

**ANTECEDENTS AND PRECIPITANTS OF BINGE-EATING:**  
**the role of dissociation and childhood psychological maltreatment**

Submitted in partial fulfilment of the requirements  
for the degree of D.Clin. Psy.

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1997

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## CONTENTS

### Volume I

	Page number
<b>1. Research project</b>	
1.1. Abstract	4
1.2.0. Acknowledgements	7
1.3.0. Introduction	9
1.3.1.0. Binge-eating	9
1.3.1.1. Description and characteristics of binge-eating	9
1.3.1.2. Theories and models involving binge-eating	12
1.3.1.3. Antecedents and precipitants of binge-eating	17
1.3.1.4. Outcome of cognitive-behavioural therapy for binge-eating	18
1.3.2.0. Trauma	20
1.3.3.0. Dissociation	24
1.3.3.1. Characteristics of dissociation	25
1.3.3.2. Function of dissociation	25
1.3.3.3. Negative effects of dissociation	27
1.3.3.4. History of dissociation	29
1.3.3.5. Measures of dissociation	30
1.3.4. Relationship between dissociation and trauma	33
1.3.5. Trauma and binge-eating	38
1.3.6. Dissociation and binge-eating	44
1.3.7. Depression in eating disorders	51
1.3.8. Relationship between dissociation, binge-eating and trauma	52
1.4. Method	60
1.4.1. Participants	60



1.4.2.	Measures	62
1.4.2.1.	Psychological maltreatment measure (CAT)	62
1.4.2.2.	Dissociative Experience Scale (DES)	63
1.4.2.3.	Perceptual Alteration Scale (PAS)	65
1.4.2.4.	Three Factor Eating Questionnaire (TFEQ)	66
1.4.2.5.	Hospital Anxiety and Depression Scale (HAD)	66
1.4.3.	Procedure	67
1.5.	Results	70
1.5.1.	Demographic characteristics	70
1.5.2.	Eating difficulties	70
1.5.3.	Clinical presentation	73
1.5.4.	Childhood psychological maltreatment	73
1.5.5.	Dissociation	76
1.5.6.	Intercorrelations and regressions	77
1.5.7.	Dissociation and psychological maltreatment	81
1.5.8.	Food diaries	87
1.6.	Discussion	93
1.7.	Conclusion	104
1.8.	Bibliography	106
1.9.	Appendices	
1.9.1.	Appendix A: CAT	137
1.9.2.	Appendix B: TFEQ	140
1.9.3.	Appendix C: HAD	144
1.9.4.	Appendix D: PAS	146

1.9.5	Appendix E: DES	148
1.9.6.	Appendix F: Information sheet for participants	151
1.9.7.	Appendix G: Consent form	153
1.9.8.	Appendix H: Ethical consent letters	155
1.9.9.	Appendix I: Semi-structured interview	158

## **Volume II**

### **2. Case studies**

2.1.	Case-study 1: Adult Placement	159
2.2.	Case-study 2: Child Placement	179
2.3.	Case-study 3: Learning Disability Placement	196
2.4.	Case-study 4: Long-term Needs Placement	210

### **3. Small scale research project** 233

#### **CONTENTS OF TABLES**

I:	Behaviours associated with binge-eating and their frequencies	71
II:	Summary of total and subscale scores on TFEQ	73
III:	Summary of total and subscale scores on HAD	74
IV:	Summary of total and subscale scores on CAT	76
V:	Summary of total and subscale scores on DES	77
VI:	Summary of total and subscale scores on PAS	77
VII:	Intercorrelations between scales and subscales	78
VIII:	Multiple regression results	80
IX:	Summary of ANOVAs	84
X:	Precipitants indicated by participants for binge-eating	88
XI:	Primary precipitants for high and low trauma groups	90
XII:	Primary precipitants for high and low DES groups	91
XIII:	Primary precipitants for high and low PAS groups	92
XIV:	Primary precipitants for high and low HAD groups	92
XV:	Chi-square results for primary precipitants	92

## **1.1 ABSTRACT**

The present study examines links between dissociation, psychological maltreatment and binge-eating. The study took place in an outpatient setting and subjects were recruited from a psychology service. Forty-five women participated in the study, having been identified as having at least one bingeing episode per fortnight, with their binge-eating episodes meeting all other DSM-IV criteria.

The study consists of two inter-linked parts; the first part examines possible antecedents of binge-eating and the second part examines precipitants of binge-eating episodes. Participants completed five questionnaires, two measures of dissociation (Dissociative Experiences Scale, DES, Bernstein & Putnam, 1986; Perceptual Alteration Scale, PAS, Sanders 1986), a measure of childhood psychological maltreatment (Child Abuse and Trauma Scale, CAT, Sanders & Giolas, 1991), a measure of anxiety and depression (Hospital Anxiety and Depression Scale, HAD, Zigmond and Snaith, 1983), and an eating behaviour questionnaire (Three Factor Eating Questionnaire, TFEQ, Stunkard & Messick, 1985). Clinical information was also collected, in addition to completed food diaries.

The first part of the study found an association between one dissociation scale (DES) and childhood psychological maltreatment, but this was not found with

the second dissociation scale (PAS). The TFEQ did not correlate significantly with maltreatment or any other variable, except for a negative correlation between disinhibition and anxiety. There was therefore no evidence found to support the predicted hypothesis that dissociation plays a mediating role between binge-eating and childhood psychological maltreatment. There was some indication that general psychopathology, as indicated by the HAD scale in this study, was associated with dissociation but not with maltreatment. The results are not consistent with previous research, as some studies have suggested a relationship between sexual abuse and binge-eating, whereas others argue that the relationship is stronger between sexual abuse and depression or general psychopathology. This may be due to methodological and design differences, including the way binge-eating was defined and measured, and the way in which childhood trauma was measured.

The second part of the study found an association between the type of precipitant of binge-eating episodes and trauma; those subjects with a history of maltreatment were more likely to binge-eat in response to negative affect (i.e. emotional eating) than those without such a history. An association was not observed between dissociation and precipitants of binge-eating, which was unexpected in view of the association between maltreatment and dissociation. Difficulties were experienced in collecting data for the second part of the study, and also in the use of the data. Therefore, caution is drawn at the use of these results but they do lend some support to the view that binge-eaters are not a

homogenous group and that different groups of binge-eaters may have different etiological explanations for their eating disorders.

The results of the study highlights the need in clinical practice for a thorough assessment of a person's eating behaviour that considers wider developmental aspects, in addition to maintaining factors, in order that their binge-eating can be reduced without the concurrent development of new symptoms. This approach is well embedded in recent cognitive-behavioural models of eating disorders which take a multi-factorial view of eating disorders.

## **1.2 Acknowledgements**

I would first of all like to thank both project supervisors, Marcia Degun-Mather and David Oakley, for their help and guidance throughout the project. I am also grateful to the clinical and administrative staff of the BHB Clinical and Health Psychology Department and the Porters Avenue Community Mental Health Team, who helped me to find participants and helped with practicalities (such as room booking, etc.). The secretaries of the Psychology Department were also invaluable in providing me with the secretarial support for the clinical work undertaken with participants in the study. Support was also received from the other community mental health teams in BHB Trust, and Stewart Bellwood (District Clinical Psychologist) was instrumental in gaining this support.

Helpful informal input to the project was received from David Fewtrell (Consultant Clinical Psychologist), whose interest and clinical experience in dissociation helped me think about the nature of dissociation and the difficulties in its conceptualisations and measurement. Glen Waller's advice and guidance was greatly appreciated at the initial stages of my project, and this along with his published work were highly influential in the hypotheses generated for the thesis.

Special thanks to Marcia Degun-Mather, who in addition to providing me with clinical supervision for my client work, also took over the support for the majority of women that I assessed - thereby increasing her work load considerably. Marcia was my supervisor for my first clinical placement as a trainee, and throughout my training has continued to provide me with support

and advise. During my first placement, I was able to observe her work with clients who have eating disorders and also with survivors of abuse, in addition to receiving supervision and training in these areas.

Lastly, gratitude and loving thanks to my parents and Paul Ennis for their prize-winning patience when proof-reading, listening and supporting me as I completed my thesis.

### **1.3. INTRODUCTION**

#### **1.3.1. Binge-eating**

##### **1.3. 1.1. Description and characteristic of binge-eating**

Binge-eating is a symptom that may be characteristic of anorexia nervosa (binge-eating-purging type), bulimia nervosa, binge-eating disorder or unspecified eating disorder. The most recent version of the American Psychiatric Association's Diagnostic and Statistical Manual (DSM-IV; American Psychiatric Association, 1994) reported the proposal for the diagnosis of Binge Eating Disorder (BED) to be included as an official category, but stated that there was insufficient information to warrant its inclusion. The principal features of BED include recurrent binge eating associated with subjective and behavioural indicators of impaired control over, and significant distress about, the binge eating and the absence of the regular use of inappropriate compensatory behaviours.

The lack of clinical utility of the diagnostic categories has been highlighted by Waller (1993). He expressed the view that the categories are too wide to enable one model to be satisfactory and advocated a focus on specific symptoms for future research.

Despite the fairly recent emergence of diagnoses such as bulimia nervosa and binge-eating disorder, binge-eating is not new. It used to be seen as the result of the sporadic availability of food, as seen in primitive tribes who ate when the hunting and fishing catches were good and were then forced to fast when no food was



available. The Romans provided vomiting rooms adjacent to banqueting rooms, so that those who over-indulged could relieve their discomfort and return for more food (Martin, 1989).

From a clinical perspective, binge-eating is a commonly reported feature in most industrialised countries. The prevalence of bulimia nervosa is estimated at 1-3% among adolescent and young adult females, and binge-eating disorder may be as prevalent as 4% in the community (DSM-IV; American Psychiatric Association, 1994). There are also indications that binge-eating is also common in non-clinical populations. For example, Wardle (1980) found reports of binges with a mean frequency of 4.7 times a month (2.2 for men) in a group of normal young people. Men and women reported some craving for food and difficulty with stopping eating once started, which are both features of the clinical condition. Binge-eating has also been found in all weight groups (Bruce & Agras, 1992; Fairburn, Hay & Welch, 1993).

Binge-eating is often carried out in secret, reflecting the shame that is often associated with it. In clinical settings, patients referred for help with their eating behaviour often report distress with their binge-eating but feel powerless to stop.

The DSM-IV criteria for an episode of binge-eating include (i) eating in a discrete period of time (e.g. within any 2-hour period) an amount of food that is definitely larger than most people would eat during a similar period of time and under similar circumstances (ii) a sense of lack of control over eating during the episode. This

definition is not accepted by all researchers investigating binge-eating. There appears to be a general acceptance of the loss of control being important but there are queries about the amount of food consumed and the time period (Garner, Shafer & Rosen, 1992; Beglin & Fairburn, 1992). Ortega, Warranch, Maldonado, and Hubbard (1987) found that individuals with bulimia were more likely to describe eating episodes as binges than were independent raters. Rossiter and Agras (1990) found that although normal subjects consumed approximately 700 kilocalories in a meal, 28% of eating episodes that subjects with bulimia nervosa reported to be a binge contained fewer than 500 kilocalories. However, Abraham and Beaumont (1982) found that all patients made a clear distinction between merely eating too much and binge eating but described binge-eating episodes that lasted from 15 minutes to 3 weeks in duration.

It is difficult to estimate the amount of calories consumed from self-reports (e.g. diaries) and this is complicated by the fact that the same amount of food eaten may have very different connotations for different individuals or for the same person over time. Rosen et al (1986) found that half of the episodes labelled as 'binges' involved consuming less than 1000 calories and there was virtually no relationship between the amount of food eaten and the rating of anxiety. Schlundt, Johnson and Jarrell (1986) concluded from their study that it was not possible to construct a reliable method for coding an eating episode as a "binge". They found that meal size or variety was associated with self-induced vomiting such that meals consisting of a greater variety of food were much more likely to be purged than meals consisting of one or two food items. 'Junk food' was also positively associated with self-induced

vomiting. This study concentrated only on the bingeing that took place in the context of existing purging behaviour and therefore may not be generalisable to binge-eating with or without purging.

Some researchers (Connors et al., 1984) prefer to measure “binge-free days” - as some people may have an entire day of chaotic eating, making it difficult to define where one binge starts and another stop and stretches past a “discrete” amount of time

#### 1.3.1.2. Theories and models involving binge-eating

As noted by Waller (1993), most of the theories and models in eating disorders have presented binge-eating in the context of the eating disorder diagnoses. A variety of factors have been proposed as being associated with binge-eating, including biological, genetic, familial, dispositional, and contextual factors.

One group of theories view binge-eating as a consequence of eating behaviour. Restraint theory, which was first proposed and developed by Herman and his colleagues (Herman & Mack, 1975; Herman & Polivy, 1975), views binge eating as a result of dietary restraint (termed cognitive restraint). They asserted that obese people become unresponsive to internal hunger cues when they adopt dietary restraint. Normal weight restrained eaters displaying disinhibited eating (bingeing) also become unresponsive to internal cues but eat more when they have eaten more (counterregulation), instead of eating less as may be expected if individuals respond

to their physiological needs. In support of this theory, a positive association was found between dietary restraint and weight status and a causal link between dieting and bingeing and overeating (Lowe, 1993). Some authors suggest that normal weight restrained eaters counterregulate, whereas obese restrained eaters fail to regulate (Ruderman, 1986; Lowe, 1993).

The evidence for restraint theory has not been consistent; Stunkard and Messick (1985) found that disinhibition and hunger were significantly positively correlated, for both dieters and free-eaters, but that cognitive restraint and hunger were not correlated for either group. Cognitive restraint and disinhibition were significantly negatively correlated for dieters, but uncorrelated for free-eaters. This is contrary to predictions of restrained eating theory.

Additionally, in a study of adolescents, Williams and colleagues (1996) found that dieting led to bingeing in thin adolescents but in fatter adolescents there was a negative relationship between cognitive restraint and disinhibition. Disinhibition and hunger were also found to be associated, and a negative correlation was seen between cognitive restraint and hunger. Their conclusions were that not all dieters are bingers and not all bingers have been dieters, that there may be two types of cognitively restrained eaters - those who follow the predictions of dietary restraint theory and become disinhibited and those who steadfastly maintain their restraint (stringent dieters). They also felt that there may be bingers who binge because they are disinhibited and susceptible to hunger whereas disinhibited dieters may binge because their high levels of cognitive restraint cause them to become disinhibited.

Herman & Polivy (1990) have continued to review their theory and now contend that bingers are not a homogenous group; bingers may binge because they are disinhibited and susceptible to hunger, whereas disinhibited dieters may binge because their high levels of cognitive restraint cause them to become disinhibited.

The factors proposed in restraint theory were incorporated into a measurement scale by Herman Polivy. Stunkard and Messick (1985) have developed this scale further and produced the Three-Factor Eating Questionnaire (TFEQ), which also measures the factors proposed (by restraint theory) to be involved in eating behaviour - restraint, disinhibition and hunger.

Fairburn and Cooper (1989) proposed a cognitive-behavioural formulation of bulimia nervosa, which brought in the influence of personality factors alongside a consideration of the consequences of eating behaviour. They asserted that a low self-esteem leads to an overconcern about shape and weight, resulting in the presentation of extreme dieting. The physiological effects of dieting is seen to lead to bingeing, and then purging may occur to compensate for the bingeing. The bingeing and purging are thought to both lower self-esteem further, and therefore lead to the maintenance of the behaviours.

An immediate criticism of the above group of theories is that bingeing does not necessarily follow food deprivation or dieting (Russell, 1979, 1985).

Another group of theories focus on the reduction of negative emotions and a collection of studies have reported that bingeing results in the reduction of negative emotions (e.g. Kaye, Gwirtsman, George, Weiss & Jimerson, 1986). Some studies have found evidence that individuals experience increased stress, anxiety and depression before a binge, which is reduced during the binge (Abraham & Beaumont, 1982; Hsu, 1990; Lingswiler, Crowther & Stephens, 1989). On the other hand, some studies suggest that some specific negative feelings (such as guilt, disgust, and helplessness) are reported to increase during bingeing (Cooper et al., 1988; Johnson & Larson, 1982) or when eating "forbidden" foods (e.g. MacDiarmid & Heatherington, 1995) and bingeing can be followed by increased depression (Elmore & De Castro, 1990; Hsu, 1990; Kaye, Gwirtsman, George, Weiss & Jimmerson, 1986). Therefore, from these studies it would appear that whilst bingeing may temporarily reduce negative affect, it may also be self-maintaining since it increases negative affect in the long-term.

Heatherton and Baumeister (1991) define binge eating as the eating that results from disinhibition of dietary restraints, regardless of whether it is part of a broader pattern of bulimia. They view bingeing as a way of avoiding negative affect, and occurs as a consequence of cognitive narrowing which allows the individual to escape from aversive self-awareness. Therefore the person escapes by focusing on their immediate stimulus environment, with a resultant loss in reasoning and inhibition, which leads to dietary restraint giving way to bingeing.

Other theories view the function of bingeing as being multiple. For example, Root and Fallon (1989) view bingeing as ways of gaining control, altering self, an outlet for anger, establishing psychological space, providing routine and predictability, coping with stress, anaesthetising internal feelings and blocking out memories. In this way, bingeing is seen as having the potential for providing different functions for different individuals.

Johnson, Schlundt and Jarrell (1986) also view bingeing as being able to moderate emotional states by either calming aroused states or replacing deficient ones. They suggest that negative affect may lessen control over eating resulting in a consumption of junk foods or large meals, leading the individual to seek out high-risk situations such as staying at home in the evening. They therefore see bulimic behaviours as attempts to cope with bad feelings and unstructured time.

Although these models provide good descriptions of the many functions of bingeing, they do not fully explain how bingeing moderates emotional states and why individuals develop bingeing as a way of moderating emotions (instead of more appropriate and successful coping).

Interestingly, successful remission of bingeing often leads in itself to a significant reduction of depression and other psychopathology (Laessle, Schweiger, Fichter and Pirke, 1988). Laessle, et al., suggest that depression may be the result of bulimia nervosa, rather than the cause, and that fluctuations of mood are secondary to the

eating behaviour. This view is therefore not consistent with the notion that bingeing is a way of coping with negative emotion.

#### 1.3.1.3. Antecedents and precipitants of binge-eating

As outlined above, binge-eating appears to have a variety of functions and therefore may be precipitated by an equally wide variety of triggers. Cognitive behavioural therapy usually starts with the monitoring of antecedents and precipitants of binge-eating, in order that this behaviour can be reduced through the identification and challenging of negative thoughts (thought to be reflective of thinking errors and dysfunctional schemas).

Identification of the triggers for binge-eating episodes is important in helping to identify the mechanisms involved. Grilo, Shiffman and Carter-Campbell (1994) found two types of situational antecedents of binge-eating: (i) solitary situations which were often precipitated by negative affect, (ii) and social eating situations which were precipitated by the social activity, food cues and internal food cravings.

Examining the range of precipitants to episodes, Abraham and Beaumont (1992) found a number of precipitating episodes of binge-eating that could be categorised as either internal feelings or actual events. Binge-eaters reported the following precipitants (% of subjects reporting precipitant in brackets): tension (91%); eating something (84%); being alone (78%); thinking of food (75%) craving specific foods (78%); going home (72%); feeling bored and feeling lonely (59%); feeling hungry



(44%); drinking alcohol (44%); going out with someone of opposite sex (25%); eating out (22%); going to parties (22%).

#### 1.3.1.4. Outcome of cognitive behavioural therapy for binge-eating

Cognitive behaviour therapy (CBT) is one of the most popular treatments offered to clients with eating disorders. It has been shown to produce clinically significant reductions in binge eating (Fairburn, Jones, Peveler, Carr, Solomon, O'Connor, Burton & Hope 1991; Garner, Rockert, Davis, Garner, Olmsted & Eagle, 1993; Wilson, Eldredge, Smith & Niles, 1991). Wilson (1996) in his review declares that CBT is superior to medication alone (desipramine was used in trials cited) and that combining CBT with medication is significantly more effective than medication alone. He concludes that, at present, no other treatment has been demonstrated to be as consistently effective as CBT. However, Wilson also points out that no more than roughly 50% of patients cease binge eating and purging; the remainder show partial improvement and a small number derive no benefit at all.

A consistent finding in the treatment of bulimia is that comorbid personality disorders are a negative prognostic factor for therapy, especially borderline personality disorder (Coker, Vize, Wade & Cooper, 1993; Johnson, Tobin & Dennis, 1990; Rossiter, Agras, Telch & Schneider, 1993). Other poor prognostic factors cited are a history of psychoactive substance abuse and self-harm (Coker, Vize, Wade, and Cooper, 1993). Gleaves and Eberenz (1994) also suggest that a history of sexual abuse or other trauma history, post-traumatic symptomology and

dissociative experiences may also indicate risk for treatment failure in therapy for eating disorders.

McManus and Waller (1995) comment that eating disorder models which focus solely on dietary behaviour and/or emotional regulation do not account for all of the factors that have been associated with bingeing - such as the comorbidity of axis I and axis II disorders, high prevalence in young women, and the high variability of precipitants and antecedents. Much of the research has concentrated on bulimia nervosa, even though Stunkard (1950) first identified binge eating as a potentially important factor in obesity over 30 years ago (Arnold et al., 1992), and it is suggested that there may be a qualitative difference between binge-eaters and bulimics (Schmidt & Telch, 1990).

McManus and Waller propose a wider model which views bingeing as resulting from a combination of predisposing factors and more specific triggers (e.g. need to escape from self-awareness, negative affect, self-denigratory beliefs, food craving and pressure to eat from others), precipitated by an overconcern with weight, shape and dieting. They suggest that an individual may be predisposed toward binge-eating by factors operating at sociocultural (e.g. over-valuing of thinness), familial (e.g. presence of child neglect or abuse) and/or individual levels (e.g. perfectionism, life-events, lack of mature coping skills). They view binge-eating as occurring when these predisposing factors combine to result in the specific triggers of food craving or the need to escape from aversive emotional states. They raise the issue of the personality characteristic of dissociation also being a possible predisposing factor to

bingeing. In combination with negative affect and a lack of alternative coping strategies, the presence of dissociation is seen to increase the likelihood that a number of impulsive behaviours, like bingeing, may develop and may be further exacerbated if the individual has had specific traumas in their past. The model proposes that bingeing has several consequences (e.g. consequences of emotional difficulties, or of eating behaviour) which serve to maintain the behaviour. The authors point to the need of verification of the above with binge eaters other than bulimics. The model provides an account for the highly heterogeneous set of factors that have been associated with binge-eating. Not all individuals will experience all of the predisposing and precipitating factors, but it is suggested that an increased risk is associated with each additional factor.

This model emphasises the need, in the treatment of eating disorders, for an individual's predisposing factors to be identified and addressed, in addition to the maintaining, precipitating factors and triggers to binges.

#### 1.3.2.0. Trauma

The presence of a trauma history is thought to be a predictor of poor prognosis in the therapy for eating disorders. There are indications that a substantial amount of people may have experienced some form of abuse during their childhood, although accurate estimation of prevalence rates and outcome is made difficult by under-reporting, different identification criteria (Markow, 1988) and the reluctance of victims to reveal information even in 'therapeutic settings' (Sheldon, 1988).

