Deliberate Self-harm Subsequent to the Experience of Cumulative Trauma.

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Thesis submitted in Requirement for the Qualification of Doctor of Philosophy
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University College London
2004
Abstract

This study examined whether the combination of parental overprotection and selective care during childhood might serve as a risk factor for deliberate self-harm (DSH) in the form of self-cutting/burning behaviours. The extent to which DSH tends to feature predominantly among females, is impulsive, and occurs most often among individuals diagnosed with borderline personality disorder (BPD) was also examined. In addition, potential associations between alcohol consumption and DSH were investigated. Secondary aims of this research were to assess the extent to which alexithymic traits, impaired frustration tolerance and dysfunction in terms of dependency and separation that might arise as a result of this type of dysfunctional parental bonding were characteristic features among self-harmers.

Results of the statistical analyses suggest that non-BPD self-harmers recall significantly higher bi-parental overprotection and lower maternal care than matched controls. BPD self-harmers failed to be differentiated from matched controls with regard to recalled maternal or paternal overprotection or care. No significant differences were observed for the gender of the total number of self-harmers referred to the researcher. There was a non-significant majority of self-harmers without a BPD diagnosis. Self-harmers and controls could not be differentiated in terms of their scores for impulsiveness although self-harmers generated scores indicating significantly raised pathology with respect to alexithymia, frustration tolerance and dependency and separation. With regard to alcohol use, BPD self-harmers reported significantly higher levels of alcohol consumption than non-BPD self-harmers and were also significantly more likely to engage in DSH whilst intoxicated. In addition, a significant majority of self-harmers who typically or always engaged in DSH whilst intoxicated were unaware of the impulse to self-harm before becoming intoxicated regardless of diagnosis. The quantitative data was supplemented by the use of case history vignettes. The results are discussed in relation to previous findings and implications for treatment and future research.
Acknowledgements

I would like to thank Professor Roland Littlewood, my principal supervisor, for his valuable academic support, advice and encouragement throughout all stages of this research. I am also grateful to Dr Mary Target for her input as my subsidiary supervisor.

The clinical staff who work in the Accident and Emergency Department and wards within University College London Hospitals NHS Trust deserve particular thanks. I am greatly indebted to Ms Annie McGuinness (A&E consultant) and members of her medical and nursing staff and to Dr David Sturgeon (consultant psychiatrist) and members of his Liaison Psychiatry team for their support and co-operation during the data-gathering stage of this research.

I am also grateful for the expert clinical advice regarding deliberate self-harm given to me by Dr Michael Crowe (consultant psychiatrist at the Crisis Recovery Unit, South London and Maudsley NHS Trust). I would also like to express my thanks for statistical advice received from Caoimhe O’Sullivan at the Medical Statistics Unit, University College London Hospitals NHS Trust.

I would also like to express my gratitude to my family, friends and my partner for their support and encouragement.

Finally I would like to acknowledge that this research was part-funded by a University of London Departmental Research Studentship (Triangle Trust) (2001-2003) and a University of London Central Research Fund Grant (2001-2002).
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CHAPTER 1: INTRODUCTION

This research examines the relationships that might exist between an individual’s experience of dysfunctional caregiving during childhood and the later presentation of deliberate self-harm (DSH) during adolescent and adult life. The theoretical background that informs this investigation of both the suggested developmental antecedents of DSH and the dynamics surrounding the activity of DSH itself is principally psychodynamic in origin and draws substantially upon object relations theory and self-psychology. Original hypotheses derived from this theoretical background are examined by conducting detailed and reliable, controlled quantitative research. This quantitative analysis is supplemented by the use of vignettes of case histories for a representative selection of self-harming participants.

In contrast to much of the existing research that seeks to investigate issues surrounding deliberate and direct, self-harming behaviours, this study is concerned only with the repeated cutting and/or burning of the skin that reflects no suicidal intent. Furthermore, unlike the overwhelming majority of published literature that considers how the experience of gross trauma (for example, sexual abuse, physical abuse, loss of a significant other and serious physical illness) might be implicated in the pathogenesis of DSH, here one is concerned only with examining the possible significance for the later presentation of DSH of the prolonged experience during childhood and adolescence of chronic, dysfunctional caregiving that may perhaps attain traumatic status cumulatively and retrospectively.

