73*	1.12	86.36*	105.20*	1.10
Interaction AXB	0.00	3.44	1.12	19.17*	0.02	1.10

* significant F values at $p < 0.05$

There is a significant difference between the two levels of factor B indicating that internal reasons hurt more than external ones when revealed, for both the EBD and control groups. Only in school 2 the interaction between the two factors is significant ($F=19.17$, $df=1,10$). Both groups are hurt more by internal than external reasons, however, the difference between hurt feelings from internal and external reasons is clearer for the control group. The children from the EBD group sometimes tend to get hurt by external reasons (Figure 40, Append. B, p.365)

Results from this part of the analysis are similar to those derived from the parent-only identified group, i.e. the nature of the reason revealed influences the degree of perceived hurt feelings.

Summarising level D findings for all three groups

According to level D findings, children from the parent-teacher EBD group seem to get hurt by the mere action of revealing and the internal/external nature of rejection does not influence the degree of their hurt feelings. In contrast, children from the parent-only and teacher-only EBD groups as well as those from the three control groups, were hurt only by internal reasons.

5.4.4. Summary of the results from data analysis

Table 62 provides a summary of the overall results from the four levels of analysis, for the three EBD groups.

Table 62: A summary of the results from the four levels of analysis for the three EBD and control groups.

		parent teacher		parent-only		teacher-only	
		EBD	cont	EBD	cont	EBD	cont
<u>Level A</u> What type of reasons are mostly chosen for self vs others' failure and rejection	for own failure & rejection	ext	ext int	ext	ext int	ext	ext int
	for others' failure & rejection	ext int	ext int	mostly ext	ext int	mostly ext	ext int
<u>Level B</u> Are reasons for rejection and failure revealed	yes revealed	ext int	ext	ext int	ext	mostly ext	ext
	not revealed	na	int	ext int	int	int	int
<u>Level C</u> Which type of reasons hurt more when revealed to the peer	hurt a lot	int	int	int	int	int	int
	hurt a little	ext	ext	ext	ext	ext	ext
<u>Level D</u> Which type of reasons hurt more when related to personal rejection	hurt a lot	ext int	int	int	int	int	int
	hurt a little	na	ext	ext	ext	ext	ext

n.a. not applicable i.e children declared that all reasons when revealed hurt considerably.

According to the results from level A, the parent-teacher identified EBD group has been found incapable of choosing internal explanations. Children have chosen far more external than internal reasons in particular when they themselves were refused or failed on a certain task (situations B). They seem

to attribute personal failure and rejection in social and working relations to external reasons. Others' failure tends to be attributed to both external and internal reasons. This tendency is more obvious in school 18. The same results are obtained for the parent-only group, however, this time results were more obvious in school 2. The tendency for more external reasons was identified for the teacher-only group, with no school differences. Results were consistent for the three control groups i.e. both external and internal reasons can account for school failure and peer rejection.

According to the results from level B, the parent-teacher identified EBD group mainly reveals the reasons for refusal and failure and the nature of the reason (external vs internal) does not seem to influence their behaviour. There are no school differences. The parent-only identified EBD group mainly reveals all the reasons but there is a small tendency to withhold internal reasons. Once more, there are no school differences. For the teacher-only EBD group, school differences do exist. In school 2, the children in the EBD group do not reveal internal reasons. In school 18, they mainly disclose all reasons although there are times that internal reasons are withheld. The control group has produced consistent results across the three parts of the analysis, i.e. they only reveal the external reasons.

According to the results from level C, children in the parent-teacher identified EBD group seem to anticipate others' hurt feelings but they have difficulties relating the degree of hurt feelings to the revealing or not of the reasons of refusal. Thus, they reveal both internal and external reasons even if they realize that internal reasons hurt more. The parent-only EBD group,

seems to be influenced by the nature of the reason. They realize that internal reasons hurt more when revealed, thus most of the time do not reveal them. There are no school differences for the above group. There are school differences for the teacher-only identified EBD group. EBD children in school 18, can anticipate the degree of hurt feelings from internal reasons but despite that they still reveal them. EBD children in school 2 are closer to the results of the control group i.e. do not reveal internal reasons because they hurt very much.

Results from level D of the analysis indicate that the parent-teacher identified EBD children are hurt almost equally by the revealing of external and internal explanations. The parent-only and teacher-only EBD groups as well as the control groups draw a clear distinction between their hurt feelings from external and internal reasons. They are only hurt when the reasons are internal.

Overall, children in the parent-teacher identified EBD group consistently fail to choose internal reasons with major differences from the children in the control group. There are no major differences between the two schools. The parent-only and teacher-only identified EBD groups seem to be less capable of choosing internal reasons and their attitudes to internal and external explanations are closer to the results of the control group. There are, however, school differences and the EBD children from school 18 fail more often to choose internal reasons than the children from school 2. Results from the three control groups are very consistent across the four levels.

5.4.5. Testing for reliability/replicability of the results

In order to test the reliability of the present results, a further group of 25 children with EBDs was interviewed and their responses to the situations i.e. questionnaire items, were compared with those of the main study.

Eight teachers from an inner-city school in Athens completed the Rutter scales for children in their classes, who according to their opinion exhibited EBDs. The head teacher of the school being a close friend of the researcher offered to provide help on collecting data from his school. Thirty children were originally identified by teachers (19 boys - 11 girls). Their parents were called to school and were asked to complete the parents' scales. Five of the children identified by teachers were not identified by parents, thus, only twenty five children were included in the sample, 17 boys and 8 girls (mean age 10.2 yrs). Table 63 below gives the scores on both scales.

Table 63: Children's scores on the Rutter scales according to teachers' and parents' ratings (n=25).

subjects	teachers	parents		Subjects	teachers	parents
1.	16	20		14.	8	15
2.	13	14		15.	10	13
3.	10	14		16.	11	21
4.	14	15		17.	18	30
5.	13	16		18.	8	16
6.	10	19		19.	9	16
7.	9	15		20.	13	21
8.	9	15		21.	21	30
9.	8	15		22.	11	20
10.	11	20		23.	12	17
11.	11	19		24.	10	17
12.	12	18		25.	11	13
13.	15	20				

The procedure followed was exactly the same as in the main study. Children were interviewed at school one at a time and the situations were read to them by the researcher. Results are as follows. The analysis of data were a replica of the analysis of the main study, i.e. done in four levels.

Level A:

Analysis of data were based on children's choices on external/internal reasons provided for both situations A (refusing others) and situations B (refusing self). Mean scores for the external/internal reasons in the refusing others situations (A), are very similar ($\bar{x} = 5.04$ int., $\bar{x} = 4.96$ ext.). Mean scores for the internal/external reasons in situations B (refusing self), were very different ($\bar{x} = 7.44$ ext., $\bar{x} = 2.56$ int.). Results from the same level in the main study are very similar (sit. A: $\bar{x} = 4.84$ int., $\bar{x} = 5.15$ ext. - sit. B: $\bar{x} = 3.80$ int., $\bar{x} = 6.20$ ext.). Two way analysis of variance revealed a significant difference between internal/external reasons ($F = 43.20$, $df = 1,24$, $p < 0.05$), and an interaction between situations and internal/external reasons ($F = 73.45$, $df = 1,24$, $p < 0.05$). It was verified that others' rejection and failure is attributed to both external and internal reasons whereas personal failure is mostly due to reasons outside the person (external).

Level B:

Analysis of data based on children's reveal/not reveal responses on the question "would you reveal the reason you refuse to your classmate".

Overall, when children revealed their reasons, there was a great

difference between the mean scores of reveal ($\bar{x} = 3.42$) and not reveal ($\bar{x} = 0.70$) answers. Very similar mean scores were found for the not reveal answers in both external ($\bar{x} = 0.36$, $sd = 0.57$) and internal ($\bar{x} = 0.80$, $sd = 0.85$) reasons. There are no great differences between mean scores for the reveal answers ($\bar{x} = 3.84$, $sd = 0.94$ ext. - $\bar{x} = 3.00$, $sd = 1.35$ int.).

Analysis of variance identified a significant difference between the two levels of factor B ($F = 212.44$ $df=1,96$, $p<0.05$) and a significant interaction between the two factors ($F=10.79$, $df=1,96$, $p<0.05$).

The conclusion drawn is that the children tend to reveal the reasons of rejection and failure most of the time regardless of the external/internal nature. The direction of the present results is the same with the results from the main study.

Level C:

Analysis of data deriving from children's responses on the question " how much would your classmate be hurt when you reveal the reason" (situations A refusing other).

According to the children's responses, feelings are hurt more when the reasons are revealed ($\bar{x} = 1.54$ overall reveal, $\bar{x} = 0.81$ overall not reveal). They also seem to realise that internal reasons hurt more when revealed ($\bar{x} = 2.47$, $sd = 0.87$) than the external ones ($\bar{x} = 0.61$, $sd = 0.41$), but still tend to reveal them both. Two way analysis of variance indicated a significant difference between the two levels of A ($F= 15.85$, $df=1,96$, $p<0.05$) and B

($F=71.07$, $df=1,96$, $p<0.05$). Results from this level of analysis are identical to those of the main study.

Level D

Analysis of data on this level concerns all situations B, i.e. when the child is refused by a classmate or fails in a task, and examines the extent of children's hurt feelings from revealing the reasons of rejection.

Findings suggest that although internal reasons hurt more when revealed than external ones, the revealing of external reasons sometimes hurts as well ($\bar{x} = 1.5$, $sd = 0.47$ ext. - $\bar{x} = 2.75$, $sd = 1.03$ int.). Analysis of variance (one way ANOVA) verified the results from mean scores ($F=30.79$, $df=1,49$, $p<0.05$). The findings are the same as those from the main study.

In conclusion, results from all four levels of analysis are almost identical to those from the main study and confirm that children in the parent-teacher identified EBD group show a consistent failure in choosing internal explanations. It can be concluded that the present findings as well as those from the main study, indicate important and replicable differences between the children in the EBD and control groups. Results are further considered and discussed in the following section.

5.5. Discussion

During the first stage of the study, children identified some school situations which according to them created negative feelings. These situations have been the basis for the construction of the questionnaire on which data were collected for the main study.

According to children's responses, the school situations which created negative feelings to them were mainly difficulties with learning and social and working relations with peers. Previous researchers have formulated or used existing instruments in order to investigate similar areas and have included situations very similar to those provided presently by the children. Marsh et al. (1984) for example, investigating the relationship between dimensions of self-concept, used the Sydney Attribution Scale which consists of brief hypothetical scenarios describing academic success and failure. Similarly, Little (1985) investigating children's understanding of the causes of success and failure in British schools (5-14yrs), has interviewed children on simple stories representing a range of achievement events. Achievement in reading, maths and art was included. A self-report questionnaire entitled "Children's Negative Cognitive Error Questionnaire" was constructed by Leitenberg et al. (1986) in order to measure children's negative cognitive errors. The areas investigated in relation to children's cognitive errors were the athletic, academic and social, which were again presented in the form of a hypothetical story. The study which has largely influenced the methodological aspects of the present

research, was the one by Weiner & Handel (1985). They interviewed children on short hypothetical scenarios regarding school and social rejection situations. However, the procedure they followed in order to produce these scenarios is not discussed in their article and hence, cannot be compared with the present one.

In the present study children have also provided the alternative responses to each of the five stories. The bipolar taxonomy of the internal/external dimension was used by the researcher to categorise children's responses. The elicited responses related to: a) ability e.g. "I am not very good at games", b) effort e.g. "I do not try hard", c) task difficulty e.g. "Homework was very hard to do", d) environmental factors e.g. "My parents could not help me". Most of these causes of failure and rejection have been included in the studies mentioned above and have been central in many others (Schneider & Leitenberg, 1989; Weiner, 1985; Waas & Honer, 1988; Wigfield, 1988).

The method used for the elicitation of situations from the children, was earlier proposed by Goldfriend & D'Zurilla (1969). Their method for generating situational taxonomies relevant to particular populations, consisted of asking people working with children (e.g. teachers, clinicians) as well as children themselves, to provide situations relating to the issues of the research focus. According to Dodge & Feldman (1990), "this method is not only comprehensive and systematic but also leads to the identification of situations that have meaning for the participants." This was the ultimate objective of the present research i.e. to identify situations which create negative feelings for

the children, within the school environment, which would be representative of their experiences. Previous studies in the area of children's EBDs have used this method and have identified the following five kinds of problematic situations: responding to threats or insults, responding to provocative behaviours, being excluded from play situations, initiating peer friendships and fulfilling group norms (Freedman et al., 1978; Dodge et al., 1985; Asarnow & Callan, 1985). The situations identified in the study are in accordance with previous research findings.

The five situations referring to social and working relations were treated together and children's responses were analysed regardless of the situation. This was based on the rationale that all problematic situations identified by children were situated within the school area and all created negative feelings to them. It was decided that given the small number of situations and the relatively small number of subjects it would not have been feasible to have a reliable comparison across the different situations.

Evidence from previous research in regular classes suggests that there is a modest, but consistent, positive relationship between school achievement and peer rejection. Studies have pointed out that children with learning difficulties were less liked and more rejected than their more academically successful peers (MacMillan & Morrison, 1984; Taylor et al., 1987). According to Taylor (1990), one of the suggestions made by previous studies is that it is the combination of school underachievement and behaviour difficulties that contributes to the problematic social relations of the children with learning difficulties. In the present study, however, the association between learning

difficulties and EBDs has not become evident. Nevertheless, children from the EBD group were lower achievers in maths and language than their counterparts in the control group. The fact that the social and working relations are so closely related has made it relatively safe to analyse present situations together.

The research review showed that few studies have dealt with children's self-attributions which was one of the aims of the present study. Most of them have presented children with stories in which the protagonist was another person (e.g. Waas & Honer, 1988; Little, 1985). Moreover, even fewer studies have been concerned with comparing children's self-attributions to other-attributions and have not included children with EBDs.

Concerning the second aim of the research i.e. children's ability to anticipate others' feelings and withhold or reveal reasons for rejection, there were only a couple of relevant studies found. One study done by Taylor & Harris (1984) investigated the knowledge of strategies for the expression of emotion among maladjusted and non-maladjusted boys. Subjects were asked to imagine that they received a gift that they did not like from a favourite relative and had to indicate the facial expression they would display to the relative. Another study by Gnepp & Chilamkurti (1988) examined children's abilities to take other people's personality traits into account when predicting their future emotional and behavioural reactions to events. However, this study examined only the anticipation of others' feelings and did not relate that to the subjects' behaviour. The Weiner & Handel (1985) study as already mentioned, is closely related to the present study. Their results will be discussed later on

in this section.

The present research, despite its limitations, throws some light on areas not previously researched by comparing EBD children's self-attributions to other-attributions and by comparing EBD children's attributions to those of a non-EBD group. It also provides evidence on children's ability to anticipate others' feelings and on the extent to which their behaviour is influenced when others' emotions are anticipated.

One of the major contributions of the present research is the fact that it allows for comparisons between the three EBD groups which emerged from the first study, i.e. the pervasive and stable EBD group identified twice by teachers and parents, the teacher-only EBD group identified twice by teachers and the parent-only group identified twice by parents. This is a very important outcome which has not been dealt with in any previous study.

As already mentioned, the parent/teacher EBD group included children with mainly antisocial and inattentive behaviours with a few emotional difficulties which however, had a lower frequency of occurrence than the rest. The parent-only EBD group included mainly children with hyperactive and antisocial difficulties with even less emotional difficulties than in the teacher/parent group. The teacher-only EBD group was a mixed group since out of the thirteen most frequent behaviours, four related to emotional difficulties, five to antisocial behaviour and four to hyperactivity.

The main findings relate to the differences identified between the three EBD groups and the control groups in terms of how children explain failure and rejection in social and working relations. While the control groups reported

external and internal reasons to be almost equally responsible for personal and others' failure, the EBD groups made different causal attributions for themselves and others i.e. external self-attributions but both external and internal for other-attributions. When the EBD children fail at certain school related tasks or are socially rejected, they attribute their failure mainly to outside factors such as task difficulty and environmental adversities over which they have no control. However, both internal and external factors are held responsible for their classmates' failure or rejection. These findings were further tested on a group of 25 children with EBDs and results confirmed the pattern of results in the main study, thus, adding to the validity of the questionnaire and findings.

The present results could be given various explanations based on the existing literature and on similar research areas. We have already referred to John's & Nisbett's actors and observers model. According to this model, there are differences between actors' and observers' attributions. Actors make mainly situational attributions and tend to explain their actions as being determined and controlled by outside factors. Observers on the other hand, tend to see other people's actions and behaviour as being due to their dispositions.

According to the present results, this model does not seem applicable to the control group because children in this group tended to make both situational and dispositional attributions to self and others' actions without clearly differentiating between the two. However, this model could be seen as partially relevant to the results from the EBD groups. EBD children seem to

follow the attributional pattern proposed by John & Nisbett and as actors they mainly made situational attributions denying any personal involvement in the outcome of their actions. Nevertheless, they did not seem to follow the dispositional attribution pattern for the observers' role and seem to perceive an interplay of internal and external factors influencing peers' behaviour.

If we accept the rationale put forward by John & Nisbett, there are informational and perceptual differences between actors and observers which can explain the present results. EBD children as actors have more information about their personal actions, attitudes, intentions and motivation than as observers, and in addition, they see the situation as more important because they focus on it. Whereas as observers, they see the actors (peers) as more important since they are the focus of attention. The same behaviour therefore will be perceived from different physical perspectives by actors and observers. So perhaps EBD children made more situational than personal attributions following the actors' rationale.

Another possible explanation for the differences between EBD children's self and others' attributions could be found in the assertion that EBD children hold negative attitudes towards success and are not motivated to succeed. This possible explanation brings into the picture issues about the importance of past experiences and achievement motivation.

Educational research has provided evidence that negative past achievement-related experiences can shape children's attributions about success and failure. In other words, repeated school failure and we may add, failure in maintaining successful interpersonal relationships, is an important

factor influencing the child's attributional pattern. Hence, it is possible that EBD children have experienced failure in the past in those two domains over which they feel they had no control, and these past experiences have shaped their present causal attributions.

At the same time significant others may have been important determinants regarding the formation of negative attributional beliefs. For example, recent research has provided evidence that parents can influence their children's achievement beliefs by socializing them to expect different levels of achievement (Eccles, 1983; Phillips, 1987). However, whether it is the child's failure that influences parental attitudes, or parents' own beliefs and attitudes that influence children or it is an interplay of both, is an issue which has not been directly resolved so far.

Nevertheless, the end result is that children develop a negative perception of their abilities and progressively display less motivation in achievement situations which in turn would increase the likelihood of future failure. Consequently, children end up showing a greater reliance on external attributions which is what was found by the present study. Results, however, from the area of learning difficulties and causal attributions are rather confusing because there are many studies which point out that children with learning difficulties make internal attributions to failure (Frieze & Snyder, 1980; Bogie & Buckholt, 1987) whereas others provide evidence for the opposite (Pearl et al. 1979; Bachrach et al., 1977; Dweck & Repucci, 1973).

Previous research has tried to explain different attributional patterns based on developmental changes. A great number of studies have identified

age differences in children's causal attributions. For instance Waas & Honer (1988), studied elementary school boys in grades two, four and six. They examined the development of situational attributions and dispositional inferences about peers. The results showed that younger boys made more positive evaluations of the target group and mainly attributed conflict to unstable and external factors, whereas older boys tended to attribute negative interactions to stable, intentional and internal factors. Earlier research on the development of causal attributions has demonstrated age-related differences in children's reasoning about feelings and emotions. For instance, Curtis & Schildhaus (1980), studied nursery school children and reported that when children were asked to attribute the cause of an event either to the actor's personality or to the situation, they made more personality attributions to others than to themselves for both positive and negative outcomes. The findings were explained on the basis of the actor-observer effect and also on the assumption that young children experience difficulties in viewing themselves objectively.

Taken together, from a cognitive-developmental perspective it is not until middle childhood that children develop an accuracy and complexity concerning inferences about emotions and their causes. As they grow older and mature cognitively they tend to move from an external stance to an internal.

In the area of school success and failure young children have been found to be less self-reflexive than older children. For example, Rholes & Ruble (1984), showed that younger children do not use traits to infer cross-

situational stability of behaviour, while older children do. Further, Goetz & Dweck (1980), found in the social domain and Rholes et al. (1980), in the academic, that for some children the use of trait concepts may be connected with maladaptive behaviour. Harter (1983), Weisz (1984) and Wigfield (1988), also reported age differences with younger children attributing both success and failure more to luck than did older children. They also demonstrated that young children do not adequately distinguish between outcomes contingent on skill from outcomes resulting from chance or other noncontingent factors.

If we accept evidence deriving from the above mentioned studies and rely on a cognitive developmental theory, we could explain the present results as follows: EBD children mainly in the parent/teacher group and to a lesser extent in the parent and teacher-only groups, show a cognitive immaturity which influences their causal attributions of personal failure and rejection in working and social relations. The fact that EBD children were able to make both external and internal attributions for other children's failure and rejection, qualifies the above explanation. Children seemed cognitively mature enough to see others as either personally or situationally responsible for failure but could not attribute personal failure and rejection to internal factors.

One possible version of the "cognitive immaturity proposition" might be that children tend to be situationally immature but not generally so. On the other hand, recent research has vigorously challenged the view of a developmental shift from external to internal attributions and has considered factors such as the degree of experience with the behaviours under question

and cultural determinants as well. For instance, Miller & Aloise (1989), claimed that even 4yrs old children can understand the psychological causes of behaviours and that the internal-external dichotomy used by developmentalists is oversimplified and not well specified. They further discuss different types of internal/external causes operating within a situation and claim that under certain conditions young children prefer psychological internal causes to physical external ones.

Little (1985), challenged the evidence on attributional beliefs concerning age differences. He suggested that age effects were most likely due to classroom environments and he proposed three alternative explanations for the phenomenon. Firstly, that children of different ages are not equally accurate in their perception of academic success and failure. Secondly, the objective determinants of success and failure of the 5yrs old children are not the same as of the 14yrs olds. Thirdly, teachers differentially explain the success and failure of children at different ages.

Research on hyperactive and aggressive children provides some evidence about these children's causal attributions which closely relates to the present results. Chaney & Bugental (1982), studied the extent to which hyperactive and non hyperactive children see success or failure as caused by factors under personal control. They identified significant differences between the hyperactive and control group. Hyperactive boys were less likely than the comparison group to attribute success and failure to effort or ability and generally believed they had less control over their academic outcomes. They also identified age differences with older children having a greater sense of

perceived control and younger ones assigning greater importance to luck as a causal function.

Comparing research evidence of young children, hyperactive and LD, Chaney & Bugental (1982), found it reasonable to suppose that the attributions of the three groups are to some extent veridical in that they reflect their inexperience with effort-outcome covariation. Similar results are reported by Linn & Hodge (1982), who studied the locus of control of hyperactive children, however, not in relation to success and failure but in more general terms. According to their results, hyperactive children are more "external" than non-hyperactive children. Schneider & Leitenberg (1989), compared aggressive and withdrawn children's causal attributions for success and failure experiences (self-esteem and optimism/pessimism) in social, academic and athletic situations. They studied four groups of children aggressive, withdrawn, aggressive/withdrawn and control. They identified a significant difference among them on the tendency to attribute successful outcomes to ability. The control group had the highest scores on this measure in comparison to the withdrawn and combined withdrawn/aggressive, but did not differ significantly from the aggressive group. The researchers did not identify any significant difference between the groups on attributions to lack of ability for failure. However, of the four groups all but the aggressive/withdrawn, made less attributions of failure to lack of ability than attributions of success to ability. In particular, the aggressive group had the lower score in this measure.