A further methodological problem that arises in studies of abuse, especially during childhood, is the accuracy of recall. Instruments that ensure accurate recall of traumatic events remain a persistent methodological problem in trauma research (Briere, 1992). Since these individuals may have high dissociation levels (due to abuse), self report methods may produce underestimates of the prevalence rates as memories may be inaccessible to some individuals. In addition, because abuse has legal implications for perpetrators and often takes place within a family context of the home (increasing difficulty at disclosure), estimates based on the number of perpetrators convicted are grossly unreliable and there have been no alternatives to self-report that have proved satisfactory.

Studies that have examined the rates of abuse have varied in what aspect of abuse they examine, and how they define it. For example, Nash & West (1985) in their studies of 223 women aged 20-39 drawn from a general practice register, and of 92 female students, found overall rates of 'abuse' of 42% and 54% respectively. Their definition included at least one category, namely receipt of obscene phone calls, that is not usually included in other studies. Finkelhor (1979, 1984) in his studies of 530 female students and 334 mothers in the USA, found estimates of childhood abuse of 19% and 15% respectively. Palmer, Oppenheimer, Dignon, Chaloner and Howells (1990) found that 10.8% reported full sexual intercourse with adults before the age of 16. What these studies suggest is that in non-clinical populations, a significant amount of individuals may have a childhood history of abuse.

In respect to childhood sexual abuse (CSA), recent evidence suggests that CSA leads to serious mental health problems. The long-term effects cited include depression, anxiety disorders, substance abuse, somatisation disorder and long-standing sexual dysfunction (Mullen et al, 1988; Burnam et al, 1988; Walker et al, 1988; Morrison, 1989). Briere (1992) in summarising the current research, noted that the effects of childhood sexual abuse may include post-traumatic stress, cognitive distortions, altered emotionality (including depression and anxiety), dissociation, disturbed relatedness, avoidance (including substance abuse, suicide, and tension-reducing activities such as bingeing and purging, and self-mutilation), and impaired self-reference. Briere suggested that a significant proportion of cases of borderline personality disorder may arise from extended and emotional abuse.

Multiple abuse, or the endurance of more than one form of abuse during childhood, is thought to have additive or interactive detrimental effects (Bagley & Famsay, 1986; Brown & Anderson, 1991; Bryer, Nelson, Miller & Drol, 1987; Chu & Dill, 1990). It would appear that all forms of abuse in childhood can be harmful in the long-term. Rorty et al. (1995) point out that psychological abuse, “seemingly the most innocuous and certainly the least studied form of childhood abuse”, was the only form of abuse considered individually that was significantly related to personality disorder amongst bulimic women.

Researchers have continued to struggle in producing objective criteria and reliable and valid definitions of abuse. It is now acknowledged that how an individual constructs and perceives an event and how it is integrated into existing psychic

structures of meaning (i.e. schemas) is more important than the characteristics of the abuse (Tillman, Nash, & Lerner, 1994). For example, many theorists have assumed that childhood sexual abuse is by definition traumatic. Yet a more recent review questions whether all cases of sexual abuse necessarily involve overwhelming affect, fear for safety and helplessness (Kendall-Tackett et al., 1993).

Psychological maltreatment is defined by the International Conference on Psychological Abuse of Children and Youth as :-

“[the] psychological maltreatment of children and youth consists of acts of omission and commission which are judged on the basis of a combination of community standards and professional expertise to be psychologically damaging. Such acts are committed by individuals, singularly or collectively, who by their characteristics (e.g. age, status, knowledge, organisational form) are in a position of differential power that renders a child vulnerable. Such acts damage immediately or ultimately the behavioral, cognitive, affective, or physical functioning of the child. (Brassard, Germain & Hart, 1987, p6)”.

Psychological maltreatment has been proposed to mediate the negative effects of specific forms of child abuse or neglect. Newberger testified before US Congress in 1991, saying that “it is not the acts alone that are traumatising but their meaning to the child” (Newberger 1991, p.27). Trauma may have differential results for

children, depending on their interpretation of what has happened, and on other cognitive, temperamental, and personality factors interacting with their interpretation (Newberger, 1991; Newberger & DeVos, 1988).

#### 1.3.3.0. Dissociation

##### 1.3.3.1. Characteristics of dissociation

Dissociation is frequently observed as a response to adult and child trauma. Dissociation is defined by the American Psychiatric Association (1994) as a 'disruption in the usually integrative functions of consciousness, memory, identity, or perception of the environment'. The basic characteristics of dissociation are amnesia, identity disturbances, and disturbances or alterations in consciousness, often leading to feelings of depersonalisation or derealization. The dissociative disorders now classified in DSM-IV (American Psychiatric Association, 1994) include dissociative amnesia, dissociative fugue, dissociative identity disorder (formerly MPD), depersonalisation disorder, and dissociative disorders not otherwise specified.

In DSM-III (American Psychiatric Association, 1980), the dissociative disorders were first 'officially' recognised, and it is now recognised that dissociative phenomena can also play an important role in other mental disorders, such as borderline personality disorder (Herman et al., 1989), post-traumatic stress disorder (Spiegel, 1988) and eating disorders (Vanderlinden et al, 1992).

Dissociation disorders may not be as uncommon as previously thought; there are reports of rates as high as 11 per cent in the general population (Ross, 1991); 15 per cent in psychiatric patients (Saxe et al., 1993) and 88 per cent in survivors of childhood sexual abuse (Anderson, Yassenik & Ross, 1993). Putnam and Trickett (1993) found that 27% of psychiatric patients across diverse diagnostic categories report dissociative experiences. It is also claimed that dissociative processes are widely reported in non-clinical populations (Angiulo & Kihlstrom, 1992; Ray, June, Turaj & Lundy, 1992; Ross, Joshi & Currie, 1990).

#### 1.3.3.2. Function of dissociation

Dissociation is often described in terms of a defence mechanism, and is characterised by poor integration of thought processes, and is most likely to be activated when an individual is faced with an overwhelming traumatic experience (Ludwig, 1983; Putnam, 1985). It is seen as a normal defensive process used to cope with traumatic experiences. In this context, dissociation is seen as adaptive and Putnam (1989) suggests that it allows individuals to continue their lives as if nothing traumatic had happened, by blocking out painful events from awareness (Putnam, 1989). Dissociation is also believed to reduce the amount of stress on the autonomic nervous system, which Ludwig (1983) refers to as 'neurological conservation'.

Dissociation is also described as an observable behaviour, an experience and a form of defence against pain, distress or humiliation.(Shalev, 1996). Furthermore, it is often viewed as a relatively primitive defense mechanism. The dissociation of a



traumatic experience is seen to be reinforced by the resulting reduction of anxiety, tension and pain.

Many authors assert that dissociative phenomena exist along a continuum, ranging from normal experiences such as day dreaming, to a pathological failure to integrate thoughts, feelings, memories and actions into a coherent and unified sense of consciousness (Bernstein and Putnam, 1986). It is at the extreme end of the spectrum that the dissociative disorders exist.

In using dissociation, an individual can be protected from initial unpleasant experiences such as pain or humiliation, but while the memory of the experience may be kept out of conscious awareness in the long term, this memory may still exert some influence over cognitions and behaviour. The adaptive functions of dissociation are illustrated by Coons and Milstein (1986), who reported on multiple personality disorder patients with a history of rape and sexual abuse who showed no psychosexual disturbances. They suggested that the separate dissociated personalities were being utilised to deal with these experiences, thus protecting the central personality by keeping such experiences outside conscious awareness. Therefore, the presence of alternative personalities may enable an individual to engage in activities they would otherwise avoid (Sachs et al, in press). Ludwig (1983) proposes seven major functions of dissociation including: the automization of certain behaviours; the isolation of unresolved issues originating from overwhelming emotional experiences; the release of tension; and escape from the constraints of reality.

#### 1.3.3.3. Negative effects of dissociation

Over time, the repetitious use of dissociation is thought to predispose an individual to later use it as their primary coping strategy (Putnam, 1989). Dissociation moves from being adaptive (when used in acute trauma) to being maladaptive when it generalises to stressful events outside the trauma context (Putnam, 1989) although the trigger-stimuli may be reminiscent of the early trauma (Braun and Sachs 1985). In more severe cases, while the central personality is protected the individual may be left with an ongoing sense of fragmentation (Spiegel, 1986). In the long-term, if dissociation is being relied upon, the development of other more mature coping strategies is inhibited.

Goldberg (1995) describes the psychic process by which dissociation moves from an adaptive to maladaptive defence. He points to the initial stage of dissociation starting with some threat to the self coming, as it were, from the "outside"; "impingement, overstimulation, trauma, or threat from the outside is the defining condition of dissociation" (Goldberg, p.496). All such threats are thought, by Goldberg, to be registered by the senses, and it is between the mind and the senses that the specific action of dissociation takes place. "The first and definitive movement in the dissociative process is the defensive withdrawal of the mind from the sensorium. The danger from the outside is now abated, or at least distanced, and thus brought under a degree of control" (p.496).

Goldberg describes how the effect of the mind being abstracted causes the instincts to be starved of sources of aliveness. This 'dislocation' is seen to be overcome by means of a forced reconnection of the mind and the sensorium (or psyche-soma). However, Goldberg points out that the reconnection is in fact a pseudo-integration, not a reconnection, but nonetheless one which is regimented and guarantees a rationalised, systematic explication of sensory and instinctual aliveness by the mind. "Successful pseudo integration maintains the dissociative organisation in which psychosomatic experience is rigidly segregated and held under control, resulting in a pervasive inauthenticity in self-experience" (p. 496).

Goldberg (1995) describes how people dissociate when faced with danger as they are unable to use "more adaptable and less drastic defences such as repression, displacement, isolation of affect, projection and the like". The symptoms of dissociation - fugue, amnesia, out-of-body experience, autohypnosis, perceptual distortions, affective deadness, identity change, depersonalisation, derealization - are said to reflect the essential element of dissociation, the withdrawal of the senses or the recoil from "somatic reality" (p.496).

The negative experiential effects of dissociation are also described by van der Kolk (1996), who points out that it can result in a subjective sense of deadness and sense of disconnection from others. Other negative effects include a disturbance in basic trust, lack of a sense of responsibility, has negative effects on identity, impacts on relationships with others, and can bring about excessive interpersonal sensitivity (van der Kolk, 1996).

#### 1.3.3.4. History of dissociation

The concept dissociation was first introduced by Pierre Janet around the turn of the century (1889), and his work remains influential in our current understanding of the defence. He described dissociation as a kind of mental avoidance (or escape) technique that can be employed during overwhelming trauma. Janet systematically studied the relationship between traumatic experiences and dissociation in the aetiology of a wide range of psychiatric problems, including eating disorders (Janet, 1889, 1907, 1919, 1925). Janet linked the phenomena of eating disorders and dissociation together, viewing them as fixed ideas (*idées fixes*) that are concealed but treatable with hypnosis.

For many years Janet's theories were ignored and forgotten, in favour of Freud's rival hypothesis of repression (Ellenberger, 1970; Frey-Rohn, 1974; Nemiah, 1985, 1991). Disturbances of memory are often reported in dissociation and in psychoanalytic thinking forgetting is also operative in repression; therefore the similarities in concepts may have contributed toward the rejecting of Janet's view as it may have been seen as competing with Freud's.

The study of dissociative phenomena was reawakened by a renewed interest in hypnosis (e.g Hilgard and Watson's work), multiple personality disorder (Putnam, 1989) and post-traumatic stress disorder (PTSD) in the 1980s. Interest in the role of dissociation with other psychiatric conditions continued with the work of Watkins

(1978, 1980), who adopted Federn's (1952) concept of ego-states. These were described as becoming separated by dissociation, and the separateness determined by the degree of flexibility and permeability in the boundaries between the ego-states. At the extreme end of the dissociative spectrum, a patient with multiple personality disorder is seen to have various ego-states which have become so separated and the boundaries so inflexible that the ego-states are unaware of one another's existence and have developed a delusion of separateness in relationship to the host personality. According to Watkin's, Hilgard and others, ego-states can be activated by the use of hypnosis, and thus the source of otherwise unexplained psychopathology is revealed. Therefore, in the use of hypnosis, these authors assert that symptoms such as binge-eating, self starvation, body image distortion, and a fear of food, can be understood and explained. It is also felt by these authors that the symptoms of eating disorders, may be the expression of an underlying disharmony and internal fighting among various dissociated ego-states in individuals.

#### 1.3.3.5. Measures of dissociation

There have been a number of instruments that have been developed to measure different aspects of dissociation. Both structured interviews and self-report methods have been adopted. Two widely used self-report measures of dissociation are the Dissociative Experiences Scale (DES; Bernstein & Putnam, 1986) and the Perceptual Alteration Scale (PAS; Sanders, 1986).

The DES was developed by Bernstein and Putnam (1986). They drew upon the DSM-III definition of dissociation for item construction and also used information from interviews with patients and clinicians to represent a range of different types of dissociative experiences. The scale was conceptualised as a trait measure and inquires about the frequency of dissociative experiences in the daily lives of subjects. It was designed to aid in determining the contribution of dissociation to various psychiatric disorders and as a screening instrument for dissociative disorders (or disorders with a significant dissociative component such as post-traumatic stress disorder).

Frankel (1990) criticises the claim of Bernstein and Putnam (1986) that the number and frequency of experiences, supposedly attributable to dissociation, lie along a continuum. Frankel claims that that about two-thirds of the items on the DES can be readily explained by the manner in which subjects recall memories, apply or redistribute attention, use their imagination, or direct or monitor control.

The PAS, developed by Sanders (1986) is similar to the DES in that it also construes dissociation as a personality trait.. The scale items were selected from items from the Minnesota Multiphasic Personality Inventory (MMPI) that Sanders felt best fit Hilgard's (1977) neodissociation description. The scale is thought to measure three factors, Modification of Affect, Modification of Control, and Modification of Cognition. Sanders (1986) provides support for the PAS' sensitivity to normal aspects of dissociation as well as pathological dissociation.

The self-report formats may be problematic in the area of dissociation, Sternberg and colleagues (1990) point out that patients with dissociative disorders are often reluctant to describe, or may be entirely unaware of, symptoms such as amnesia or identity alterations and may be unable to complete an accurate self-report.

Since both scales are said to measure the same construct, it would be expected that they would correlate highly with each other. However, Rosen & Petty (1994) found that the DES and PAS were significantly, but not highly, correlated with each other.

Further criticisms of both scales are presented by Fischer and Elnitsky (1990) who question their construct validity. They found that neither the DES, nor the Perceptual Alteration Scale (Sanders; 86) adequately measured the three dimensions hypothesised to underlie dissociative experience. For both scales, a single factor emerged as replicable and reliable; disturbances in affect-control in the PAS; and disturbances in cognition-control in the DES. Analysis of the combined items showed that the scales are measuring conceptually different but statistically correlated dimensions of dissociation (Fischer & Elnitsky, 1990).

As Frankel (1990) describes in his criticism of hypnosis and dissociation literature, there does appear to be a lack of clarity about the psychological construct dissociation and how to measure it - "it is as if the core of the phenomenon is fairly readily recognisable and can be agreed on" (1990, p827). He recommends restraint when using the term dissociation and advocates a clearer elaboration of the concept. It seems that there is evidence that the DES is measuring, both reliably and validly,

an aspect of dissociation, and there is a body of evidence that supports the authors' in their confidence that they are measuring the whole construct. Recently, there has been a growth of developmental work in dissociation scales, so more may be learnt about dissociation from future studies. In the meantime, for research examining the relationship of dissociation with trauma and other areas (e.g. eating disorders), it may be advisable to use the DES in conjunction with other measures of dissociation.

#### 1.3.4.0. Relationship between dissociation and trauma

Janet considered traumatising to result from the failure to take effective action against a potential threat, resulting in helplessness. This was felt to lead to the development of 'vehement emotions' which interfered with memory storage. Janet felt that adaptation to a trauma required a person to form a narrative and that the nature of dissociation ('a narrowing of consciousness') prevented this narrative development, as one experience was not being associated with another and thinking was prohibited. (Janet, 1909)

From the research on trauma (e.g. van der Kolk, 1996), it is well established that traumatic experiences trigger the onset of intense emotions, exert a disintegrating effect on the mind, can lead to the development of depressive and anxiety symptoms and can lead to the development of dissociative symptoms. Again, it is generally accepted that dissociation prevents a fully integrated awareness and hence prohibits the working through of the traumatic event.



How the traumatic stress is expressed symptomatically in individuals, can be affected by the prevailing culture (van der Kolk & McFarlane, 1996). In the treatment of post-traumatic stress disorder (PTSD), patients may have a range of difficulties with information processing and therefore need help in developing skills to label and evaluate the meaning of sensations and affective states, to discriminate present from past and to interpret social cues in the context of current realities rather than past events (van der Kolk & McFarlane, 1996).

There have been many attempts by authors to describe the effects of trauma on children, paying particular attention to the reasons why defenses are needed and the meaning of the abuse on the young child. For example, Davies (1996) describes how a young child experiencing parental physical and sexual abuse by a trusted parent is confronted with great "interpersonal contradiction", whereby the "enormity of the betrayal and of physical and psychological violation challenges the child's very basic and essential capacity to trust and, therefore, to depend" (p.199). The child can also be seen at risk, not only psychologically, but in a more immediate physical way as they are dependent upon their carers for food, shelter, etc. Davies maintains that the young child "is forced to integrate irreconcilable emotional schemata - toxic images of an abused self in violently ambivalent emotional relationship to images of abusive, out-of-control parental figures with more containable, emotionally modulated, verbally encoded representations of self in otherwise more benevolent interaction with those same significant others." (p199, Davies, 1996).

Contemporary theorists argue that childhood trauma plays a strong etiological role in the occurrence of dissociation in adulthood (Herman, 1992; Putnam and Trickett, 1993). Empirical evidence for this is provided by studies that have found a strong relationship between dissociation and a history of childhood sexual and physical abuse (Chu and Dill, 1990; Coons et al., 1988; Sanders and Giolas, 1991).

Some authors specify this role further by suggesting that dissociation is a defense used to mediate the trauma of childhood abuse. For example, in a study by Brodsky, Cloitre and Dulit (1995) patients diagnosed with borderline personality disorder who reported earlier age at onset of sexual abuse, greater severity of abuse and abuse by family member had higher dissociation levels. They were also more likely to self-mutilate and had higher levels of current depressive symptoms. Those patients reporting physical abuse were also found to be more dissociative.

Similar results have been found in both clinical and non-clinical populations. For example, Sanders et al. (1989) established a link between childhood stress and dissociation in a college population, using a general measure of maltreatment, the Child Abuse and Trauma (CAT) scale. The CAT has been used in other studies that supports this link in other clinical and non-clinical populations (Sanders & Becker-Lausen, 1995; Sanders & Giolas, 1991). The use of the CAT is supported by the finding in one study that no single type of maltreatment accounted for a unique proportion of the variance in dissociation in female college students when researchers controlled for the effects of other forms of maltreatment (Sandberg and Lynn, 1992).

Theorists have sought to explain why a child who has been traumatised does not necessarily develop more mature coping strategies as they develop into an adult and/or come out of the trauma situation. One explanation that is offered is that trauma early in the life cycle fundamentally affects the maturation of the systems in charge of the regulation of psychological and biological process. The disruption of the self-regulatory process is also thought to make individuals vulnerable to develop dissociation problems, in addition to a range of other difficulties including chronic affect dysregulation, destructive behaviour against self and others, learning disabilities, somatization and distortions in concepts about self and others (van der Kolk, McFarlane, & Weisaeth, 1996).

It appears that this disruption in the maturation of the self-regulatory process is influenced by a number of factors such as the age at which the trauma starts (i.e. the earlier the trauma, the greater the disruption), the nature of the relationship between the abused and abuser (e.g. family member seen as more disrupting), and the severity of the trauma. These factors influence the development of the individual's personality to include the trait dissociation, such that dissociation is more likely to be used as a defense (Brodsky, Cloitre, and Dulit, 1995).

This developmental perspective is supported by the study by Zlotnick and colleagues (1996). They found that female psychiatric inpatients who had been sexually abused by a relative prior to the age of 13 were significantly more dissociative when compared with patients with physical and/or sexual assault after the age of 17 years.

Support is also found in studies examining other childhood stressors, such as neglect, familial loss, and witnessing abuse (Irwin, 1994; Zlotnick et al., 1995). Relatively low levels of abuse, such as feeling neglected or being left alone frequently, have also been suggested to produce a shift towards greater dissociation (Sanders, McRoberts and Tollefson, 1989).

There is some evidence that the relationship of sexual abuse with later adjustment is not due to the sexual abuse per se, but rather to the confounding of sexual abuse with family background. Fromuth (1986) found little evidence that a history of sexual abuse made a unique contribution in predicting later psychological adjustment. A small but significant relationship was found between a history of sexual abuse and measures of psychological adjustment. However, the Parental Support Scale appeared to predict later psychological adjustment better.

Researchers, claiming trauma as a cause of dissociative pathology, have been criticised for neglecting to consider other pathogenic factor in the child's environment that may explain subsequent pathology. It is argued that families in which abuse occurs are more pathological than nonabusing families, with higher levels of role or boundary confusion, more rigid behavioural control, and less cohesiveness and adaptability (Alexander & Lupfer, 1987; Harter, Alexander & Neimeyer, 1988; Hoagwood & Stewart, 1988). Therefore, differences between abused and nonabused samples on measures of psychopathology in general, and dissociation in particular, are reasoned to be due not to the effects of trauma per se, but to the non-specific effects of living in a pathogenic home environment (Tillman

et al, 1994). Nash et al., 1993) found that subjects who were sexually traumatised in childhood were significantly more dissociative than nonabused subjects. However, when family environment was used as a covariant, the effect for early trauma receded to the point of non-significance.

This supports the measurement of psychological maltreatment, as opposed to the occurrence of specific abusive acts, in investigating the links between trauma and dissociation; since the meaning attached to the abuse (which is felt to be more influential than the actual act alone) would be influenced by other variables in the family (such as family cohesiveness, parental support).

#### 1.3.5.0. Trauma and bingeing

As discussed before, there are a number of theories and models that seek to explain either binge-eating within the context of an eating disorder, or by itself. The more recent models (e.g McManus and Waller, 1995) reflect the contribution that predisposing factors, such as childhood trauma, may have in the aetiology of eating disordered symptoms such as binge-eating. This point is also supported by Powers and Fernandez (1984) who state that eating disorders are conditions with multiple, interrelated causes and consequences.

The idea, that symptoms of eating disorders and childhood trauma are interrelated, is not new. Janet (1903, 1907) proposed that eating disordered symptoms were the result of unconscious fixed ideas caused by a previous traumatic event. This

traumatic experience was thought to create the primary fixed idea from which secondary fixed ideas about eating behaviour develop. Janet believed that to treat such eating problems, the original traumatic experience had to be resolved.