In addition, this study seeks to assess the extent to which DSH is a markedly impulsive and predominantly female behaviour that occurs most often among those individuals diagnosed with borderline personality disorder (BPD).
Part 1: Literature Review of DSH

The incidence of DSH in general and clinical populations

Estimates of the incidence of DSH within general and clinical populations have tended to vary. From a review of epidemiological literature Walsh and Rosen (1988) estimated that between 14 and 600 people per 100,000 engaged in some form of 'self-mutilation' that included DSH. These authors' approximation of this relatively broad category of behaviours was extrapolated from a variety of studies (Morgan 1979; Hawton et al. 1982; Johnson et al. 1973; Pattison and Kahan 1983; Kahan and Pattison 1984) that had been conducted in England and North America. Johnson et al. (1975) reported that cutting behaviours accounted for 17.6% of 1433 episodes of self-injury per 100,000 population observed within hospitals, prisons, nursing homes and general practices. From an analysis of British articles Tantam and Whittaker (1992) suggested that approximately 1 in 600 individuals in the general population deliberately cut themselves and subsequently sought medical attention from hospitals. This approximation is significantly lower than that provided by Hawton and Catalan (1987) who observed that at least 80% of individuals attending a general hospital in England after self-injury had engaged in DSH. The most recent epidemiological study (Horrocks et al. 2003) reported that 641 out of 885 attendances for self-injury at two Accident and Emergency departments in England over a period of 18 months were due to episodes of self-laceration.

Briere and Gil (1998) examined the incidence of 'self-mutilation' in general population and clinical samples. In contrast to 4% of the general population sample who had engaged in 'cutting, burning or scratching' behaviours within the previous six months (0.3% of whom had engaged in this behaviour often), 21% of clinical
participants drawn from outpatient or inpatient mental health services had engaged in these behaviours within this period. More recently, Klonsky et al. (2003) also detected that approximately 4% of a large non-clinical population had a history of DSH although this prevalence rate fell to less than 1% with respect to those participants who had repeatedly engaged in this behaviour. Osuch et al. (1999) reported that among 99 psychiatric inpatients who were not cognitively impaired or severely psychotic, histories of non-suicidal, self-injurious behaviour were disclosed by approximately 85% of females and 15% of males. Self-cutting/scratching was the most frequent form of self-injurious behaviour encountered among these patients. Zlotnick et al. (1999) refer to two studies that report widely divergent rates of DSH between general psychiatric patients (Phillips and Alkan 1961) and BPD patients (Shearer et al. 1988). In contrast to a prevalence rate for DSH among general psychiatric patients of approximately 4.3%, up to 80% of BPD patients had histories of DSH. These data appear to be consistent with the conclusions drawn by Langbehn and Pfohl (1993) in their study of psychiatric inpatients who cut themselves. Here, self-harmers were most likely to receive Axis II diagnoses (DSM-IV).

It is evident that estimates as to the incidence of DSH vary widely. Walsh and Rosen (1988) suggest that such variations might have arisen on account of the under-reporting of DSH by self-harmers and the under-inclusiveness or over-inclusiveness of studies with respect to the types of self-harm investigated. Despite this lack of clarity in terms of the definitions of DSH and the tendency for self-cutting behaviours to be under-reported, there nevertheless appears to be a developing consensus in the mental health literature that the incidence of DSH may be increasing (Walsh and Rosen 1988; Crowe 1997; Boyce et al. 2001; Freeman 2002; Klonsky et al. 2003).
The notion of a ‘typical wrist cutter’

Several early and psychoanalytically-oriented papers (Graff and Mallin 1967; Grunebaum and Klerman 1967; Pao 1969) reported that individuals who engaged in repetitive, superficial and non-suicidal cutting behaviours displayed certain common characteristics. Here, a ‘typical cutter’ was referred to as a young and physically attractive female who is usually unmarried and of above average intelligence. Other features recorded for these self-harmers included numerous admissions to psychiatric hospitals, histories of drug and alcohol abuse or dependence, and experiences of trauma (typically, sexual abuse, physical abuse and neglect). Partly on account of these suggested common characteristics, certain authors (Graff and Mallin 1967; Pao 1969) proposed that DSH might most appropriately be considered in terms of a distinct behavioural syndrome.