As shown in the research review in chapter 3, no prior attempt has been made to directly compare aggressive with withdrawn children on their

causal attributions to success or failure in work and play situations. Results from the Schneider & Leitenberg study (1989), suggesting that aggressive children have a more self-enhancing attributional response style, a higher self-esteem and make more positive self-evaluations than withdrawn children, are very important and justify many theoretical aspects concerning the heterogeneity of the term EBDs.

In the first chapter of the present research reference has been made to the nature and definitions of the term EBDs and it was argued that this is an umbrella term under which many conditions can be found. The present results on children's attributions to failure are very similar to the results of the aggressive group in the Schneider & Leitenberg study (1989), if we consider the fact that the three EBD groups identified in the present study mainly included children with behavioural difficulties. However, emotional as well as behavioural difficulties were identified in the teacher-only EBD group. Thus, when conclusions are to be drawn, great attention should be paid to the composition of the EBD group and simple generalizations should be avoided.

So far, an attempt has been made to relate the present results to the empirical evidence from the literature. Most of the studies and the theoretical basis on which they stand, to a lesser or greater extent, provide some support for the present findings regarding EBD children's preference of external attributions for personal outcomes. However, none of them seems to adequately and fully explain the present results and moreover, none of them seems to address the asymmetry identified between attributions for personal and others' failure made by the EBD groups. An explanation which is

considered very plausible, though not completely adequate on its own, is the one based on the so called self-serving bias (Marsh et al., 1984; Miller & Ross, 1975), or the "hedonic bias" discussed by Heider (1958).

According to Heider, for an event to be seen as attributable to a given reason, the reason has to fit the wishes of the person. Generally, individuals appear to be biased towards explaining events in a manner congruent with a positive self-evaluation. The self-serving bias is considered to be an attempt to protect or enhance self-esteem and it is an ego-protective strategy (Harter, 1983; Marsh et al., 1984). Riess et al. (1981), argued that this phenomenon represents either "conscious, intentional distortions" in order to protect one's public image, or "unconscious, unwitting distortions in perceptions of causality" that accurately reflect one's self-perceptions. The children in the three EBD groups in the present study, seem to have the ability to understand that both external and internal reasons can be responsible for others' failure. However, either consciously or unconsciously they choose to make external causal attributions to personal failure in order to protect or defend themselves. Miller & Ross (1975), argued that it is important to distinguish between self-protection effects, or attributions which involve denying responsibility for negative consequences, and self-enhancement effects, or attributions which involve claiming responsibility for positive results.

Prior research has also provided evidence that a defence or self-serving attributional pattern is associated with higher self-esteem and lower depression in children (Fielstern et al., 1985; Seligman et al., 1984). Supportive evidence is provided by Schneider & Leitenberg (1989), who refer

to earlier studies which reported that aggressive children are high in self-esteem. If we again consider the fact that behaviour difficulties mainly characterized the present EBD groups, we could propose a similar explanation, i.e. children give external causal attributions to failure in order to protect a high self-esteem. These explanations may apply to the teacher/parent EBD group but are relatively tentative for the parent and teacher only groups, since emotional as well as behavioural difficulties were present in those two EBD groups and at the same time, the present study did not provide information on children's self-esteem.

The defensive explanation seems to be more applicable presently. Children in the EBD groups may have experienced peer rejection and school failure. Based on these experiences, one way to deny personal responsibility is to place responsibility on the environment.

Borrowing from the psychoanalytic terminology - but not literally applying the theory - we may say that children respond to lack of effort or ability by using defences, whether this is intentional or unintentional. Some researchers suggest that this effect represents a deliberate distortion and that it is a defense against some negative experience such as low self-esteem or anxiety, whereas others argue that it may be quite rational and not represent a bias at all. So far, no study has been located that included this possible explanation for the causal attributions of children with EBDs. There is however, a substantial body of early literature which has documented that "normal" subjects indeed are more likely to attribute personal success to internal causes while attribute failure to external ones (Miller & Ross, 1975; Zuckerman,

1979).

Regarding the second aim of the present research, there is evidence that EBD children in all three groups, have the ability to anticipate others hurt feelings when external or internal reasons of rejection are revealed or withheld. Results were consistent for the three control groups. Children clearly differentiated between revealing the external reasons and withholding the internal ones, i.e. when you reject someone and the reason is internal to the person you do not reveal the true reason because the person will be hurt.

Differences were found among the three EBD groups as well. The parent only and teacher only identified groups had similar responses to the control groups, i.e. internal reasons tend not to be revealed because they hurt the other. However, in the parent-teacher EBD group, children tended to reveal both internal and external reasons. They were able to anticipate that disclosing internal reasons of rejection hurt their classmates considerably more than the revealing of external reasons. Nevertheless, this anticipation did not seem to influence their actions and they communicated the reason regardless of its nature. These differences between the EBD groups can either relate to the different composition of the groups i.e the children in the parent-teacher EBD group had more intense and pervasive difficulties than the children in the other two EBD groups, or it can relate to the small number of children in the parent and teacher- only groups.

The ability to anticipate the behavioural and emotional reactions of other people is considered by many researchers a prerequisite for a successful social interaction (Gnepp & Chilamkurti, 1988). The way children

draw inferences about others' inner psychological experiences and emotional reactions has been a major theme in the social cognition literature and reference has already been made to the relation between social cognition and social behaviour (Chapter 4). Research has mainly dealt with children's ability to infer an emotional reaction from a personality attribution (Berndt & Heller, 1985; Rholes & Ruble, 1984) and with the development of relations between cognitive-affect and action-behaviour. Studies demonstrated that there is an understanding that internal reasons for rejection influence others' self-esteem and generally evoke negative feelings to the other person, an ability which is manifested by the age of six. Children's behaviour is guided by this knowledge (Shantz, 1983; Graham et al., 1984).

Developmental changes are reported by Higgins et al. (1981), who claim that older children may be well aware that making others feel bad or angry has implications for their own well-being and may be detrimental to social goals by endangering social bonds. They also make the assumption that younger children may not be concerned about the feelings of others or think that it is not inappropriate to arouse unpleasant feelings.

Relative to the present study is a study done by Taylor & Harris (1984), with two groups of 7-8yrs and 10-11yrs old children. They compared emotionally disturbed children with non-disturbed ones in terms of their knowledge about strategies and rules for the display of emotions. Children were faced with situations in which they receive a gift that they do not like, from a favourite relative. They were asked to indicate what facial expression they would display to the relative and to explain their choice. Results indicated

a developmental change in spontaneous reference to a display rule and this developmental trend was retarded among maladjusted boys of comparable age to the experimental group. It seems that only the older "normal" subjects were aware of the need to avoid hurting others' feelings. The maladjusted boys made fewer spontaneous reference to control strategies both with respect to the masking of disappointment and to the control of aggression. The researchers imply that maladjusted boys either lack knowledge of control strategies or they know such strategies but find it difficult to apply in practice and/or choose to adopt counteraggression instead. Similarly, in the present study, children from the parent/teacher EBD group, although they realised that the revealing of internal reasons has negative implications for their fellow students, they did not choose to avoid hurting them by withholding the truth.

Along the same lines, Weiner & Handel (1985), studied children's (5-12yrs) anticipated emotional consequences of causal attributions and their communication strategies. They introduced children to scenarios describing social rejection situations, similar to the ones used in the present study. They found out that younger children were just as aware as the older ones, that internal causes for rejection give rise to greater hurt feelings than do external causes. They also found that overall there was a greater tendency to withhold internal rather than external uncontrollable causes. However, the younger children (5-7yrs) were more likely to reveal an internal reason. The conclusion drawn was that although all children in the study could anticipate the emotions elicited through communicating certain reasons, not all of them intended to act on this information. The older children have chosen to conceal responses in

order not to elicit negative emotional reactions in the other person, whereas the younger children have shown an adherence to communicating the truth. Researchers provided various explanations for these developmental differences. Findings could be explained on the basis that older children have more options available than younger children and are more likely to display a discrepancy between public and private beliefs.

This is probably related to what Piaget called moral realism, a moral development stage during which young children tend to comply with the rules and have very rigid perceptions of law and order. There has been a long standing speculation that behaviours such as temper tantrums, aggression, destructiveness, defiance and uncooperative behaviour, relate to an inadequacy in children's capacity to make moral judgements (Smentana, 1990). For example, Bear & Richards (1981), identified developmental delays in moral reasoning.

Another factor which could have influenced young children's behaviour is the experimental setting. Children might have been less willing to appear dishonest to the experimenter. One could add the possibility that older children are in a position to understand or even know from experience, that evoking negative emotions to others might have negative implications for themselves as well. If we refer to the literature on empathy, one could also claim that younger children might not have yet developed the ability to empathize with others and avoid hurting them. Graham & Weiner (1986), reported that as children grow older their affective life becomes richer and more differentiated and it also begins to play a more central role as a guide to social behaviour.

Consequently, older children become more sensitive to a variety of cognitively based cues, including emotional feedback.

All the above explanations which mainly imply developmental differences could well apply to the present findings in explaining the behaviour of the parent-teacher EBD group. They do not however, apply to the teacher and parent-only EBD groups because the responses of the children in those two groups were more similar to the controls rather than to the parent/teacher EBD group.

If we are to adopt the above explanations, we accept that to a certain extent children whose EBDs are pervasive and stable tend to be socio-cognitively immature in relation to the attributional style of other children of similar ages. However, even if it is very tempting to support such a statement we should be very careful and take into consideration counterarguments (Zuckerman, 1979). For instance, Sohn (1977), argued that results based on self-attributions do not need to agree with those based on attributions about hypothetical others. He presented results that demonstrated the importance of these findings. Weiner (1979), as well, argued about the importance of the self-versus-other distinction in attribution research.

Evidence from the last level of data analysis (examining whether internal or external reasons hurt more when they relate to personal rejection and failure), demonstrated differences between the parent-teacher EBD and control group only. The parent-only and teacher-only groups produced the same results as the controls, i.e. when internal reasons of rejection are communicated they hurt more than when they are external. Also if personal

failure in social and work relations is due to internal factors hurts more than when it is due to external factors. The pervasive and stable EBD group tended to be almost equally hurt from internal and external reasons. To them it is the rejection/failure, i.e the end result, that counts. The reasons which produced the rejection/failure, do not seem to increase or decrease their hurt feelings. Unfortunately no studies have been located along similar lines and comparisons can not be made.

Conclusions

Summarizing, there are two main findings in the present study: the first relates to the distinct differences found between the parent-teacher EBD and control group and the second to the differences found between the three EBD groups. Perhaps the stronger the relationships between children's causal attributions and EBDs, the more intense and pervasive the emotional and behavioural difficulties are. Evidence from the subsequent study on the 25 children with EBDs has verified this relationship, however, it needs to be further examined since the sample size of the present study does not allow for generalizations and only gives tentative explanations mainly relating to the pervasive and stable EBD group which was mostly characterized by behavioural difficulties.

Concluding, the present results do not seem to wholly verify the "cognitive-developmental immaturity hypothesis". However, there is an

indication that the attributions made by the children in the parent/teacher EBD group were different from those made by the control group, and according to the literature, these attributions are more representative of younger children. Considering the limitations, findings seem to indicate that children with pervasive and stable EBDs, adopt a self-enhancing attributional response style which is ego-protective. The fact that the children in the pervasive and stable group, a) denied any personal responsibility for failure and rejection b) were hurt when they were rejected regardless of the nature of rejection, implies that their external attributions are a conscious defence to protect themselves from negative emotions. This interpretation is more tentative for the parent and teacher-only EBD groups because children in those two groups did not consistently fail to choose internal explanations.

It should be made clear that the area investigated by the present study has been very inefficiently researched and because the evidence provided is relatively new, we should be careful with the explanations we provide. The differences identified between the three EBD groups as well as between the pervasive/stable and the control, need to be further investigated and in greater detail before more precise theoretical explanations can be developed.

CHAPTER 6: GENERAL DISCUSSION AND CONCLUSIONS

Introduction

Chapter six includes a final discussion of the issues addressed in the research and makes conclusive comments on the findings. The theoretical issues of terminology, prevalence, factors associated with EBDs and assessment, which were analysed in the first study, are summarized. The relevance of socio-cognitive development to EBDs, is pinpointed. The focus, objectives and design of the two studies included in the research, are also summarized.

The chapter concludes with the evaluation of methodology and the contributions and practical implications of the present research.

6.1. Theoretical significance of the present research

The present research has underlined the fact that ever since researchers became interested in studying the psychological problems of school age children, many terms have been used to define conceptually and operationally those problems. So far, there is no definition that is generally agreed upon. This is mainly due to the fact that social and cultural expectations make the definitions of EBDs relative. In addition to that, different theoretical models use their own definitions and measurement devices.

The term which has mostly been of use the last decade in the UK, is emotional and behavioural difficulties which is the equivalent of behaviour disorders in the US. The term EBDs deriving from an educational background, has replaced the term "maladjustment" which was officially used in Britain for many years.

In Greece, the term "social maladjustment" has been used to define children with severe emotional and behavioural problems, whereas in practice most of the children with mild or moderate EBDs are either grouped together with learning disabled children or go undetected with no special educational provision. In practical terms, children with EBDs are not recognized as a group of children with special educational needs.

The term EBDs was adopted by the present research acknowledging the fact that there is a mutual interaction between emotional and behavioural difficulties. By using such a generic term the present research tried to avoid reliance on any single theoretical approach explaining the nature of EBDs. On

the basis of evidence indicating the situation specificity of EBDs, this research has called for a more eclectic approach in order to identify and assess these difficulties.

It has been very difficult, as shown in the literature, to provide a precise answer to the question "how many" pupils with EBDs are likely to be found in schools (chapter 1). Prevalence rates of EBDs can vary enormously across studies since there are so many factors which influence the occurrence of the difficulties. The effect of vague and inconsistent definitions is considered to be one major difficulty. The situation specificity of EBDs is another problem since many difficulties may be present only at school or only at home. Thus, depending on where the study takes place different prevalence rates may be reported. Even within the same school, teachers may have different perceptions of emotional and behavioural difficulties. Furthermore, the methods employed by researchers can affect the final estimates.

In chapter two, it has become obvious that so far, a commonly accepted instrument to identify EBDs is not available. Even so, instruments use different thresholds which may vary not only across cultures but within the same country. Child factors such as gender and age, have also been found to affect the onset of EBDs thus, affecting prevalence rates. There is for example a clear-cut sex difference demonstrated by many studies which confirms that EBDs are more often identified in boys than in girls and more specifically this is the case with behavioural difficulties. At the same time, studies have also provided evidence of correlations between learning difficulties and EBDs.

Demographic factors relating to school and home could also affect

estimates of EBDs. The social class variable has been considered by many researchers a potential influence on the onset of EBDs, as well as home adversities such as marital discord, parents' psychological health and overcrowded families. The catchment area of a school which broadly relates to differences in home school and community environments, seems to influence prevalence rates of the difficulties. Differences in prevalence rates have been reported between socially disadvantaged inner city areas and advantaged urban or rural areas. In that context, estimates from different studies in the U.S. and Europe, vary from as little as 1% to 30% of school age children having EBDs.

Reference has been made (chapter 2) to the importance of early identification and the full assessment of children's social and emotional needs, which is considered essential by most researchers and necessary for helping children. The initial identification of the difficulties is done mostly by parents and/or teachers who refer the children to professionals. Assessment techniques are largely influenced by different theoretical models, namely the medical, psychodynamic and behavioural. These models have been summarized as well as the most commonly used assessment methods, i.e. interviews, observation and rating scales. All three of them have advantages as well as disadvantages and many arguments have been raised about the issues of validity and reliability. Of the three, behaviour rating scales have been discussed in greater detail since the Rutter scale was used for the identification of the sample group. Rating scales have become a very popular assessment method for EBDs in the U.K. and the U.S., mainly because they

are economical in cost, effort and time and provide a rather comprehensive picture of the problem areas. Most of the studies have used parents, teachers or both, as informants of children's difficulties. The issues of validity and reliability of their ratings as well as issues of interrater agreement have been extensively discussed in previous research as well as in the present one (chapter 2).

In the last decade a fast growing area of research in developmental and educational psychology, has been children's social cognition. The developmental study of social cognition lies on the border between cognitive and developmental psychology. Topics that were traditionally within the preserve of developmental psychology, such as attachment and emotional development are being approached from a cognitive perspective, focusing on the child's developing understanding. Respectively, issues within the cognitive domain such as conservation and concept formation are approached from a social perspective and their social-interactional aspects are studied.

Deriving from the notion that the way children think relates to the way they behave, reseachers studying children began to explore the links between socio-cognitive, affective and behavioural processes. A number of studies presented in chapter 3 have identified relations between the child's capacity to experience emotions and the development of cognitive capabilities such as role taking, decentration and causal attributions. An attributional approach to emotional development is guided by the belief that cognitions/causal attributions precede or alter emotional experiences that include pity, anger, guilt, etc. Thus, developmental differences in the experience and

understanding of these emotions result from age-related changes in the linkage between causal thought and emotional experiences.

There are a number of attribution theories and what binds them all together is the argument that children seek to find the causes of behaviour. These theories discussed in chapter 3, deal with the way children (people), process information to arrive at a judgement about the causes of their own or other people's behaviour. The theories are also concerned with how the products of the processing of information are used to guide children's conduct. Research has documented that past negative experiences such as achievement related failure and social rejection, influence children's causal attributions. If achievement failure and social rejection are seen as due to internal personal factors, then low self esteem and negative feelings are experienced. If they are perceived as due to external situational factors, then anger or pity are experienced. The attribution of a child's successes or failures to him/herself, to luck, or to environmental causes may affect the child's future behaviour. This notion has been introduced into both clinical and educational fields with great advantages.

There are a great number of studies on children's socio-cognitive development, on their use of causal attributions in relation to success and failure and on their ability to anticipate others' hurt feelings. However, the way children with EBDs think and feel about themselves and their relationships with others and the way they anticipate others' feelings, is an area not well studied. Reference has been made in chapter 3 to studies which provide information on the causal attributions of children with learning difficulties, aggressive and

rejected children as well as to studies of children with depressive symptoms.

An array of theoretical issues in the field of causal attributions have been addressed by the present study. The dispositional/situational model which explains differences between actors and observers on the grounds of informational and perceptual differences has been discussed. The influence of cognitive-developmental changes on children's attributional patterns has been sustained based on previous relevant studies. Evidence has also been provided for the relevance of a self-serving attributional pattern which is considered to be an attempt to protect or enhance self esteem and it is an ego-protective strategy. The issues raised by those theoretical perspectives have largely contributed to the assumptions drawn by the present research.

6.2. Focus and objectives of the research

A substantial body of epidemiological research has provided prevalence estimates of children's emotional and behavioural difficulties in different countries. The educational and social implications of these studies have become apparent in many countries, e.g. U.K. and U.S., through the implementation of special intervention and educational programmes as well as through the provision of family services. In Greece there have been very few similar studies providing information on children with EBDs and their findings, so far, have very little if no implications for meeting the educational and social needs of children with EBDs, on a state basis.

There are many studies in Europe and the U.S, which have related children's social behaviour and successful social relationships to social cognition. However, this body of research has not adequately dealt with the social cognition of emotional and behavioural difficulties neither in Europe nor in the U.S., let alone in Greece. Within this context, the general objectives of the present study were twofold:

- a) to identify a sample group of primary school age children who demonstrated EBDs and examine some key characteristics of these children
- b) to investigate the ways in which children with EBDs interpret difficult work and social situations and examine their abilities to anticipate others' hurt feelings.

The research was divided into two studies.

Objectives of the first study

The overall aim was the search for a specific group of primary school age children who could justifiably be described as demonstrating EBDs. The assumption made was that since children with EBDs are not recognized as a separate group in Greece, they could be identified within the population of an ordinary school.

The first set of research questions was related to the relevance of the Rutter rating scales to the Greek context in terms of the reliability, validity and discriminant ability of the scales. The second set of research questions related to, a) the identification of the characteristics of these children in order to accurately describe their difficulties, and b) the extent to which there was a

parent/teacher agreement in order to deal with the situation-specificity issue and study possible differences between the EBD groups identified by different informants. The third set of research questions was related to factors associated with EBDs i.e. is there a relationship between emotional/behavioural difficulties and the child's gender or age? Do factors relating to social class and disadvantaged school area relate to EBDs? What is the relationship between EBDs and learning difficulties?

Objectives of the second study

The major aims of the second study were to investigate the ways in which children with EBDs understand and interpret difficult work and social situations and examine their abilities to anticipate others' feelings. Deriving from these aims, more specific research questions were examined. The study aimed at a) defining the three groups identified in terms of specificity and pervasiveness and b) identifying possible differences between the three EBD groups studied, as well as between these groups and their controls, in terms of how they process information relative to school social situations and how they handle them.

Differences were studied between children's self versus others' internal/external causal attributions. The extent to which the nature of social rejection and failure influences children's behaviour was another important research question.

6.3. Design and findings of the research

6.3.1. Design

Through the use of the Rutter behaviour scales, parents and teachers have identified a group of primary school age children with EBDs in Athens, Greece. Both sets of respondents rated children twice over a four month interval, in order to show the stability of the difficulties and take account of the situation specificity of the difficulties (chapter 4). The children with some indication of stable EBDs, on the basis of parents' and teachers' ratings, were divided into three groups according to informants' scores, i.e. one group was pervasive and stable over time identified twice by parents and teachers, one group identified twice by teachers only and one identified twice by parents only. Groups were studied separately in order to account for differences between them.

The three EBD groups identified during the first study were the target groups of the second study. A four stage process was followed in order to achieve the objectives of the study (chapter 5). During the first stage, through group discussions, children have identified difficult school situations which created negative feelings. A questionnaire was designed based on the situations provided by children. Scenarios were presented in a hypothetical form with external/internal responses explaining their outcomes. The second stage, included the piloting of the questionnaire, examined the validity of the attribution statements and evaluated the administration procedure. The third stage was the main study which considered findings from the previous stage

and used the final form of the instrument to interview children. The fourth and final stage included the testing for reliability of the main findings on a new group of 25 children with EBDs.

The target groups were matched with control groups in terms of age, sex, SES and school attainment, and were interviewed on the questionnaire situations. There were two experimental conditions, one investigating personal causal attributions and one causal attributions of others' behaviour.

6.3.2. Findings

a) First study

In part one of the analysis, data from the whole sample were analysed (n=266). According to the results from an item analysis, the difficulties identified by both respondents mostly related to behaviour difficulties. However, there was an indication that parents and teachers identified different difficulties in children. Parents have mostly identified conduct disorders and the most frequently occurred behaviours were disobedience, temper tantrums, restlessness, fighting, eating difficulties and headaches. Teachers on the other hand, identified emotional difficulties as well as conduct disorders. According to them the behaviours which were more frequently occurring were, poor concentration, restlessness, fighting, irritability, disobedience, worrying, being fearful, fussy and miserable. Both sets of respondents seemed to agree on their ratings about the least frequent behaviours i.e. truants, not liked, twitches, sucks thumb, soils, tears at school and stuttering.