More recently, Briere (1992) stated that pathological eating may be a maladaptive mechanism for avoiding overwhelming affect associated with memories of abuse. Briere also points out that eating may trigger certain specific traumatic memories and therefore the person may be reluctant to engage in treatment that requires bingeing to stop and to eat a wider variety of food. In this way, the resistance often seen in therapy, that is reflected in poor outcome, can be seen as protective for the abused individual.

In the research that has been carried out investigating links between trauma and eating disorders, many researchers have continued to focus on specific forms of abuse. Much of the research in this area has also concentrated on bulimia nervosa (and anorexia nervosa) rather than binge-eating only. An association has been found, in some studies, between childhood sexual abuse and eating disorders (e.g. Herzog, Staley, Carmondy, Robbins, & van der Kolk, 1993). However, a direct causal relationship between a history of abuse and eating disorders or binge-eating has not been found but some researchers have suggested that abuse is a significant risk factor for the development of bingeing and purging behaviour (Pitts and Waller, 1993; Waller, 1992).

In support of this view, early clinical studies have reported apparently high rates of childhood sexual abuse (CSA) among bulimic patients (e.g. 30 to 66%; Oppenheimer, Howells, Palmer and Chaloner, 1985; Root & Fallon, 1988; Sloan & Leichner, 1986).

Additionally, a history of child abuse has consistently been found to be associated with Axis I psychopathology and personality disorders among adult women in both clinical and non-clinical samples (Briere & Runtz, 1988; Browne & Finkelhor, 1986; Herman, Perry, & van der Kolk, 1989). Eating-disordered women have been found to manifest high rates of co-morbid Axis I pathology, especially mood disorders, psychoactive substance-use disorders, and anxiety disorders (Hudson, Pope, Yurgelun-Todd, Jonas & Frankenbury, 1987; Powers, Covert, Brightwell & Stevens, 1988). In addition, high rates of personality disorders have been fairly consistently found in bulimic samples (Gartner, Marcus, Halmi & Loranger, 1989; Levin & Hyler, 1986; Powers et al., 1988; Yates, Sieleni, Reich & Brass, 1989; Zanarini et al., 1990).

More specifically, Miller et al. (1993) found that bulimic women had been sexually abused more frequently than non-bulimic women. They suggested that elevated sexual abuse rates among bulimic women may also explain why bulimics typically report feeling extremely negative toward their bodies.

Shearer, Peters, Quatytman and Ogden (1990) also found evidence for links between sexual abuse and eating disorders in their study of 40 inpatients with borderline

personality disorder (BPD). Their results indicated that those with a history of any child sexual abuse were significantly more likely to have an eating disorder than those BPD patients without such a history. However, this relationship did not hold for incest, child physical abuse or "worst abuse" (especially severe and/or protracted abuse). The authors did not indicate what percentage of abused women, overall, had an eating disorder.

Lastly, Waller (1992) found that specific characteristics of abuse (identity of abuser, age at first abuse, and use of force) were associated with the frequencies of bingeing and (to a less extent) vomiting

Support for the link between childhood trauma and eating symptomology, has also been found in non-clinical populations. For example, Calam and Slade (1989) found support for the relationship between adverse sexual experience and eating problems, in an undergraduate sample. They found a general pattern of occurrence of sexual experiences and scores for types of eating disorder symptomology being higher than that expected by chance for all categories, with the exception of those before age 14. Dieting and bulimia appeared to be associated with sexual experience involving force, but bulimia was not associated with intrafamilial sexual experience. They felt that dieting or self-starvation could form an overt means of regaining control with a family where sexual abuse had occurred. Compulsive eating or bulimia was also hypothesised to arise in a situation where the individual was not in a position to attain control over the perpetrator of the abuse, as in the case of sexual assault by someone outside the family.



Like Waller's (1992) study, levels of eating psychopathology appear to be associated with the nature of sexual abuse in non-clinical populations (Beckman & Burns, 1990; Smolak, Levine, & Sullins, 1990; Williams, Wagner & Calam, 1992). Calam and Slade (1987, 1989) reported that eating disordered attitudes were associated with abuse as at a younger age, abuse involving force, and abuse involving a family member. These findings collectively suggest that there is a non-random distribution of reported sexual abuse amongst the eating disorder subgroups.

However, some studies have failed to demonstrate a greater incidence of sexual abuse in bulimic or anorexic samples than in control groups or in the general population of women of comparable age (e.g. Folsom et al., 1993; Ross, Heber, Norton & Anderson, 1989).

In a recent review of six studies comparing rates of sexual abuse among bulimics and normal control subjects, Pope and Hudson (1992) concluded that "current evidence does not support the hypothesis that CSA is a risk factor for bulimia nervosa" (p.455). Three subsequent controlled studies have yielded only mixed support for an abuse-bulimia linkage. Beckman and Burns (1990) found that bulimic and normal women did not differ significantly on their reported number of intrafamilial or extrafamilial childhood sexual experiences. However, bulimics did report significantly more forced, extrafamilial sexual episodes during adolescence than normal eaters. Similarly, Abramson and Lucido (1991) obtained nearly identical percentages of bulimics and non-bulimics reporting childhood sexual experiences

(69%) but did obtain a significant correlation between eating behaviours and the total number of childhood sexual experiences. Finally, Smolak, Levine, and Sullins (1990) reported a significant difference between abused and non-abused college students on the Eating Disorders Inventory (EDI), a measure of eating attitudes and behaviours.

It has been suggested that methodological difficulties may have contributed to the inconsistency of results, for example the use of nonblind assessments (Pope & Hudson, 1992), use of low cut-off scores on questionnaires used to define the disordered eating group (Abramson & Lucido, 1991), combining of heterogeneous eating disturbances (Smolak et al., 1990) and broad definitions of CSA (Pope & Hudson, 1992).

The lack of consistent results has led to some authors disputing the proposed link made between childhood sexual abuse and eating disorders. Forty, Yager & Rossotto (1994) suggested that "childhood abuse has the effect of increasing the diversity of psychopathology, if any psychopathology is present, rather than increasing the likelihood of developing particular classes of disorder". They also suggest that abused women's greater pathology reflects integration of a trauma response into their personality structure. They support Connors and Morse (1993) view that the correlation between sexual trauma and personality disturbance may be stronger than the relationship between trauma and eating pathology.

A different view is taken by Fullerton, Wonderlich and Gosnell (1995), who did not find any evidence to support a relationship between symptom severity and reports of abuse. They did find increased psychological distress as manifested by elevated EDI scores in the abused subjects, and they also had significantly higher depression scores than those who had not been abused. They concluded that abuse in patients with eating disorders is associated with problems such as an increased distress, depression, alcohol abuse, suicide attempts and that these comorbid conditions complicate the treatment and therefore contribute toward poor outcome.

Researchers continue to investigate the relationship between trauma and eating disorders/symptoms. Efforts are made to adopt more restrictive definitions of CSA and bulimia, and further evidence of an association has been found (e.g. Hastings and Kern 1994; Welch and Fairburn, 1994). Welch and Fairburn, on the basis of their study, concluded that any relationship which appears to exist between reported sexual abuse and the eating disorders is neither specific nor special. Some authors argue that this conclusion does not necessarily mean that a history of sexual abuse is not a risk factor for the development of eating psychopathology, but point to the need to understand the role of such abuse within the context of the multifactorial nature of the eating disorder (Everill and Waller, 1995).

#### 1.3.6.0. Dissociation and binge-eating

Despite Janet's early work where links were made between eating disorders and dissociation (Janet, 1924), with the exception of the hypnosis literature, there has

been very little mention until fairly recently of any links between dissociation and eating disorders.

Similarities have been observed, and reported, between binge-eating and dissociative experiences. For example, Johnson et al. (1984) compared the binge state with an altered state of consciousness and with a dissociative experience, describing the perception and memory of events being “blurred”. Russell (1979) also reported the binge-eating and purging episodes in bulimia patients as having a similarity to dissociative experiences. Beaumont and Abraham (1983) reported that 75% of a group of 30 patients with bulimia had experienced symptoms of “depersonalization and derealization” during eating binges and 72% had a reduction in negative mood state during the binges.

Since hypnosis has been long conceptualised as a controlled state of dissociation (Hilgard, 1977), researchers have investigated the hypnotizability in bulimic patients. For example, Pettinati, Horne, and Staats (1985) reported that hypnotic capacity in the bulimic patient was significantly higher than in those patients with anorexia nervosa and a normal, age-matched population. Similar findings have been found by other researchers for bulimic patients (e.g. Covino, Jimerson, Walton, Franko & Frankel, 1994; Kranhold, Baumann, & Ficher, 1992) and in college women with symptoms of abnormal eating (Barabasz, 1991; Groth-Marnat & Shumaker, 1990).

The close association between early sexual trauma and dissociation, observed in studies, has been attributed to young children’s hypnotizability heightening their

ability to dissociate under stress (Zlotnick, et al, 1996). It may also be that young children have difficulty in cognitively processing overwhelming experiences, and they utilise dissociation in an attempt to maintain a sense of order and meaning

Lynn and Rhue (1988) found evidence that children who were severely abused, and harshly punished tended to use fantasy as a dissociative mental safety valve. They developed a capacity to create different 'believed-in-selves', giving a sense of separateness from the core self, which could be felt to be a protection from the abuse and maltreatment.

Janet believed that the hypersuggestibility (which is directly linked to hypnosis), often seen in his hysterical patients, was the result of the narrowing of the field of consciousness - the dissociated parts of the mind lacked the higher mental functions of critical judgement. From a slightly different perspective, Mollon (1996) describes how people who have been abused extensively as a child have been frightened out of their own perceptions - and so "their freedom to perceive has been mutilated" (p.42). Such a person, Mollon believes, will be more suggestible

There is support for an association between binge-eating and dissociation. For example, Sanders (1986) reported a higher degree of dissociation phenomena (using the PAS) in bulimic patients compared to a matched normal college-age population. Other researchers, using the Dissociative Experiences Scale (DES), have also reported that eating-disordered patients scored significantly higher than age-matched

normal females (Demitrack, Putnam, Brewerton, Brandt & Gold, 1990; Golder, Cockhill, Bakan, & Birmingham, 1991).

These links are also supported in non-clinical populations. For example, Sanders (1986) found that college women who reported a tendency toward binge eating scored higher than nonbingers on the Perceptual Alteration Scale (PAS). It should be noted that a criticism is made of the PAS in these studies, as it contains several items relating to body image and abnormal eating (e.g. "My body is too heavy") and it is not clear whether the group differences observed by Sanders have been contaminated by this overlap in content (Valdiserri and Kihlstrom, 1995).

There are three main explanations offered for the similarities and hypothesised association between binge-eating and dissociation. Firstly, dissociation may be necessary only to enable the bulimic to initiate a binge by creating the temporary shift to a lower level of cognitive awareness, as described by Heatherton and Baumeister (1991), to reduce self-awareness that would normally inhibit a bulimic against eating. This view would see dissociation as a part of the bulimic psychopathology. Since the process of eating can absorb the person's attention and result in escape from broad self-awareness, the relationship between binge eating and reduced self-awareness may be one of reciprocal causality. (Heatherton and Baumeister, 1991).

A second explanation that is offered is that dissociation may be used as a defence against the intolerable feelings of guilt and self-dislike created specifically by the bulimic symptomatology itself (Chandarana and Malla, 1989).

A third explanation is that the eating behaviour may develop to act as a further dissociative mechanism. Therefore the development of the eating symptomatology might be influenced by the existing defence mechanism (Vanderlinden et al, 1993; McCarthy et al., 1994; Everill et al, under consideration).

In support of this third explanation, Everill, Waller and Macdonald (1995) in their study found higher levels of dissociation in eating-disordered subjects (compared to non-eating disordered controls) but not at a significant level. They did, however, find a significantly higher level of specific dissociative experiences - absorption - in the eating disordered group. Dissociative tendencies also accounted for a large proportion of the variance in the frequency of bingeing. They concluded that bulimic behaviours act as defences, reducing awareness of intolerable emotional and cognitive states.

Further support comes from studies that have looked at the bingeing-dissociation association in dissociative patients. Torem (1990) found that 77 out of 84 dissociative patients had at least one eating disorder symptom (including binge eating, self-starvation, laxative or ipecac abuse, self-induced vomiting, or excessive exercising).

Dissociation has also been found to be associated with self-mutilation in a variety of psychiatric populations (van der Kolk, Perry & Herman, 1991). It has been proposed that self-mutilation may sometimes be an attempt to ameliorate the discomfort of the dissociative phenomena of numbness and identity diffusion (Shapiro, 1987; Favazza, 1989). Brodsky Clitre and Dulit (1995) reported that female inpatients with borderline personality disorder who dissociate may represent a subgroup of patients with the disorder who are at especially high risk for self-mutilation. Their study found that self-mutilation was a powerful predictor for dissociation and was independent of childhood abuse history, although childhood abuse was associated with self-mutilation and dissociation. Demitrack et al (1990) also found that the presence of severe dissociative experience appeared to be related to a propensity for self-mutilation and suicidal behaviour.

Following on from this, there is some evidence to link binge-eating with other forms of proposed escape-motivated self-harm. Bulimics and other binge eaters have been observed to have elevated rates of alcohol abuse, drug use, suicide, and self-injury (Heatherton and Baumeister in their review, 1991).

Rosen and Petty (1994) in their study using the DES and the PAS found that the cognitive dimension of the PAS did not correlate with any of the measures of eating. They suggest that perhaps disordered eating is only related to the modification of affect and loss of control rather than any cognitive component. This has direct clinical implications as it would suggest that therapy focusing solely on the cognitive distortions involved in eating disorders may fail to reduce bingeing. Rosen and Petty



(1994) recommend therapy focusing on recovering feelings that have been cut off and dealing with issues of loss of control.

The link between dissociation and eating pathology is questioned by Valdiserri and Kihlstrom (1995) who found only a modest relationship between abnormal eating (using the EDI) and dissociative experiences in a normal college population. They did find significant correlations between drive for thinness, bulimic tendencies, and body dissatisfaction on the one hand, and the frequency of dissociative experiences on the other hand. The authors concluded that dissociation was more strongly related to aspects of ego dysfunction than to abnormal eating per se. Later, Valdiserri & Kihlstrom in a further study (1995b), again with college students, found that abnormal eating and ego dysfunction (from EDI) were most strongly associated with depression. A lower correlation was obtained with dissociation, fears, obsessions and compulsions. Panic disorder was most strongly associated with abnormal eating but not ego dysfunction. They concluded that the correlations between eating disorder and dissociation were relatively weak compared to measures of other personality attributes related to psychopathology particularly depression.

In summary, the exact relationship between dissociation and eating disorders remains unclear. A predisposition to dissociate may make some individuals more prone to develop an eating disorder after experimenting with dieting. It may be understood as a way to manage extreme anxiety states and to induce dissociation. It may be that dissociation is simply a marker for markedly dysfunctional family life,

significant childhood trauma, very early developmental difficulties or multiple psychiatric problems (McCallum, Lock, Kulla, Rorty, Wetzel, 1992)

If there is an association between dissociation and binge-eating, for which there does appear to be a lot of support for the link, and more specifically if dissociative states are involved in the mechanism of pathological eating behaviour, then there are implications for the treatment of such patients. Torem (1986) suggests the use of hypnotherapeutic strategies associated with individually tailored suggestions, ego-strengthening, therapeutic imagery, cognitive structuring, and in some cases, ego-state therapy. Torem (1990) argues for a further category of eating disorder - dissociative eating disorders. These patients, he sees as not responding to treatment until the dissociation and related issues are addressed. In addition, Barabasz (1990) has described a group of patients who were taught, quickly, to identify the feelings of dissociation and to control their symptoms in hypnosis with minimal exploration of their psychodynamics.

#### 1.3.7.0. Depression in eating disorders

Depression is well documented amongst bulimic patients. For example, Hudson and Pope (1987) in their review found that between 30% and 77% of bulimics are currently experiencing or have experienced a major affective disorder. Similarly, Rosen, Gross and Vara (1987) found that depression was correlated with high scores on restrained eating. Following on from this, some authors have suggested that bulimia is a variant of depression and pointed to its pervasiveness in bulimia as

support for their claim (Herzog, 1982; Hudson & Pope, 1987). Further support is cited in the observation that treatment which successfully eliminates binge eating and vomiting also results in reduced depression (Wilson, 1987). One study by Greenes, Fava, Cioffi and Herzog (1993), reported that a significant association found between depression and dissociation, confounded the relationship between bulimia nervosa and dissociation. However, the authors themselves draw caution to their results and conclusions, pointing to their small sample size (n=16) and lack of non-psychiatric control group.

#### 1.3.8.0. Relationship between dissociation, binge-eating and trauma.

An area of research has recently developed which examines links between dissociation, binge-eating and trauma. Much of this work follows on from the research previously discussed, whereupon links between trauma and dissociation, trauma and eating disorders/binge-eating, dissociation and eating disorders/bingeing have been partially supported.

Two studies (Norton, Ross and Novotny, 1990; and Putnam, Guroff, Silberman, Barban and Post, 1986) have found positive correlations between dissociation and anger, depression and anxiety levels. This may suggest that people who rely on dissociative defenses have a relatively high level of emotionality, which in principle could be both positive and negative affects (rather than just trauma-related affects). However, Irwin (1996) in his study of 100 students found that dissociative tendencies

were associated with an imbalance between positive and negative affects in favour of the latter.

Briere (1992) proposed a model that outlines the specific function of certain tension-reducing behaviours (including bulimic behaviours) in individuals who report a history of abuse. The model suggests that a reliance on dissociation as a defence mechanism is important in the relationship between abuse and tension-reducing behaviours. Briere suggests that dissociation is used repeatedly to deal with stressors that evoke powerful feelings associated with the abusive experience. Specific behaviours, like bingeing (and other self-harm behaviours such as self-cutting) are seen as developing in order to serve a number of functions, including: relief from guilt and self-hatred; interruption of dissociative or dysphoric states; temporary distraction; and restoration of control.

In support of Briere's model, studies have found greater dissociative tendencies in bulimics who report a history of abuse (Miller et al., 1993; McCarthy et al., 1994; Vanderlinden et al., 1993). More recently, Everill et al (in press) have cited evidence that dissociation acts as a mediating factor between a history of sexual abuse and frequency of bingeing in women with bulimic disorders. The proposal that dissociation acts specifically as mediating factor between abuse and bulimic symptomatology may explain why some studies (e.g. Covino et al., 1994) have failed to find a correlation between dissociation and bingeing severity when considering only those two variables.

Becker-Lausen, Sanders & Chinsky (1996) found that child maltreatment was related to negative life experiences, with depression and dissociation differentially mediating the various outcomes in a non-clinical student population. Dissociation and depression were also found to be significantly correlated with negative life outcomes. Depression was felt to be a mediator between child maltreatment and interpersonal difficulties. Child maltreatment was also found to be significantly related to later victimisation, which the authors suggest is due to individuals who learn to detach from reality (through dissociation), as a response to childhood maltreatment, also learning to disregard cues that would otherwise warn them to be on guard, or to avoid certain circumstances or people. Van der Kolk (1989) explains how childhood trauma may be repeated on behavioural, emotional, physiological and neuroendocrinologic levels. This may explain why people who rely on dissociative defenses have a relatively high level of emotionality (Norton et al, 1990; Putnam et al, 1986; Irwin, 1995) and is consistent with the view that trauma-related affects have a mediating role in the development of dissociative tendencies.

A study that examined the relationship of prior childhood sexual abuse and dissociative symptomatology in recent rape victims found that those rape victims who reported histories of sexual abuse obtained higher scores on a dissociative symptom scale than rape victims without such a history (Hearst et al., 1994). In addition, Herzog and colleagues (1993) studied both the presence of child sexual abuse (CSA) and dissociative symptoms in 20 eating disorder patients. Subjects with a history of CSA had significantly higher scores on the Dissociative Experiences Scale.

Many theorists regard dissociation as an age-related vulnerability, with young children susceptible to dissociative states because of their capacity for self-hypnosis (Spiegel, 1986; Terr, 1991). Empirical support for this view is found in studies that have demonstrated that hypnotizability is greatest in the years preceding adolescence (Bernstein and Putnam, 1986; Hilgard, 1965; Morgan and Hilgard, 1983). Research has shown that among survivors of sexual abuse, there is a markedly higher level of dissociative symptoms for subjects abused before age 13 (Kirby et al., 1993).

Everill and Waller (1995) proposed a theoretical model that outlined the development of bingeing behaviour, in response to early trauma and mediated by dissociation. They hypothesise that a traumatic experience (particularly abuse at an early age) and dissociative responses to that experience are significant risk factors for the development of subsequent eating problems in some individuals. The hypothesised process begins with a traumatic experience and which is followed by the development of maladaptive schemata (using Beck's concept of schemata which are viewed as self-maintaining and elaborating, 1967). The triggering of these schemata causes intolerable emotional states and so the individual is likely to develop cognitive strategies to block awareness of the schema or the schema trigger. Dissociation becomes relied upon as the primary strategy for cognitive avoidance of the trauma schemata or trigger, and the dissociative process also involves the formation of schemata that operate according to the same self-maintaining principles as the trauma schemata.

A lowered awareness of the trauma-related schemata takes place if the dissociative schemata is successful. However, the effectiveness of dissociation in dealing with the traumatic experience and the related cognitive schemata is likely to be dependent upon the degree of traumatisation and the psychological state of the individual at the time of the original trauma. If the schemata caused by the trauma is too strong to block cognitively, as it becomes too elaborate, the dissociated memories may form a separate sphere of consciousness and an entirely separate personality may develop to deal with any subsequent trauma, feelings and cognitions caused by the traumatic experience, and triggers for the trauma schemata.

Bulimic behaviour (or any other impulsive behaviour such as alcohol or self harm) develops as a consequence of a trigger that is in some way reminiscent of the original trauma but which cannot be blocked from awareness by the existing dissociative schemata. The trigger creates powerful feelings and cognitions, created by the trauma schemata which are too strong to be blocked cognitively and results in emotional distress for which the person lacks the appropriate coping strategies. Everill and Waller point to bingeing be adopted, as a dissociative defence, when food is already an issue through previous dieting. The bulimic and other impulsive behaviours, develop to block emotions and psychological distress and restore control.

However, these behaviours are likely to activate additional cognitive schemata that are specifically related to the eating behaviour - such as personal worth being measured mainly in terms of weight and shape, thinness being equated with self-

control, virtue and intelligence. Again, this schemata is likely to be self-elaborating, continually reinforced by self-defeating behaviours and cognitive distortions. The use of bulimic and other tension-reducing behaviours over time, coupled with a reliance on shape and weight as a measure of self-worth, is likely to lead to a poor self-image, causing increased emotional distress and therefore acting as another trigger for the impulsive behaviours. Therefore a cycle develops that ensures a continued reliance on dissociation and the blocking behaviours, to relieve emotional distress.

Everill and Waller (1995) cite research studies which support the existence of attentional biases in rape victims (e.g. Foa et al., 1991) and abused women with eating disorders (e.g. Waller et al., 1995), activation of trauma schemata and the use of dissociation (e.g. Waller et al, in press), and specific cognitive schemata in eating disordered women (e.g. Ben-Tovim and Walker, 1991; Cooper et al., 1992).