References to these purportedly typical features have repeatedly appeared in the published literature with relatively minimal challenge. In addition, as DSH has gradually attracted more clinical interest since the 1960's, certain other suggested correlates of this behaviour, for example, the diagnosis of BPD (Schaffer et al. 1982) and self-harmers’ dysfunction with respect to heightened impulsiveness (Favazza 1996), have tended to become almost definitive in terms of the regularity with which they are used when referring to people who engage in DSH. The validity of these reports of such apparently common features existing among individuals who engage in DSH and the appropriateness of conceptualising DSH as a distinct syndrome are examined in detail in the following sections of this literature review.

The notion that there might be a typical cutter developed within the context of American psychiatry that had existed during the first half of the twentieth century, a context within which the prevailing orientation towards psychiatry was significantly
influenced by psychoanalysis. Certainly among earlier studies, methodological issues (for example, the use of small sample sizes, the lack of control groups and the use of information obtained from self-harming patients within private psychiatric hospitals) probably significantly contributed towards the stereotypical image of a cutter. However, despite the relatively rapid diminution of the influence that psychoanalysis has had on mental health services and research concerned with DSH since the first half of the twentieth century, more recent studies continue to reinforce the conceptualisation of a person who repeatedly engages in DSH as a young (Pattison and Kahan 1983; Shearer et al. 1988; Gardner 2001) and impulsive (Herpertz et al. 1997; Stanley et al. 2001) female (Asch 1971; Favazza 1996; Smith et al. 1998; Gardner 2001) with a history of abuse (Schaffer et al. 1982; Briere and Gil 1998; Low et al. 2000) and a diagnosis of BPD (Schaffer et al. 1982; Shearer et al. 1988; van der Kolk et al. 1991). Those studies that have reported findings that are not consistent with such a conceptualisation (for example, Clendenin and Murphy 1971; Brodsky et al. 1995; Crowe 1997; Horrocks et al. 2003; Klonsky et al. 2003) are relatively uncommon.

As noted above (see page 19), it appears that the incidence of DSH may be increasing. Although this current research is not concerned with treatment strategies for DSH, it is nevertheless important to mention that where inaccurate preconceptions of the characteristics of self-harmers inform treatment interventions then such interventions, when made available to patients, are most likely to be of limited efficacy. For example, the diagnosis most often associated with DSH is BPD. This is likely to have some influence upon the level of resources that are made available to self-harmers. Lewis and Appleby (1988) note that patients "...given a previous diagnosis of personality disorder (PD) were seen as more difficult and less deserving of care
compared with control subjects who were not. The PD cases were regarded as manipulative, attention-seeking, annoying, and in control of their suicidal urges ... PD therefore appears to be an enduring pejorative judgement...” (p.44). More recently, Kendall’s (2002) review of the effects that distinctions drawn between mental illness and personality disorders including BPD might have for mental health service users unambiguously highlights one of the more disturbing implications of the PD diagnoses: “Certainly, it is commonplace for a diagnosis of personality disorder to be used to justify a decision not to admit someone to a psychiatric ward, or even to accept them for treatment” (p.111).