Overall, 35.3% of the children in the two schools were identified with EBDs, according to both respondents. The overlap in both scales was 16.1%. A 6.4% of the children were identified with EBDs by parents only, whereas 12.8% were identified by teachers only. Results have indicated that the school in the disadvantaged area had a higher number of children exhibiting EBDs.

According to the results, gender and social class in relation to the school area variable, were found to correlate positively with EBDs. Present results are in accordance with previous research findings which indicate that boys more often than girls have emotional and behavioural difficulties. What the present study has further indicated is that the intensity of the difficulties is also higher for boys. The tendency identified in the present study for more behavioural difficulties attributed to boys and more emotional difficulties attributed to girls, although not statistically significant, implies a different profile of EBDs for boys and girls.

The factor analysis of teachers' scores revealed three factors, an antisocial, an antisocial-hyperactive and an anxious-neurotic. The factor analysis of the parents' scores revealed neither a coherent antisocial nor a neurotic factor according to the Rutter subscales. However, all behaviours identified were closely related to the EBDs profile and were mainly antisocial and hyperactive behaviours.

The overall correlation between parents' and teachers' ratings was moderate (.40) and statistically significant. There was a tendency for a higher agreement between the two respondents for boys than for girls, which, however, was not statistically significant.

In part two of the analysis, data from the children identified with EBDs were only included, since this group of children was the core sample of the research and more information was needed in order to accurately describe it.

Stability of ratings was shown on the teachers' and parents' scales. Scores were found to be consistent over time and the age, school and gender variables did not seem to have influenced respondents' ratings.

Parents' educational level was also found to be associated with EBDs. Most of the parents of the EBD groups had a lower educational level in comparison to the controls. This correlation between EBDs and social class seems to agree with previous research findings. The fact that one of the schools in the study was located in a socially disadvantaged area, seems to have influenced the high number of children identified. In the disadvantaged school area there were more children with EBDs and difficulties seemed to be more frequent and intense. Reference has been made in chapter 4, to the literature and empirical evidence which has shown that social class as well as school related factors relate to EBDs. The present results indicate that this association holds true for the children with EBDs in the two Greek schools context.

Results from the data analysis on school attainment indicated that children from the pervasive EBD group function at a lower level of achievement in language and maths than their control, but in no way did they exhibit learning difficulties. According to teachers' assessment, they seem to perform at a satisfactory level.

b) Second study

The data analysis of the second study was divided into four levels. In each of those, the three EBD groups were studied separately in comparison to a control.

The major objective in level A was to identify differences between the EBD groups and their controls in terms of the reasons chosen by children to explain personal and others' failure and rejection. The pervasive and stable group (parents/teachers) which was mainly a group with behaviour difficulties, has failed to choose internal reasons in the sense that they made different personal and others' attributions i.e. they attributed personal failure and rejection to external reasons tending to deny personal responsibility, whereas they made both internal and external attributions for others' failure and rejection. The control group made both internal and external attributions for the two conditions.

The teachers' EBD group (a mixed EBDs group), was closer to the pervasive and stable group and parents' EBD group (mainly children with behaviour difficulties), was closer to the control.

In level B, the objective was to find out whether the internal/external nature of rejecting a classmate, would influence the subjects' behaviour. The EBD children in the parent/teacher group indicated that they will reveal the reasons for rejection regardless of their nature. The EBD children in the parent-only group mainly revealed internal reasons and only occasionally they did not reveal them. Children in the teacher-only EBD group had similar answers to all three control groups, and only revealed external reasons.

In level C the intention was to examine whether the children in the EBD and control groups could anticipate others' hurt feelings when the reasons for rejection were revealed and whether their behaviours were associated with this anticipation.

Differences were not identified in children's ability to anticipate others' negative feelings. Children in all three EBD and control groups were able to anticipate that when internal reasons are communicated, they hurt considerably more than external ones. However, differences were found between the EBD groups in children's reactions to this anticipation. Children in the parent/teacher EBD group communicated both internal and external reasons although they realised that internal reasons hurt more. EBD children from the parent-only and teacher-only groups, mostly did not reveal internal reasons because they hurt a lot, however, occasionally they did.

In level D the objective was to find out how the subjects themselves felt when the reasons for rejection were communicated to them. Results for the parent and teacher only EBD groups were similar to the three control groups i.e. their feelings were hurt considerably more when the internal reasons of rejection were revealed to them rather than when the external ones were revealed. However, children from the parent/teacher EBD group were equally hurt by the revealing of internal and external reasons of rejection.

Reference has been made to school differences. The EBD group from school 18 (lower class area) seemed to be more incapable of choosing internal reasons than the EBD group in school 2 (middle-class area). Differences were more obvious between the two teacher-only groups. Children from the parents'

only EBD group, as already mentioned, had results similar to the control groups. The tendency for school differences in the teacher EBD group raises issues about the reliability of teachers' identification. i.e. possibly the children identified by teachers in school 2 were false positive cases of EBDs, whereas in school 18, teachers may have chosen children more reliably. Results have also been related to school and social class influences. During the first study of the research evidence for the importance of these two factors was identified i.e. most of the children in school 18 had parents from the lower educational and occupational levels and their behavioural and emotional difficulties were more frequent and severe. It has been suggested that the differences identified between the two schools in the teacher only group are related either to social class factors or to inaccurate teachers' perceptions.

The present results are in accordance with earlier studies which provide evidence indicating that demographic characteristics are associated with attributional differences. For example attributional differences were found with regard to gender (Dweck et al., 1978), race (Friend & Neale, 1972) and socioeconomic status (Raviv et al., 1980; Falbo, 1975). Raviv et al. (1980) found that children with low socioeconomic status (SES) tended to attribute their failure more to stable than unstable causes, while children with higher SES tended to attribute their failure more to internal than to external causes. Similarly, Falbo (1975) found that middle-class children tended to attribute negative outcomes to effort more often than did lower-class children.

A subsequent analysis of data from a newly identified group of 25 children, has produced almost the same results on all four levels of analysis

and has provided evidence for the reliability and replicability of the results.

6.4. Evaluation of the methodology

The results obtained from the pilot of the first study, showed that the Rutter scales could be applied to the Greek context. Most teachers have defined children with behaviour and emotional difficulties using behaviour characteristics present in the actual Rutter scales and the cut-off points used by teachers and parents to identify children were very similar to those set by Rutter. It was considered fairly safe not to use other methods for identifying the most appropriate cut-off scores (e.g. Receiver Operating Characteristic - ROC - analysis), since the scales have been used in Greece before and the appropriate cut-off points have been established. Special attention was given to translating the scales as accurately as possible into the Greek language.

Inviting parents to school and completing the questionnaires through a semi-structured interview with the researcher, helped to maximize respondents' rate and also increased the likelihood that questionnaires were fully completed.

Although the three EBD groups identified showed stable difficulties (high test-retest correlations), the fact that the heterogeneity of EBDs was not considered and subgroups relating to the Rutter scales have not been identified, limits generalizations. The relatively small sample of the research has possibly further limited the identification of subgroups. However, the study

has accounted for the situation-specificity nature of EBDs and the identification of the three EBD groups (parent/teacher, parent-only, teacher-only) has been of major importance and interest. The study has also identified a fairly well defined EBD sample and has defined emotional and behavioural difficulties in functional terms.

It has not been possible to account for both mothers' and fathers' responses mainly because of time pressure. This measure could have provided a more valid identification of the sample. Mainly due to the structure of the Greek educational system, it has not been possible to collect information on children's behaviour from a second teacher. Since there are many variables which may have influenced teachers' perceptions of difficulties, a second opinion could have been very helpful.

Referring to the second study, group discussions proved to be a helpful and valid way of eliciting negative situations from the children. Similar constructs to the ones identified presently have been identified by other studies in the area. The questionnaire situations were formed based on content analysis, and a group of teachers and psychologists have verified the validity of the provided reasons as either external or internal attributions.

The pilot study then provided useful information on the administration procedure, the wording and the structure of the questionnaire. The use of probing questions was found very useful since they served as a validity cross-check for children's first choices of internal/external reasons of rejection.

One of the major drawbacks in attribution research in general, is the poor quality of measurement instruments. Measurement procedures have not

yet developed an adequate degree of sophistication and the issues of validity and reliability are not always considered. The lack of comparability of measurement procedures used by different researchers makes the comparison of results from different studies a difficult task. In the present research, the reliability and replicability of the results were tested and verified on a new group of children with EBDs whose responses on the questionnaire were compared to those from the original sample.

Relating to the use of the external/internal dichotomy used in the present research, many writers have challenged the assumption that causal attributions cannot be adequately described by the single bipolar dimension of external/internal. Most of them agree that the exact number of causal dimensions is somewhat equivocal although it certainly includes locus (internal/external), stability (stable/unstable), controlability (controllable/uncontrollable) and intentionality (intentional/unintentional). According to Ladd & Crick (1989), most investigators have failed to utilize the three dimensions (locus, stability, controlability) which are considered necessary to classify beliefs. They have called for more differentiation among the types of external/internal causes in order to clarify the nature of developmental changes in causal reasoning, and suggest that the external/internal dichotomy oversimplifies and misleads research results. It is, however, a first step towards studying causal attributions and it gives a good indication of the direction of attributions which indeed needs further investigation. Thus, presently the criticisms applying to the use of the external /internal dimension are accepted, and the limitations of the present study are

recognized. However, the present validity check on the external/internal dimension by the group of teachers and psychologists has shown that the distinction between the two dimensions is valid - at least presently - and makes the present findings important and interesting, since they provide some indication of the direction of the attributional pattern of children with EBDs.

According to previous research results, attributions are content specific and we should not generalize causal attributions from academic and social areas to other content areas. We could even argue that a distinction should be made between academic and social causal attributions since they refer to different kinds of situations. Within this context, it could have been worthwhile to account for this distinction in the present study and examine possible differences between the two areas. However, since both situations were placed in the school environment, and the sample size and number of situations was small, it was considered relatively safe that they were discussed together. However, care is needed in applying results in other content areas outside schools.

Considering all the above, some doubts about the validity and reliability of the instrument still remain. It has already been mentioned that further research is needed which will enable us to compare results and examine the applicability of the instrument to larger samples of children of similar ages and experiences in the first place, followed by research on different age groups.

6.5. Contributions of the present research and practical implications

The overall objective of the present research has been to draw together the areas of emotional and behavioural difficulties and social cognition. The ultimate goal was to provide evidence of the significance of socio-cognitive processes in understanding children with EBDs. More specifically, the study focused on determining the extent to which children with EBDs perceive, interpret and react to school related difficult situations differently, from non-EBD children. The research also examined whether children with EBDs form a coherent group with respect to how they construe social situations. Considering the fact that there is a limited amount of previous relevant studies in Europe and the U.S., and also the fact that in Greece children with EBDs are not even recognized as a group with special educational needs, the present study fulfilled its goals and has provided a fine identification of EBDs as well as a better understanding of how these children think and respond to emotionally arousing situations. The practical and theoretical implications of this contribution concern the people working with children with EBDs, and urge for more suitable educational provision and social rehabilitation.

So far, previous research in the area of EBDs, has not focused on comparing different EBD groups. It has either used only parents or only teachers or when both were used, the EBD group identified was treated as a composite one. In that respect, the present research by studying three different EBD groups, contributes to existing knowledge and adds useful information to our understanding of the heterogeneity and situation specificity

of EBDs. There is a clear indication that differences exist between the three EBD groups in relation to their interpretation of difficult school-related situations and accordingly, in relation to their attributional patterns. These differences need to be taken into account when we talk about children with emotional and behavioural difficulties since they seem to illustrate a pattern of response which might be relevant to understanding how their difficulties are maintained.

According to respondents' ratings, the children in the parent/teacher EBD group had more intense and pervasive emotional and behavioural difficulties than the children in the other two EBD groups. This finding as well as the moderate correlations which were found between parents' and teachers' ratings for the parent/teacher EBD group, suggest that the more pervasive the EBDs the higher the agreement between the different informants. Those children who were identified twice by both respondents, had difficulties which were persistent across situations and were more pervasive than those of the children in the parent or teacher-only groups.

These results are very important because they add to our understanding about the nature of emotional-behavioural difficulties and provide a finer identification of EBDs. Evidence from the present research has also theoretical implications for assessment. It suggests that behaviour rating scales for identifying EBDs need to distinguish between milder and more severe EBDs. It also indicates that this kind of assessment needs to be cross situational, since according to the results, the more severe the EBDs, the more pervasive.

Another major contribution of the present research relates to the fact that the study is looking for differences between the three EBD groups and their controls which might reflect on possible causal mechanisms. Many explanations have been provided for the differences identified between the pervasive (parent-teacher) EBD group and the control as well as for the differences between the three EBD groups. The cognitive immaturity hypothesis, the actors and observers' model, the importance of negative past experiences, the self-serving bias as well as the self-fulfilling and defensive explanations, have been analysed in the discussion section of chapter 5. However, none of the above explanations seems to completely and adequately explain the results on their own. At the same time it is not an easy task to provide theoretical shelter for an area which is relatively new. Nevertheless, the present study provides information on understanding the processes by which children with EBDs mishandle social situations and adopt maladaptive ways of coping. Thus, it sheds some light on the relationship between EBDs and causal attributions and provides promising ground for further research in the area. However, we need to appreciate the fact that we do not know how these children would operate in real life situations and that limits the present findings.

The specific relationship found between EBDs and attributional factors, could not be explained in terms of low academic abilities or attainment since the findings indicate that the children with EBDs studied presently, perform at a satisfactory level in school.

The findings also contribute to the area of peer relations and provide

grounds for further research in attributions and peer interactions. Studies in the area so far, have shown that children with peer relation problems who tend to aggress inappropriately in peer situations, seem most likely to experience externalizing problems (Rubin, 1985) and consequently, may be most likely to assign external causes to negative interpersonal outcomes. Supportive evidence is provided by the present research for the above ideas and previous research is in accordance. For example, in the Sobol & Earn study (1985), neglected children tended to view causes as being more internal than did rejected children. Ladd & Crick (1989), have shown that neglected children were more likely to attribute negative outcomes to external causes especially for relationship outcomes. These results warrant further empirical consideration and future investigation is needed in the area relating social success and failure to EBD children's attributions and feelings.

The practical implications of the present research relate to the more general implications that attribution theory has for the educational process. Studies have demonstrated convincingly that causal attributions influence achievement outcomes, i.e. the intensity of work at these activities, the degree of persistence on difficult tasks, the generalization of negative past experiences. These behaviours, manifestly influence the degree of learning in school settings, have implications for successful social interactions and influence children's feelings and self-esteem. In that respect, the present practical implications relate to helping teachers and parents better understand and explain children's behaviours and feelings and inform their interventions with appropriate counselling and support. Professionals in the area can benefit

from working on the understanding children make of negative situations and unravel aspects of their communication patterns.

The present results have some practical implications for the social skills training area. So far, the research has shown that problems in this area are indeed related to many emotional and adjustment problems and that children who manifest social skills difficulties also suffer from EBDs and academic problems. The finding that the EBD children in the parent/teacher group in particular, revealed hurtful reasons for rejecting their classmates, may illustrate a process by which children with EBDs may come to express social aggression. This aggressive social interaction may elicit counter aggression and/or social rejection from their peers and adults.

Since social behaviour permeates all aspects of life for children and affects their later adjustment and happiness, social skills deficits should be seen as a major part of the underlying etiology of EBDs. They should also be seen as an area where efforts may have very beneficial preventative effects as well. For children with EBDs, present and future adjustment may greatly depend on whether their social skill difficulties are identified and remediated. Thus, the present results seem to urge educational services for children with EBDs to include motivational as well as intellectual inputs in their educational objectives. For example, schools should provide children with opportunities to develop the basic social skills and behaviour needed in order to deal with the world in a competent fashion and help them ultimately to enhance their self-control over the environment. Teachers should try to convince their EBD pupils that effort is a major determinant of achievement and social outcomes, and

that effort and persistence can cause school and social success. The present findings also give directions for future research in the area since the EBD children of the study do not seem to have learned the key social skills necessary for initiating and maintaining positive social relationships with others.

In conclusion, cultural questions are raised by both studies. Firstly the applicability of the Rutter scales needs to be further tested in a larger Greek population. Secondly, most of the research in the area of EBDs and almost all research in the area of attribution was conducted in the the U.S. and the U.K. This raises questions concerning ethnic differences. Of course, studies have taken place in different countries - a few in Greece - and reference has been made to them whenever possible, relating to prevalence rates of EBDs. Relating to the causal attributions area, some studies have taken place elsewhere (Bar-Tal et al., 1980 in Israel; Dyal, 1984 in Britain, India, Nigeria, Hungary; Faustman & Mathews, 1980 in Sri Lanka; Rupp & Niwicki, 1978 in Hungary) and all have reported relationships between causal attributions and achievement as well as differences between internal/external attributions. Nevertheless, there is not enough evidence on the relationship between EBDs and causal attributions which will enable us to make comparisons within countries let alone between different countries.

Before any generalizations are to be made from the present results, we should consider cultural influences on the educational network in Greece, the value placed on education and achievement by parents and teachers, Greek teachers' perceptions, child rearing practices and the extent to which these

aspects, can affect prevalence rates of EBDs as well as childrens' social cognition. Aspects like these, without underestimating the educational and psychological contributions of the research, raise the issue of the cultural specificity of the findings which is present in most social scientific research.

APPENDIX A

Table 16: Percentages of teachers' responses in both schools according to children's age.

Items	School 18			School 2		
	8-9yrs	9-10yrs	10-11yrs	8-9yrs	9-10yrs	10-11yrs
Restless	46.7	57.5	35.4	43.1	37.5	21.4
Truants	4.4	32.5	0.0	1.7	3.1	4.7
Fidgety	28.9	40.0	18.7	36.2	12.5	19.0
Destroys	13.3	17.5	6.2	10.3	9.4	4.7
Fights	31.1	50.0	35.4	39.6	37.5	27.8
Not liked	11.1	7.5	18.7	15.5	21.9	19.0
Worried	15.5	40.0	37.5	29.3	18.7	21.4
Solitary	20.0	12.5	20.8	22.4	12.5	16.6
Irritable	17.8	57.5	31.2	34.5	25.0	11.9
Miserable	8.9	40.0	18.7	37.9	9.4	14.3
Twiches	2.2	5.0	8.3	15.5	6.2	4.7
Sucks thumb	8.9	5.0	0.0	12.1	6.2	2.4
Bites nails	4.4	15.0	10.4	15.5	3.1	0.0
Absent	11.1	15.0	6.2	5.2	3.1	7.1
Disobedient	31.1	47.5	20.8	22.4	18.7	14.3
Poor conc.	42.2	50.0	47.9	36.2	15.6	42.8
Fearful	8.6	35.0	29.2	39.6	9.4	11.9
Fussy	24.4	30.0	16.6	29.3	18.7	14.3
Lies	17.8	32.5	14.6	13.8	9.4	11.9
Steals	0.0	0.0	0.0	0.0	0.0	0.0
Soils	6.7	0.0	0.0	1.7	3.1	0.0
Pains	6.6	40.0	16.6	12.0	3.1	7.1
Tears	2.2	2.0	2.1	1.7	3.1	0.0
Stutter	0.0	15.0	6.2	0.0	0.0	0.0
Bullies	6.7	7.5	18.7	27.6	8.4	7.1
Speech dif.	2.2	37.5	0.0	0.0	0.0	0.0

Table 17: Mean scores and standard deviations of teachers' overall scores on the Rutter scales.

Age	School 2		School 18		School 2 & 18
	Boys	Girls	Boys	Girls	Boys & Girls
8-9yrs	\bar{x} =6.5 sd=5.3	\bar{x} =5.2 sd=3.4	\bar{x} =5.2 sd=4.9	\bar{x} =3.5 sd=5.0	\bar{x} =5.2 sd=4.7
	Boys & Girls		Boys & Girls		
	\bar{x} =5.8 sd=4.3		\bar{x} =4.5 sd=4.9		
9-10yrs	\bar{x} =5.6 sd=6.8	\bar{x} =1.1 sd=2.9	\bar{x} =12.2 sd= 6.2	\bar{x} =7.5 sd=8.0	\bar{x} =6.4 sd=7.4
	Boys & Girls		Boys & Girls		
	\bar{x} =3.4 sd=4.8		\bar{x} =8.8 sd=7.1		
10-11yrs	\bar{x} =5.1 sd=4.4	\bar{x} =2.3 sd=3.7	\bar{x} =6.5 sd=5.9	\bar{x} =3.2 sd=3.3	\bar{x} =4.5 sd=4.8
	Boys & Girls		Boys & Girls		
	\bar{x} =3.6 sd=4.0		\bar{x} =5.1 sd=4.6		
	Total Boys	Total Girls	Total Boys	Total Girls	
	\bar{x} =5.8 sd=5.4	\bar{x} =3.3 sd=3.8	\bar{x} =7.0 sd=6.0	\bar{x} =5.1 sd=6.4	
	Total school 2		Total school 18		
	\bar{x} =4.5 sd=4.8		\bar{x} =6.0 sd=6.3		
Total Boys \bar{x} =6.4 sd=5.7 Total Girls \bar{x} =4.2 sd=5.3 Total N (266) \bar{x} =5.3 sd=5.6					

Table 18: Mean scores and standard deviations of parental overall scores on the Rutter scales.

Age	School 2		School 18		School 2 & 18
	Boys	Girls	Boys	Girls	Boys & Girls
8-9yrs	\bar{x} =7.5 sd=6.4	\bar{x} =5.1 sd=6.0	\bar{x} =8.5 sd=6.0	\bar{x} =10.6 sd= 7.9	\bar{x} =7.6 sd=6.7
	Boys & Girls		Boys & Girls		
	\bar{x} =6.2 sd=6.2		\bar{x} =9.4 sd=7.0		
9-10yrs	\bar{x} =7.8 sd=6.0	\bar{x} =2.7 sd=4.2	\bar{x} =10.7 sd=10.1	\bar{x} =6.6 sd=5.6	\bar{x} =6.6 sd=6.7
	Boys & Girls		Boys & Girls		
	\bar{x} =5.2 sd=5.1		\bar{x} =7.7 sd=7.8		
10-11yrs	\bar{x} =7.6 sd=6.5	\bar{x} =4.0 sd=5.3	\bar{x} =8.6 sd=9.9	\bar{x} =7.1 sd=7.8	\bar{x} =6.9 sd=7.7
	Boys & Girls		Boys & Girls		
	\bar{x} =5.6 sd=6.0		\bar{x} =8.0 sd=8.8		
	Total Boys	Total Girls	Total Boys	Total Girls	
	\bar{x} =7.6 sd=6.3	\bar{x} =4.2 sd=5.4	\bar{x} =8.9 sd=8.5	\bar{x} =7.9 sd=7.1	
	Total school 2		Total school 18		
	\bar{x} =5.8 sd=6.1		\bar{x} =8.4 sd=7.8		
Total Boys \bar{x} =8.3 sd=7.4 Total Girls \bar{x} =6.0 sd=6.5 Total N (266) \bar{x} =7.1 sd=7.1					

Table 23: Mean scores and standard deviations of teachers' scores for the EBD group (time 1 - time 2).