There is some evidence that physiological correlates of dissociation may be important in the development of bulimic behaviours. For example, van der Kolk et al., (1991) commented that impulsive behaviours, dissociation and self-destructive behaviour may be responses to hormonal changes, which are triggered by reminders of past trauma. This is based on increasing evidence that stress hormones are released when victims are re-exposed to abuse-related stimuli (Konicki & Schelz, 1989; van der Kolk, 1987). Therefore, both psychological and physiological factors may be contributory in the development of binge-eating behaviours.



Understanding the inter-relationships between trauma, bingeing and dissociation is essential for appropriate treatment to be offered to eating disordered patients. For binge-eating patients with a history of childhood trauma and high dissociation, neither addressing the trauma therapeutically nor viewing the bingeing behaviour as a way of reducing awareness may result in the bingeing (if reduced in treatment) being replaced by other impulsive behaviours (Everill & Waller, 1995).

In summary, there is a large amount of evidence that has found links between (i) childhood trauma and dissociation, (ii) childhood trauma and eating disorders/binge-eating and (iii) dissociation and eating disorders/binge-eating. Researchers have gone on to propose, with supporting empirical evidence, that there is a three-way relationship between childhood trauma, dissociation and binge-eating and suggested that dissociation plays a mediating role between binge-eating and trauma.

However, the research results have not been entirely consistent in supporting the above proposed relationships. Problems in the measurement of childhood trauma, may have contributed towards the lack of consistent results. These problems include self-report difficulties, definition variability and a tendency for researchers to concentrate on specific forms of abuse, rather than looking at the subjective meaning of the events as measured by the construct 'psychological maltreatment'. Much of the research has also looked at binge-eating in the context of bulimia nervosa, and not included binge-eaters who do not fulfil all of the diagnostic criteria. The definition of binge-eating is also problematic, and the most accepted definition (DSM-IV) is

also criticised for the disparities observed between the established criteria and reports made by binge-eaters.

Criticisms have also been directed towards the construct and measurement of dissociation, as discussed before. In addition, the links between dissociation, childhood abuse and eating disorders has been argued to reflect higher psychopathology and/or confounded by depression.

The present study differs from the previous research discussed, as it includes binge-eaters irrespective of their diagnosis, and adopted the DSM-IV definition of binge-eating, but without criteria of the frequency of binge-eating being at least two per week. Eating behaviour was measured using the Three-factor Eating Questionnaire (TFEQ). An attempt was made to look at the dissociative levels of binge-eaters. Dissociation was examined by using two separate measures (DES and PAS), in order that measurement criticisms could be addressed or examined. Psychological maltreatment was examined using the Child Abuse and Trauma Scale (CAT). A general measure of depression and anxiety (Hospital Anxiety and Depression Scale) was included to assess whether psychopathology has a confounding effect on the predicted relationship. The study aimed to establish, firstly, whether **there is an association between psychological maltreatment and dissociation in binge-eaters**. Secondly, an attempt was made to investigate whether **dissociation plays a mediating role between binge-eating and psychological maltreatment, and whether this relationship is confounded by general psychopathology as indicated by levels of anxiety and depression**. A prediction was made that the relationship

between dissociation, psychological maltreatment and binge-eating would not be confounded by anxiety/depression.

An attempt was also made to examine, through self-report diaries of food intake, whether there are any differences in the primary (i.e. major) precipitants of binge-episodes between high and low dissociators and/or those binge eaters with/without a history of psychological maltreatment. It was therefore predicted that **a difference in the type of primary precipitants to binge-episodes would be observed between high and low dissociators.** It was also predicted that **there will be a difference in the type of primary precipitants to binge-episodes between those with a history of psychological maltreatment and those without a history of psychological maltreatment.**

#### **1.4.0 Method**

##### **1.4.1. Participants**

Participants were recruited from Warley Hospital, Clinical Psychology Department. All participants were women since no men were referred to the department, during the study period, for help with their binge-eating. All referrals received during the study period, with a presenting problem of an eating disorder or eating-disordered symptom, were offered an assessment interview appointment. Referrals were received from a variety of settings and disciplines, including a few self-referrals. A total of 86 assessment appointments were offered, eleven of these did not attend their

first appointment, and two attended the first appointment but did not return again. For those women who indicated during the first assessment interview the occurrence of binge-eating, they were asked at the end of their first assessment session to participate in the research study. Potential participants were given an information sheet (Appendix F) and consent form (Appendix G) which outlined the project and the procedure. Participants were given at least a week (until next assessment session) to consider their decision. Participants received a full psychological assessment, which on average took 2/3 session, in order that treatment recommendations could be made and arranged. Those that declined to participate in the research project, were still assessed by the researcher and offered psychological treatment, if appropriate, in the department.

Seventy-three patients received a full assessment of which fifty-one were 'binge-eaters' (eleven non-bingeing AN, and eleven did not have an eating disorder or were inappropriate referrals).

Each participant met the following criteria for binge-eating (1) the consumption of an amount of food that is definitely larger than most people would eat during a similar period of time and under similar circumstances, in a discrete period of time, (2) a perceived lack of control or inability to stop eating during the binge episode, (3) an average of one binge episode every two weeks, for the past 6 months and (4) marked distress associated with binge eating. Subjects were excluded from study participation if they were below the age of 18, and/or were currently experiencing a psychotic illness.

All patients who were asked agreed to participate in the research, but six of these did not return their questionnaires. Therefore, a total of forty-five women participated in the study.

#### 1.4.2. Measures

For reference only, the copies of the measures used in the study are presented in Appendix A to E.

##### 1.4.2.1. Psychological maltreatment measure

The Child Abuse and Trauma (CAT) scale was initially developed to investigate child maltreatment and dissociation in clinical and non-clinical populations (Sanders & Becker-Lausen, 1995; Sanders & Giolas, 1991). It is felt to be a general measure of maltreatment and was created as a theoretical measure for testing hypotheses about childhood maltreatment outcomes. A paper-and-pencil measure was sought by the authors for ease of administration to large groups, to avoid problems of inter-rater reliability and to increase veracity or reporting through its anonymity. Under-reporting is expected, due to the stigma of disclosing an abusive childhood, but alternatively, it is possible that subjects may exaggerate childhood problems because of a complaining response style. Therefore, items for the scale were written in a purposefully mild format and included reversal of several questions to avoid response set problems. The 38-item CAT scale contains questions related to

childhood experiences of sexual mistreatment, physical mistreatment and punishment, psychological abuse, physical or emotional neglect and negative home environment (e.g. parent substance abuse or fighting). The goal of the scale is to measure current subjective perception of the degree of stress or trauma present during childhood, and is based on the concept that “the meaning a child makes of experiences influences how the experience affects the child” (Newberger & De Vos, 1988, p.505).

Sanders and Becker-Lausen (1995) found the mean of the CAT in a college sample was .75 (SD = .42) and the median was .66. The distribution was skewed and range was 0.5 to 2.66. Three factors emerged accounting for 38% of overall variance for items: factor 1, the negativity of the home atmosphere (including loneliness and neglect, means = .85, SD .63; factor 2 concerned sexual abuse, mean = .08, SD = .28; and factor 3 involved punishment, mean = 1.20, SD = .54. Good internal consistency (reflected in Cronbach’s alpha of .90) and test-retest reliability (.89 ( $p < .001$ ) was found.

#### 1.4.2.2. Dissociative Experiences Scale (DES)

The DES is a self-report measure that is self-administered. Through directions on the cover sheet of the scale, subjects are instructed to only consider those experiences not occurring under the influence of drugs or alcohol when marking answers. The questions and instructions can be read aloud, if the subject is illiterate or has difficulty reading.

The DES uses a visual analogue response scale, to avoid imposing preconceived categories on the subjects' responses (Oborne and Clarke, 1975) and consists of a 100-mm line with no divisions and numerically anchored at the endpoints. Studies of this format have indicated the format to be equal or superior to other formats (Oborne and Clark, 1975; Remington et al., 1979). The subject indicates his or her response to each question by making a slash across the 100-mm line at the appropriate place.

The scale was intended for clinical populations, and for use with adults since the language is more appropriate for persons 18 or older.

Initially, DES data were analysed using non-parametric statistics as scores were felt to be not normally distributed. However, Carlson and Putnam (1993) suggests that parametric statistics for moderate sized samples ( $N > 30$ ) can be employed. This recommendation was made based on the observation, in samples, that the mean scores were generally equivalent to median scores, and that the means for DES scores were in fact generally normally distributed.

Studies of the reliability of the DES (Bernstein & Putnam, 1986; Frischholz, et al., 1990; Pitblado & Sanders, 1991) indicate good test-retest reliability and internal reliability (split-half and Kuder Richardson). Inter-rater reliability for the scoring of the DES was studied by Frischholz et al, (1990) who found a coefficient of relative agreement of .99 across scores ( $n=20$ ).

There have been many studies examining different aspects of validity in the DES, that report positive reports for the DES, including criterion, concurrent, discriminant and convergent validity ( e.g. Carlson et al., 1993; Frischholz et al., 1990; Bernstein & Putnam, 1986). These studies indicate the construct validity of the DES and support the status of dissociation as a valid and well-defined psychological phenomenon.

#### 1.4.2.3. The Perceptual Alteration Scale (PAS).

The scale was developed by Sanders (1986), who selected items for the scale from the Minnesota Multiphasic Personality Inventory (MMPI) which matched Hilgard's (1977) description of neo-dissociation. The scale in its final format consists of 27 Likert-style items using a response scale of 1 to 4 (never to almost always). Sanders reported three factors: modification of affect (e.g. I feel that my mind is divided"); modification of control (e.g. I am glad I can forget what I look like"); and modification of cognition (e.g. I do things without thinking").

The PAS was found to not correlate with age, height, and weight, providing some evidence of discriminant validity (Sanders, 1986) and evidence was also found in support of its construct validity. A Chronback Alpha Test of internal consistency was performed and yielded an alpha score of .95, demonstrating internal consistency of the scale (Sanders, 1986).



#### 1.4.2.4. Three Factor Eating Questionnaire (TFEQ)

The Three Factor Eating Questionnaire (TFEQ) takes approximately 20 minutes to complete and consists of 51 items measuring three dimensions of eating behaviour: factor 1, cognitive restraint; factor 2, disinhibition of control and; factor 3, susceptibility to hunger. Part I of the questionnaire consists of 36 statements requiring “True” or “False” answers. Part II comprises 15 questions rated on a 5 point scale (Stunkard & Messick, 1985). The questionnaire items were derived initially from Herman and Polivy’s Revised Restraint Scale (1980), Pudel’s Latent Obesity Questionnaire (1975), and newly written items based on clinical experience.

The subscale disinhibition is reported to be highly correlated with binge eating (Marcus, et al 1985). Ganley (1980) found that emotional eating is a component of the Disinhibition factor, and felt that disinhibition was best described by two factors, one assessing Weight Lability and the other Emotional Eating. For these reasons, the disinhibition subscale of the TFEQ was used in the present study as an indicator and measure of binge-eating.

#### 1.4.2.5. Hospital Anxiety and Depression Scale (HAD)

The HAD was developed by Zigmond and Snaith (1983) as a brief self assessment scale for detecting states of depression and anxiety in the clinical settings. It consists of a 14-item self report questionnaire which is comprised of two subscales of 7 items each for anxiety and depression. Each item is scored on a 0-3 point scale based on

the selection of one of four statements. The participant is requested to answer in reference to their feelings over the last week. It usually takes approximately 3-5 minutes to complete.

For each subscale, cut-off points are established, with scores of 7 and less representing 'non-cases', scores of 8-10 representing 'doubtful' cases and scores of 11 or more representing 'definite cases'.

The authors report good reliability and evidence of internal consistency and validity. The measure was chosen both for its psychometric properties and ease of completion.

#### 1.4.3.0. Procedure

Ethical consent for the project was granted under Chair's action on behalf of the Ethics Committee for Brentwood, Havering and Barking Community Healthcare Trust (see Appendix H, for a copy of the approving letter).

Subjects were asked to sign a consent form (Appendix G) indicating that they understood the nature of the study and that they could terminate participation at any time. The signed consent forms were collected before questionnaire completion. No names or identifying information were contained on the questionnaires. After the questionnaires were completed and collected, feedback was given to each participant

on their responses; this was usually done in the context of the assessment for treatment.

The following steps were attempted with each participant in the study.

1. Participants received and completed the following questionnaires:- (i) Three Factor Eating Questionnaire; (ii) Childhood Abuse and Trauma Scale (CAT); (iii) Dissociative Experiences Scale (DES); (iv) Perceptual Alteration Scale (PAS); (v) Hospital and Depression Scale (HAD). These were given towards the end of the assessment period. Some participants completed the questionnaire in the presence of the researcher, others took the questionnaire home with them and later returned them.

2. Each participant was asked to keep a continuous record of their eating behaviour for a two week period and to consent to the collection and use of self-monitoring diaries completed in the initial stages of their therapy. A self-monitoring form was provided on which participants were asked to record the date and time of each meal or snack, the place of the meal, and the precipitating thoughts, events and feelings for each binge-episode. For completed diaries, binges were identified during the assessment, by the researcher, in collaboration with the participant. Those eating episodes which a participant categorised as a binge, but the researcher felt that the binge-criteria was not met, were coded as 'subjective binges' and were not included in the analysis. The responses were coded by the researcher using a free response format. The precipitants were then regrouped as either 'emotion

precipitants' or 'non-emotion precipitants', which is similar to the system described by Abraham and Beaumont (1992).

3. Each participant was asked to consent to their clinical assessment information being included in the study. The assessment included:- presenting problems; client's view of problems; history of problem; family background; educational/occupational history; relationships; medical history and current health; previous help with problem. A semi-structured interview format (Appendix I) was followed for the research, but most assessments extended beyond the prescribed format, and was led by the full assessment of the participant's psychological needs. Clinical information was collected on a form designed specifically for data collection.

Each participant was allocated a research number, which was inserted on their completed questionnaires and on their data collection form. The consent forms were kept separate from the data, although a cross-reference list was kept, with the consent forms, of each participants name and research number, in order that queries that arose in the data entry could be checked.

## 1.5.0 RESULTS

The data used in the following analyses came from three sources (1) completed questionnaires (2) self-reported clinical and historical information (3) self-report food diaries. Statistical analyses were performed on a Windows version of SPSS.

### 1.5.1. Demographic characteristics

Forty-five women were included in the study. Participants had a mean age of 27 years in age, and ranged from 18 to 59 years. Twenty participants (44.4%) were in full-time employment, ten in part-time employment, ten were unemployed and five participants were full-time care-givers. Most of the participants had been referred by either their General Practitioner (22 participants) or by a Psychiatrist (14 participants). The other main group of referrers were Community Psychiatric Nurses. The majority of participants (70%) had been referred following a discussion of their eating behaviour with the referrer, in which their eating behaviour was identified as problematic. All participants' referral letters referred either to their eating difficulties or their weight.

### 1.5.2. Eating difficulties

The majority of subjects had received a DSM-IV diagnosis, from a Psychiatrist or G.P., of Bulimia Nervosa (60%). Three participants (6.7%) were diagnosed

with Anorexia Nervosa, twelve participants met the criteria for Binge-eating Disorder (26.7%) and two participants were diagnosed with unspecified eating disorder.

Participants reported a mean of seven binges per fortnight (standard deviation 5.052). The number of binge episodes reported by participants varied from one to eighteen per fortnight, with a median number of six episodes per fortnight. Table 1 shows other behaviours associated with binge-eating reported by participants.

Table 1: Behaviours associated with binge-eating and their frequencies

<b>Behaviours</b>	<b>Frequency (and percentages)</b>
Vomiting	24 (53.3)
Laxatives	11 (24.4%)
CNS appetite suppressants	6 (13.3%)
Over-exercising	8 (17.8%)

The majority of participants engaged in some food restriction, 49% aimed to either restrict their food intake to a pre-set amount of calories or purposely skipped occasional meals. Fourteen participants (31 %) engaged in severe food restriction whereby they would eat a very small amount, aside from their binge episodes.

The mean time period that participants had experienced their eating difficulties was nine years, and the range was 1 to 29 years. Fourteen participants (31%) reported that they had anorexia nervosa prior to their current presentation of eating difficulties. The age at which the eating difficulties were reported to have started varied from seven years of age to fifty-four years of age. The median age for onset of eating difficulties was 16 years of age.

The body mass index (BMI) for participants ranged from 14.78 to 56.10, with a mean of 26.88 and median of 21.66 (std dev 12.21). All participants were unhappy with either their weight or the shape of their body.

The scores on the Three-factor Eating Questionnaire (TFEQ) were normally distributed and are presented for all participants in Table II. On the disinhibition subscale, 45% of participants scored within the clinical range given in the normative guidelines for the scale. 28% of participants scored within the clinical range on the hunger subscale and 49% scored within the clinical range on the cognitive restraint subscale.

Scores on the TFEQ subscales correlated with each other, indicated a positive correlation between disinhibition and hunger ( $r = .58, 0 < .0001$ ), a negative correlation between disinhibition and restraint ( $r = -.43, p < 0.003$ ) and a negative correlation between hunger and restraint ( $r = -.32, p < 0.028$ ).

Table II: Summary of total and subscale scores on TFEQ

Subscale	Mean	Median	Standard deviation	Range
Total	30.91	31	6.18	14-42
Hunger	7.89	8	3.69	2-13
Cognitive restraint	12.56	13	.816	0-21
Disinhibition	10.47	11	3.02	2-14

### 1.5.3. Clinical presentation

Sixty-two percent of participants were currently diagnosed with an Axis I disorder, by either their G.P. or their Psychiatrist. For example, 26% were diagnosed with Post Traumatic Stress Disorder and 44.4% had a diagnosis of Depression. Other diagnoses included Panic disorder and Anxiety disorder. Nine participants were diagnosed with an Axis II personality disorder, the most common being Borderline Personality Disorder.

The scores on the Hospital Anxiety and Depression Scale (HAD) were normally distributed. Clinical cut-off points are given at 11 and above, 47% of participants scored at or above this point on the Depression subscale and 41% scored at or above this point on the Anxiety subscale. Table III, shows the parameters for participants scores on the HAD and its subscales. Two questionnaires were not available for the analyses.



Table III: Summary of total and subscale scores for HAD

Subscale	Mean	Median	Standard deviation	Range
Total	22.72	23.5	6.96	10-36
Anxiety	12.97	13	4.22	4-20
Depression	9.75	9.5	3.98	2-18

Eighteen patients (40%) reported their use of other self-destructive behaviours (aside from bingeing). The most commonly reported behaviours included lacerating body (11% of total participants), illegal drug use (11%) and binge-drinking (11%). Less commonly reported behaviour included eating out-of-date food to get food-poisoning, finger biting, burning self with cigarettes, hair-pulling and reckless behaviour (jumping out of first floor window).

Twenty-two participants (49%) reported recent suicidal thoughts and 28.9% of total participants reported that they had made a parasuicide attempt in the past, half of these had made three or more parasuicide attempts.

#### 1.5.4. Child psychological maltreatment

Twenty-two participants (50%) were identified as having experienced some form of psychological maltreatment during their childhood (age 16 or below). These participants were those who reported experiences of either sexual abuse, physical abuse, emotional abuse, neglect or negative home environment.

Ten participants (22.2%) reported unwanted sexual experiences in their clinical interview, three of these involved one or both of their parents. Seven participants reported experiencing physical abuse at home, six reported a negative home environment as indicated by, for example, violence between parents, or alcoholism. Six participants reported feeling that their parent/s had mistreated them emotionally. Three participants reported experiencing traumatic events - one participant found her grandmother hanged, another was traumatised by the Bosnia civil war, and the third was involved in a car accident.

Three of the participants experienced three categories of psychological maltreatment during their childhood, and a further three participants experienced two categories. Thirteen participants reported their negative childhood experiences to be enduring.

As expected, the scores on the Child Abuse and Trauma Scale were not normally distributed, nonetheless, future analyses utilised parametric statistics since it is generally felt that violation of this assumption does not substantially affect the results of statistical analyses (e.g. Howell, 1992). Table IV shows the total and subscale scores for the CAT, which are calculated as an average for each individual participant (i.e. individual's total score is divided by number of items in scale). The overall level of childhood abuse and trauma reported by participants, as indicated by total and subscale means, are higher than those reported in college samples (e.g. Sanders and Becker-Lausen 1995).

Table IV: Child Abuse and Trauma Scale scores

Subscale	Mean	Standard deviation	Median	Range
Total	1.096	.612	947	.11-2.68
Neglect or negative home environment	1.36	.78	1.214	0 - 3.36
Sexual abuse	0.267	.421	0	0 - 1.67
Punishment	1.47	.878	1.33	0 - 4.50

Interestingly, not all participants disclosed their trauma or abuse experiences during the clinical interviews; some participants disclosed this information only on the questionnaire (with some willing to discuss this afterwards, but not all). Additionally, some participants disclosed their experiences during the interview but did not disclose it on the questionnaire (no questionnaire responses were altered by the researcher alone).

#### 1.5.5. Dissociation

The scores on the Dissociative Experiences Scale (DES) were normally distributed, but the scores on the Perceptual Affect Scale were not symmetrical in their distribution. The scores for both scales are indicated in Table V and VI. As the analyses indicate in Table VII, the two scales were highly correlated with each other, and the subscales were also correlated to the other dissociation scale (i.e. Depersonalization and derealization subscale correlated with PAS). The subscales within each scale all correlated highly with each other, with the exception of the subscale Control of Cognition (PAS), which was not

significantly correlated with either the Control of Behaviour or the Control of Affect, but did correlate with total scores on the PAS. Collectively these correlations provide some evidence of the scales' reliability and validity in measuring dissociation.

Table V: Summary of total and subscale scores on the DES

Sub-scales	Mean	Median	Range	Standard dev
Total	21.98	18.21	.71 - 69.29	16.61
Amnesia	10.44	3.75	0 - 58.75	13.91
Absorption	31.85	32.22	0 - 73.33	21.98
Depersonalization and derealization	17.67	13.33	0 - 88.33	20.064

Table VI: Summary of total and subscale scores on the PAS

Subscale	Mean	Median	Range	Standard deviation
Total	65.38	64	34 - 90	11.70
Control of affect	30.31	31	14 - 44	6.48
Control of cognition	10.33	10	5 - 17	8.0
Control of behaviour	24.73	25	13 - 36	4.6

#### 1.5.6. Intercorrelations and regressions

Total and subscale scores from the CAT, TFEQ, PAS, disinhibition and HAD were analysed using correlational methods (Pearson  $r$ ) in order to assess the associations between the variables that each scale seeks to measure. One-tailed significance levels are reported because the direction of the association was

predicted for the various pairings. The correlations are summarised in Table VII, and correlations marked with an asterix indicate a significance level of  $p < 0.05$ .

The TFEQ subscales did not correlate significantly with any of the other questionnaires or subscales, with the exception of the disinhibition subscale which correlated negatively with the anxiety subscale. One of the aims of the study was to examine whether dissociation plays a mediating role between childhood psychological maltreatment and binge-eating. To test for mediation, a series of regression analyses were planned, as described by Baron and Kenny (1986). The disinhibition subscale of the TFEQ was to be used as the dependent measure of binge-eating. The results of the multi-correlations indicated little evidence of a relationship between eating behaviour and any of the other variables. Therefore, no support was found to support the prediction that dissociation would play a mediating role between childhood psychological maltreatment and binge-eating.

Table VII. Intercorrelations between scales and subscales.

Measures		Correlation coefficient	Significance level * = $p < 0.05$ ** = $p < 0.01$
CAT	IHAD	0.239	0.061
	Anxiety	0.125	0.213
	Depression	0.294	0.028 *
	DES	0.302	0.024 *
	Depersonalization & derealization	0.181	0.123
	Absorption	0.420	0.003 **
	Amnesia	0.150	0.169
	PAS	0.173	0.133
	Control of affect	0.143	0.180
	Control of cognitions	0.049	0.379
	Control of behaviour	0.207	0.091
	DISINHIBITION	0.164	0.146

Measures	Correlation coefficient	Significance level * = $p < 0.05$ ** = $p < 0.01$
HAD		
CAT	0.239	0.061
Sexual abuse	0.30	0.023 *
Negative env & neglect	0.854	0.000 **
Punishment	0.131	0.201
DES	0.557	0.000 **
Depersonalization & derealization	0.85	0.000 **
Absorption	0.549	0.000 **
Amnesia	0.424	0.002 **
PAS	0.532	0.000 **
Control of affect	0.517	0.000 **
Control of cognitions	0.458	0.001 **
Control of behaviour	0.327	0.016 **
DISINHIBITION	-0.216	0.082
DES		
HAD	0.557	0.000 **
Anxiety	0.516	0.000 **
Depression	0.444	0.001 **
CAT	0.302	0.024 *
Sexual abuse	0.129	0.204
Neg env & neglect	0.343	0.012 **
Punishment	0.345	0.010 **
PAS	0.569	0.000 **
Control of affect	0.636	0.000 **
Control of cognitions	0.506	0.000 **
Control of behaviour	0.347	0.011 **
DISINHIBITION		
Disinhibition (3 Factor)		
HAD	-0.216	0.082
Anxiety	-0.294	0.028 *
Depression	-0.072	0.324
DES	-0.184	0.119
Depersonalization & derealization	-0.172	0.136
Absorption	-0.194	0.106
Amnesia	-0.207	0.091
PAS	0.122	0.212
Control of affect	-0.223	0.075
Control of cognitions	-0.232	0.067
Control of behaviour	0.42	0.393
CAT	0.164	0.146
Sexual abuse	-0.053	0.367
Neg env & neglect	0.177	0.128
Punishment	-0.0093	0.476
PAS		
HAD	0.532	0.000 **
Anxiety	-0.40	0.001 **
Depression	0.368	0.008 **
DES	0.569	0.000 **
Depersonalization & derealization	0.548	0.000 **
Absorption	0.556	0.000 **
Amnesia	0.457	0.001 **
CAT	0.173	0.133

Measures	Correlation coefficient	Significance level * = $p < 0.05$ ** = $p < 0.01$
Sexual abuse	0.064	0.339
Neg envi & neglect	0.146	0.169
Punishment	0.10	0.257
DISINHIBITION	-0.122	0.212

There were strong correlations between the other variables, in particular the HAD scale correlated well with the DES, PAS and the negative environment and neglect subscale of the CAT. The subscales of the HAD showed different patterns of correlations. For example, anxiety was strongly associated with DES, whereas depression was highly correlated with sexual abuse and CAT.

A series of multivariate statistics were undertaken at the onset of the analysis, as it was felt that the measures would be conceptually interlinked. The starting point for the analysis was multiple correlations between the variables, leading to a series of multiple regressions and finishing with a series of ANOVAs. Multiple regression and ANOVA to essentially ask the same kind of questions and give the same kind of answers. Undertaking the multiple regressions was useful in identifying those variables that were influential in the variances of scores. However, multiple regression loses its accuracy when predictor variables are highly correlated with each other (i.e. multicollinearity), since there were many variables that showed strong correlations, the ANOVAs were undertaken to minimise errors.

Table VIII: Multiple Regression results

Dependent	Independent	Regression	R squared ( $r^2$ )	Significance
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variable	variable/s	coefficient (r)		level
DES	CAT & HAD	0.58	0.34	0.0002 **
	CAT	0.39	0.15	0.0083 **
	HAD	0.56	0.31	0.0001 **
	Subscales of CAT	0.43	0.19	0.03 *
HAD	Disinhibition, DES, CAT	0.58	0.33	0.0011 **
	Subscales of CAT, DES & PAS	0.65	0.42	0.0173 **
	Sexual abuse & DES	0.60	0.36	0.0001 **
PAS	CAT & HAD	0.53	0.28	0.0012 **

\* significant at  $p < 0.05$

\*\* significant at  $p < 0.01$

#### 1.5.7. Dissociation and psychological maltreatment

The DES and PAS did not correlate with the same variables. For example the DES correlated with the CAT, the negative home environment subscale (CAT) and depression. It did not correlate significantly with the other subscales of the CAT. Whereas the PAS correlated significantly with the HAD and anxiety.

The CAT showed a strong positive correlation with the DES, particularly the absorption subscale, and depression. Interestingly, the CAT did not correlate significantly with the HAD. The subscales of the CAT showed different correlation patterns also. The negative environment was correlated with absorption and DES, sexual abuse was correlated with HAD and depression, and the punishment scale was correlated with the absorption subscale (DES).



These associations were explored further in a series of standard multiple regressions, which are shown on Table VIII. Of particular interest was the way in which the HAD contributed towards variances in scores. The HAD was brought into the study to address whether depression/anxiety interacted with, or confounded, the relationship between dissociation and childhood maltreatment. A standard multiple regression was carried out with the DES as the dependent variable, and the HAD and CAT as the independent variables. The results indicate a highly significant regression coefficient ( $r=.58$ ), which had an F value significant at 0.0002 level, indicating a strong linear relationship between the variables. The results of the multiple regression also showed that the variable HAD contributed significantly to the prediction of DES scores, as indicated by its beta value of .513 and t value of 3.88, which was significant at a  $p<0.0004$ . The CAT variable had a beta of .179 and was not significantly independent in the linear relationship (t not significant). Therefore, the HAD was a stronger predictor of DES. The linear relationship involving the variables accounted for 34% of the variances in scores, as indicated by the R square (.34).

When a regression was carried out between DES and HAD only, a slightly lower regression coefficient was observed ( $r=.556$ ) which was also highly significant (significance of  $F=0.0001$ ) but which accounted for less of the variances in the scores of DES ( $R\text{ squared} = .31$ ). This provides some evidence that childhood maltreatment also plays a role in the prediction of DES scores, but not to the same degree as the HAD. Collectively, this suggests that anxiety/depression

(measured by HAD) dissociation (measured by DES), and childhood psychological maltreatment are interlinked.

Further exploratory analyses were then undertaken to investigate other possible predictive variables. For example, a stepwise multiple regression was carried out with DES as a dependent variable and with the subscales of CAT entered separately as independent variables. The results indicated that the neglect/negative environment subscale was a stronger predictor of DES scores than the other subscales. The addition of the other two subscales still produced a significant regression coefficient but the R square was larger with the former subscale only, indicating greater accounting of variance in scores. Introducing the HAD scale as a further independent variable with CAT, produced a stronger coefficient and the variance in scores was also better accounted for.

The PAS did not correlate significantly with the CAT, or any of its subscales. However, when the PAS was regressed with the HAD and the CAT, a regression coefficient was observed ( $R=.53$ ,  $F=7.98$ ) which was significant at a  $p<0.0012$  level. However, the HAD showed a larger beta (.52) compared to the CAT's beta (0.05) and the HAD was significantly independent (sig  $t=.0005$ ) in the relationship. This provides further support that the DES and PAS perform differently with psychological maltreatment, and that general psychopathology may be interlinked with dissociation.

When the HAD was treated as a dependent variable, with DES, disinhibition and CAT, further significant regression coefficients were found ( $R=.58$ ,  $F$  significant at 0.0011 level). The disinhibition subscale was introduced into the regression to examine whether the presence of the other variables produced a significant effect. The DES variable had the largest beta value (.496) when compared with the CAT (Beta of .1123) and disinhibition (beta of -.14), indicating that the DES variable was more predominant in the linear relationship. The HAD was then regressed with the subscales of the CAT, DES and PAS, indicated that the best predictors of the dependent variable (HAD) were absorption, followed by depersonalization/derealization and sexual abuse. This is of interest when considering that sexual abuse was the most influential subscale when considering DES (dissociation) variances, and may suggest that different types of abuse have different psychological sequelae.

A series of ANOVAs were carried out on the data, to examine differences in variances and any interactional effects between variables. The results of the ANOVAs are presented in Table IX.

Table IX: Summary table of ANOVAs

Dependent variable	Independent variables	F statistic	Degrees of freedom	Significance level
DES	HAD and CAT		Total = 42	
	Main effect	5.87	2	0.006 **
	HAD	8.11	1	0.007 **
	CAT	4.36	1	0.043 &
	2-way interaction	2.14	1	0.646
PAS	HAD and CAT		Total=42	
	Main effect	2.19	2	0.125

HAD	HAD	4.37	1	0.043 *
	CAT	0.064	1	0.801
	2-way interaction	0.016	1	0.901
HAD	CAT and PAS		Total=42	
	Main effect	2.357	2	0.108
	CAT	0.642	1	0.428
	PAS	4.661	1	0.037 *
	2-way interaction	0.111	1	0.740
HAD	CAT and DES		Total=42	
	Main effect	2.590	2	0.088
	CAT	0.186	1	0.669
	DES	5.155	1	0.029 *
	2-way interaction	0.007	1	0.933
HAD	CAT, DES and PAS		Total=42	
	Main effect	3.122	3	0.037 *
	CAT	0.269	1	0.607
	DES	2.451	1	0.126
	PAS	2.268	1	0.140
	No interactional effects analysed			
HAD	DES and PAS		Total=42	
	Main effect	3.438	2	0.042 *
	DES	1.232	1	0.274
	PAS	2.804	1	0.102
	2-way interaction	0.086	1	0.771

\* significant at  $p < 0.05$  \*\* significant at  $p < 0.01$

The first analysis of variance was carried out using DES as a dependent variable, with HAD and CAT as independent variables, to investigate the interaction of HAD and CAT with DES. To carry out the ANOVA, the participants were divided into groups according to their scores on the CAT and HAD. Those participants with CAT scores one standard deviation above the mean, were put into a 'high maltreatment' group, and the others put into a 'low-

maltreatment'. Similarly, a 'high depressed/anxious' group and a 'low-depressed' group were developed using the same criteria with the HAD total scores (i.e. defined by scores above or below the standard deviation above mean). The results of the ANOVA indicated a significant difference in DES scores between both the 'high maltreatment' and 'low-maltreatment group ( $p < 0.43$ ), and between the 'high depressed/anxious' group and 'low depressed/anxious' group ( $p < 0.007$ ). A two-way interaction between the independent variables was not found.

When the ANOVA was carried out with the PAS as the dependent variable, with the same groups (high and low trauma and depressed/anxious groups), no main effects were observed in the total variance, but a difference in PAS scores was found between the high and low anxiety/depression group.

Two ANOVAs were carried out by using the HAD as the dependent variable, and two independent variables, first of all using CAT and PAS, secondly using CAT and DES. Both found a significant effect on the dissociation measures, but no overall effect and no interactions between the two independent variables. Lastly, an ANOVA was carried out using the high and low groups of the CAT, DES and PAS, with the HAD as the dependent variable. The results indicated a main effect, but no difference in depression scores between the individual groups. Since, the previous ANOVAs had found a difference, it may be that there were differences in HAD scores between particular groups, but that the sample size was insufficient for the effects to be significantly noted.

Overall, there appears to be some evidence of a strong relationship between dissociation and anxiety/depression. This is supported by the observation that when one variable becomes an independent variable, and the other a dependent variable, a significant difference in the variance of scores can be found, and they both appear to be mutually influential in predicting the score of the other within their linear relationship. An association was found between dissociation and psychological maltreatment, but only when the DES was used to measure dissociation. This provides some support for the first experimental hypothesis, but support for the hypothesis is not found if dissociation is measured using the PAS.

No evidence was found to support an association between anxiety/depression and trauma, either in a direct way or through an interaction with any of the other variables. The second hypothesis predicted that dissociation would play a mediating role between binge-eating and childhood maltreatment, and that the relationship would not be confounded by depression/anxiety levels. Since a relationship was not observed between disinhibition and dissociation, or any other variables, support is made for the rejection of this hypothesis.

Other variables were examined, but it appeared that the strongest relationship existed between dissociation and anxiety/depression, and between trauma and dissociation.

#### 1.5.8. Food diaries

The second part of the study attempted to examine the precipitants of binge-episodes. Nineteen food diaries were collected from participants. The low collection rate was attributable mainly to participants not returning their diaries, although in three cases no binge episode took place during their assessment period. Of the participants who recorded their food intake for the study, data was collected on 113 binge-eating episodes. The mean number of binges per fortnight was six episodes, and the range was 2 to 12 episodes. Binge episodes in the food diaries were marked by participants, and only included if the assessor was in agreement that the DSM-IV criteria were met, in terms of the amount eaten and the loss of control experienced by the participant. It was not uncommon for participants to term an eating episode as a binge, in the absence of an inappropriate amount of food being eaten. These 'subjective binges' were not included in the analyses.

The precipitants cited by participants were grouped into the categories indicated in Table X, which shows the frequency of citation for each category. The total number of precipitants cited was 122, as sometimes a participant did not cite a precipitant for every episode or sometimes cited more than one.

Table X: Precipitants indicated by participants for binge-episodes

Precipitants	Frequency	Re-grouping
Emotion attributable to weight/body image	20	Emotion
Emotion (not attributable)	42	Emotion

directly to weight)		
Presence of food	16	Non-emotion
Ate food and could not stop	7	Non-emotion
Hunger	14	Non-emotion
Tiredness	10	Non-emotion
Exercise	1	Non-emotion
Feeling unwell	1	Non-emotion
Habitual time to binge	3	Non-emotion
Vomited	1	Non-emotion
Consumption of alcohol	6	Non-emotion
Thoughts about diet next day and need to use up food	1	Non-emotion

The precipitants were then regrouped into two categories - emotion precipitants and non-emotion precipitants. The emotion precipitants included a range of emotions, such as feeling angry, low, or anxious. Only negative emotions were cited as precipitants. Some of the precipitants cited by participants were emotions that appeared to be related directly to their weight or body image. For example, a participant may have written "feeling fat and ugly". Whereas other emotions may have been related to other factors, such as relationship difficulties. It may be argued that many of the other variables have the ability to evoke a negative emotion, depending on the person's interpretation of that precipitant. For example, a person may have stated that their binge was precipitated by the presence of food. That person may say that seeing the food triggered the binge. However, it may be when the person saw the food, thoughts entered their head which in turn lowered their mood. Therefore, with this method of analysing the data there runs the risk that the 'actual' precipitants are not being examined, but some other variable.



The precipitants cited by each participant were then examined and each participant grouped according to the type of precipitant most commonly cited by them. For example, if someone had eight binge episodes during a fortnight, and cited in five episodes that the precipitant was an emotion, two were non-emotion precipitants and one episode was unstated - then their primary precipitant was classified as 'emotion'. In those cases where an equal amount of precipitant types were cited, then the person was classed as having a 'mixed' primary precipitant. Table XI shows the regrouping and their respective frequencies.

The coding system was not repeated by a second rater, therefore the reliability of the system is unknown.

Table XI. Regrouped primary precipitants

Type of primary precipitant	Frequency (n=19)
Emotion	9
Non-emotion	8
Mixed	2

Previous studies that have examined precipitants for particular behaviours have employed a log-linear contingency table approach (e.g. Schlundt, et al., 1986) which overcomes the difficulty of the non-independence of observations that the episodes present. However, because of the variability in the quality and quantity of the information (e.g. some participants recorded two days, other may have

recorded 6 weeks), it was felt that such an approach was not warranted. The statistical analysis focused solely on the primary precipitant grouping allocated to each participant.

The clinical and questionnaire responses were cross-referenced with the diary entries, to examine whether differences exist in the type of primary precipitants of binge-episodes between both high and low dissociators and trauma and non-trauma participants. Since anxiety/depression appeared to be an influential factor in the first part of the study, this was also included in the analyses. High and low dissociators were established by grouping participants according to their DES and PAS score (separately). The cut-off point for the groups was at the median for all the scores. This is different from the method chosen to separate high and low DES scorers in the first part of the study (which used one standard deviation about the mean as the cut-off). This method was chosen as Chi-squares were performed on the data, and as the sample size was small, it was felt that using the former method would lead to a skewness in the data and make Chi-squared analyses more difficult to undertake. Participants were also grouped, in this way, with the HAD and the CAT scores. Tables XII, XIII, XIV and XV show the primary precipitants across the different groups.

Table XII: Primary precipitants for high and low trauma groups

<b>Group</b>	<b>Emotion</b>	<b>Non-emotion</b>	<b>Mixed</b>
High trauma	8	1	2
Low trauma	1	7	0

Table XIII: Primary precipitants for high and low DES groups

<b>Group</b>	<b>Emotion</b>	<b>Non-emotion</b>	<b>Mixed</b>
High DES	6	2	2
Low DES	3	6	0

Table XIV: Primary precipitants for high and low PAS groups

<b>Group</b>	<b>Emotion</b>	<b>Non-emotion</b>	<b>Mixed</b>
High PAS	7	3	2
Low PAS	2	5	0

Table XV: Primary precipitants for high and low HAD groups

<b>Group</b>	<b>Emotion</b>	<b>Non-emotion</b>	<b>Mixed</b>
High HAD	5	1	2
Low HAD	4	7	0

A series of Chi-square were carried out on the data in the above four tables and this test was chosen as the data is of a categorical nature. These analyses violated one of the assumptions for the Chi-square, which advises against its use with small expected frequencies. However, Howell (1987) quotes studies (e.g. Bradley et al., 1979) where the type I errors were found to be rare in small samples, as long as marginal totals were not drastically skewed.

Table XVI shows the results of the Chi-square analyses, which indicate an association between the type of primary precipitants and trauma, and also with anxiety/depression. This is in line with one of the predictions made with at the start of the study. Caution needs to be made in interpreting these results because of the inaccuracy of the information recorded, the uncertain validity and reliability of the coding system and the violation of the Chi-square. At the least, it suggests that there are differences in the way groups of binge-eaters may perceive their trigger (e.g. looking within themselves or attribution to an external object). It may also suggest that between different groups of binge-eaters there are different triggers, and or different functions of the binge-eating.

Table XVI: Chi-square results for primary precipitants

Groups	Chi-square value	Degrees of freedom	Significance level
High and low trauma	11.76	2	0.002 **
High and low HAD	6.29	2	0.042 *
High and low DES	4.96	2	0.08
High and low PAS	4.25	2	0.12

\* Significant at  $p < 0.05$       \*\* Significant at  $p < 0.01$

## **1.6. DISCUSSION**

Generally, the study's results were not consistent with previous research. The difference in findings may be attributable to the differences in the measures that were adopted (e.g. disinhibition or CAT) and/or the differences in the criteria for

binge-eating. Four predictions were made at the start of the project, of which two were partially confirmed and two were not.

With regard to links between childhood maltreatment and dissociation, a positive correlation was found between these two variables when the DES was used to measure dissociation. But the correlation was not significant when the PAS measure was adopted. The correlational analyses found that the DES and PAS were significantly correlated with each other, but did not correlate with other variables in the same way as each other. This was surprising as the two measures are thought to measure the same psychological construct, dissociation, and would therefore be expected to correlate significantly with the same variables. This was not the case and provides support for Fischer and Elnitsky's (1990) claim that the two scales may be measuring conceptually different but, perhaps, statistically inter-correlated dimensions of dissociation (Fischer & Elnitsky, 1990).

A further unexpected result was that not all participants scored within the clinical range of the disinhibition subscale on the TFEQ. The subscale is considered a good measure of binge-eating, and therefore since the participants were all binge-eaters it was anticipated that their scores would be higher on this subscale. The TFEQ and its subscales did not correlate significantly with any other variable, with the exception of disinhibition which correlated negatively with the anxiety subscale of the HAD. This could indicate that when anxiety is high, bingeing is less likely to occur. However, previous studies have found

heightened levels of anxiety prior to bingeing (Abraham and Beaumont, 1982; Hsu, 1990; Lingswiler et al, 1989), so it would be expected that those who are more anxious would be more likely to binge. Since, the HAD was only completed once by participants and anxiety levels not rated prior or after binges, it would be premature to make any conclusions about anxiety and binge-eating as there is no evidence that, within the study's group of binge-eaters, the anxiety/depression levels were consistent throughout the day.

The scores on the TFEQ were not fully supportive of the predictions made by restraint theory. In line with restraint theory, a positive correlation was observed between disinhibition and hunger and a negative correlation between hunger and restraint. However, disinhibition and restraint were negatively correlated, which is contradictory to restraint theory. Similarly, from the clinical information it was established that not all of the participants were engaging in some form of food restraint, which also supports Russell's (1979, 1985) argument that binge-eating does not always take place in the context of food deprivation.

Additionally, the food diaries completed by participants, provided some evidence that binge-eating is not always precipitated by the same type of precipitants, either across groups of binge-eaters, within groups of binge-eaters or within an individual over time. This could imply that one theory or model may not necessarily fit all binge-eaters. That is, for some binge-eaters the development of their binge-eating may be explained by restraint theory, but for other binge-eaters alternative models may provide better explanations (e.g. anxiety reducer). Put a

different way, it may suggest that the function of the binge-eating is different for different binge-eaters. For example, for one person it may be that they binge-eat to help them deal with negative emotions, whereas another person binge-eats because they have not eaten all day and counterregulate when they do eat.

It was anticipated that there would be correlations between the TFEQ, specifically the disinhibition subscale, and the dissociation measures. This was not the case and is inconsistent with recent research which has found a significant correlation between disinhibition and the DES (e.g. Frاسquilho and Oakley, 1997). Further comparisons between the present study and such research may provide some explanation for the difference in results (e.g. whether methodological or design differences are contributory).

The lack of significant correlations for the TFEQ and its subscales, immediately disconfirmed the study's prediction that dissociation would act as a mediator between binge-eating (as reflected by scores on disinhibition) and childhood psychological maltreatment. After examining the results of correlational analyses between variables, exploratory multiple regressions were performed to see what variables were linked, and whether there were any variables that were able to account for a significant amount of variance in scores, in addition to being a good predictor for other variables. The strongest finding was the associations of the HAD with the other measures. In particular, it demonstrated strong predictive powers for DES scores but no evidence was found of a relationship between anxiety/depression and childhood psychological

maltreatment. This was confirmed in the ANOVAs carried out on the data, which also confirmed the significant relationship between dissociation and anxiety/depression. There was some evidence that different aspects of psychological maltreatment may have different psychological outcomes. For example, that sexual abuse could be more closely associated with depression, and negative home environment and neglect with anxiety/depression. However, these factors were not shown to be statistically predictive in the multiple regressions.