Total EBD scores (n=95)		$\bar{x}1 = 10.9$ $\bar{x}2 = 9.4$ $sd = 5.5$ $sd = 3.5$	
Total Boys (n=57) $\bar{x}1 = 10.3$ $\bar{x}2 = 9.6$ $sd = 4.5$ $sd = 3.8$		Total Girls (n=38) $\bar{x}1 = 10.7$ $\bar{x}2 = 9.1$ $sd = 5.9$ $sd = 3.1$	
Total age 8-9 (n=38) $\bar{x}1 = 9.4$ $\bar{x}2 = 8.5$ $sd = 4.7$ $sd = 2.3$		Total age 9-10 (n=27) $\bar{x}1 = 14.1$ $\bar{x}2 = 10.5$ $sd = 6.6$ $sd = 4.6$	Total age 10-11 (n=30) $\bar{x}1 = 9.8$ $\bar{x}2 = 9.7$ $sd = 4.3$ $sd = 3.4$
Total School 2 (n=38)	$\bar{x}1 = 10.3$ $\bar{x}2 = 9.1$ $sd = 4.5$ $sd = 3.4$	Total School 18 (n=57)	$\bar{x}1 = 11.3$ $\bar{x}2 = 9.7$ $sd = 6.1$ $sd = 3.5$
Boys (n=25) $\bar{x}1 = 10.8$ $\bar{x}2 = 9.0$ $sd = 5.1$ $sd = 3.9$	Girls (n=13) $\bar{x}1 = 9.2$ $\bar{x}2 = 9.1$ $sd = 2.9$ $sd = 2.5$	Boys (n=32) $\bar{x}1 = 11.2$ $\bar{x}2 = 10.1$ $sd = 5.5$ $sd = 3.6$	Girls (n=25) $\bar{x}1 = 11.5$ $\bar{x}2 = 9.2$ $sd = 6.9$ $sd = 3.5$

$\bar{x}1 = \text{time 1}$ $\bar{x}2 = \text{time 2}$

Table 24: Mean scores and standard deviations of parent's scores for the EBD group (time 1 - time 2).

Total EBD scores (n=95) $\bar{x}_1 = 12.4$ $\bar{x}_2 = 12.3$ sd = 8.2 sd = 7.1			
Total Boys (n=57) $\bar{x}_1 = 13.0$ $\bar{x}_2 = 12.7$ sd = 8.2 sd = 7.3		Total Girls (n=38) $\bar{x}_1 = 11.7$ $\bar{x}_2 = 11.8$ sd = 8.4 sd = 6.7	
Total age 8-9 (n=38) $\bar{x}_1 = 13.3$ $\bar{x}_2 = 13.7$ sd = 6.6 sd = 7.1		Total age 9-10 (n=27) $\bar{x}_1 = 10.9$ $\bar{x}_2 = 10.5$ sd = 7.9 sd = 4.2	
Total age 10-11 (n=30) $\bar{x}_1 = 12.7$ $\bar{x}_2 = 12.2$ sd = 10.3 sd = 8.7			
Total school 2 (n=38) $\bar{x}_1 = 11.3$ $\bar{x}_2 = 11.3$ sd = 6.8 sd = 7.3		Total school 18 (n=57) $\bar{x}_1 = 13.1$ $\bar{x}_2 = 13.0$ sd = 9.0 sd = 6.8	
Boys (n=25) $\bar{x}_1 = 12.1$ $\bar{x}_2 = 11.5$ sd = 6.2 sd = 6.8	Girls (n=13) $\bar{x}_1 = 9.8$ $\bar{x}_2 = 10.8$ sd = 7.9 sd = 8.6	Boys (n=32) $\bar{x}_1 = 13.6$ $\bar{x}_2 = 13.7$ sd = 9.4 sd = 7.7	Girls (n=25) $\bar{x}_1 = 12.6$ $\bar{x}_2 = 12.2$ sd = 8.7 sd = 5.6

\bar{x}_1 = time 1 \bar{x}_2 = time 2

Figures

Figure 4: Bar chart representing the number of parental responses on each scale item, in school 18 (n=134).

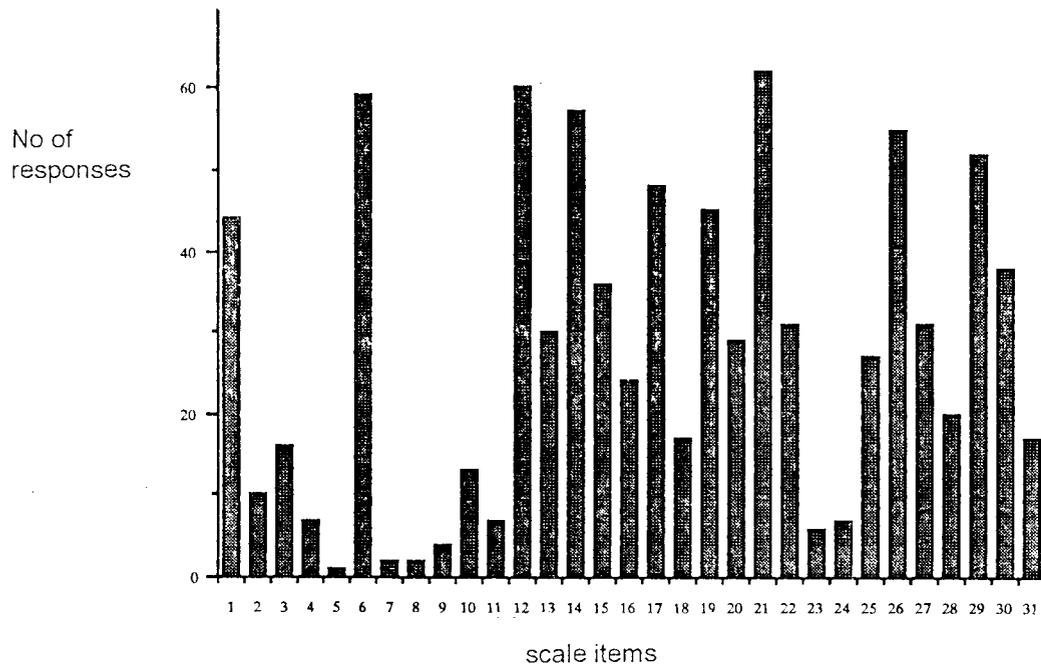


Figure 5: Bar chart representing the number of parental responses on each scale item, in school 2 (n=132).

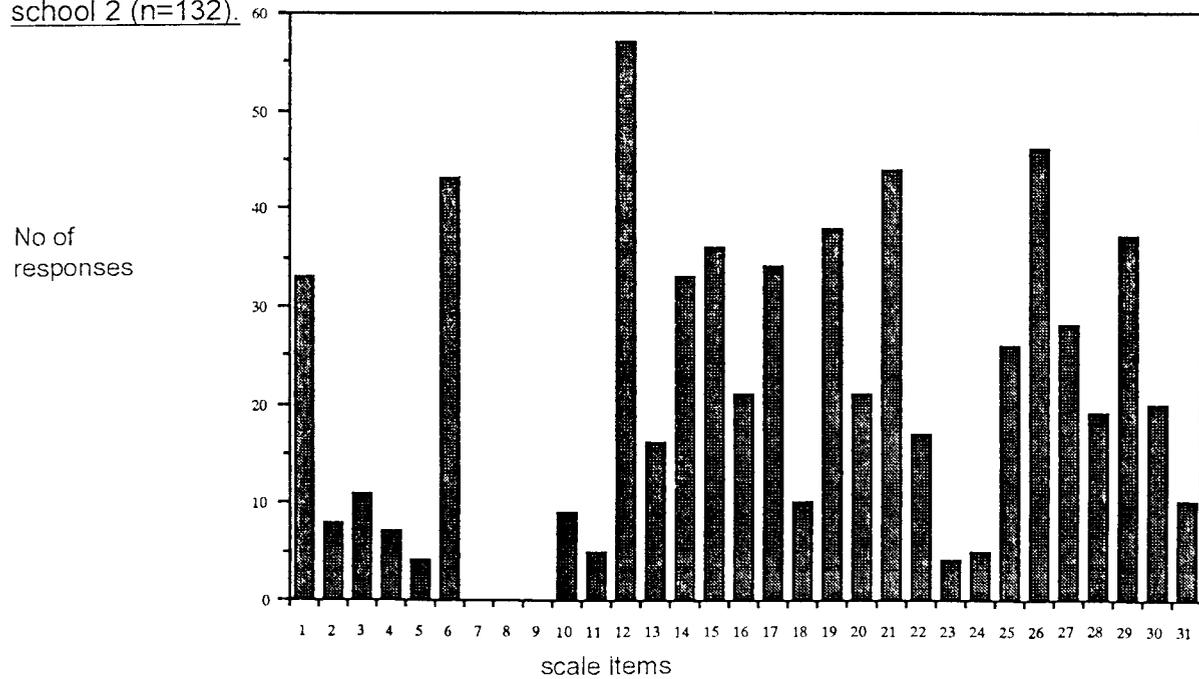


Figure 7: Graphical representation of the parents' different responses for boys & girls in school 2.

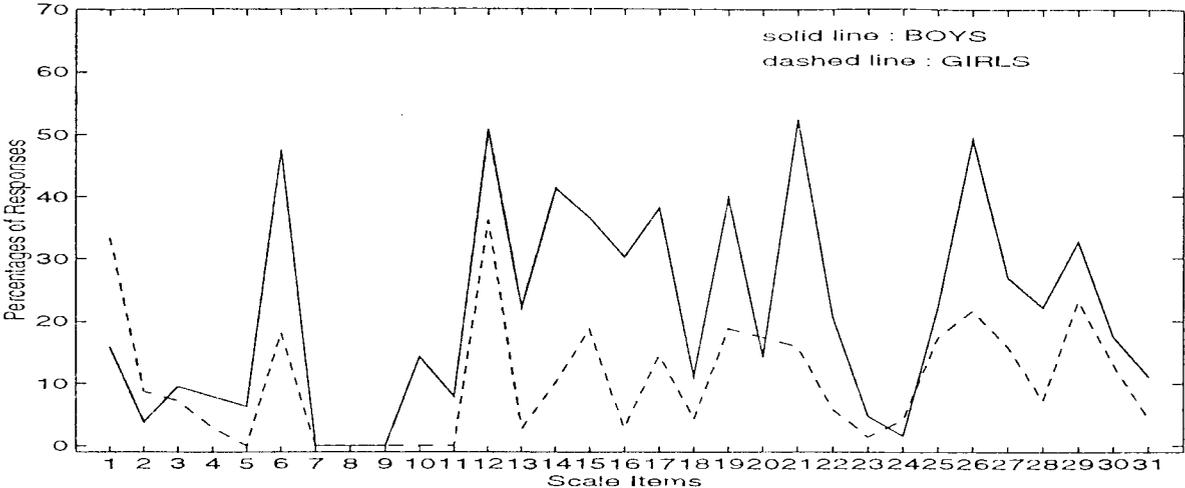


Figure 8: Graphical representation of the parents' different responses for boys & girls in school 18.

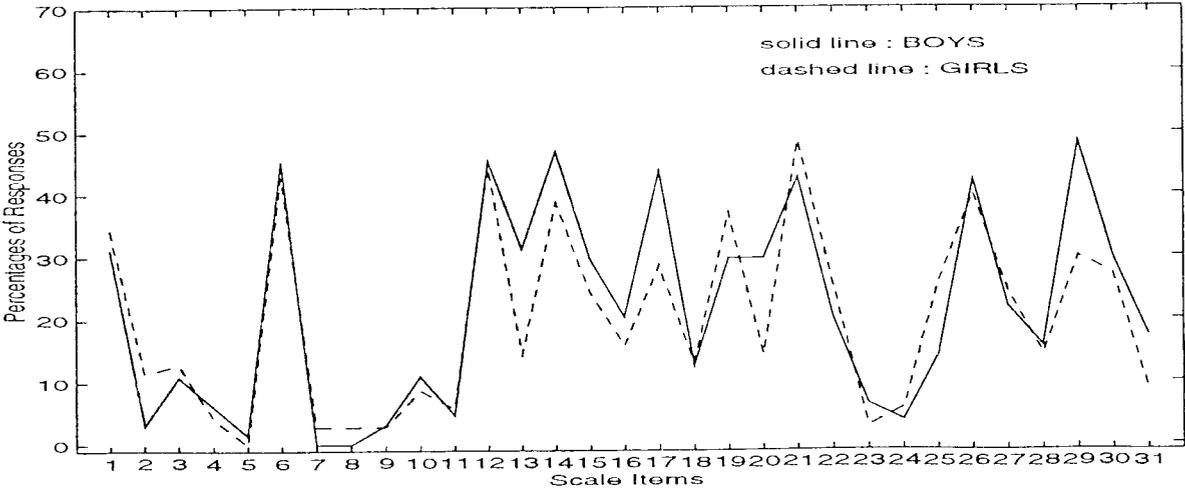


Figure 11: Graphical representation of the teachers' different responses for boys & girls in school 2.

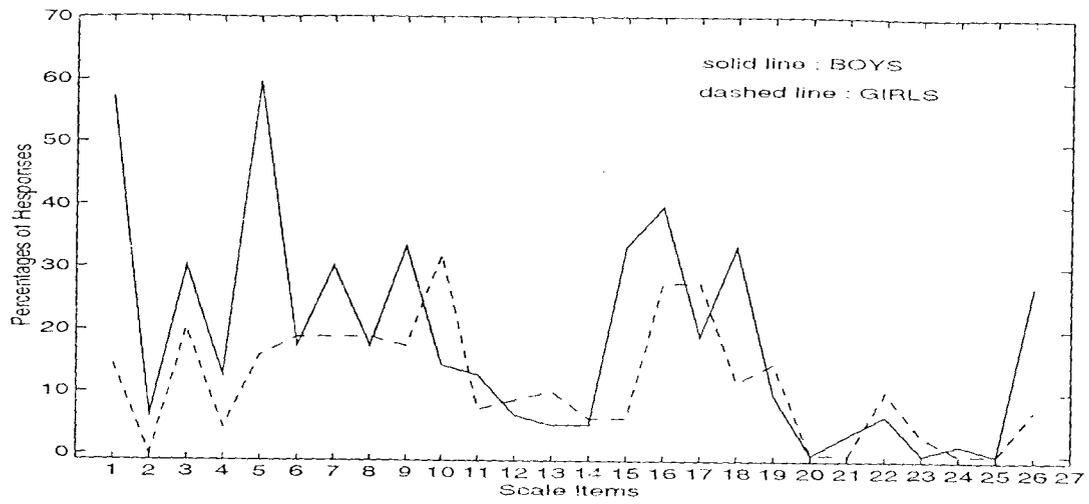


Figure 12: Graphical representation of the teachers' different responses for boys & girls in school 18.

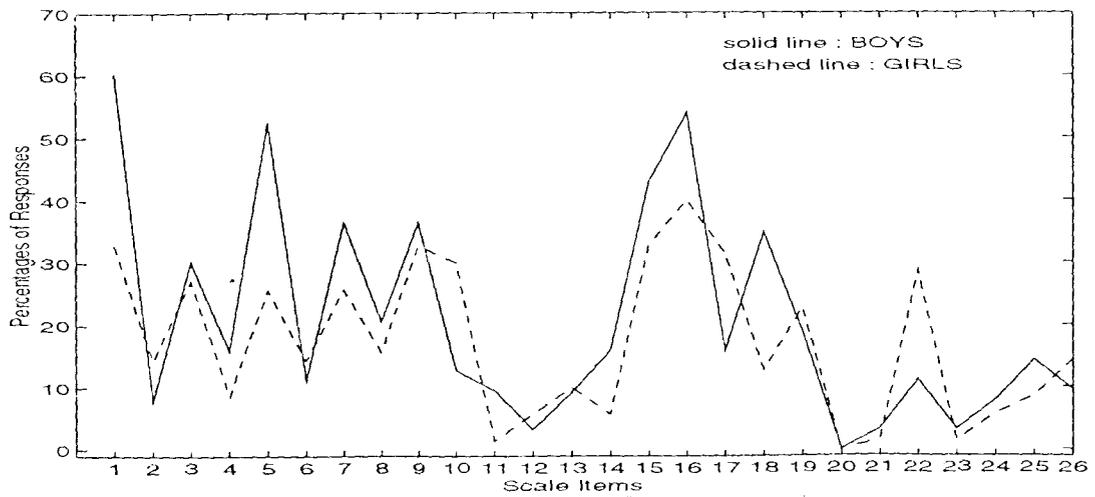


Figure 13: Histogramms 1 & 2: The number of fathers in each of the five educational categories in the two schools.

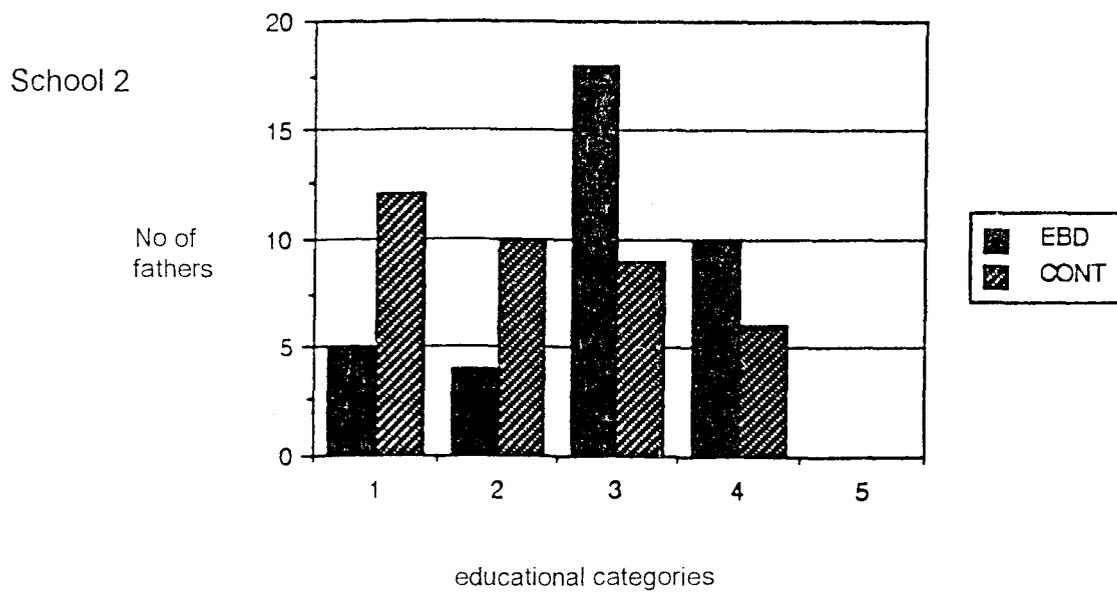
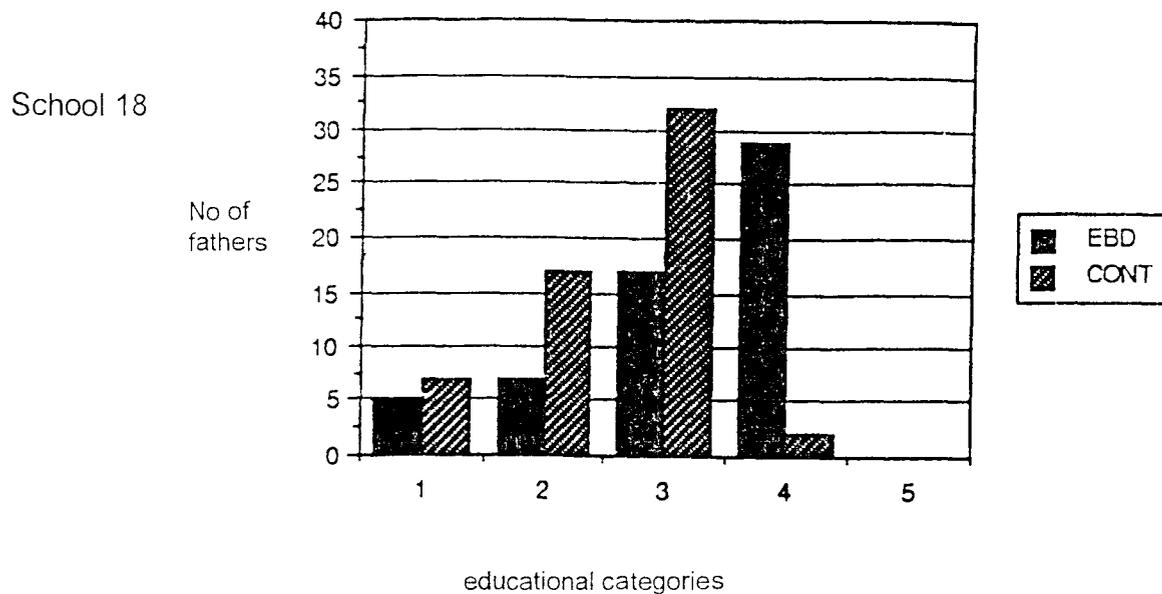
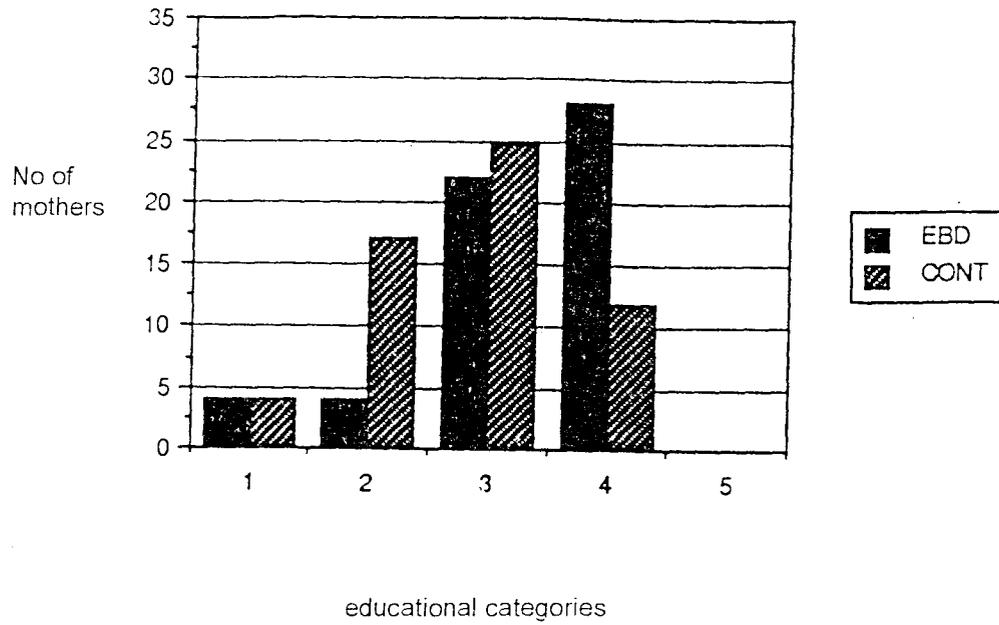


Figure 14: Histogramms 3 & 4: The number of mothers in each of the five educational categories in the two schools.