An ANOVA found a significant difference in DES scores between both a high maltreatment and low maltreatment group, and also between a high depressed/anxious group and low depressed/anxious group. No interaction was found between maltreatment and anxiety/depression as would have been expected, given the large amount of studies where links with depression have been found.

There the results of the study provide some support for claims that there is no relationship between sexual abuse and eating disorders. For example, Fullerton et al (1995) asserted that there was no relationship between bingeing severity and sexual abuse, but pointed to heightened distress, and presence of self-destructive behaviour in those with a history of sexual abuse. It was felt that the consequences of sexual abuse was the increase in distress, not the eating disorder, but that the presence of the heightened distress made the treatment of eating disorders problematic in eating-disordered patients who have experienced sexual abuse in childhood. However, in this study, the eating questionnaire



subscale did not demonstrate any strong links. Given the prevalence of co-morbidity amongst clients with eating disorders, and also the co-morbidity of the participants in the study, this may indicate that there were difficulties in the measurement of the different factors. The data will be re-examined and compared to other studies in order that these stark differences can be understood.

However, it may be that the slight alteration in the criteria for binge-eating (e.g. less frequent binge-eating included), or the adoption of the construct psychological maltreatment (rather than measuring the presence of abuse only), were contributory.

As mentioned previously, the DES and the PAS did not correlate in the same way with different measures. Interestingly, the DES correlated positively with the CAT, but only correlated with one subscale of the CAT - the neglect/negative environment subscale. This may illustrate the importance of considering the whole family context in which abuse takes place in, rather focusing on actual events and supports the use of the construct psychological maltreatment when investigating the effects of abuse. However, the PAS did not correlate with the CAT, or any of its subscales. The lack of consistent results between the DES and PAS highlights the need for further clarification about what they are measuring, and also highlights, perhaps, the need for greater understanding of what dissociation is. It may be that the DES and PAS tap into different aspects of dissociation that have different antecedents, different aetiologies and different consequences.

The participants in the study did show a high degree of other eating-disordered behaviours and general psychopathology; fifty percent of participants engaged in self-induced vomiting; a quarter of participants used laxatives; 60% were diagnosed as having bulimia nervosa, 6% with binge-eating anorexia nervosa and 26% with binge-eating disorder. Factors also associated with eating disorders were also present within the group, such as presence of depression and anxiety as reflected by scores on HAD, self-destructive behaviour (40%), diagnosis of personality disorder (20%), 22% experienced unwanted sexual experiences during childhood, 15% experienced physical abuse, and 13% experienced emotional abuse. Therefore, it is possible that the group of participants included in this study may not represent binge-eaters reported in other studies but at the same time does not represent 'normal' binge-eating (i.e. non-clinical binge-eating) as the amount of binge-eating episodes was above that reported for normal populations (e.g. Wardle, 1980) and was identified as a difficulty by participants over a significant period of time (mean length of eating difficulties was nine years).

It may also be possible that the sample was too small for the amount of variables and items contained in questionnaires.

The third prediction made for the study was supported by the result, whereby a significant association was observed between type of precipitants and psychological maltreatment. The Chi-square analysis indicated that those

participants with a history of trauma during childhood, were more likely to binge-eat following an 'emotion' precipitant. Whereas, the non-trauma participants were more likely to binge-eat in response to non-emotion precipitants, such as feeling hungry, presence of food or habit of coming home and eating. A similar association was also found with anxiety/depression. This may support the notion that binge-eaters are not a homogeneous group, and that for one group of binge-eater (i.e. those who have experienced trauma) the bingeing serves as a way of coping with negative affect, whereas for another group of bingers (i.e. those without trauma) the bingeing is mainly a consequence of food deprivation (as outlined by restraint theory). It also provides further evidence of an association of anxiety/depression with binge-eating.

Chi-squares carried out in the same way to investigate any differences in primary precipitants of high and low dissociators, were not significant. This was surprising as an association between one of the dissociation scales and trauma had been established, so it was anticipated that if an association was found between trauma and primary precipitants, then there would be one found for dissociation also. It may be that there is no association between emotional eating and dissociation, or it may be that the quality and quantity of information led to an association not being found.

The use of diaries in the study proved to be problematic. As is also found in cognitive therapy, the participants sometimes find it difficult to complete the

diary and bring them to their sessions. Therefore, the return rate of diaries was quite low, and the information contained in them was patchy. As the researcher was responsible for assessing participants only, and aimed to get the information collected for each participant during their assessment, this meant that participants could not be trained up properly on the completion of diaries. It is usually observed in clinical practice, that the identification of automatic thoughts and precipitants becomes better with practice, and this learning process was not feasible in the study.

Anecdotally, when reviewing the diaries with participants, it was noted that many participants termed some eating episodes a 'binge', when the criteria for DSM-IV was not met, because of the amount of food eaten. Some participants identified episodes as binges as they felt that they had no control with their intake of food at that point, and had wanted to eat a very small amount, if anything at all. They reported negative feelings in response to them "losing control". For example, feeling worthless because they can't control their eating, or feeling greedy. Some participants could identify these episodes as being less severe than 'objective binges' (i.e. DSM-IV criteria binge episodes). However, they still felt that these episodes were 'binges' because of their lack of control. In such cases, the episodes were not included in the study. This is a different finding to that reported by Abraham and Beaumont (1982), who reported that participants were able to identify binges accurately and made a distinction between eating too much and binge eating. It would be of interest to see if the subjective experience between objective and subjective binge-episodes is similar

An interesting observation in the study was the way in which participants disclosed their childhood experiences. Some participants did not disclose any trauma/stress in response to questions asked during the clinical assessment. For example, participants may have been asked "how did you learn about sex?", "can you tell me about your first sexual experiences?", or "were there any upsetting experiences that happened whilst you were growing up?". Some participants did disclose upsetting events or experiences at this point, and also recorded their experiences on the maltreatment questionnaire. Some participants, however, did not record their experiences but had disclosed them during the interview. Some participants had not disclosed any experiences or events during the assessment interview, but then disclosed the information on the questionnaire. One participant said it was easier to write it down on a questionnaire, and had wanted to tell me when I asked verbally, but felt too anxious and afraid to do so.

It is generally felt that self-report methods measuring maltreatment or abuse, can produce underestimates due to the stigma associated with such experiences, or because the person may have only fragmented memories of such events/experiences. Four participants reported that an additional concern for them in telling others about their experiences, was that people may view them as "liars", or "neurotics" and view their memories of their stressful events/experiences as 'false memories'.

As van der Kolk (1996) points out, because of the nature of traumatic memories and the physiological, mental and psychological process involved in the processing of traumatic memories, these memories are more likely to be fragmented and not feel like other memories. This can lead to a person feeling that their memory isn't a real memory, but perhaps a dream. Additionally, since those experiencing trauma during childhood and adulthood can develop dissociative symptomatology, this further prevents the integration of traumatic memories and keeps them in a fragmented state. Difficulties disclosing difficulties experiences and events may also be influenced by an individual's fear that she will become overwhelmed by the memories, and they may purposely avoid talking about these events.

The nature of the therapeutic relationship can provide the right environment for disclosing painful memories. But if somebody experiences dissociation on a regular basis, this may lead to them feeling disconnected from others, hinder the development of trust, and increase their interpersonal sensitivity. Studies which investigate maltreatment and trauma will therefore be faced with a number of measurement difficulties, as the very nature of the experiences being investigated may lead to under-reporting.

Despite, the unpredicted findings it would be worth investigating further how and why these findings arose. Future research would benefit from reviewing the choice of questionnaires; a more specific binge-eating questionnaire, a wider dissociative scale that measures all factors involved in dissociation, and perhaps

the inclusion of separate anxiety and depression questionnaires which contain more items (rather than a brief dual questionnaire). Increasing the sample size would also be advantageous. Associations between maltreatment, dissociation and depression/anxiety should also be explored across different client groups (e.g. DSM-IV definition of bingers, infrequent bingers, anorexics, non-clinical participants).

### **1.7. Conclusions**

The study confirmed, partially, two of the four predictions made. An association was found between one dissociative scale (DES) and childhood psychological maltreatment, but this was not found with the second dissociative scale (PAS). The TFEQ did not correlate significantly with maltreatment or any other variable, except for a negative correlation between disinhibition and anxiety. There was therefore no evidence that dissociation played a mediator role between binge-eating and maltreatment. There was some indication that general psychopathology, as indicated by the HAD scale in this study, was associated with dissociation. This could indicate that the dissociation is more strongly associated with general psychopathology than it is with childhood trauma. However, methodological factors make it difficult to form any firm conclusions.

The study also examined the primary precipitants to binge-eating episodes. Evidence was found that those who have experienced maltreatment during childhood are more likely to binge-eat in response to negative mood, as opposed

to those with such a history who may binge-eat in response in dietary restraint. A similar association was also found between primary precipitants and anxiety/depression. This supports the view that binge-eaters are not a homogenous group, and one model may not be sufficient to explain all binge-eaters.



## **1.8 BIBLIOGRAPHY**

Abraham, S.F. & Beaumont, P.J.V. (1982). How patients describe bulimia or binge-eating. *Psychological Medicine*, 12, 625-635.

Abramson, E.E., & Lucido, G.M. (1991). Childhood sexual experience and bulimia. *Addictive Behavior*, 16, 529-532.

Alexander, P., & Lupfer, S. (1987). Family characteristics and long-term consequences associated with sexual abuse. *Archives of Sexual Behavior*, 16, 235-245.

American Psychiatric Association (1994) *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition. Washington, DC: American Psychiatric Association.

Anderson, G., Yassenik, L., & Ross, C.A. (1993) Dissociative experiences and disorders among women who identify themselves as sexual abuse survivors. *Child Abuse and Neglect*, 17, 677-686

Angiulo, M.J & Kihlstrom, J.F. (1992). Dissociative experiences in a college population. *Unpublished manuscript*, University of Arizona.

Arnow, B., Kenardy, J., & Agras, W. S. (1992) Binge eating among the obese. A descriptive study, *Journal of Behavioral Medicine*, 15, 155-170.

Bagley, C., & Ramsay, R. (1986). Sexual abuse in childhood: Psychosocial outcomes and implications for social work practice. *Journal of Social Work and Human Sexuality*, 4, 33-47.

Barabasz, M. (1991) Hypnotizability in bulimia. *International Journal of Eating Disorders*, 10, 117-120.

Beaumont, P.J.V., & Abraham, S.F. (1983). Episodes of ravenous overeating or bulimia: their occurrence in patients with anorexia nervosa and with other forms of eating disorder. In P.L. Darby, P.E. Garfinkel, D.M. Garner & D.V. Coscina (Eds.), *Neurology and neurobiology*, 3, *anorexia nervosa: Recent developments in research*, New York: Alan R. Liss, Inc.

Beck, A.T. (1967) *Depression: Clinical, experimental and theoretical aspects*. New York: Harper & Row

Becker-Lausen, E, Sanders, B & Chinsky, J.M. (1996) Mediation of abusive childhood experiences: depression, dissociation, and negative life outcomes.

Beckman, K.A., & Burns, G.L. (1990) Relation of sexual abuse and bulimia in college women. *International Journal of Eating Disorders*, 9, 487-492

Beglin, S.J., & Fairburn, C.G. (1992). What is meant by the term "binge"? *American Journal of Psychiatry*, 149, 123-124.

Ben-Tovim, D.I. and Walker, M.K. (1991) Further evidence for the Stroop Test as a quantitative measure of psychopathology. *International Journal of Eating Disorders*, 10, 609-613

Bernstein, E.M. & Putnam, F.W. (1986) Development, reliability, and validity of a dissociation scale. *Journal of Nervous Mental Disorders*, 174, 727-735.

Brassard, M.R., Germain, R., & Hart, S.N. (1987) *Psychological maltreatment of children and youth*. New York: Pergamon Press.

Braun, B.G. and Sachs, R.F. (1985) The development of multiple personality disorder: Predisposing, precipitating, and perpetuating factors. In: *Childhood Antecedents of Multiple Personality Disorder* (ed. R.P.Kluft). Washington, DC: American Psychiatric Press, pp.37-64.

Briere, J (1992) *Child Abuse Trauma. Theory and Treatment of the Lasting Effects*. London: Sage

Briere, J., & Runtz, M. (1988). Multivariate correlates of childhood psychological and physical maltreatment among university women. *Child Abuse and Neglect*, 12, 331-341

Brodsky, B.S., Cloitre, M., & Dulit, R.A. (1995) Relationship of dissociation to self-mutilation and childhood abuse in borderline personality disorder, *American Journal of Psychiatry*, 152:12, 1788-1792.

Blake-White, J., & Kline, C.M. (1985) Treating the dissociative process in adult victims of childhood incest. *Social Casework: The Journal of Contemporary Social work*, 394-402.

Brown, G.R., & Anderson, B. (1991). Psychiatric morbidity in adult inpatients with childhood histories of sexual and physical abuse. *American Journal of Psychiatry*, 148, 55-61.

Browne, A., & Finkelhor, D (1986) The impact of child sexual abuse: a review of the research. *Psychological Bulletin*, 99, 66-77

Bryer, J.B., Nelson, B.A., Miller, J.B. & Krol, P.A. (1987). Childhood sexual and phsycial abuse as factors in adult psychiatric illness. *American Journal of Psychiatry*, 144, 1426-1430.

Bruce, B.& Agras, W.S (1992) Binge eating in females: A population based investigation. *International Journal of Eating Disorders*, 12, 365-373.

Burnam, M.A., Stein, J.A., Golding, J.M. et al (1988) Sexual assault and mental disorders in a community population. *Journal of Consultation and Clinical Psychology*, 56, 843-850.

Calam, R., & Slade, P. (1987) Eating problems and sexual experience: Some relationships. *British Review of Bulimia and Anorexia Nervosa*, 2, 37-43.

Calam, R.M. & Slade, P.D. (1989) Sexual experience and eating problems in female undergraduates, *International Journal of Eating Disorders*, 8(4), 391-397.

Carlson, E.B & Putnam, F.W. (1993) An update on the Dissociative Experiences Scale. *Dissociation*, 6 (1), 16-27.

Chandarana, P. and Malla, A. (1989) Bulimia and dissociative states: A case report. *Canadian Journal of Psychiatry*, 34, 137-139.

Chu, J.A. & Dill, D.L. (1990). Dissociative symptoms in relation to childhood physical and sexual abuse. *American Journal of Psychiatry*, 147, 887-892.

Coker, S., Vize, C., Wade, T., & Cooper, P.J. (1993). Patients with bulimia nervosa who fail to engage in cognitive behavior therapy. *International Journal of Eating Disorders*, 13, 35-40.

Connors, M.E., Johnson, C.L., Stuckey, M.K. (1984) Treatment of bulimia with brief psychoeducational group therapy. *American Journal of Psychiatry*, 141, 1512-1516.

Connors, M.E., & Morse, W. (1993). Sexual abuse and eating disorders: A review. *International Journal of Eating Disorders*, 13, 1-11.

Coons, P.M. and Milstein, V. (1986) Psychosexual disturbances in multiple personality disorder: Characteristics, etiology, and treatment. *Journal of Clinical Psychiatry*, 47, 106-110

Coons, P.M., Bowman, E.S., Milstein, V. (1988). Multiple personality disorder: A clinical investigation of 50 cases. *Journal of Nervous and Mental Disorders*, 176, 519-527.

Cooper, J.L., Morrison, T.L., Bigman, O.L., Abramowitz, S.I., Levin, S., & Krener, P. (1988). Mood changes and affective disorder in the binge-purge cycle. *International Journal of Eating Disorders*, 7, 469-474.

Cooper, M.J., Anastasiades, P. and Fairburn, C.G. (1992) Selective processing of eating - shape- and weight-related words in persons with bulimia nervosa. *Journal of Abnormal Psychology*, 101, 352-355.

Covino, N.A., Jimerson, D.C., Walton, B.E., Franko, D.L., & Frankel, F.H. (1994) Hypnotizability, dissociation, and bulimia: An outpatient study. *Journal of Abnormal Psychology*, 103, 455-459.

Davies, J.M. (1996). Dissociation, repression and reality testing in the countertransference: The controversy over memory and false memory in the psychoanalytic treatment of adult survivors of childhood sexual abuse, *Psychoanalytic Dialogues*, 6(2), 189-218.

Demitrack, M.A., Putnam, F.W., Brewerton, T.D., Brandt, H.A., & Gold, P.W. (1990). Relation of clinical variables to dissociative phenomena in eating disorders. *American Journal of Psychiatry*, 147, 1184-1188

Ellenberger, H. (1970). *The discovery of the unconscious*. New York:Basic Books

Elmore, D.K., & De Castro, J.M. (1990). Self-rated moods and hunger in relation to spontaneous eating behavior in bulimics, recovered bulimics and normals. *International Journal of Eating Disorders*, 9, 179-190.

Everill, J.T., & Waller, G. (1995) Reported sexual abuse and eating psychopathology: A review of the evidence for a causal link, *International Journal of Eating Disorders*, 18(1), 1-11.

Everill, J.T., Waller, G. and Macdonald, W (in press). Reported sexual abuse and bulimic symptoms: the mediating role of dissociation. *Dissociation*.

Everill, J.T., Waller, G., and Macdonald, W (1995) Dissociation in bulimic and non-eating-disordered women, *International Journal of Eating Disorders*, 17 (2), 127-134.

Fairburn, C., & Cooper, P. (1989). Eating disorders. In K.Hawton, P. Salkovskis, J.Kirk, & D. Clark (Eds. *Cognitive behavior therapy for psychiatric problems: A practical guide* (pp277-314). Oxford: Oxford University Press.

Fairburn, C., Jones, R., Peveler, R.C., Carr, S.J., Solomon, R.A., O'Connor, M.E. Burton, J., & Hope, R.A. (1991) Three psychological treatments for bulimia nervosa. *Archives of General Psychiatry*, 48, 463-469.

Fairburn, C.G., Hay, P.J., & Welch, S.L. (1993) Binge eating and bulimia nervosa: Distribution and determinants. In C.G. Fairburn & G.T. Wilson (Eds), *Binge eating: Nature, assessment and treatment*. New York: Guildford Press, 124-143.



Favazza, A.R. (1989) Why patients mutilate themselves. *Hospital Community Psychiatry*, 40, 137-145.

Finkelhor, D. (1979) *Sexually victimised children*. New York: Free Press

Finkelhor, D. (1984) *Child Sexual Abuse: New Theory and Research*. New York: Free Press.

Fischer, D.G. & Elnitsky, S (1990) A factor analytic study of two scales measuring dissociation. *American Journal of Clinical Hypnosis*, 32 (3), 201-207.

Foa, E.B., Feske, V., Murdoch, T.B., Kozak, M.J., and McCarthy, P.R. (1991). Processing of threat-related information in rape victims. *Journal of Abnormal Psychology*, 100, 156-162.

Folsom, V., Krahn, D., Nairn, K., Gold, L., Demitrack, M.A., & Silk, D.R. (1993). The impact of sexual and physical abuse on eating disordered psychiatric symptoms: A comparison of eating disordered and psychiatric inpatients. *International Journal of Eating Disorders*, 13, 249-257.

Frankel, F.H. (1990) Hypnotizability and Dissociation. *American Journal of Psychiatry*, 147 (7), 823-829.

Frasquilho, F., and Oakley, D. (1997). Hypnotizability, dissociation and three factors of eating behaviour, *Contemporary Hypnosis*, 14 (2), 107-113.

Frey-Rohn, L. (1974). *From Freud to Jung*. Boston, MA:Shambhala

Frischholz, E.J., Braun, B.G., Sachs, R.G., Schwartz, D.R. *et al.*, (1990) The Dissociative Experiences Scale: Further replication and validation, *Dissociation*, 3 (3), 151-153

Fromuth, M.E. (1986) The relationship of childhood sexual abuse with later psychological and sexual adjustment in a sample of college women. *Child Abuse and Neglect*, 10, 5-15

Fullerton, D.T., Wonderlich, S.A., Gosnell, B.A. (1995) Clinical characteristics of eating disorder patients who report sexual or physical abuse, *International Journal of Eating Disorders*, 17(3), 243-249.

Ganley, R.M. (1989) Emotion and eating in obesity: A review of the literature. *International Journal of Eating Disorders*, 8, 343-361.

Garner, D.M., Shafer, C.L., & Rosen, L.W. (1992). Critical appraisal fo the DSM-II-R diagnostic criteria for eating disorders. In S.R. Hooper, G.W. Hynd, R.E. Mattison (Eds.), *Child psychopathology: Diagnostic criteria and clinical assessment*. Hillsdale, NJ: Erlbaum.

Gleaves, D.H., & Eberenz, K.P. (1994). Sexual abuse histories among treatment-resistant bulimia nervosa patients. *International Journal of Eating disorders*, 15, 227-231.

Goldberg, P (1995) "Successful" dissociation, pseudovitality and inauthentic use of the senses, *Psychoanalytic Dialogues*, 5(3), 493-510.

Greenes, D., Fava, M., Cioffi, J., Herzog, D.B. (1993) The Relationship of depression to dissociation in patients with bulimia nervosa. *Journal of Psychiatric Research*, 27(2), 133-137.

Grilo, C.M., Shiffman, S., & Carter-Campbell, J.T. (1994). Binge eating antecedents in normal-weight nonpurging females: Is there consistency? *International Journal of Eating Disorders*, 16, 239-249

Groth-Marnat, G., & Schumaker, J.F. (1990). Hypnotizability, attitudes towards eating and concern with body size in a female college population. *American Journal of Clinical Hypnosis*, 32, 194-200.

Harter, S., Alexander, P., Neimeyer, R.A. (1988) Long-term effects of incestuous child abuse in college women: Social adjustment, social cognition, and family characteristics. *Journal of Consulting and Clinical Psychology*, 56, 5-8.

Hastings, T., & Kern, J.M. (1994) Relationships between bulimia, childhood sexual abuse, and family environment, *International Journal of Eating Disorders*, 15 (2), 103-111.

Hearst, D.E., Riggs, D.S., Foa, E.B. (1994). Dissociative experiences and PTSD among female victims of assault and rape. Paper delivered at the 147th American Psychiatric Association Annual Meeting, Philadelphia.

Heatherton, T.F., & Baumeister, R.E. (1991). Binge-eating as an escape from self-awareness. *Psychological Bulletin*, 110, 86-108.

Herman, J.L. (1992) *Trauma and recovery*. New York: Basic Books.

Herman, C.P., & Mack, D. (1975). Restrained and unrestrained eating. *Journal of Personality*, 43, 647-660.

Herman, C.P., & Polivy, J. (1975) From dietary restraint to binge eating. Attaching causes to effects, *Appetite*, 14, 123-125.

Herman, C.P., & Polivy, J. (1980) Restrained eating. In *Obesity* (Edited by Stunkard, A.J.) Philadelphia: Saunders.

Herman, J., Perry, C., & van der Kolk, B. (1989) Childhood trauma in borderline personality disorder. *American Journal of Psychiatry*, 146, 490-495.

Herman, J., & Schatzow, E. (1987) Recovery and verification of memories of childhood sexual trauma. *Psychoanalytic Psychology*, 4(1), 1-14.

Herzog, D.B. (1982) Bulimia: The secretive syndrome. *Psychosomatics*, 23, 701-704.

Herzog, D.B., Staley, J.E., Carmody, S., Robbins, W.M., & van der Kolk, A. (1993). Childhood sexual abuse in anorexia nervosa and bulimia nervosa: a pilot study. *Journal American Academy of Child and Adolescent Psychiatry*, 32, 962-966.

Hilgard, E.R. (1965) *Hypnotic susceptibility*. New York:Harcourt, Brace & World

Hilgard, E.R. (1973). Dissociation revisited. In M. Henle, J. Jaynes, & J. Sullivan (Eds.), *Historical conceptions of psychology*, New York: Springer, pp. 205-219.

Hilgard, E.R. (1977) *Divided consciousness: Multiple controls in human thought and action*. New York:Wiley-Interscience.

Hoagwood, K., & Stewart, J.M. (1988) Family structural factors in cases of child sexual abuse. Paper presented at the annual meeting of the American Psychological Association, Atlanta, GA.

Howell, D.C. (1987) *Statistical methods for Psychology*. PWS Publishers

Hsu, L.K.G. (1990) The experiential aspects of bulimia nervosa: Implications for cognitive-behavioural therapy. *Behavior Modification*, 14, 50-65.

Hudson, J.I., & Pope, H. G. (1987) Depression and eating disorders. In O.G. Cameron (Ed.), *Presentations of depression* (pp33-66). New York: Wiley.

Hudson, J.I., Pope, H.G., Yurgelun-Todd, D., Jonas, J.M., & Frankenburg, F.R. (1987) A controlled study of lifetime prevalence of affective and other psychiatric disorders in bulimic outpatients. *American Journal of Psychiatry*, 144, 1283-1287.

Irwin, H.J. (1995) Affective predictors of dissociation, III: Affect balance, *The Journal of Psychology*, 129 (4), 463-467.

Janet, P. (1889) *L'Automatisme psychologique: Essay de psychologie experimentale sur les forme inferiures de l'activitie humaine*. Paris: Felix Alcan.

Janet, P. (1907) *The major symptoms of hysteria*. London, New York: Macmillan.

Janet, P. (1909) *Les Nevroses*. Paris: Flammarion

Janet, P. (1919) *Les meditations psychologiques*. Paris: Felix Alcan.

Janet, P. (1924). *The major symptoms of hysteria*. New York: Wiley.

Janet, P (1925). *Psychological healing*. New York: Macmilan.

Johnson, C., Lewis, C., & Hagman, J (1984) The syndrome of bulimia: Review and synthesis. *Psychiatric Clinics of North America*, 7, 247-273.

Johnson, C., Tobin., DL., & Dennis, A. (1990). Differences in treatment outcome between borderline and nonborderline bulimics at one-year follow-up. *International Journal of Eating Disorders*, 9, 617-627.

Kaye, W.H., Gwirtsman, .E., George, D.T., Weiss, S.R., & Jimerson, D.C. (1986) Relationship of mood alterations to bingeing behavior in bulimia. *British Journal of Psychiatry*, 149, 479-485.

Kendall-Tackett, K.A., Williams, L.M., & Finkelhor, D. (1993). Impact of sexual abuse on children: A review and synthesis of recent empirical studies, *Psychological Bulletin*, 113, 164-180.

Kirby, J.S., Chu, J.A., & Dill, D.L. (1993) Correlates of dissociative symptomatology in patients with physical and sexual abuse histories. *Comprehensive Psychiatry*, 34, 258-263

Konicki, P.E. and Schelz, S.C. (1989) Rationale for clinical trials of opioid antagonists in treating patients with personality disorders and self-injurious behaviour. *Psychopharmacological Bulletin*, 4, 556-563.

Kranhold, C., Baumann, U., & Fichter, M. (1992) Hypnotizability in bulimic patients and controls: A pilot study. *European Archives of Psychiatry and Clinical Neuroscience*, 242, 72-76.

Levin, A.P., & Hyler, S.E. (1986). DSM-III personality diagnosis in bulimia. *Comprehensive Psychiatry*, 27, 47-53.

Lingswiler, V.M., Crowther, J.H., & Stephens, M.A.P. (1989) Affective and cognitive antecedents to eating episodes in bulimia and binge-eating. *International Journal of Eating Disorders*, 5, 533-539



Lowe, M.R. (1993) The effects of dieting on eating behavior: A three-factor model. *Psychological Bulletin*, 114, 100-121.

Ludwig, A.M. (1983) The psychobiological functions of dissociation. *American Journal of Clinical Hypnosis*, 26, 93-99.

Lynn, S.J., and Rhue, J.W. (1988) Fantasy proness: Hypnosis, developmental antecedents and psychopathology. *American Psychologist*, 43, 35-44.

Macdiarmid, J. I., and Heatherington, M.M. (1995). Mood modulation by food: An exploration of affect and cravings in "chocolate addicts". *British Journal of Clinical Psychology*, 34, 138.

Markowe, H.L. J. (1988) The frequency of childhood sexual abuse in UK. *Health Trends*, 20, 2-6.

Martin, J.E. (1989) Bulimia: A literature review, *British Journal of Occupational Therapy*, 52 (4), 138-142.

McCarthy, M.K., Goff, D.C., Baer, L., Cioffi, J. and Herzog, D.B. (1994) Dissociation, childhood trauma and the response to fluoxetine in bulimia patients. *International Journal of Eating disorders*, 15, 219-226.

McManus, F., Waller, G. (1995). A functional analysis of binge-eating, *Clinical Psychology Review*, 15, 845-863.

Miller, D.A.F., McCluskey-Fawcett, K., & Irving, L.M. (1993) The relationship between childhood sexual abuse and subsequent onset of bulimia nervosa. *Child Abuse and Neglect*, 17, 305-314

Mizes, J.S. (1985). Bulimia: A review of its symptomatology and treatment. *Advances in Behavior, Research and Therapy*, 7, 91-142.

Mollon, P. (1996) *Multiple Selves, Multiple Voices: Working with trauma, violation and dissociation*, Wiley: Chichester.

Morgan, A.H., & Hilgard, E.R. (1983) Age differences in susceptibility to hypnosis. *International Journal of Clinical Experimental Hypnosis*, 21, 78-85.

Morrison, J. (1989) Childhood sexual histories of women with somatization disorder. *American Journal of Psychiatry*, 146, 239-241.

Mullen, P.E., Romans-Clarkson, S.E., Walton, V.A., et al (1988) Impact of sexual and physical abuse on women's health. *Lancet*, i, 841-845.

Nash, M. R., Hulsey, T.L., Sexton, M.C., Harralson, T.L., & Lambert, W. (1993). Long-term sequelae of childhood sexual abuse: Perceived family environment,

psychopathology, and dissociation. *Journal of Clinical and Consulting Psychology*, 61 (2), 276-283.

Nash, C.L., & West, D.J. (1985) Sexual molestation of young girls: a retrospective survey. In *Sexual Victimization* (ed. D.J. West). Aldershot: Gower.

Nemiah, J.C. (1985). Dissociative disorders. In Kaplan, H & Sadock, B (Eds), *Comprehensive textbook of psychiatry* (4th edn, pp. 942-957). Baltimore, MD:Williams & Wilkins.

Nemiah, J.C. (1991). Dissociation, conversion, and somatization. In Spiegel, D. (Ed.), Dissociative disorders. *American Psychiatric Press Review of Psychiatry*, 10, 248-275.

Newberger, C.M. (1991) Child maltreatment: Problems and promise for the 1990s. Reauthorization for the Child Abuse Prevention and Treatment Act (CAPTA). Hearing before the Subcommittee on Children, Family, Drugs and Alcoholism of the Committee on Labor and Human Resources, United States Senate, 102nd Congress (Senate Hearing 102-691). Washington, DC: US government Printing Office.

Newberger, C.M., & De Vos, E. (1988) Abuse and victimaization: a life-span developmental perspective. *American Journal of Orthopsychiatry*, 58, 505-511

Norton, G.R., Ross, C.A., & Novotny, M.F. (1990) Factors that predict scores on the Dissociative Experiences Scale. *Journal of Clinical Scale*, 46, 273-277.

Osborne, D.J. & Clarke, M.J. (1975) Questionnaire surveys of passenger comfort. *Applied Ergonomics*, 6, 97-103.

Oppenheimer, R., Howells, R., Palmer, R.L., & Chaloner, D.A. (1985) Adverse sexual experience in childhood and clinical eating disorders: A preliminary description. *Journal of Psychiatric Research*, 19, 357-361.

Ortega, D.F., Warranch, H.R., Maldonado, A.J., & Hubbard, F.A (1987) A comparative analysis of self-report measures of bulimia. *International Journal of Eating Disorders*, 6, 301-311.

Palmer, R.L., Oppenheimer, R., Dignon, A., Chaloner, D.A., Howells, K (1990) Childhood sexual experiences with adults reported by women with eating disorders: An extended series. *British Journal of Psychiatry*, 156, 699-703.

Pettinati, H.M., Horne, R.L., & Staats, J.M. (1985) Hypnotizability in patients with anorexia nervosa and bulimia. *Archives of General Psychiatry*, 42, 1014-1016.

Pitblado, C.B., & Sanders, B (1991). Reliability and short-term stability of scores on the Dissociative Experiences Scale. In B.G. Braun & E.B. Carlson (Eds).

*Proceedings of the Eighth International Conference on Multiple Personality and Dissociative States*, Chicago: Rush.

Pitts, C. and Waller, G. (1993) Self-denigratory beliefs following sexual abuse: Association with the symptomatology of bulimic disorders. *International Journal of Eating Disorders*, 13, 407-410.

Pope, H.G. & Hudson, J.I. (1992) Is childhood sexual abuse a risk factor for bulimia nervosa? *American Journal of Psychiatry*, 149, 455-463.

Powers, P.S., & Fernandez, R.C. (Eds.) (1984). *Current treatment of anorexia nervosa and bulimia*. Basel, Switzerland: S.Karger AG.

Powers, P.S., Covert, D.L., Brightwell, D.R., & Stevens, B.A. (1988). Other psychiatric disorders among bulimic patients. *Comprehensive Psychiatry*, 29, 503-508.

Pudel, V.E., Metzdorff, M., Oetting, M.X. (1975) Zur Persoehnlichkeit Adipoeser in psychologischen Tests unter Beruecksichtigung latent Fettsuechtiger. *Z Psychosom Med Psychoanalyse*, 21, 345-350.

Putnam, F.W. (1985) Dissociation as a response to extreme trauma. In: *Childhood Antecedents of Multiple Personality Disorder* (ed. R.P. Kluft). Washington, DC: American Psychiatric Press, pp. 65-98.

Putnam, F. (1989) *Diagnosis and treatment of multiple personality disorder*. New York: Guildford Press,

Putnam, F.W. (1993) Dissociative disorders in children: Behavioural profiles and problems. *Child Abuse and Neglect*, 17, 39-45.

Putnam, F.W., Guroff, Siberman, Barban & Post, R.M. (1986) The clinical phenomenology of multiple personality disorder: Review of 100 recent cases. *Journal of Clinical Psychiatry*, 47, 285-293

Putnam, F.W., & Trickett, P.K. (1993) Child sexual abuse: A model of chronic trauma, *Psychiatry*, 56, 82-95

Ray, W.J., June, K., Turaj, K & Lundy, R. (1992) Dissociative experiences in a college age population: A factor analytic study of two dissociation scales. *Personality and Individual Differences*, 13, 417-424.

Remington, M., Tyrer, P.J., Newson-Smith, J *et al.*, (1979) Comparative reliability of categorical and analogue rating scales in the assessment of psychiatric symptomatology. *Psychological Medicine*, 9, 765-770.

Root, M.P., & Fallon, P. (1988) The incidence of victimization experiences in a bulimic sample. *Journal of Interpersonal Violence*, 3, 161-173.

Root, M.P.P. & Fallon, P. (1989). Treating the victimized bulimic. *Journal of Interpersonal Violence*, 4, 90-100.

Rorty, M., Yager, J., & Rossotto, E. (1994) Childhood sexual, physical and psychological abuse and their relationship to comorbid psychopathology in bulimia nervosa, 16 (4), 317-334.

Rosen, J.C., Leitenberg, H., Fisher, C., & Khazam, C. (1986) Binge-eating episodes in bulimia nervosa: The amount and type of food consumed. *International Journal of eating Disorders*, 5, 255-267

Rosen, J.C., Gross, J., & Vara, L. (1987) Psychological adjustment of adolescents attempting to lose or gain weight. *Journal of Consulting and Clinical Psychology*, 55, 742-747

Rosen, E.F. & Petty, L.C. (1994) Dissociative states and disordered eating. *American Journal of Clinical Hypnosis*, 36 (4), 266-275.

Ross, C.A (1991). Epidemiology of multiple personality disorder and dissociation. *Psychiatric Clinics of North America*, 14(3), 503-517.

Ross, C.A., Heber, S., Norton, G.R., & Anderson, G. (1989) Differences between multiple personality disorder and other diagnostic groups on structured interview. *Journal of Nervous and Mental Disorders*, 177, 487-491.

Ross, C., Joshi, S & Currie, R (1990) Dissociative experiences in the general population. *American Journal of Psychiatry*, 147, 1547-1552.

Rossiter, E.M., Agras, W.S., Telch, C.F. & Schneider, J.A. (1993) Cluster B personality disorder characteristics predict outcome in the treatment of bulimia nervosa. *International Journal of Eating Disorders*, 13, 349-358.

Ruderman, A.J. (1986) Dietary restraint: A theoretical and empirical review. *Psychological Bulletin*, 99, 247-262.

Russell, G.F.M. (1979) Bulimia nervosa: An ominous variant of anorexia nervosa. *Psychological Medicine*, 9, 429-448.

Russell, G.F.M. (1985). The changing face of anorexia nervosa: An introduction to the conference. *Journal of Psychiatric Research*, 19, 101-109.

Sachs, R.G. Goodwin, J. and Braun, B.G (in press). The role of child abuse in the development of multiple personality disorder. In: *Multiple Personality and Dissociation* (eds. B.G. Braun and R.P.Kluft). New York: Guildford Press



Sandberg, D.A., & Lynn, S.J. (1992) Dissociative experiences, psychopathology and adjustment, and adolescent maltreatment in female college students. *Journal of Abnormal Psychology*, 101, 717-723.

Sanders, S (1986). The perceptual alteration scale: A scale measuring dissociation. *American Journal of Clinical Hypnosis*, 2, 95-102.

Sanders, B., & Becker-Lausen, E (1995). The measurement of psychological maltreatment: Early data on the Child Abuse and Trauma Scale. *Child Abuse and Neglect*, 19, 315-323

Sanders, B & Giolas, M (1991). Dissociation and childhood trauma in psychologically disturbed adolescents. *American Journal of Psychiatry*, 148, 50-53.

Sanders, B., & McRoberts, G., & Tollefson, C. (1989) Childhood stress and dissociation in a college population, *Dissociation*, 2(1), 17-23.

Saxe, G.N., van der Kolk B.A., Berkowitz, R., Chinman, G., Hall, K., Lieberg, G., & Schwartz, J (1993) Dissociative disorders in psychiatric inpatients. *American Journal of Psychiatry*, 150, 1037-1042.

Schlundt, G.G., Johnson, W.G., & Jarrell (1986). A sequential analysis of environmental, behavioral and affective variables predictive of vomiting in bulimia nervosa. *Behavioral Assessment*, 8, 253-269.

Schmidt, N.B., & Telch, M.J. (1990) Prevalence of personality disorders among bulimics, nonbulimic binge-eaters and normal controls. *Journal of Psychopathology and Behavioral Assessment*, 12, 169-185.

Shalev, A.Y. (1996) Stress versus traumatic stress: From acute homeostatic reactions to chronic psychopathology. In B.A. van der Kolk, A.C. McFarlane & L. Weisaeth (eds.) *Traumatic Stress*, Guildford Press: New York, p 77-101.

Shapiro, S. (1987) Self-mutilation and self-blame in incest victims. *American Journal of Psychotherapy*, 41, 46-54.

Shearer, S.L., Peters, C.P., Quaytman, M.S., & Ogden, R.L. (1990). Frequency and correlates of childhood sexual and physical abuse histories in adult female borderline patients. *American Journal of Psychiatry*, 147, 214-216.

Sheldon, H. (1988) Childhood sexual abuse in adult female psychotherapy referrals: incidence and implications for treatment, *British Journal of Psychiatry*, 152, 107-112.

Sloan, G., & Leichner, P. (1986) Is there a relationship between sexual abuse or incest and eating disorders? *Canadian Journal of Psychiatry*, 31, 656-660.

Smolak, L., Levine, M., & Sullins, E. (1990) Are child sexual experiences related to eating-disorder attitudes and behaviors in a college sample? *International Journal of Eating Disorders*, 9, 167-178.

Spiegel, D. (1986). Dissociating damage. *American Journal of Clinical Hypnosis*, 29(2), 123-131.

Steinberg, M., Rounsaville, B., & Cicchetti, D.V. (1990) The Structured Clinical Interview for DSM-III-R Dissociative Disorders: Preliminary Report on a New Diagnostic Instrument, *American Journal of Psychiatry*, 147 (1), 76-82.

Stunkard, A.J. (1959) Eating patterns and obesity. *Psychiatric Quarterly*, 33, 284-292.

Stunkard, A.J. & Messick, S. (1985) The Three-Factor Eating Questionnaire to measure dietary restraint, disinhibition, and hunger. *Journal of Psychosomatic Research*, 29, 71-83.

Tillman, J.G., Nash, M.R., & Lerner, P.M. (1994) Does trauma cause dissociative pathology?

Torem, M.S. (1986). Dissociative states presenting as an eating disorder, *American Journal of Clinical Hypnosis*, 29, 137-142.

Torem, M.S. (1990). Covert multiple personality underlying eating disorders, *American Journal of Psychotherapy*, 44, 357-368.

Valdiserri, S., & Kihlstrom, J.F. (1995a) Abnormal eating and dissociative experiences. *International Journal of Eating Disorders*, 17(4), 373-380.

Valdiserri, S., & Kihlstrom, J.F. (1995b) Abnormal and dissociative experiences: A further study of college women, *International Journal of Eating Disorders*, 18 (2), 145-150.

van der Kolk, B.A (1987) *Psychological Trauma*. Washington DE: American Psychiatric Press

van der Kolk, B.A (1989) The compulsion to repeat the trauma: Re-enactment, revictimization, and masochism. *Psychiatric Clinics of North America*, 12, 389-411

van der Kolk, B.A. (1996) The complexity of adaptation to trauma: Self-regulation, stimulus discrimination, and characterological development. In B.A. van der Kolk, A.C. McFarlane & L. Weisaeth (eds.) *Traumatic Stress*, Guildford Press: New York, pp 182-213.

van der Kolk, B.A., & McFarlane, A.C. (1996) The black hole of trauma. In B.A. van der Kolk, A.C. McFarlane & L. Weisaeth (eds.) *Traumatic Stress*, Guildford Press: New York. (p3-23).

van der Kolk, B.A., & McFarlane, A.C., & Weisaeth, L. (1996) *Traumatic Stress*, Guildford Press: New York.

van der Kolk, B.A., Perry, J.C., Herman, J.L (1991). Childhood origins of self-destructive behavior. *American Journal of Psychiatry*, 148, 1665-1671.

Vanderlinden, J. and Vandereycken, W. (1993) The use of hypnotherapy in the treatment of bulimia nervosa. *The International Journal of Clinical and Experimental Hypnosis*, 38, 101-111.

Walker, E., Katon, W., Harrop Griffiths, J., et al (1988) Relationship of chronic pelvic pain to psychiatric diagnoses and childhood sexual abuse. *American Journal of Psychiatry*, 145, 75-80.

Waller, G. (1992) Sexual abuse and the severity of bulimic symptomatology. *British Journal of Psychiatry*, 161, 90-93.

Waller, G. (1993). Why do we diagnose different types of eating disorder? Arguments for a change in research and clinical practice. *Eating Disorders Review*, 1, 74-89.

Waller, G. and Ruddock, A. (1995) Information-processing correlates of reported sexual abuse in eating-disordered women. *Child Abuse and Neglect*, 19, 745-759.

Wardle, J. (1980) Dietary restraint and binge eating. *Behavioural Analysis and Modification*, 4, 201-209.

Watkins, J.G. (1978). *The therapeutic self*. New York: Human Sciences Press.

Welch, S., & Fairburn, C.G. (1994) Sexual abuse and bulimia nervosa: Three integrated case control comparisons, *American Journal of Psychiatry*, 151, 402-407.

Williams, H.J., Wagner, H.L., Calam, R.M. (1992) Eating attitudes in survivors of unwanted sexual experiences. *British Journal of Clinical Psychology*, 31, 203-206.

Williams, S.S., Contento, I. R., Michela, J.L., Gladis, M.M., & Pierce, N.T. (1996) Restrained eating among adolescents: Dieters are not always bingers and bingers are not always dieters, *Health Psychology*, 15 (3), 176-184.

Wilson, G.T. (1987) Assessing treatment outcome in bulimia nervosa: A methodological note. *International Journal of Eating Disorders*, 339-348.

Wilson, G.T. (1996). Treatment of bulimia nervosa: When CBT fails. 34, 197-212

Wilson, G.T., Eldredge, K.L., Smith, D., & Niles, B. (1991). Cognitive-behavioral treatment with and without response prevention for bulimia. *Behaviour Research and Therapy*, 29, 575-583.

Yates, W.R., Sieleni, B., Reich, J., & Brass, C. (1989). Comorbidity of bulimia nervosa and personality disorder, *Journal of Clinical Psychology*, 50, 57-59.

Zanarini, M. C., Frankenburg, F.R., Pope, H.J., Hudson, J.I., Yurgelun-Todd, D., & Cicchetti, C.J. (1990). Axis II comorbidity of normal-weight bulimia. *Comprehensive Psychiatry*, 30, 20-24.

Zlotnick, C., Shea, M.T., Pearlstein, T., Begin, A., Simpson, E., Costello, E. (1996). Differences in dissociative experiences between survivors of childhood incest and survivors of assault in adulthood, *The Journal of Nervous and Mental Disease*, 184, 52-54.

## Appendix A



## Home Environment Questionnaire

This questionnaire seeks to determine the general atmosphere of your home when you were a child or teenager and how you felt you were treated by your parents or principal caretaker. (If you were not raised by one or both of your biological parents, please respond to the questions below in terms of the person or person who had the primary responsibility for your upbringing as a child). Where a question inquires about the behaviour of both of your parents and your parents differed in their behaviour, please respond in terms of the parent whose behaviour was the more severe or worse.