School 18



School 2

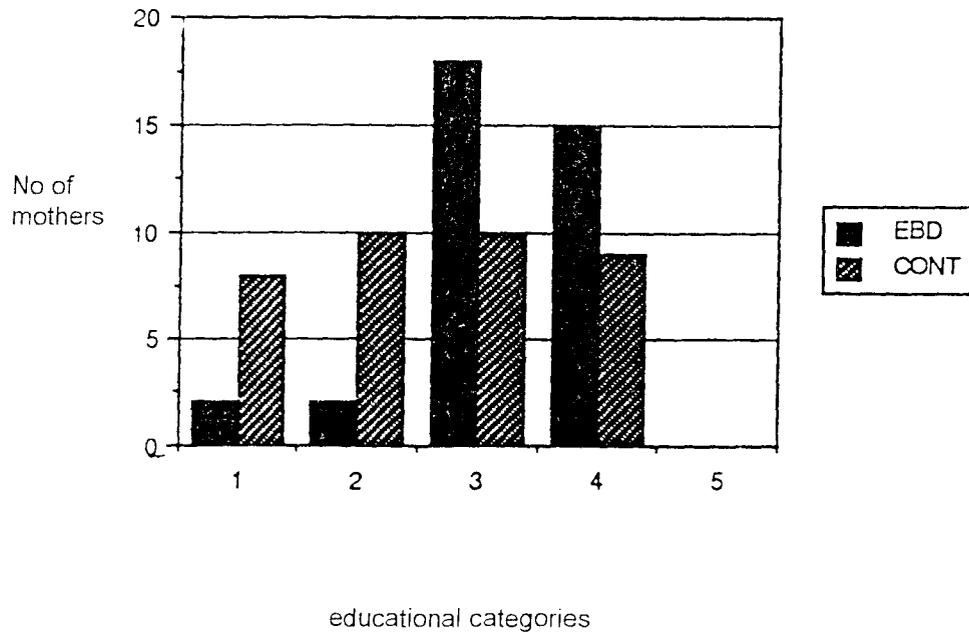


Figure 15: Histogramms 5 & 6: The number of fathers in each of the five occupational categories in the two schools.

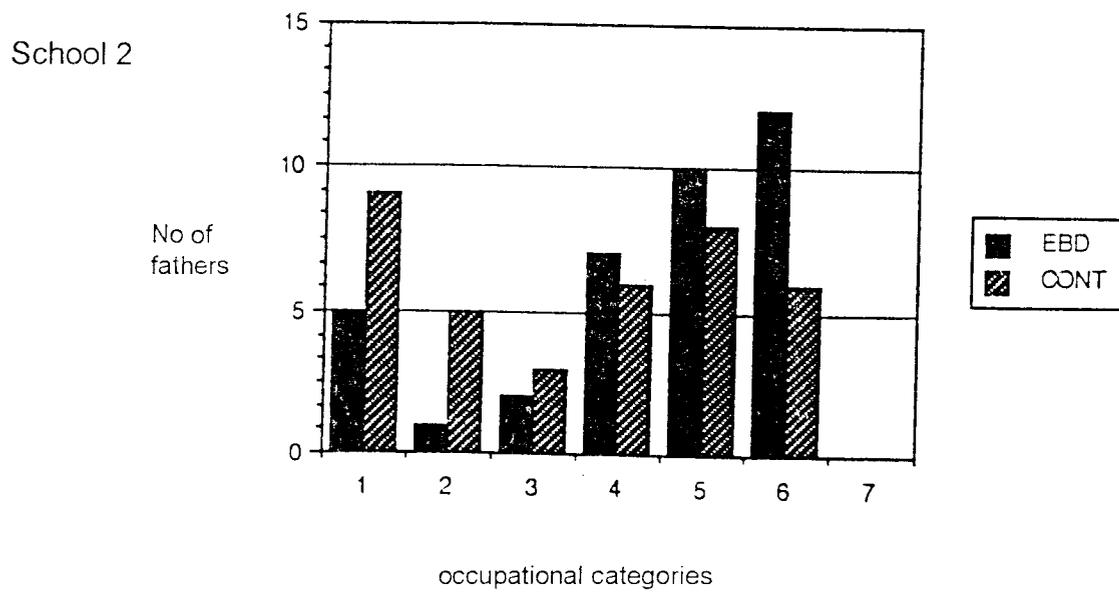
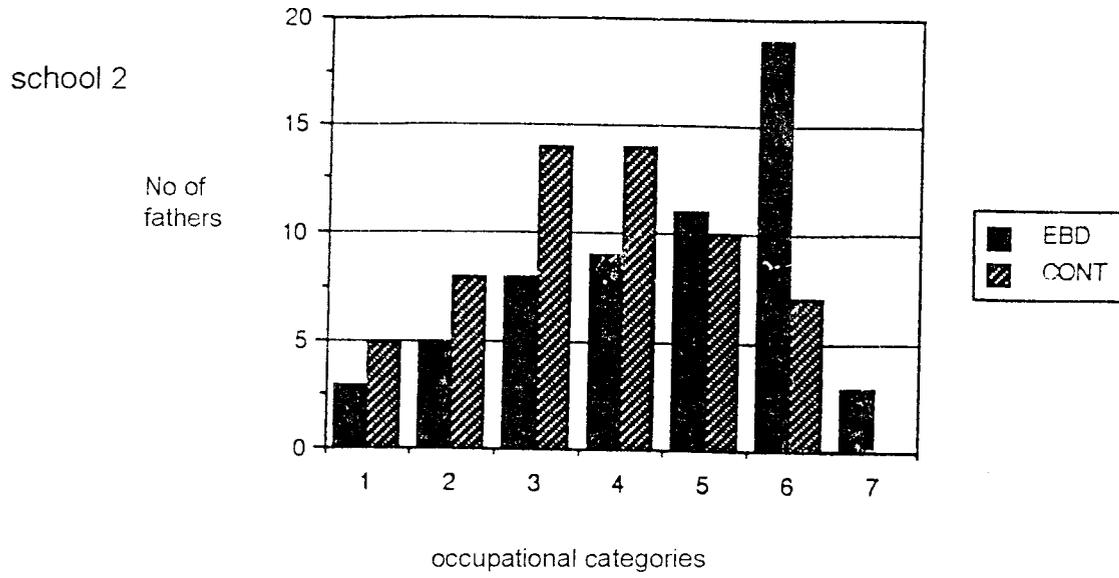
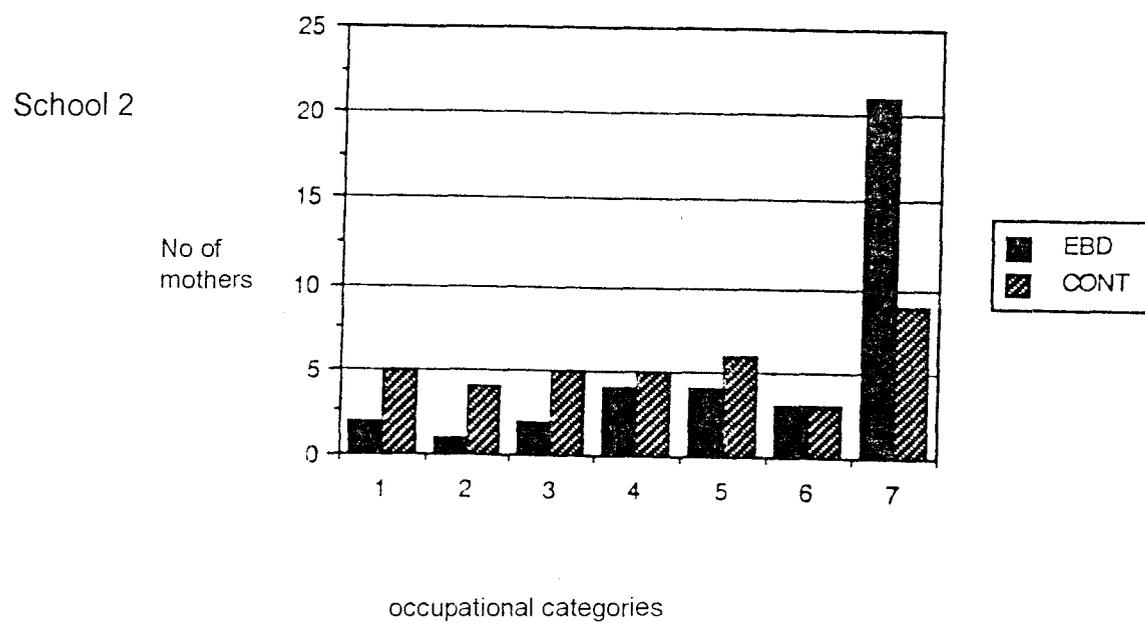
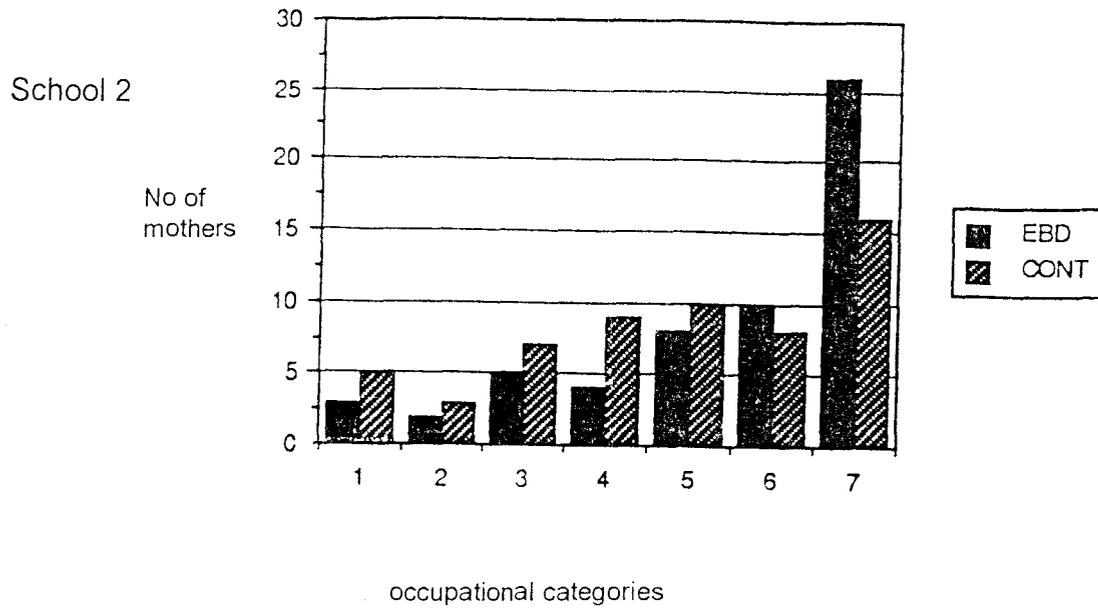


Figure 16: Histogramms 7 & 8: The number of mothers in each of the five occupational categories in the two schools.



APPENDIX B

Table 32: Raw scores, mean scores and standard deviations of the number of external and internal reasons given by the EBD and control group, for situations A & B.

	EBD (n=45)				Control (n=45)			
	Situations A refusing other		Situations B refusing self		Situations A refusing other		Situations B refusing self	
Sch. 18 n=25	ext \bar{x} =5.3 sd=1.7	int \bar{x} = 4.7 sd= 1.6	ext \bar{x} =6.6 sd=1.7	int \bar{x} =3.4 sd=1.7	ext \bar{x} =4.9 sd=2.3	int \bar{x} =5.2 sd=2.3	ext \bar{x} =5.4 sd=1.9	int \bar{x} =4.6 sd=1.9
raw scores	133	117	164	86	120	130	135	115
Sch. 2 n=20	ext \bar{x} =4.9 sd=1.1	int \bar{x} =5.0 sd=1.2	ext \bar{x} =5.7 sd=1.7	int \bar{x} =4.2 sd=1.7	ext \bar{x} =5.5 sd=1.3	int \bar{x} =4.4 sd=1.5	ext \bar{x} =5.5 sd=1.4	int \bar{x} =4.4 sd=1.4
raw scores	99	101	115	85	111	89	111	89
School 2 & 18 n=45	\bar{x} =5.1	\bar{x} =4.8	\bar{x} =6.2	\bar{x} =3.8	\bar{x} =5.1	\bar{x} =4.9	\bar{x} =5.5	\bar{x} =4.5
raw scores	232	218	279	171	231	219	246	204
School 18	ext \bar{x} =6.0 sit. A \bar{x} =5.0 int \bar{x} =4.1 sit. B \bar{x} =5.0 total EBD \bar{x} =5.0				ext \bar{x} =5.1 sit. A \bar{x} =5.0 int \bar{x} =4.9 sit. B \bar{x} =5.0 total control \bar{x} =5.0			
School 2	ext \bar{x} =5.3 sit. A \bar{x} =5.0 int \bar{x} =4.6 sit. B \bar{x} =5.0				ext \bar{x} =5.0 sit. A \bar{x} =5.0 int \bar{x} =5.0 sit. B \bar{x} =5.0			
School 2 & 18	EBD \bar{x} =5.0				ext \bar{x} =5.3 sit. A \bar{x} =5.0 control \bar{x} =5.0 int \bar{x} =4.6 sit. B \bar{x} =5.0			

Table 34: Raw scores, mean scores and standard deviations of the number of external and internal reasons given by the the EBD and control group for both situations A & B (level A parent-only group).

	EBD group (n=18)				Control group (n=18)			
	Situations A refusing other		Situations B refusing self		Situations A refusing other		Situations B refusing self	
	ext	int	ext	int	ext	int	ext	int
sch. 2 n=6	$\bar{x}=5.2$ sd=0.7	$\bar{x}=4.9$ sd=0.7	$\bar{x}=7.3$ sd=0.8	$\bar{x}=2.7$ sd=0.8	$\bar{x}=4.2$ sd=1.3	$\bar{x}=5.8$ sd=1.3	$\bar{x}=5.0$ sd=1.3	$\bar{x}=5.0$ sd=1.3
raw score	31	29	44	16	25	35	30	30
sch. 18 n=12	$\bar{x}=5.9$ sd=2.3	$\bar{x}=4.1$ sd=2.3	$\bar{x}=5.9$ sd=1.5	$\bar{x}=4.1$ sd=1.5	$\bar{x}=4.9$ sd=1.8	$\bar{x}=5.1$ sd=1.8	$\bar{x}=4.6$ sd=1.6	$\bar{x}=5.4$ sd=1.6
raw score	71	49	71	49	59	61	55	65
	School 2 total		EBD	$\bar{x}=5.0$	School 2 total		EBD	$\bar{x}=5.0$
			external	$\bar{x}=6.2$			external	$\bar{x}=4.6$
			internal	$\bar{x}=3.7$			internal	$\bar{x}=5.4$
			sit. A	$\bar{x}=5.0$			sit. A	$\bar{x}=5.0$
			sit. B	$\bar{x}=5.0$			sit. B	$\bar{x}=5.0$
	School 18 total		EBD	$\bar{x}=5.0$	School 18 total		EBD	$\bar{x}=5.0$
			external	$\bar{x}=5.9$			external	$\bar{x}=4.7$
			internal	$\bar{x}=4.1$			internal	$\bar{x}=5.2$
			sit. A	$\bar{x}=5.0$			sit. A	$\bar{x}=5.0$
			sit. B	$\bar{x}=5.0$			sit. B	$\bar{x}=5.0$

Table 36: Raw data, mean scores and standard deviations of the number of external and internal reasons given by the EBD and control groups for the refusing other (A) and refusing self (B) situations (both schools, level A, teacher-only group).

	EBD group (n=14)				Control group (n=14)			
	Situations A refusing other		Situations B refusing self		Situations A refusing other		Situations B refusing self	
	ext	int	ext	int	ext	int	ext	int
sch. 2 n =7	\bar{x} =6.7 sd=1.2	\bar{x} = 3.3 sd=1.2	\bar{x} = 5.8 sd=2.1	\bar{x} = 4.1 sd=2.1	\bar{x} = 4.1 sd=1.7	\bar{x} = 5.8 sd=1.7	\bar{x} = 4.7 sd=0.8	\bar{x} = 5.3 sd=0.8
raw scores	47	23	41	29	29	41	33	43
sch. 18 n =7	\bar{x} =6.8 sd=0.7	\bar{x} = 3.1 sd=0.7	\bar{x} =6.6 sd=1.6	\bar{x} = 3.4 sd=2.0	\bar{x} = 5.6 sd=1.6	\bar{x} = 4.4 sd=1.6	\bar{x} = 5.3 sd=1.2	\bar{x} = 4.7 sd=1.2
raw scores	47	22	46	24	39	31	37	33
	School 2 Total		School 18 Total		School 2 Total		School 18 Total	
	ebd	\bar{x} =5.0	ebd	\bar{x} =5.0	control	\bar{x} =5.0	control	\bar{x} =5.0
	external	\bar{x} =6.3	external	\bar{x} =6.7	external	\bar{x} =4.4	external	\bar{x} =5.4
	internal	\bar{x} =3.7	internal	\bar{x} =3.3	internal	\bar{x} =5.6	internal	\bar{x} =4.6
	sit. A	\bar{x} =5.0	sit. A	\bar{x} =5.0	sit. A	\bar{x} =5.0	sit. A	\bar{x} =5.0
	sit. B	\bar{x} =5.0	sit. B	\bar{x} =5.0	sit. B	\bar{x} =5.0	sit. B	\bar{x} =5.0

Table 38: Raw data, mean scores and standard deviations of the reveal/not reveal responses for the external/internal reasons chosen by the Ebd and control groups (both schools) (level B, parent/teacher group).

	School 2 (n=40)				School 18 (n=50)			
	EBD (n=20)		Control (n=20)		EBD (n=25)		Control (n=25)	
	int	ext	int	ext	int	ext	int	ext
reveal	$\bar{x} = 3.1$ sd=1.5	$\bar{x} = 3.5$ sd=1.0	$\bar{x} = 0.2$ sd=0.4	$\bar{x} = 3.7$ sd=1.2	$\bar{x} = 3.0$ sd=1.5	$\bar{x} = 3.9$ sd=1.4	$\bar{x} = 0.6$ sd=0.6	$\bar{x} = 3.4$ sd=2.1
raw data	62	70	5	74	75	97	15	86
	Total EBD reveal $\bar{x} = 3.3$		Total control reveal $\bar{x} = 2.0$		Total EBD reveal $\bar{x} = 3.4$		Total control reveal $\bar{x} = 2.2$	
not reveal	$\bar{x} = 1.1$ sd=1.2	$\bar{x} = 0.2$ sd=0.5	$\bar{x} = 3.7$ sd=1.0	$\bar{x} = 0.3$ sd=0.5	$\bar{x} = 0.9$ sd=0.9	$\bar{x} = 0.3$ sd=0.7	$\bar{x} = 3.8$ sd=1.8	$\bar{x} = 0.4$ sd=0.6
raw data	23	5	74	7	20	8	96	11
	Total EBD not reveal $\bar{x} = 0.7$		Total control not reveal $\bar{x} = 2.0$		Total EBD not reveal $\bar{x} = 0.6$		Total control not reveal $\bar{x} = 2.1$	
	Total EBD $\bar{x} = 2.0$ Total control $\bar{x} = 2.0$ Total external $\bar{x} = 1.9$ Total internal $\bar{x} = 2.0$ Total reveal $\bar{x} = 2.6$ Total not reveal $\bar{x} = 1.4$				Total EBD $\bar{x} = 2.0$ Total control $\bar{x} = 2.1$ Total external $\bar{x} = 2.0$ Total internal $\bar{x} = 2.1$ Total reveal $\bar{x} = 2.7$ Total not reveal $\bar{x} = 1.3$			
	Overall EBD $\bar{x} = 2.0$		internal external $\bar{x} = 2.0$		reveal not reveal $\bar{x} = 2.7$		$\bar{x} = 1.3$	

Table 39: Raw data, mean scores and standard deviations of the reveal/not reveal responses for the suggested internal/external reasons to the EBD and control groups in each school (level B, parent/teacher group).

	School 2 (n=40)				School 18 (n=50)				
	EBD (n=20)		Control (n=20)		EBD (n=25)		Control (n=25)		
	int	ext	int	ext	int	ext	int	ext	
reveal	$\bar{x} = 3.2$ sd=1.1	$\bar{x} = 3.8$ sd=1.1	$\bar{x} = 0.6$ sd=0.7	$\bar{x} = 3.5$ sd=1.2	$\bar{x} = 2.9$ sd=1.4	$\bar{x} = 3.8$ sd=1.5	$\bar{x} = 0.3$ sd=0.4	$\bar{x} = 3.8$ sd=2.1	
raw data	64	77	12	70	73	94	7	96	
	Total EBD reveal $\bar{x} = 3.5$		Total control reveal $\bar{x} = 2.0$		Total EBD reveal $\bar{x} = 3.3$		Total control reveal $\bar{x} = 2.1$		
not reveal	$\bar{x} = 0.8$ sd=0.9	$\bar{x} = 0.1$ sd=0.4	$\bar{x} = 3.7$ sd=1.4	$\bar{x} = 0.2$ sd=0.5	$\bar{x} = 1.2$ sd=1.5	$\bar{x} = 0.1$ sd=0.3	$\bar{x} = 3.3$ sd=1.9	$\bar{x} = 0.2$ sd=0.5	
raw data	16	3	74	4	30	3	83	6	
	Total EBD not reveal $\bar{x} = 0.5$		Total control not reveal $\bar{x} = 1.9$		Total EBD not reveal $\bar{x} = 0.7$		Total control not reveal $\bar{x} = 1.8$		
	Total EBD control internal external reveal not reveal $\bar{x} = 2.0$ $\bar{x} = 2.0$ $\bar{x} = 2.1$ $\bar{x} = 1.9$ $\bar{x} = 2.8$ $\bar{x} = 1.2$				Total EBD control internal external reveal not reveal $\bar{x} = 2.0$ $\bar{x} = 1.9$ $\bar{x} = 1.9$ $\bar{x} = 2.0$ $\bar{x} = 2.7$ $\bar{x} = 1.2$				
	Overall EBD Control		$\bar{x} = 2.0$ $\bar{x} = 2.0$	internal external		$\bar{x} = 2.0$ $\bar{x} = 2.0$	reveal not reveal		$\bar{x} = 2.8$ $\bar{x} = 1.2$

Table 41: Raw data, mean scores and standard deviations of the reveal/not reveal responses for the external/internal reasons chosen by the EBD and control groups in both schools (level B. parent-only group).

	EBD group (n=12)				Control group (n=12)			
	internal		external		internal		external	
	reveal	not reveal	reveal	not reveal	reveal	not reveal	reveal	not reveal
sch. 18	$\bar{x} = 1.9$ sd=2.3	$\bar{x} = 1.3$ sd=1.5	$\bar{x} = 4.1$ sd=1.8	$\bar{x} = 0.7$ sd=0.9	$\bar{x} = 0.7$ sd=0.8	$\bar{x} = 3.7$ sd=1.4	$\bar{x} = 3.2$ sd=1.3	$\bar{x} = 0.3$ sd=0.5
raw data	23	16	49	8	8	41	39	4
	Total reveal $\bar{x} = 3.0$ Total not reveal $\bar{x} = 1.0$				Total reveal $\bar{x} = 1.9$ Total not reveal $\bar{x} = 1.9$			
	Total EBD $\bar{x} = 2.0$				reveal $\bar{x} = 2.5$	external $\bar{x} = 2.1$		
					Control $\bar{x} = 2.0$	not reveal $\bar{x} = 1.5$	internal $\bar{x} = 1.9$	
	EBD group (n=6)				Control group (n=6)			
sch. 2	$\bar{x} = 1.2$ sd=1.2	$\bar{x} = 2.8$ sd=1.3	$\bar{x} = 3.2$ sd=0.7	$\bar{x} = 0.5$ sd=0.5	$\bar{x} = 0.5$ sd=0.8	$\bar{x} = 4.7$ sd=1.4	$\bar{x} = 2.7$ sd=1.6	$\bar{x} = 0.2$ sd=0.4
raw data	7	17	19	3	3	28	16	1
	Total reveal $\bar{x} = 2.2$ Total not reveal $\bar{x} = 1.7$				Total reveal $\bar{x} = 1.6$ Total not reveal $\bar{x} = 2.4$			
	Total EBD $\bar{x} = 1.9$				reveal $\bar{x} = 1.9$	internal $\bar{x} = 2.3$		
	control $\bar{x} = 2.0$				not reveal $\bar{x} = 2.0$	external $\bar{x} = 1.6$		

Table 42: Raw scores, mean scores and standard deviations of the number of reveal/not reveal responses for the external/internal reasons proposed to the children in both schools (level B, parent-only group).

	EBD group (n=12)				Control group (n=12)			
	internal		external		internal		external	
	reveal	not reveal	reveal	not reveal	reveal	not reveal	reveal	not reveal
sch. 18	$\bar{x} = 2.4$ sd=1.1	$\bar{x} = 2.5$ sd=1.6	$\bar{x} = 2.8$ sd=2.1	$\bar{x} = 0.2$ sd=0.4	$\bar{x} = 0.2$ sd=0.4	$\bar{x} = 3.3$ sd=1.4	$\bar{x} = 4.0$ sd=1.2	$\bar{x} = 0.4$ sd=0.9
raw data	29	30	34	3	3	40	48	5
	Total reveal $\bar{x} = 2.6$ Total not reveal $\bar{x} = 1.4$				Total reveal $\bar{x} = 2.1$ Total not reveal $\bar{x} = 1.9$			
	Total EBD $\bar{x} = 2.0$ reveal $\bar{x} = 2.4$ internal $\bar{x} = 2.1$ Control $\bar{x} = 2.0$ not reveal $\bar{x} = 1.6$ external $\bar{x} = 1.9$							
	EBD group (n=6)				Control group (n=6)			
sch. 2	$\bar{x} = 1.0$ sd=1.2	$\bar{x} = 2.5$ sd=1.0	$\bar{x} = 4.0$ sd=0.6	$\bar{x} = 0.3$ sd=0.5	$\bar{x} = 0.3$ sd=0.5	$\bar{x} = 2.3$ sd=1.5	$\bar{x} = 5.0$ sd=2.0	$\bar{x} = 0.3$ sd=0.5
	Total reveal $\bar{x} = 2.6$ Total not reveal $\bar{x} = 1.4$				Total reveal $\bar{x} = 2.7$ Total not reveal $\bar{x} = 1.3$			
	Total EBD $\bar{x} = 2.0$ reveal $\bar{x} = 2.6$ internal $\bar{x} = 1.6$ Control $\bar{x} = 2.0$ not reveal $\bar{x} = 1.4$ external $\bar{x} = 2.4$							

Table 44: Raw data, mean scores and standard deviations of the reveal/not reveal responses for the internal/external reasons chosen by the EBD and control groups (both schools, level B teacher-only group).

	School 2 n=14				School 18 n=14			
	EBD n=7		Control n=7		EBD n=7		Control n=7	
	internal	external	internal	external	internal	external	internal	external
reveal	$\bar{x} = 0.8$ sd=0.7	$\bar{x} = 4.8$ sd=1.1	$\bar{x} = 0.6$ sd=1.0	$\bar{x} = 3.1$ sd=1.8	$\bar{x} = 2.3$ sd=0.5	$\bar{x} = 4.4$ sd=1.1	$\bar{x} = 0.3$ sd=0.5	$\bar{x} = 3.8$ sd=1.2
raw data	6	34	4	22	16	31	2	27
	Total EBD $\bar{x} = 2.8$		Total control $\bar{x} = 1.8$		Total EBD $\bar{x} = 3.3$		Total control $\bar{x} = 2.1$	
not reveal	$\bar{x} = 2.0$ sd=0.9	$\bar{x} = 0.3$ sd=0.5	$\bar{x} = 4.0$ sd=1.7	$\bar{x} = 0.3$ sd=0.5	$\bar{x} = 0.8$ sd=1.1	$\bar{x} = 0.4$ sd=0.5	$\bar{x} = 3.4$ sd=1.5	$\bar{x} = 0.4$ sd=0.8
raw data	14	2	28	2	6	3	2	3
	Total EBD $\bar{x} = 11$		Total control $\bar{x} = 2.1$		Total EBD $\bar{x} = 0.6$		Total control $\bar{x} = 1.9$	
	Overall	EBD $\bar{x} = 2.0$	control $\bar{x} = 2.0$	external $\bar{x} = 2.2$	internal $\bar{x} = 1.8$	reveal $\bar{x} = 2.3$	not reveal $\bar{x} = 1.6$	
	Overall	EBD $\bar{x} = 2.0$	control $\bar{x} = 2.0$	external $\bar{x} = 2.3$	internal $\bar{x} = 1.7$	reveal $\bar{x} = 2.7$	not reveal $\bar{x} = 1.3$	

Table 45 : Raw data, mean scores and standard deviations of the reveal/not reveal responses for the internal/external reasons suggested to the EBD and control groups in both schools (level B, teacher-only group)

	School 2 n=14				School 18 n=14			
	EBD n=7		control n=7		EBD n=7		control n=7	
	internal	external	internal	external	internal	external	internal	external
reveal	$\bar{x} = 1.1$ sd=0.7	$\bar{x} = 1.8$ sd=0.9	$\bar{x} = 0.3$ sd=0.5	$\bar{x} = 4.0$ sd=1.9	$\bar{x} = 2.0$ sd=1.1	$\bar{x} = 2.8$ sd=1.3	$\bar{x} = 0.3$ sd=0.5	$\bar{x} = 3.4$ sd=1.5
raw data	8	13	2	28	14	20	2	24
	Total EBD $\bar{x} = 1.5$		Total control $\bar{x} = 2.1$		Total EBD $\bar{x} = 2.4$		Total control $\bar{x} = 1.8$	
not reveal	$\bar{x} = 4.1$ sd=0.7	$\bar{x} = 0.8$ sd=0.9	$\bar{x} = 3.1$ sd=1.9	$\bar{x} = 0.6$ sd=0.8	$\bar{x} = 3.1$ sd=1.3	$\bar{x} = 0.0$ sd=0.0	$\bar{x} = 4.1$ sd=1.2	$\bar{x} = 0.1$ sd=0.4
raw data	29	6	22	4	22	0	29	1
	Total EBD $\bar{x} = 2.5$		Total control $\bar{x} = 1.8$		Total EBD $\bar{x} = 1.6$		Total control $\bar{x} = 2.1$	
	Overall	EBD $\bar{x} = 2.0$	control $\bar{x} = 2.0$	external $\bar{x} = 1.8$	internal $\bar{x} = 2.2$	reveal $\bar{x} = 1.8$	not reveal $\bar{x} = 2.2$	
					Overall	EBD $\bar{x} = 2.0$	control $\bar{x} = 2.0$	external $\bar{x} = 1.6$
						internal $\bar{x} = 2.4$	reveal $\bar{x} = 2.2$	not reveal $\bar{x} = 1.8$

Table 47: Mean scores and standard deviations of the degree of hurt feelings from the revealing of external reasons (EBD & Control groups, school 18, level C, parent/teacher group).

1. Children's own choices of reasons

	EBD group		Control group	
	external	internal	external	internal
reveal	$\bar{x} = 1.1$ sd=0.8	$\bar{x} = 1.7$ sd=0.9	$\bar{x} = 0.8$ sd=0.8	$\bar{x} = 0.5$ sd=0.6
	Total reveal $\bar{x} = 1.4$		Total reveal $\bar{x} = 0.6$	
not reveal	$\bar{x} = 0.6$ sd=1.1	$\bar{x} = 1.1$ sd=1.5	$\bar{x} = 1.1$ sd=1.6	$\bar{x} = 2.9$ sd=1.6
	Total not reveal $\bar{x} = 0.8$		Total not reveal $\bar{x} = 2.0$	
	Total external $\bar{x} = 0.8$ Total internal $\bar{x} = 1.4$		Total external $\bar{x} = 0.9$ Total internal $\bar{x} = 1.7$	
Overall	EBD $\bar{x} = 1.3$ external $\bar{x} = 0.9$ reveal $\bar{x} = 1.0$ Control $\bar{x} = 1.3$ internal $\bar{x} = 1.5$ not reveal $\bar{x} = 1.4$			

2. Suggested reasons (probing)

	EBD group		Control group	
	external	internal	external	internal
reveal	$\bar{x} = 1.0$ sd=0.7	$\bar{x} = 2.4$ sd=1.0	$\bar{x} = 0.2$ sd=0.4	$\bar{x} = 0.2$ sd=0.4
	Total reveal $\bar{x} = 0.7$		Total reveal $\bar{x} = 0.2$	
not reveal	$\bar{x} = 0.2$ sd=0.7	$\bar{x} = 1.2$ sd=1.5	$\bar{x} = 0.6$ sd=1.0	$\bar{x} = 3.3$ sd=0.5
	Total not reveal $\bar{x} = 0.7$		Total not reveal $\bar{x} = 1.9$	
	Total external $\bar{x} = 0.6$ Total internal $\bar{x} = 1.8$		Total external $\bar{x} = 0.4$ Total internal $\bar{x} = 1.7$	
Overall	EBD $\bar{x} = 1.2$ external $\bar{x} = 0.5$ reveal $\bar{x} = 0.9$ Control $\bar{x} = 1.1$ internal $\bar{x} = 1.8$ not reveal $\bar{x} = 1.3$			

Table 48: Mean scores and standard deviations of the degree of hurt feelings from the revealing of the external reasons (EBD & control groups, school 2, level C, parent/teacher group)

1. Children's own choices

	EBD group		Control group	
	internal	external	internal	external
reveal	$\bar{x} = 1.2$ sd=0.9	$\bar{x} = 2.4$ sd=0.9	$\bar{x} = 0.7$ sd=0.4	$\bar{x} = 0.4$ sd=1.0
	Total reveal $\bar{x} = 1.8$		Total reveal $\bar{x} = 0.6$	
not reveal	$\bar{x} = 0.3$ sd=0.8	$\bar{x} = 1.3$ sd=1.3	$\bar{x} = 1.0$ sd=1.6	$\bar{x} = 3.3$ sd=0.4
	Total not reveal $\bar{x} = 0.8$		Total not reveal $\bar{x} = 2.2$	
	Total external $\bar{x} = 0.8$ Total internal $\bar{x} = 1.9$		Total external $\bar{x} = 0.9$ Total internal $\bar{x} = 1.9$	
Overall	EBD $\bar{x} = 1.3$ external $\bar{x} = 0.8$ control $\bar{x} = 1.4$ internal $\bar{x} = 1.9$		reveal $\bar{x} = 1.2$ not reveal $\bar{x} = 1.5$	

2. Suggested reasons (probing)

	EBD group		Control group	
	external	internal	external	internal
reveal	$\bar{x} = 0.9$ sd = 0.7	$\bar{x} = 2.4$ sd = 0.8	$\bar{x} = 0.3$ sd = 0.4	$\bar{x} = 1.0$ sd = 1.4
	Total reveal $\bar{x} = 1.6$		Total reveal $\bar{x} = 0.7$	
not reveal	$\bar{x} = 0.3$ sd = 0.9	$\bar{x} = 2.2$ sd = 1.5	$\bar{x} = 0.5$ sd = 1.1	$\bar{x} = 3.2$ sd = 0.5
	Total not reveal $\bar{x} = 0.7$		Total not reveal $\bar{x} = 1.9$	
	Total external $\bar{x} = 0.6$ Total internal $\bar{x} = 1.8$		Total external $\bar{x} = 0.4$ Total internal $\bar{x} = 2.1$	
Overall	EBD $\bar{x} = 1.2$ external $\bar{x} = 0.5$ Control $\bar{x} = 1.3$ internal $\bar{x} = 2.0$		reveal $\bar{x} = 1.2$ not reveal $\bar{x} = 1.3$	

Table 50: Mean scores and standard deviations of the degree of hurt feelings from the revealing of external versus internal reasons by the EBD & control groups (school 2, level C parent-only group).

1. Children's own choices

	EBD			Control		
	external	internal		external	internal	
reveal	$\bar{x} = 0.3$ sd=0.4	$\bar{x} = 1.2$ sd=1.4	total reveal $\bar{x} = 0.7$	$\bar{x} = 0.6$ sd=0.5	$\bar{x} = 0.3$ sd=0.5	total reveal $\bar{x} = 0.4$
not reveal	$\bar{x} = 1.3$ sd=1.7	$\bar{x} = 2.7$ sd=0.8	total not reveal $\bar{x} = 0.9$	$\bar{x} = 0.4$ sd=1.0	$\bar{x} = 3.3$ sd=0.5	total not reveal $\bar{x} = 1.9$
	total external $\bar{x} = 0.8$	total internal $\bar{x} = 1.9$		total external $\bar{x} = 0.4$	total internal $\bar{x} = 1.9$	
Overall EBD $\bar{x} = 1.4$ external $\bar{x} = 0.7$ reveal $\bar{x} = 0.6$ control $\bar{x} = 1.2$ internal $\bar{x} = 1.9$ not reveal $\bar{x} = 1.9$						

2. Suggested reasons (probing)

	EBD			Control		
	external	internal		external	internal	
reveal	$\bar{x} = 0.7$ sd=0.4	$\bar{x} = 0.8$ sd=0.6	total reveal $\bar{x} = 0.7$	$\bar{x} = 0.1$ sd=0.1	$\bar{x} = 0.3$ sd=0.5	total reveal $\bar{x} = 0.2$
not reveal	$\bar{x} = 0.7$ sd=1.2	$\bar{x} = 2.8$ sd=0.6	total not reveal $\bar{x} = 1.7$	$\bar{x} = 0.7$ sd=1.0	$\bar{x} = 2.5$ sd=1.2	total not reveal $\bar{x} = 1.6$
	total external $\bar{x} = 0.7$	total internal $\bar{x} = 1.8$		total external $\bar{x} = 0.4$	total internal $\bar{x} = 1.4$	
Overall EBD $\bar{x} = 1.2$ external $\bar{x} = 0.5$ reveal $\bar{x} = 0.5$ control $\bar{x} = 0.9$ internal $\bar{x} = 1.6$ not reveal $\bar{x} = 1.5$						

Table 51: Means and standard deviations of the degree of hurt feelings from the revealing of external versus internal reasons by the EBD and control groups (school 18, level C parent-only group).

1. Children's own choices

	EBD			Control		
	external	internal		external	internal	
reveal	$\bar{x} = 0.7$ sd=0.9	$\bar{x} = 1.2$ sd=0.8	total reveal $\bar{x} = 0.9$	$\bar{x} = 0.6$ sd=0.4	$\bar{x} = 0.7$ sd=1.0	total reveal $\bar{x} = 0.7$
not reveal	$\bar{x} = 1.2$ sd=1.5	$\bar{x} = 1.5$ sd=1.6	total not reveal $\bar{x} = 1.4$	$\bar{x} = 1.2$ sd=1.7	$\bar{x} = 3.3$ sd=0.6	total not reveal $\bar{x} = 2.2$
	total external $\bar{x} = 1.0$	total internal $\bar{x} = 1.3$		total external $\bar{x} = 0.9$	total internal $\bar{x} = 2.0$	
Overall	EBD $\bar{x} = 1.6$ external $\bar{x} = 0.9$ reveal $\bar{x} = 0.8$ control $\bar{x} = 1.5$ internal $\bar{x} = 1.7$ not reveal $\bar{x} = 1.8$					

2. Suggested reasons (probing)

	EBD			Control		
	external	internal		external	internal	
reveal	$\bar{x} = 0.3$ sd= 0.3	$\bar{x} = 2.1$ sd= 1.3	total reveal $\bar{x} = 1.2$	$\bar{x} = 0.2$ sd=0.3	$\bar{x} = 0.2$ sd=0.4	total reveal $\bar{x} = 0.2$
not reveal	$\bar{x} = 0.7$ sd= 1.4	$\bar{x} = 3.3$ sd=1.1	total not reveal $\bar{x} = 2.1$	$\bar{x} = 0.5$ sd= 1.0	$\bar{x} = 3.3$ sd=0.4	total not reveal $\bar{x} = 1.9$
	total external $\bar{x} = 0.5$	total internal $\bar{x} = 2.7$		total external $\bar{x} = 0.4$	total internal $\bar{x} = 1.7$	
Overall	EBD $\bar{x} = 1.6$ external $\bar{x} = 0.4$ reveal $\bar{x} = 0.7$ control $\bar{x} = 1.1$ internal $\bar{x} = 2.2$ not reveal $\bar{x} = 2.0$					

Table 53: Mean scores and standard deviations of the degree of hurt feelings from the revealing of external versus internal reasons by the EBD and control groups (school 2, level C, teacher-only group).

1. Children's own choices

	EBD group			control group		
	external	internal		external	internal	
reveal	$\bar{x} = 0.6$ sd=0.4	$\bar{x} = 1.1$ sd=1.2	total reveal $\bar{x} = 0.8$	$\bar{x} = 0.6$ sd=0.5	$\bar{x} = 0.3$ sd=0.6	total reveal $\bar{x} = 0.5$
not reveal	$\bar{x} = 0.8$ sd=1.5	$\bar{x} = 2.8$ sd=0.8	total not reveal $\bar{x} = 1.8$	$\bar{x} = 1.0$ sd=1.7	$\bar{x} = 3.1$ sd=0.6	total not reveal $\bar{x} = 2.0$
	total external $\bar{x} = 0.7$	total internal $\bar{x} = 1.9$		total external $\bar{x} = 0.8$	total internal $\bar{x} = 1.7$	
Overall	EBD $\bar{x} = 1.3$ external $\bar{x} = 0.8$ reveal $\bar{x} = 0.6$ control $\bar{x} = 1.2$ internal $\bar{x} = 1.8$ not reveal $\bar{x} = 1.9$					

2. Suggested reasons (probing)

	EBD group			control group		
	external	internal		external	internal	
reveal	$\bar{x} = 0.3$ sd=0.3	$\bar{x} = 1.2$ sd=1.1	total reveal $\bar{x} = 0.7$	$\bar{x} = 0.1$ sd=0.2	$\bar{x} = 0.4$ sd=0.8	total reveal $\bar{x} = 0.3$
not reveal	$\bar{x} = 1.3$ sd=1.7	$\bar{x} = 2.6$ sd=0.8	total not reveal $\bar{x} = 2.0$	$\bar{x} = 0.6$ sd=1.1	$\bar{x} = 3.2$ sd=0.8	total not reveal $\bar{x} = 1.9$
	total external $\bar{x} = 0.8$	total internal $\bar{x} = 1.9$		total external $\bar{x} = 0.4$	total internal $\bar{x} = 1.8$	
Overall	EBD $\bar{x} = 1.4$ external $\bar{x} = 0.6$ reveal $\bar{x} = 0.5$ control $\bar{x} = 1.1$ internal $\bar{x} = 1.8$ not reveal $\bar{x} = 1.9$					

Table 54: Mean scores and standard deviations of the degree of hurt feelings by the revealing of external versus internal reasons by the EBD and control groups (school 18, level C, teacher-only group).

1. Children's own choices

	EBD group			control group		
	external	internal		external	internal	
reveal	$\bar{x} = 0.5$ sd=0.4	$\bar{x} = 2.1$ sd=0.9	total reveal $\bar{x} = 1.3$	$\bar{x} = 0.6$ sd=0.3	$\bar{x} = 0.9$ sd=1.6	total reveal $\bar{x} = 0.7$
not reveal	$\bar{x} = 1.3$ sd=1.6	$\bar{x} = 1.5$ sd=1.9	total not reveal $\bar{x} = 1.4$	$\bar{x} = 0.7$ sd=0.7	$\bar{x} = 3.2$ sd=0.5	total not reveal $\bar{x} = 2.0$
	total external $\bar{x} = 0.9$	total internal $\bar{x} = 1.8$		total external $\bar{x} = 0.6$	total internal $\bar{x} = 2.0$	
Overall	EBD $\bar{x} = 1.4$ external $\bar{x} = 0.8$ reveal $\bar{x} = 1.0$ control $\bar{x} = 1.3$ internal $\bar{x} = 1.9$ not reveal $\bar{x} = 1.7$					

2. Suggested reasons (probing)

	EBD group			control group		
	external	internal		external	internal	
reveal	$\bar{x} = 0.2$ sd=0.4	$\bar{x} = 1.9$ sd=1.0	total reveal $\bar{x} = 1.1$	$\bar{x} = 0.5$ sd=0.4	$\bar{x} = 0.7$ sd=0.4	total reveal $\bar{x} = 0.6$
not reveal	$\bar{x} = 0.0$ sd=0.0	$\bar{x} = 2.9$ sd=0.6	total not reveal $\bar{x} = 1.4$	$\bar{x} = 0.1$ sd=0.4	$\bar{x} = 3.2$ sd=0.4	total not reveal $\bar{x} = 1.7$
	total external $\bar{x} = 0.1$	total internal $\bar{x} = 2.4$		total external $\bar{x} = 0.3$	total internal $\bar{x} = 2.0$	
Overall	EBD $\bar{x} = 1.2$ external $\bar{x} = 0.2$ reveal $\bar{x} = 0.9$ control $\bar{x} = 1.1$ internal $\bar{x} = 2.2$ not reveal $\bar{x} = 1.6$					

Table 56: Mean scores and standard deviations of the degree of hurt feelings from the revealing of external and internal reasons (both schools, EBD & control groups, level D, parent/teacher group).

1. Children's own choices

	School 2 (n=40)		School 18 (n=50)	
	EBD (n=20)	Control (n=20)	EBD (n=25)	Control (n=25)
reveal external	$\bar{x} = 1.6$ sd=0.9	$\bar{x} = 0.6$ sd=0.5	$\bar{x} = 1.3$ sd=0.8	$\bar{x} = 0.5$ sd=0.4
reveal internal	$\bar{x} = 2.3$ sd=1.0	$\bar{x} = 2.7$ sd=0.8	$\bar{x} = 2.4$ sd=0.8	$\bar{x} = 2.9$ sd=0.7
	Total	EBD $\bar{x} = 2.0$ control $\bar{x} = 1.7$ external $\bar{x} = 1.1$ internal $\bar{x} = 2.5$	Total	EBD $\bar{x} = 1.8$ control $\bar{x} = 1.6$ external $\bar{x} = 0.9$ internal $\bar{x} = 2.6$

2. Suggested reasons (probing)

	School 2 (n=20)		School 18 (n=25)	
	EBD (n=20)	Control (n=20)	EBD (n=25)	Control (n=25)
reveal external	$\bar{x} = 1.0$ sd=0.6	$\bar{x} = 0.5$ sd=0.5	$\bar{x} = 1.5$ sd=0.9	$\bar{x} = 0.5$ sd=0.6
reveal internal	$\bar{x} = 2.8$ sd=0.5	$\bar{x} = 3.1$ sd=0.5	$\bar{x} = 3.0$ sd=0.5	$\bar{x} = 3.2$ sd=0.4
	Total	EBD $\bar{x} = 1.9$ control $\bar{x} = 1.8$ external $\bar{x} = 0.7$ internal $\bar{x} = 3.0$	Total	EBD $\bar{x} = 2.2$ control $\bar{x} = 1.8$ external $\bar{x} = 1.0$ internal $\bar{x} = 3.1$

Table 58: Mean scores and standard deviations of the degree of hurt feelings from the revealing of external or internal reasons in both schools (EBD & control groups, level D, parent-only group).