In responding to these questions, simply circle the appropriate number according to the following definitions:

0 = never

1 = rarely

2 = sometimes

3 = very often

4 = always

To illustrate, here is a hypothetical question:

Did your parents criticise you when you were young? 0 1 2 3 4

If you were rarely criticised, you should circle number 1.

Please answer all the questions.

1. Did your parents ridicule you? 0 1 2 3 4
2. Did you ever seek outside help or guidance because of problems in your home? 0 1 2 3 4
3. Did your parents verbally abuse each other? 0 1 2 3 4
4. Were you expected to follow a strict code of behaviour in your home? 0 1 2 3 4
5. When you were punished as a child or teenage, did you understand the reason you were punished? 0 1 2 3 4
6. When you didn't follow the rules of the house, how often were you severely punished? 0 1 2 3 4
7. As a child did you feel unwanted or emotionally neglected? 0 1 2 3 4
8. Did your parents insult you or call you names? 0 1 2 3 4
9. Before you were 14, did you engage in any sexual activity with an adult? 0 1 2 3 4
10. Were your parents unhappy with each other? 0 1 2 3 4
11. Were your parents unwilling to attend any of your school-related activities? 0 1 2 3 4
12. As a child were you punished in unusual ways (e.g. being locked in a closet for a long time or being tied up)? 0 1 2 3 4
13. Were there traumatic or upsetting sexual experiences when you were a child or teenager that you couldn't speak about? 0 1 2 3 4

*Please turn over*

14. Did you ever think you wanted to leave your family and live with another family? 0 1 2 3 4
15. Did you ever witness the sexual mistreatment of another family member? 0 1 2 3 4
16. Did you ever think serious about running away from home? 0 1 2 3 4
17. Did you witness the physical mistreatment of another family member? 0 1 2 3 4
18. When you were punished as a child or teenager, did you feel the punishment was deserved? 0 1 2 3 4
19. As a child or teenager, did you feel disliked by either of your parents? 0 1 2 3 4
20. How often did your parents get really angry with you? 0 1 2 3 4
21. As a child did you feel that your home was charged with the possibility of unpredictable physical violence? 0 1 2 3 4
22. Did you feel comfortable bring friends home to visit? 0 1 2 3 4
23. Did you feel safe living at home? 0 1 2 3 4
24. When you were punished as a child or teenage, did you feel "the punishment fit the crime? 0 1 2 3 4
25. Did your parents every verbally lash out at you when you did not expect it? 0 1 2 3 4
26. Did you have traumatic sexual experiences as a child or teenager? 0 1 2 3 4
27. Were you lonely as a child? 0 1 2 3 4
28. Did your parents yell at you? 0 1 2 3 4
29. When either of your parents was intoxicated, were you ever afraid of being sexually mistreated? 0 1 2 3 4
30. Did you ever wish for a friend to share your life? 0 1 2 3 4
31. How often were you left at home alone as a child? 0 1 2 3 4
32. Did your parents blame you for things you didn't do? 0 1 2 3 4
33. To what extent did either of your parents drink heavily or abuse drugs? 0 1 2 3 4
34. Did your parents ever hit or beat you when you did not expect it? 0 1 2 3 4
35. Did your relationship with your parents ever involve a sexual experience? 0 1 2 3 4
36. As a child, did you have to take care of yourself before you were old enough? 0 1 2 3 4
37. Were you physically mistreated as a child or teenager? 0 1 2 3 4
38. Was your childhood stressful? 0 1 2 3 4

## Appendix B

### Three-factor Eating Questionnaire

Part I. Please answer the following questions by circling either 'T' (to indicate True) or 'F' (to indicate False).

1. When I smell a sizzling steak or see a juicy piece of meat, I find it difficult to keep from eating, even if I have just finished a meal T F
2. I usually eat too much at social occasions, like parties and picnics T F
3. I am usually so hungry that I eat more than three times a day T F
4. When I have eaten my quota of calories, I am usually good about not eating any more T F
5. Dieting is so hard for me because I just get too hungry T F
6. I deliberately take small helpings as a means of controlling my weight T F
7. Sometimes things just taste so good that I keep on eating even when I am no longer hungry T F
8. Since I am often hungry, I sometimes wish that while I am eating, an expert would tell me that I have had enough or that I can have something more to eat T F
9. When I feel anxious, I find myself eating T F
10. Life is too short to worry about dieting T F
11. Since my weight goes up and down, I have gone on reducing diets more than once T F
12. I often feel so hungry that I just have to eat something T F
13. When I am with someone who is overeating, I usually overeat too. T F
14. I have a pretty good idea of the number of calories in common food T F
15. Sometimes when I start eating, I just can't seem to stop T F
16. It is not difficult for me to leave something on my plate T F
17. At certain times of the day, I get hungry because I have gotten used to eating then T F
18. While on a diet, if I eat food that is not allowed, I consciously eat less for a period of time to make up for it T F
19. Being with someone who is eating often makes me hungry enough to eat also T F
20. When I feel blue, I often overeat T F
21. I enjoy eating too much to spoil it by counting calories or watching my weight T F
22. When I see a real delicacy, I often get so hungry that I have to eat right away T F
23. I often stop eating when I am not really full as a conscious means of limiting the amount that I eat T F

- |     |   |   |   |
|-----|---|---|---|
| 24. | I get so hungry that my stomach often seems like a bottomless pit   | T | F |
| 25. | My weight has hardly changed at all in the last ten years   | T | F |
| 26. | I am always hungry so it is hard for me to stop eating before I finish the food on my plate                 | T | F |
| 27. | When I feel lonely, I console myself by eating  | T | F |
| 28. | I consciously hold back at meals in order not to gain weight  | T | F |
| 29. | I sometimes get very hungry late in the evening or at night   | T | F |
| 30. | I eat anything I want, any time I want  | T | F |
| 31. | Without ever thinking about it, I take a long time to eat   | T | F |
| 32. | I count calories as a conscious means of controlling my weight  | T | F |
| 33. | I do not eat some foods because they make me fat  | T | F |
| 34. | I am always hungry enough to eat at any time  | T | F |
| 35. | I pay a great deal of attention to changes in my figure   | T | F |
| 36. | While on a diet, if I eat a food that is not allowed, I often then splurge and eat other high calorie foods | T | F |

Part II: Please answer the following questions by circling the number above the response that is appropriate to you.

- |     |   |                         |                      |                |
|-----|---|-------------------------|----------------------|----------------|
| 37. | How often are you dieting in a conscious effort to control your weight?                                       |                         |                      |                |
|     | 1   | 2                       | 3                    | 4              |
|     | rarely  | sometimes               | usually              | always         |
| 38. | Would a weight fluctuations 5 lbs affect the way you live your life?  |                         |                      |                |
|     | 1   | 2                       | 3                    | 4              |
|     | not at all  | slightly                | moderately           | very much      |
| 39. | How often do you feel hungry?   |                         |                      |                |
|     | 1   | 2                       | 3                    | 4              |
|     | only at mealtimes   | sometimes between meals | often between meals  | almost always  |
| 40. | Do your feelings of guilt about overeating help you to control your food intake?                              |                         |                      |                |
|     | 1   | 2                       | 3                    | 4              |
|     | never   | rarely                  | often                | always         |
| 41. | How difficult would it be for your to stop eating halfway through dinner and not eat for the next four hours? |                         |                      |                |
|     | 1   | 2                       | 3                    | 4              |
|     | easy  | slightly difficult      | moderately difficult | very difficult |

42. How conscious are you of what you are eating?
- |            |          |            |           |
|------------|----------|------------|-----------|
| 1          | 2        | 3          | 4         |
| not at all | slightly | moderately | extremely |
43. How frequently do you avoid 'stocking up' on tempting foods?
- |              |        |         |               |
|--------------|--------|---------|---------------|
| 1            | 2      | 3       | 4             |
| almost never | seldom | usually | almost always |
44. How likely are you to shop for low calorie foods?
- |          |                   |                   |             |
|----------|-------------------|-------------------|-------------|
| 1        | 2                 | 3                 | 4           |
| unlikely | slightly unlikely | moderately likely | very likely |
45. Do you eat sensibly in front of others and splurge alone?
- |       |        |       |        |
|-------|--------|-------|--------|
| 1     | 2      | 3     | 4      |
| never | rarely | often | always |
46. How likely are you to consciously eat slowly in order to cut down on how much you eat?
- |          |                 |                   |             |
|----------|-----------------|-------------------|-------------|
| 1        | 2               | 3                 | 4           |
| unlikely | slightly likely | moderately likely | very likely |
47. How frequently do you skip desert because you are no longer hungry?
- |              |        |                      |                  |
|--------------|--------|----------------------|------------------|
| 1            | 2      | 3                    | 4                |
| almost never | seldom | at least once a week | almost every day |
48. How likely are you to consciously eat less than you want?
- |          |                 |                   |             |
|----------|-----------------|-------------------|-------------|
| 1        | 2               | 3                 | 4           |
| unlikely | slightly likely | moderately likely | very likely |
49. Do you go on eating binges though you are not hungry?
- |       |        |           |                      |
|-------|--------|-----------|----------------------|
| 1     | 2      | 3         | 4                    |
| never | rarely | sometimes | at least once a week |
50. On a scale of 0 to 5, where 0 means no restraint in eating (eating whatever you want, whenever you want it) and 5 means total restraint (constantly limiting food intake and never 'giving in'), what number would you give yourself?
- 0 eat whatever you want, whenever you want it
- 1 usually eat whatever you want, whenever you want it
- 2 often eat whatever you want, whenever you want it
- 3 often limit food intake, but often 'give in'
- 4 usually limit food intake, rarely 'give in'
- 5 constantly limiting food intake, never 'giving in'
51. To what extent does this statement describe your eating behaviour? 'I start dieting in the morning but because of any number of things that happen during the day, by evening I have given up and eat what I want, promising myself to start dieting again tomorrow'
- |             |                |                               |                        |
|-------------|----------------|-------------------------------|------------------------|
| 1           | 2              | 3                             | 4                      |
| not like me | little like me | pretty good description of me | describes me perfectly |

## Appendix C

# HAD Scale

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Doctors are aware that emotions play an important part in most illnesses. If your doctor knows about these feelings he will be able to help you more.

This questionnaire is designed to help your doctor to know how you feel. Read each item and place a firm tick in the box opposite the reply which comes closest to how you have been feeling in the past week.

Don't take too long over your replies: your immediate reaction to each item will probably be more accurate than a long thought-out response.

*Tick only one box in each section*

## I feel tense or 'wound up':

Most of the time .....  
A lot of the time .....  
Time to time, Occasionally .....  
Not at all .....

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

## I feel as if I am slowed down:

Nearly all the time .....  
Very often .....  
Sometimes .....  
Not at all .....

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

## I still enjoy the things I used to enjoy:

Definitely as much .....  
Not quite so much .....  
Only a little .....  
Hardly at all .....

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

## I get a sort of frightened feeling like 'butterflies' in the stomach:

Not at all .....  
Occasionally .....  
Quite often .....  
Very often .....

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

## I get a sort of frightened feeling as if something awful is about to happen:

Very definitely and quite badly .....  
Yes, but not too badly .....  
A little, but it doesn't worry me .....  
Not at all .....

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

## I have lost interest in my appearance:

Definitely .....  
I don't take so much care as I should.....  
I may not take quite as much care .....  
I take just as much care as ever .....

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

## I can laugh and see the funny side of things:

As much as I always could .....  
Not quite so much now .....  
Definitely not so much now .....  
Not at all .....

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

## I feel restless as if I have to be on the move:

Very much indeed .....  
Quite a lot .....  
Not very much .....  
Not at all .....

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

## Worrying thoughts go through my mind:

A great deal of the time .....  
A lot of the time .....  
From time to time but not too often .....  
Only occasionally .....

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

## I look forward with enjoyment to things:

As much as ever I did .....  
Rather less than I used to .....  
Definitely less than I used to .....  
Hardly at all .....

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

## I feel cheerful:

Not at all .....  
Not often .....  
Sometimes .....  
Most of the time .....

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

## I get sudden feelings of panic:

Very often indeed .....  
Quite often .....  
Not very often .....  
Not at all .....

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

## I can sit at ease and feel relaxed:

Definitely .....  
Usually .....  
Not often .....  
Not at all .....

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

## I can enjoy a good book or radio or TV programme:

Often .....  
Sometimes .....  
Not often .....  
Very seldom .....

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>



## Appendix D

## PERCEPTUAL ALTERATION SCALE

**INSTRUCTIONS :** This questionnaire consists of statements which describe experiences which people may have in every day lives. Please tick in the box to the right of each item to show how often that statement applies to you. It is important that your answers do **not** refer to times when you may have been affected by alcohol or drugs.

Description	Never	Sometimes	Frequently	Almost Always
I can't understand why I get so cross and grouchy.				
I feel out of touch with my body.				
I have fits of laughing and crying that I cannot control.				
When I get tired or upset it seems like an outside force comes in to control my actions.				
My body is too heavy.				
My mind wants one thing but my body is determined to do another.				
In some situations my mind and my body are just not together.				
My moods can really change.				
I forget right away what people say to me.				
I find myself concealing my activities from others.				
I am glad I can forget what I look like.				
I do many things which I regret afterwards.				
What my body is doing has nothing to do with me.				
I don't know how to stop myself from doing something.				
I find myself in a strange place without knowing how I got there.				
I get torn between doing one thing or another.				
I find myself doing things without knowing why.				
I feel compelled to think and act in a way that is out of character for me.				
I wish I didn't watch my every move.				
Even when I have missed several meals I find that I am not hungry.				
I find my mind blank.				
I want to do two conflicting things at once and find myself arguing with myself.				
I feel that my mind is divided.				
I feel that there are two of me.				
I do things without thinking.				
I find I have hidden something and don't know why.				
I see myself differently than other people see me.				

## Appendix E

.....

## DISSOCIATIVE EXPERIENCES SCALE

**INSTRUCTIONS:** This questionnaire consists of twenty-eight questions about experiences that you may have in your daily life. We are interested in how often you have these experiences. It is important, however, that your answers show how often these experiences happen when you are **not** under the influence of alcohol or drugs. To answer the questions, please determine to what degree the experience listed in the question applies to you and circle a number, as shown in the example below, to show what percentage of the time this applies to you.

[illegible]

Some people have the experience of driving or riding in a car or bus or train and suddenly realizing that they don't remember what has happened during all or part of the trip.

0% 10 20 30 40 50 60 70 80 90 100%

Some people find that sometimes they are listening to someone talk and they suddenly realize that they did not hear part or all of what was said.

0% 10 20 30 40 50 60 70 80 90 100%

Some people have the experience of finding themselves in a place and having no idea how they go there.

0% 10 20 30 40 50 60 70 80 90 100%

Some people have the experience of finding themselves dressed in clothes that they don't remember putting on.

0% 10 20 30 40 50 60 70 80 90 100%

Some people have the experience of finding new things among their belongings that they do not remember buying.

0% 10 20 30 40 50 60 70 80 90 100%

Some people sometimes find that they are approached by people who they do not know who call them by another name or insist that they have met them before.

0% 10 20 30 40 50 60 70 80 90 100%

Some people sometimes have the experience of feeling as though they are standing next to themselves or watching themselves do something and they actually see themselves as if they were looking at another person.

0% 10 20 30 40 50 60 70 80 90 100%

Some people are told that they sometimes do not recognize friends or family members.

0% 10 20 30 40 50 60 70 80 90 100%

Some people find that they have no memory for some important events in their lives (for example, a wedding or graduation).

0% 10 20 30 40 50 60 70 80 90 100%

Some people have the experience of being accused of lying when they do not think that they have lied.

0% 10 20 30 40 50 60 70 80 90 100%

Some people have the experience of looking in a mirror and not recognizing themselves.

0% 10 20 30 40 50 60 70 80 90 100%

Some people have the experience of feeling that other people, objects, and the world around them are not real.

0% 10 20 30 40 50 60 70 80 90 100%

Some people sometimes have the experience of feeling that their body does not seem to belong to them.

0% 10 20 30 40 50 60 70 80 90 100%

Some people have the experience of sometimes remembering a past event so vividly that they feel as if they were reliving that event.

0% 10 20 30 40 50 60 70 80 90 100%

Some people have the experience of not being sure whether things that they remember happening really did happen or whether they just dreamed them.

0% 10 20 30 40 50 60 70 80 90 100%

Some people have the experience of being in a familiar place but finding it strange and unfamiliar.

0% 10 20 30 40 50 60 70 80 90 100%

Some people find that when they are watching television or a movie they become so absorbed in the story that they are unaware of other events happening around them.

0% 10 20 30 40 50 60 70 80 90 100%

Some people find that they become so involved in a fantasy or daydream that it feels as though it were really happening to them.

0% 10 20 30 40 50 60 70 80 90 100%

Some people find that they sometimes are able to ignore pain.

0% 10 20 30 40 50 60 70 80 90 100%

Some people find that they sometimes sit staring off into space, thinking of nothing, and are not aware of the passage of time.

0% 10 20 30 40 50 60 70 80 90 100%

Some people sometimes find that when they are alone they talk out loud to themselves.

0% 10 20 30 40 50 60 70 80 90 100%

Some people find that in one situation they may act so differently compared with another situation that they feel almost as if they were two different people

0% 10 20 30 40 50 60 70 80 90 100%

Some people sometimes find that in certain situations they are able to do things with amazing ease and spontaneity that would usually be difficult for them (for example, sports, work, social situations, etc.).

0% 10 20 30 40 50 60 70 80 90 100%

Some people sometimes find that they cannot remember whether they have done something or have just thought about doing that thing (for example, not knowing whether they have just mailed a letter or have just thought about mailing it).

0% 10 20 30 40 50 60 70 80 90 100%

Some people find evidence that they have done things that they do not remember doing.

0% 10 20 30 40 50 60 70 80 90 100%

Some people sometimes find writings, drawing, or notes among their belongings that they must have done but cannot remember doing.

0% 10 20 30 40 50 60 70 80 90 100%

Some people sometimes find that they hear voices inside their head that tell them to do things or comment on things that they are doing.

0% 10 20 30 40 50 60 70 80 90 100%

Some people sometimes feel as if they are looking at the world through a fog so that people and objects appear far away or unclear.

0% 10 20 30 40 50 60 70 80 90 100%

## Appendix F

## Consent Form

### Information Sheet

We are investigating various aspects of binge-eating. In particular, we are looking at the antecedents and precipitants (triggers) of bingeing experiences, and also at the 'hypnotic susceptibility' of binge-eaters.

You are asked to consent to the following:-

- to allow clinical information to contribute towards our study. Information taken for research will be anonymous and amalgamated with information gained from other participants in the study.
- to fill out a number of questionnaires which are about your past experiences, present experiences, thoughts and feelings. Some of the questions may address sensitive issues.
- to undertake an exercise that assesses 'hypnotic susceptibility'. This procedure does not involve inducing any hypnotic state, instead it requires you to take part in a creative imagination exercise. The creative imagination exercise involves imagining a variety of simple and interesting situations.
- to undertake a 20-30 minute interview which involves general questions about thoughts and feeling you may have related to particular bingeing experiences. The interview also examines aspects of food preferences and events that set off bingeing experience.
- to allow information from your self-monitoring diaries to contribute towards our study. Information will be anonymised and amalgamated with information gained from other participants. The dairies are a routine part of intervention, which you would be asked to complete for your intervention, recording information about your eating behaviour and corresponding activities and mood.

The study is being undertaken by two researchers from University College London (Francisco Frasquilho and Penny Rogers) and is being undertaken at Warley Hospital.

**All information given in this study will be treated confidentially and will be stored in a safe place. Once the research is over, personal information will be destroyed. This research is separate from any treatment you receive now or in the future. You do not have to take part in this study if you do not want to. If you decide to take part, you may withdraw at any time without having to give a reason, and without adverse consequences. Non-participation in this project will in no way affect your present of future treatment at any services within the BHB Trust.**

**Please feel free to ask the investigators, either Francisco Frasquilho (0171-387-7050 extn: 5938) or Penny Rogers (01277-213241, Psychology Dept), any questions you may have. After reading the above, please complete the attached form**

## Appendix G



*Confidential*

**CONSENT FORM**

- 1) I have read the information sheet about this study YES/NO
- 2) I have had an opportunity to ask questions about this study YES/NO
- 3) I have received satisfactory answers to all my questions YES/NO
- 4) I have received sufficient information about this study YES/NO
- 5) I understand that I am free to withdraw from this study at any time YES/NO
- 6) I agree to take part in this study YES/NO

Participant's Signature ..... Date .....

Name (Block letters) .....

Participants Address .....

Witness' Signature ..... Date .....

Name (Block letters) .....

Witness' Address .....

Investigator's Signature ..... Date .....

## Appendix H

ur Ref:

Warley Hospital, Warley Hill

ur Ref:

Brentwood, Essex CM14 5HQ

Tele: 01277 213241 Fax: 01277 201713

19th March, 1996.

Ms. Penny Rogers,  
Clinical Psychologist in Training,  
c/o, Psychology Department,  
Warley Hospital.

Dear Ms. Rogers,

**Antecedents and precipitants of binge-eating**

Thank you for your recent submission to the Ethics Committee, requesting 'Chairman's Action'. Would you please confirm the following:

- 1) There will be a gap of 24 hours for clients to decide whether they wish to participate in the study, before they are given the consent form.
- 2) Clients will be informed, on the information sheet, that non-participation in the study will in no way affect their right to either present or future treatment by services within the Trust.
- 3) Information will be held safely and securely. This should be stated on the information sheet. Please also let me know how this will be achieved.
- 4) Will all information to be destroyed after completion of your project? If so, please confirm this on the information sheet.

When I receive the above information, I will consider taking 'Chairman's Action'.

Yours sincerely,



**Dr. K. Padamsee, FRCPsych.**  
**Chairman, Ethics Committee**



COMMUNITY HEALTH CARE

MENTAL HEALTH SERVICES

our Ref:

Warley Hospital, Warley Hill

our Ref:

Brentwood, Essex CM14 5HQ

Tele: 01277 213241 Fax: 01277 201713

4th April, 1996.

Ms. Penny Rogers,  
38, Argyle Road,  
Ilford,  
Essex, IG1 3BG.

Dear Ms. Rogers,

**Antecedents and precipitants of binge-eating**

Further to previous correspondence, I write to confirm that 'Chairman's Action' has been granted with reference to the above project.

Yours sincerely,

**Dr. K. Padamsee, FRCPsych.**  
**Chairman, Ethics Committee**

## Appendix I

### Semi-structured Interview Format

1. Problem
  - description of current problem
  - history of problem
  - previous intervention
2. Family structure and history
  - family structure
  - occupational history of parents and sibling
  - past and present relationship with family members
  - current contact with family
3. Education and Occupational
  - schooling
  - qualifications
  - work history
  - current work situation
4. Psychological and Psychiatric History
  - any previous interventions (including from G.P.)
  - any previous admissions to Psychiatric hospital
5. Significant medical history and current health
6. Personal and Social
  - intimate relationships
  - sexual health (e.g. whether there are any difficulties)
  - sexual history (e.g. whether any evidence of abuse)
  - social support and friendships
  - housing situation
  - dependents
7. Any other relevant background information (e.g. financial difficulties)