1. Children's own choices

	School 18 (n=24)		School 2 (n=12)	
	EBD (n=12)	control (n=12)	EBD (n=6)	control (n=6)
reveal external	$\bar{x} = 0.8$ sd=0.6	$\bar{x} = 0.4$ sd=0.3	$\bar{x} = 0.7$ sd=0.5	$\bar{x} = 0.7$ sd=0.6
reveal internal	$\bar{x} = 2.7$ sd=0.7	$\bar{x} = 3.0$ sd=0.3	$\bar{x} = 2.8$ sd=0.3	$\bar{x} = 2.5$ sd=0.5
	total	EBD $\bar{x} = 1.8$ control $\bar{x} = 1.7$ external $\bar{x} = 0.6$ internal $\bar{x} = 2.9$	total	EBD $\bar{x} = 1.8$ control $\bar{x} = 1.6$ external $\bar{x} = 0.7$ internal $\bar{x} = 2.7$

2. Suggested reasons (probing)

	School 18 (n=24)		School 2 (n=12)	
	EBD (n=12)	control (n=12)	EBD (n=6)	control (n=6)
reveal external	$\bar{x} = 0.6$ sd=0.5	$\bar{x} = 0.4$ sd=0.4	$\bar{x} = 0.5$ sd=0.3	$\bar{x} = 0.3$ sd=0.3
reveal internal	$\bar{x} = 2.9$ sd=0.4	$\bar{x} = 3.2$ sd=0.5	$\bar{x} = 3.3$ sd=0.3	$\bar{x} = 3.3$ sd=0.3
	Total	EBD $\bar{x} = 1.8$ control $\bar{x} = 1.8$ external $\bar{x} = 0.5$ internal $\bar{x} = 3.1$	Total	EBD $\bar{x} = 1.9$ control $\bar{x} = 1.8$ external $\bar{x} = 0.5$ internal $\bar{x} = 3.3$

Table 60: Mean scores and standard deviations of the degree of hurt feelings from the revealing of external versus internal reasons (both schools, EBD & control groups, level D teacher-only group).

1. Children's own choices

	School 18 n=14		School 2 n=14	
	EBD n=7	Control n=7	EBD n=7	Control n=7
external	$\bar{x}=0.6$ sd=0.5	$\bar{x}=0.8$ sd=0.3	$\bar{x}=0.7$ sd=0.4	$\bar{x}=0.4$ sd=0.3
internal	$\bar{x}=2.2$ sd=1.1	$\bar{x}=2.5$ sd=0.6	$\bar{x}=1.6$ sd=0.9	$\bar{x}=2.9$ sd=0.3
	total	EBD $\bar{x}=1.4$ control $\bar{x}=1.6$ external $\bar{x}=0.7$ internal $\bar{x}=2.3$	total	EBD $\bar{x}=1.2$ control $\bar{x}=1.6$ external $\bar{x}=0.6$ internal $\bar{x}=2.2$

2. Suggested reasons (probing)

	School 18 n=14		School 2 n=14	
	EBD	control	EBD	control
external	$\bar{x}=0.2$ sd=0.2	$\bar{x}=0.6$ sd=0.5	$\bar{x}=0.6$ sd=0.7	$\bar{x}=0.7$ sd=0.3
internal	$\bar{x}=3.2$ sd=0.4	$\bar{x}=2.9$ sd=0.5	$\bar{x}=3.0$ sd=0.4	$\bar{x}=3.2$ sd=0.3
	total	EBD $\bar{x}=1.7$ control $\bar{x}=1.7$ external $\bar{x}=0.4$ internal $\bar{x}=3.0$	total	EBD $\bar{x}=1.8$ control $\bar{x}=1.9$ external $\bar{x}=0.7$ internal $\bar{x}=3.1$

Figures

Figure 17: Graph representing the interaction between factors A (EBD/control) & B (external/internal) in school 18 (level A, parent/teacher group).

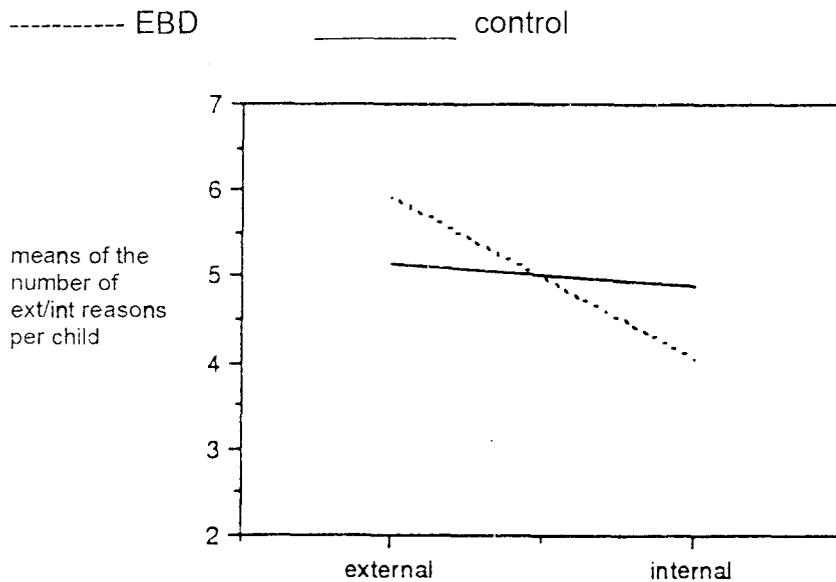


Figure 18: Graph representing the interaction between factors B (internal/external) & C (situations A & B) in school 18 (level A, parent/teacher group).

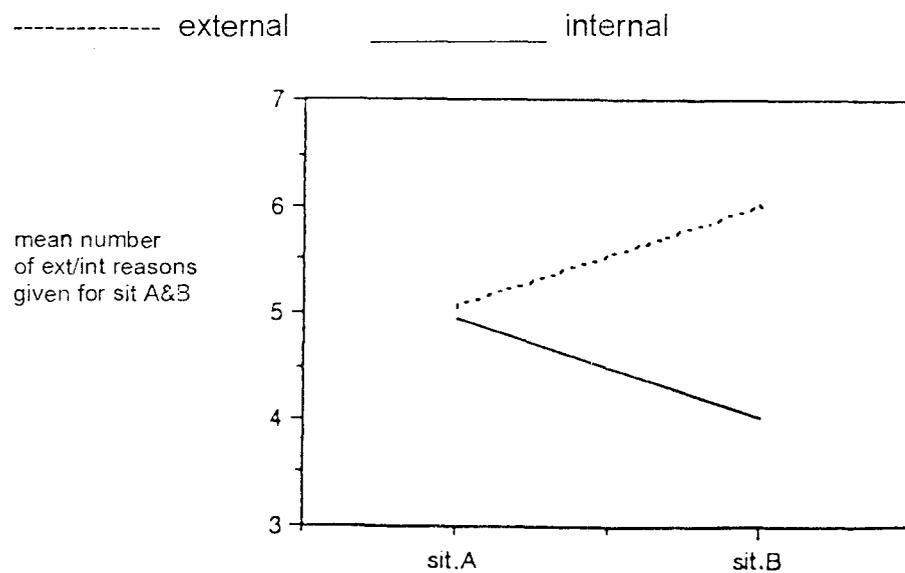


Figure 19: Graph representing the interaction between factors A (EBD/control) & B (external/internal) in school 2 (level A, parent-only group).

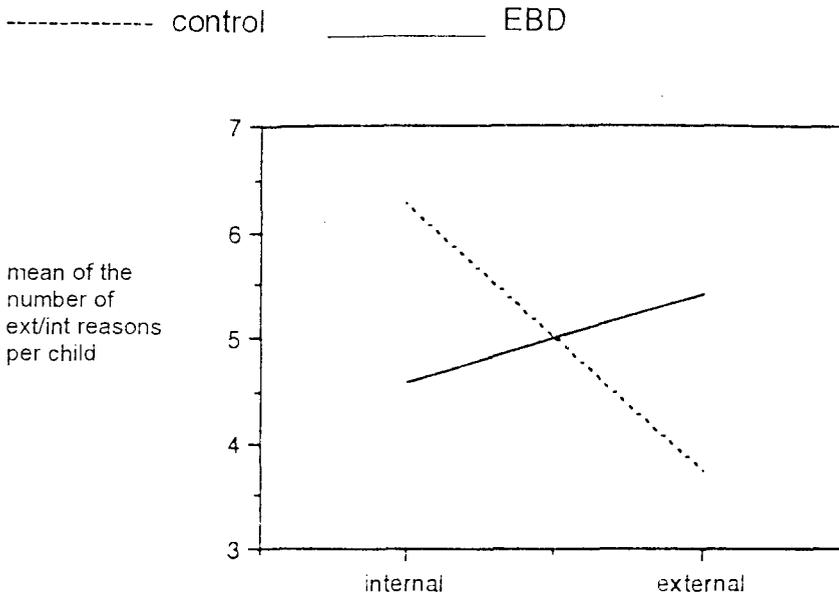


Figure 20: Graph representing the interaction between factors B (external/internal) & C (situations A & B) in school 2 (level A, parent-only group).

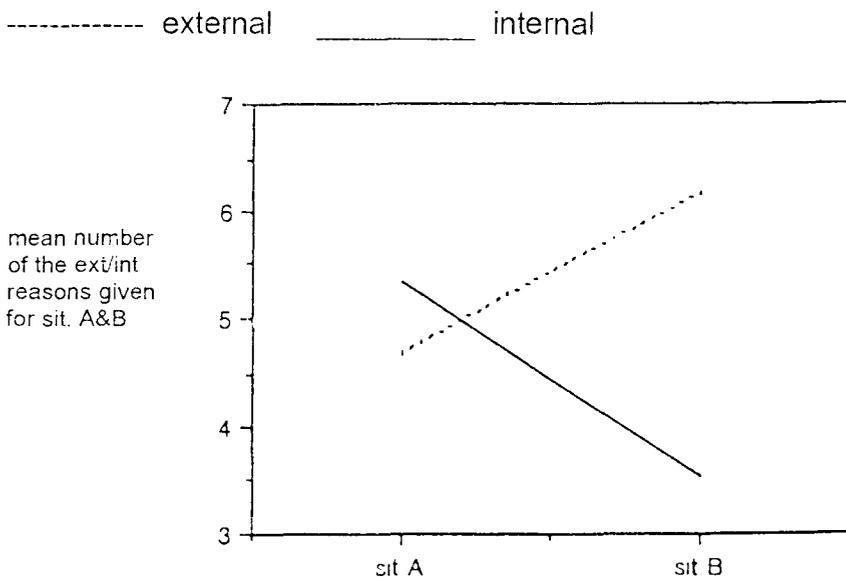
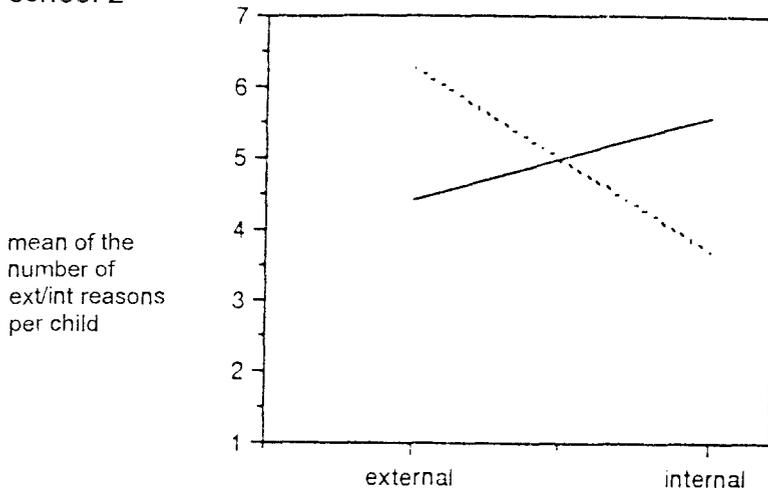


Figure 21: Graphs representing the interaction between factors A (EBD/control) & B (external/internal) in school 2 (level A, teacher-only group).

----- EBD _____ control

school 2



school 18

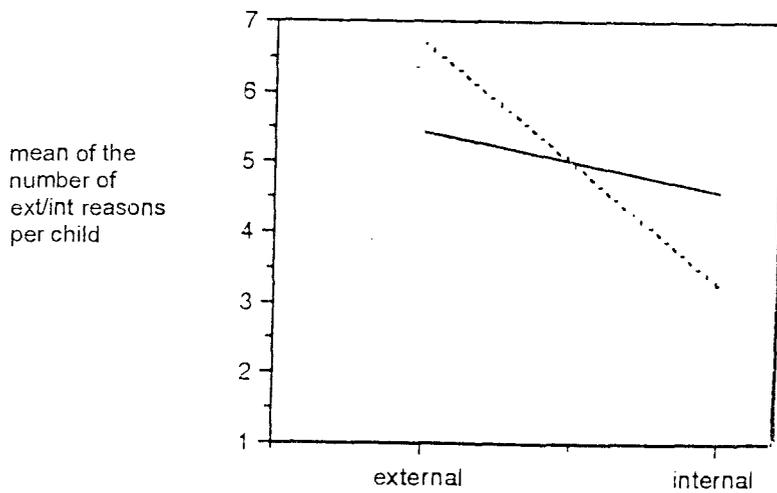


Figure 24: Graph representing the interaction among factors AXBXC (EBD/control, reveal/not reveal, internal/external) in school 2 (level B, parent/teacher group).

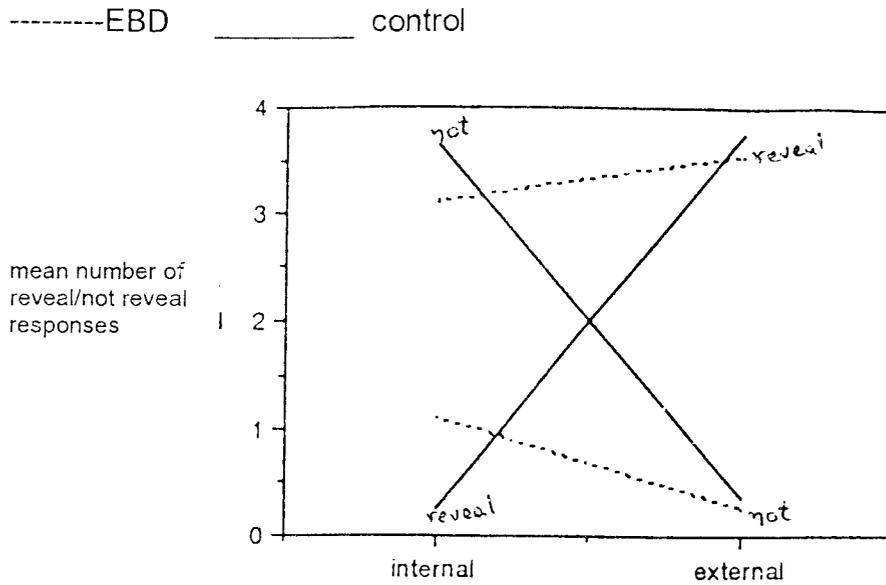


Figure 25: Graph representing the interaction among factors AXBXC (EBD/control, reveal/not reveal, internal/external) for the suggested reasons in school 2 (level B, parent/teacher group).

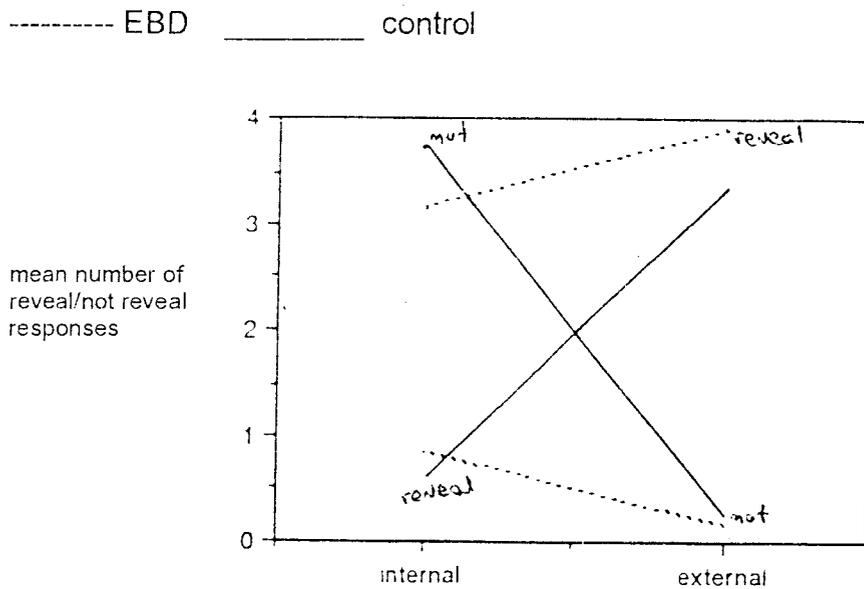


Figure 26: Graph representing the interaction among the three variables (EBD/control, reveal/not reveal, internal/external) for children's own choices in school 18 (level B, parent-only group).

----- reveal _____ not reveal

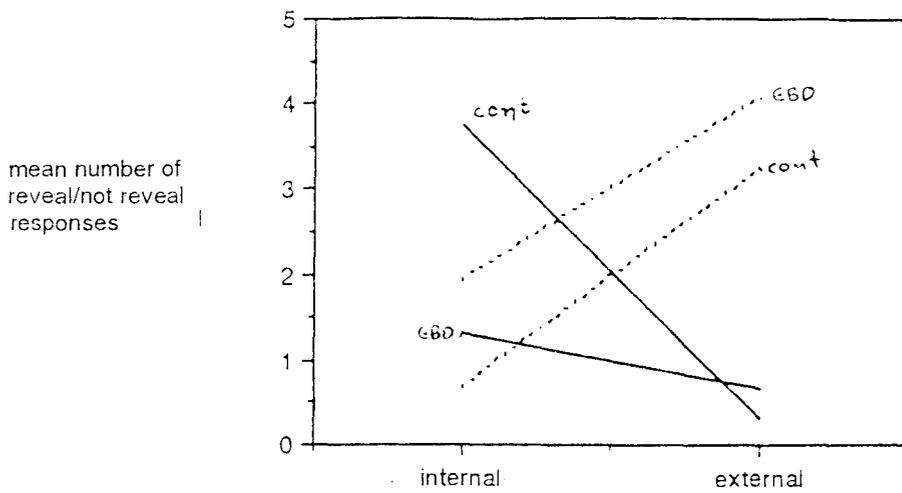


Figure 27: Graph representing the interaction between the three factors (EBD/control, reveal/not reveal, internal/external) for the suggested reasons in school 18 (level B, parent-only group).

-----EBD _____ control

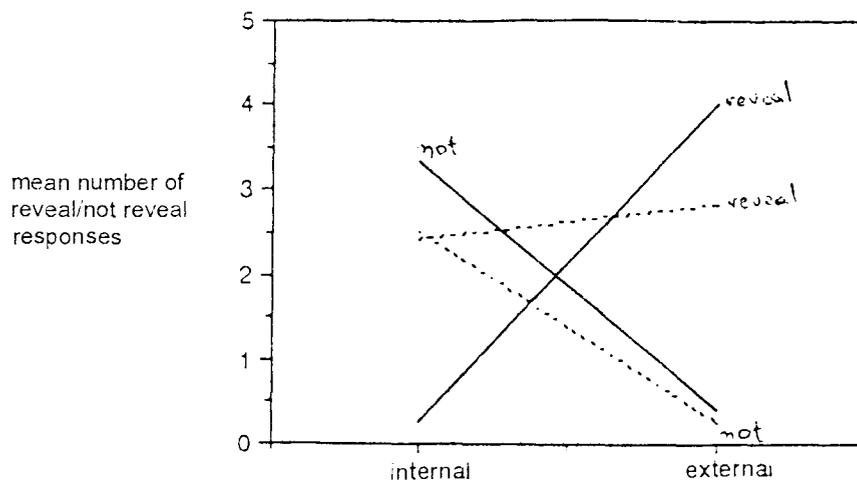


Figure 28: Graph representing the interaction among factors AXBXC (EBD/control, reveal/not reveal, internal/external) in school 18 (level B, teacher-only group).

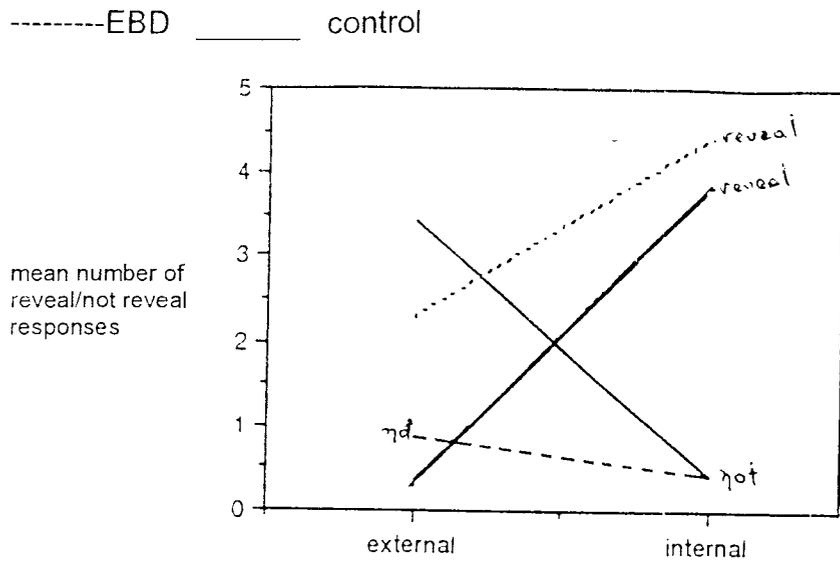


Figure 29: Graph representing the interaction among factors AXBXC (EBD/control, reveal/not reveal, internal/external) for the suggested reasons in school 18 (level B teacher-only group).

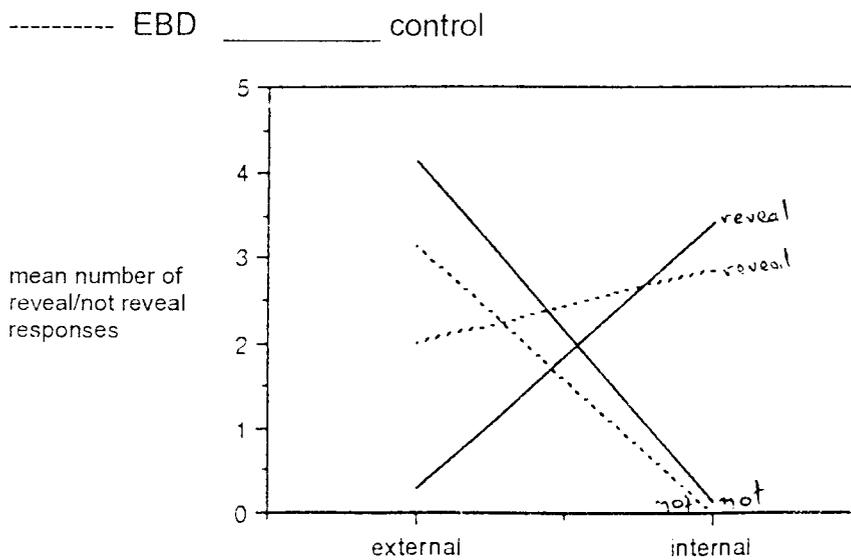


Figure 30: Graph representing the interaction among the three variables (EBD/control, external/internal, degree of hurt feelings) in school 18 (level C, parent-teacher group).

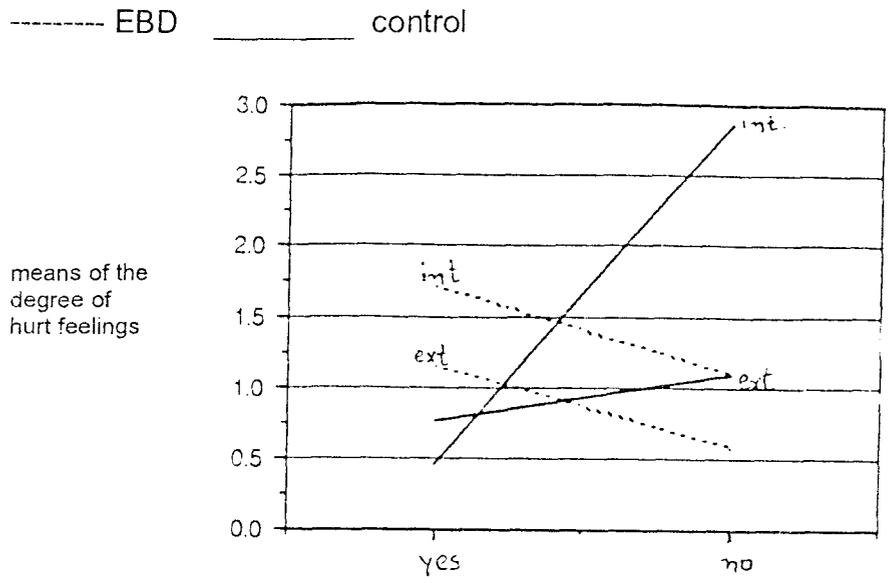


Figure 31: Graph representing the interaction among the three variables (EBD/control, external/internal, degree of hurt feelings) in school 2 (level C, parent/teacher group).

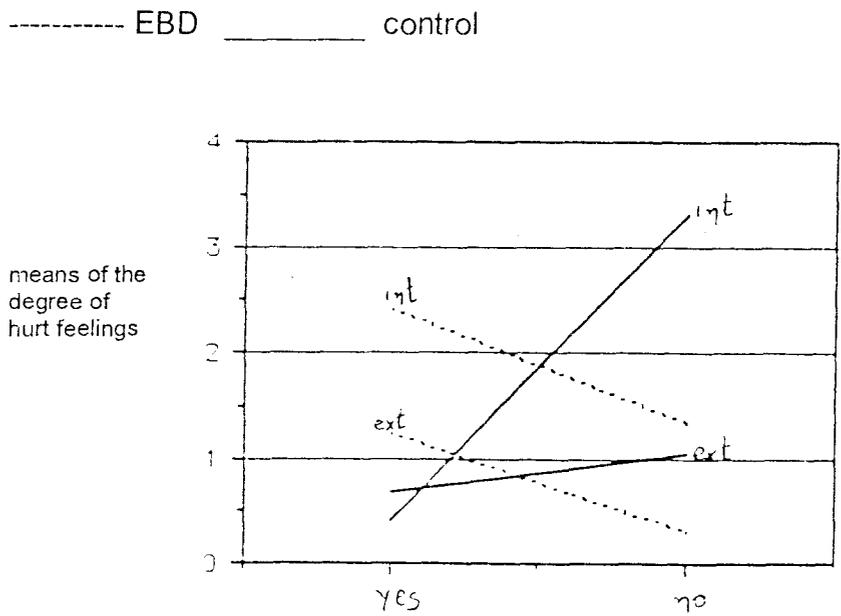


Figure 32: Graph representing the interaction between the three factors (EBD/control, external/internal, degree of hurt feelings) in school 2 (level C parent-only group).

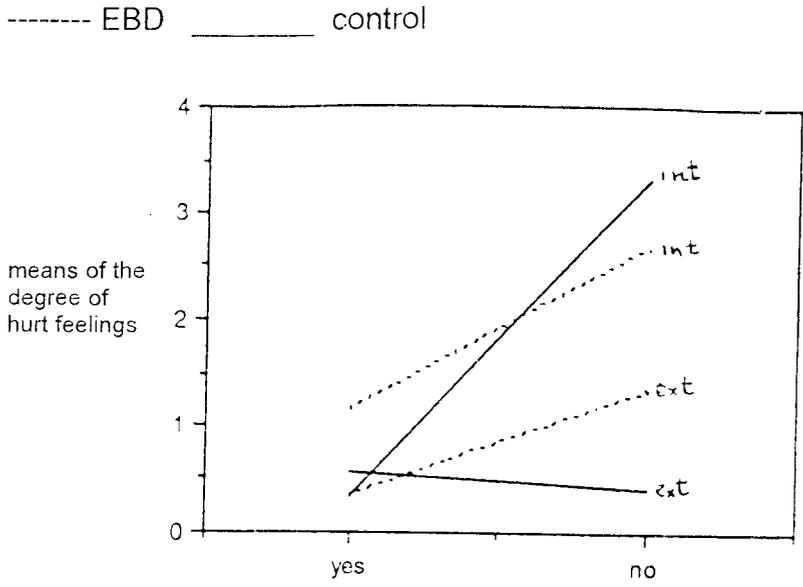


Figure 33: Graph representing the interaction among the three factors (EBD/control, external/internal, degree of hurt feelings) in school 18 (level C, parent-only group).

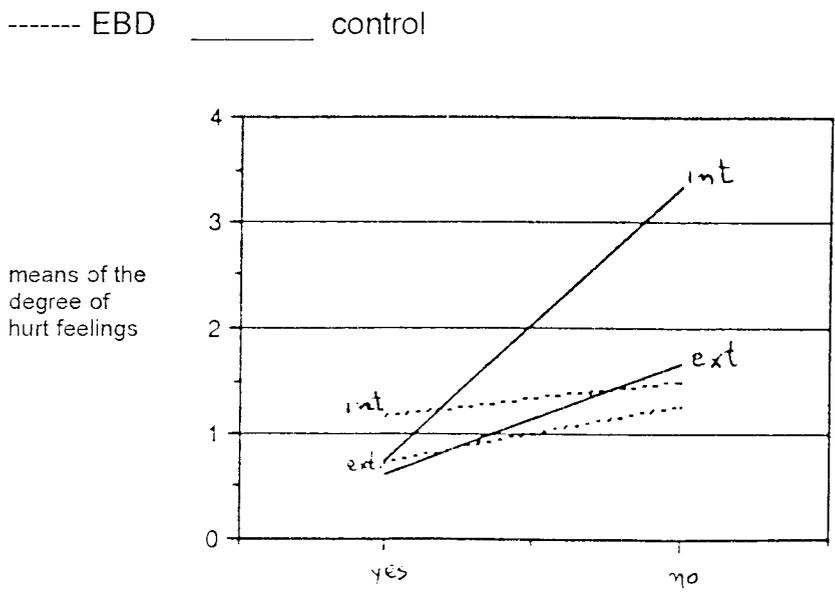


Figure 34: Graph representing the interaction among the three variables (EBD/control, external/internal, degree of hurt feelings) in school 18 (level C, parent-only group).

----- EBD _____ control

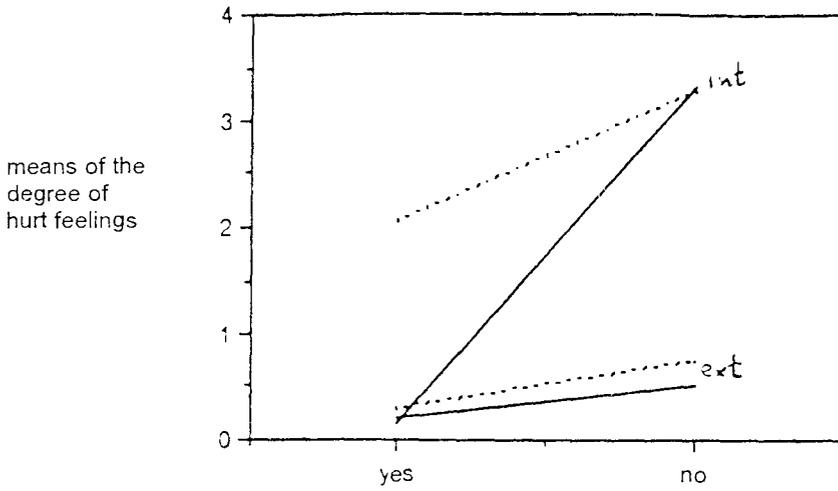


Figure 35: Graph representing the interaction among the three variables (EBD/control, external/internal, reveal/not reveal) in school 18 (level C, teacher-only group)

----- EBD _____ control

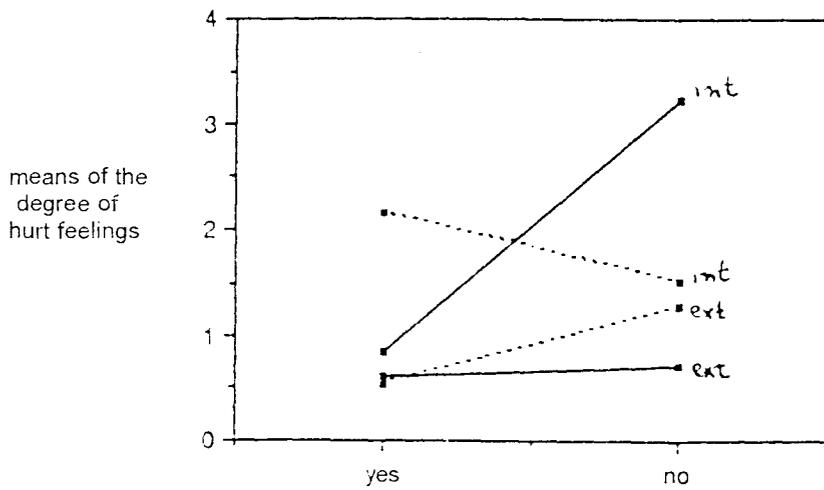


Figure 36: Graph representing the interaction among the three variables (EBD/control, external/internal, reveal/not reveal) for the suggested reasons in school 18 (level C, teacher-only group).

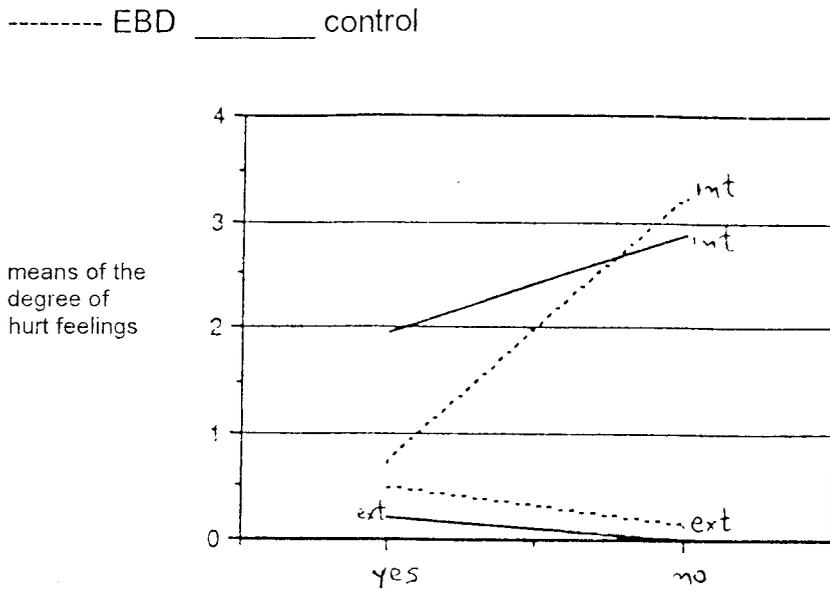


Figure 37: Graphs representing the interaction between factors A (degree of hurt feelings from the revealing of external/internal reasons) & B (EBD/control) for the suggested reasons and for children's own choices, in school 2 (level D, parent-teacher group).

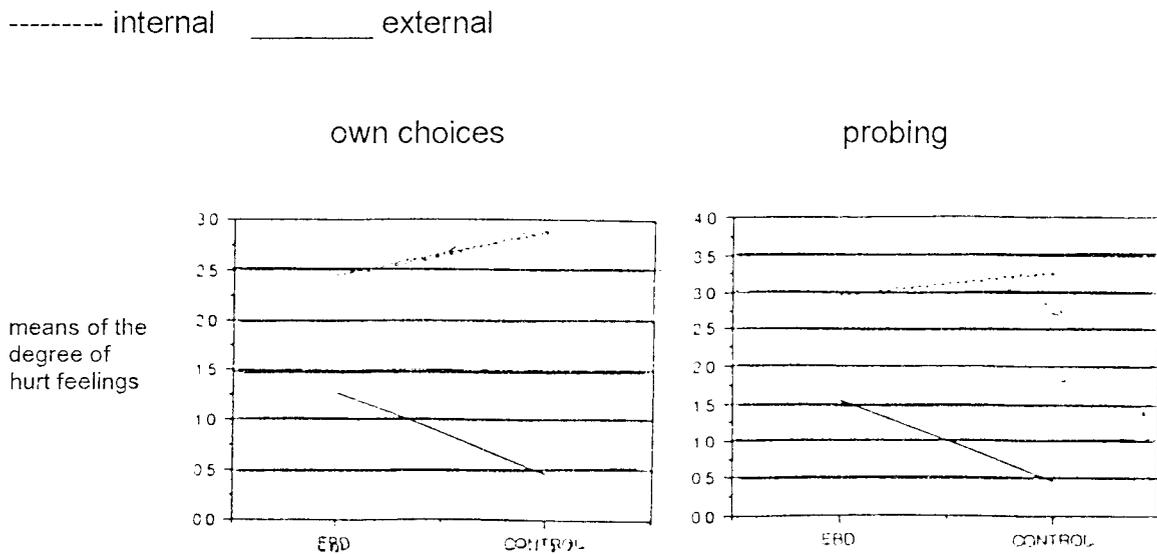


Figure 38: Graphs representing the interaction between factors A (degree of hurt feelings) & B (EBD/control) in school 18 (level D, parent-teacher group).

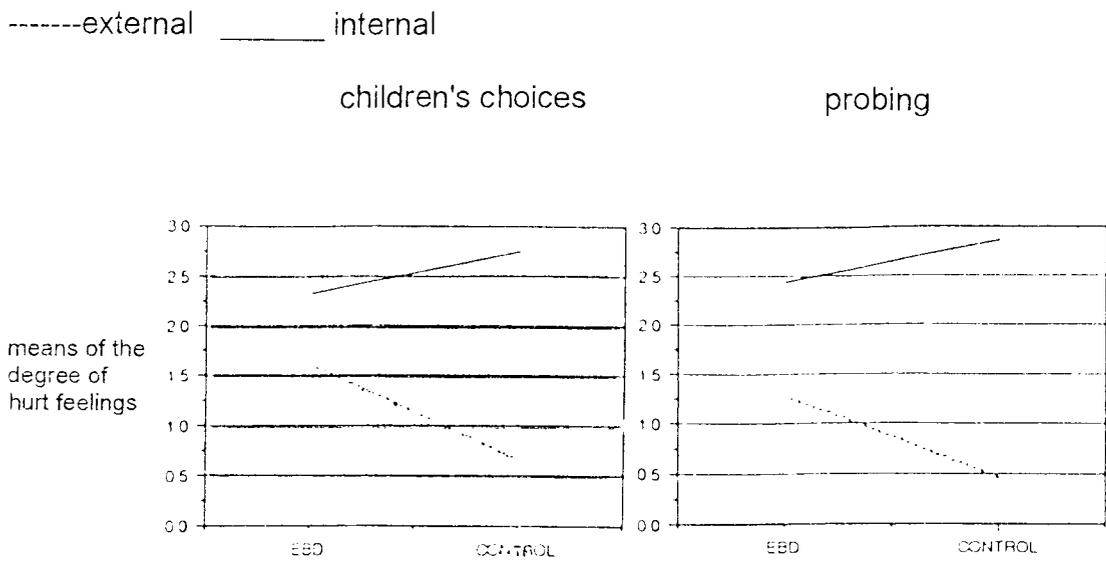


Figure 39: Graph representing the interaction between factors A (EBD/control) & B (external/internal) in school 18 (level D, parent-only group).

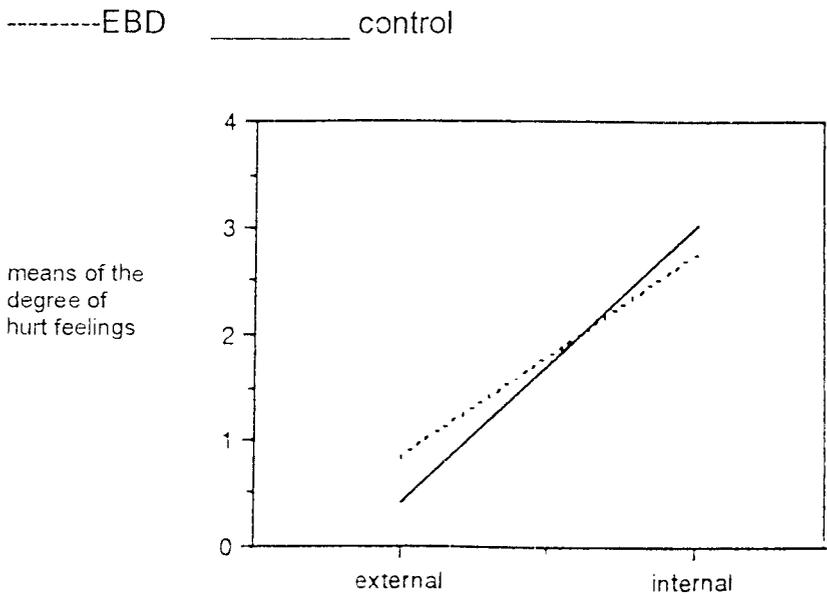
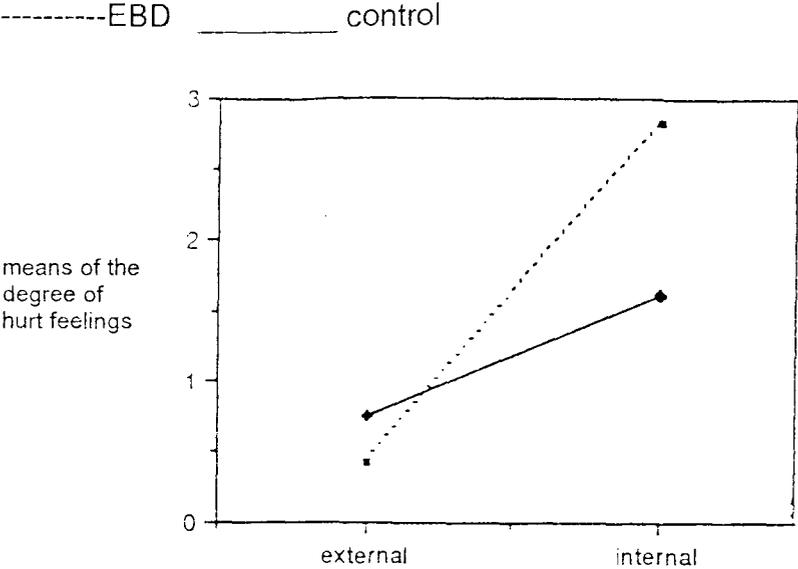


Figure 40: Graph representing the interaction between factors A (EBD/control) & B (hurt feelings from internal/external reasons) in school 2 (level D, teacher-only group).



APPENDIX C

The questionnaire used for the collection of data

1. Situation A

Pretend that a boy/girl from your class asks you to go out and play with him/her during break-time. You decide to say no because:

- a) you are sick with a bad cold
- b) your parents have asked you not to be friends with that boy
- c) the teacher has asked you to help him carry some books
- d) your classmate has been mean to you before
- e) she/he has a bad reputation in school
- f) she/he is never good at games

2. Situation A

Pretend that a boy/girl in your class asks you to work together on a maths assignment. You refuse because:

- a) you have promised someone else to work with
- b) you prefer working on your own
- c) you have already done the work at home
- d) you do not like his/her behaviour
- e) you think he/she is not good at maths
- f) she/he had refused to help you before

3. Situation A

Suppose you are playing a basket-ball game with your friends during PE hour. A boy/girl asks you if he/she can join in. You refuse because:

- a) the team has a full number of players
- b) she/he is punished by the coach
- c) she/he hasn't got the right outfit
- d) she/he is not familiar with the rules of the game
- e) she/he is a trouble-maker
- f) she/he is not a good palyer; she/he scores seldomly

4. Situation A

Suppose that a child in your class is absent. The teacher asks if you can visit him/her and give the homework. You refuse because:

- a) you know that your parents won't let you
- b) his/her house is too far away
- c) you have arranged to do other things that evening
- d) you know he/she does not care about school work
- e) he/she had never been of any help to you
- f) he/she had been rude and mean to you

5. Situation A

Suppose that the teacher has given an assignment to the class for the weekend. A classmate of yours did not complete it. Why do you think so?

- a) he/she had lost the notes
- b) she/he got sick
- c) she/he had no help
- d) she/he is not very clever
- e) she/he is always lazy to do any work
- f) she/he was overanxious and could not finish it

1. Situation B

Pretend that you ask a boy in your class to go out and play together during the break. He refuses because:

- a) she/he has a tummy-ache
- b) she/he wants to do his homework in the classroom
- c) she/he had made other arrangement
- d) you had a fight and he/she is angry with you
- e) he/she has a bad reputation in school
- f) she/he thinks you are not good at games

2. Situation B

Pretend that you ask a classmate to work on a maths assignment with you. he/she refuses because:

- a) she/he does not need help
- b) she/he has promised someone else
- c) she/he has already done the work at home
- d) she/he knows you are not good at maths

- e) she/he does not like you
- f) you had refused her/him your help once

3. Situation B

Suppose that the children in your class are playing a basketball game in the yard of the school. You ask them to join in and they refuse because:

- a) the team has a full number of players
- b) you didn't have the right outfit
- c) it is other children's turn
- d) last time you played you had been clumsy and caused an accident
- e) you have a reputation for foul-play
- f) you never score

4. Situation B

Suppose that last time you were sick no one came to bring you the homework. Why do you think so?

- a) the weather was bad
- b) your house was too far away
- c) they did not know your address
- d) your classmate do not like you
- e) you never volunteered to take homework to an absent classmate
- f) last time you were sick although someone brought you the notes you didn't do the homework

5. Situation B

Suppose that the teacher has given you an assignment to do during the weekend. You did not complete it because:

- a) you got sick
- b) you run out of time
- c) you had workers in the house
- d) you did not know how to do it
- e) you didn't trust yourself to do it correct
- f) you were overwhelmed with anxiety and could not finish it.

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