The consequences of allowing potentially inaccurate stereotypes of individuals who engage in DSH to remain unchallenged is perhaps best illustrated by this tendency to conflate DSH with BPD. The rate of completed suicide among the reportedly increasing number of individuals who engage in DSH has been estimated to be between 13% and 16% over a five-year period (Crowe and Bunclark 2000). Clearly, decisions that are made not to engage such individuals within mental health services that are partly or wholly informed by diagnostic presumptions are unlikely to reduce this significantly raised mortality rate.
**DSH and gender**

The notion that DSH typically arose among females who were also young and single was originally suggested by those studies that investigated this behaviour only among this category of subjects (Graff and Mallin 1967; Grunebaum and Klerman 1967; Kafka 1969; Pao 1969; Asch 1971; Rosenthal et al. 1972). An early challenge to this perception came from Clendenin and Murphy’s (1971) investigation that compared the characteristics of individuals who cut their wrists with those of individuals who self-harmed by other means. Within this controlled study, these authors reviewed police reports for 671 incidents of self-harm that included 65 reports of different individuals who had made non-life threatening cuts to their wrists. With regard to this study’s definition of self-harm, Clendenin and Murphy stated that it would include any self-inflicted injury that resulted in tissue damage. No reference is made either to the degree of suicidal intent involved or to the extent of injury sustained. In light of possible dissimilarities between the cutting behaviours that were examined by Clendenin and Murphy and DSH as it is defined in this present study, it is necessary to regard the relevance of these authors’ findings to an understanding of DSH with some caution.

In contrast to those earlier studies referred to in the above paragraph, Clendenin and Murphy emphasised that “...considering the general neglect of men in the literature on wrist-cutting ... it is something of a surprise to find two fifths of the wrist cutters in this series to be men” (1971, p.465). In addition to detecting this significant minority of male self-harmers the authors reported that although most male and female wrist cutters were between the ages of 15 and 34 years of age, all decades were represented for both men and women. Furthermore, with regard to the marital status of the wrist cutters, the authors observed that although most males were single less than one third
of females were unmarried. A more recent epidemiological study of DSH (Klonsky et al. 2003) in a large nonclinical population also failed to detect significant differences in the prevalence rates of DSH between men and women.

In terms of the gender of the wrist cutters identified in their study, Clendenin and Murphy (1971) propose that women suffering mental health problems were more than twice as likely to receive input from psychiatric services within private hospitals in the USA than were their male counterparts. As a result of this these authors conclude that “...studies confined to patients in private hospitals, psychiatric or otherwise, will yield an undue preponderance of women” (p.468).

This suggested ‘preponderance of women’ would also appear not to be restricted solely to the private healthcare sector in the USA. For example, the Crisis Recovery Unit at the Bethlem Royal Hospital in England is a 12 bedded, specialist national unit that offers inpatient care for individuals who engage in non-suicidal self-harm. The majority of these inpatients have histories of self-harm that include DSH. Crowe (1997) who is the consultant psychiatrist at this unit reports that women accounted for 62 of all 74 admissions. However, the author emphasises that this predominance of females was not so pronounced in the original referrals to the unit and suggests how the eventual gender difference on admission might have been influenced by the greater tendency to interpersonal violence among males, a tendency that may have informed decisions not to offer admissions to several male self-harmers.

Crowe (1997) also reports that the majority of inpatients with histories of DSH had disclosed experiences of childhood sexual abuse. In addition, the preponderance of these patients had diagnoses of BPD (Crowe, personal communication, November 19, 2001). Although a review of the literature that has investigated purported associations between sexual abuse, BPD and DSH will be presented later, it is important to
mention here how the perception of DSH as a symptom of female mental ill health might have arisen partly as a result of such associations. BPD is most often (typically, 75%) diagnosed in females (DSM-IV, p.652) and sexual abuse has repeatedly been implicated as a predisposing factor for BPD (Zanarini et al. 1989; Lobel 1992). Hence, although both the extent to which sexual abuse might serve as a significant risk factor for the later development of BPD (Salzman 1998; Fossati et al. 1999; Graybar and Boutilier 2002) and the validity of differential gender prevalence rates for BPD (Golomb et al. 1995; Anderson et al. 2001) have recently become the subject of debate, it is not unlikely that this predominance of women with BPD admitted to the Crisis Recovery Unit was at least partly a function of these idiosyncratic features of the BPD diagnosis.

Briere and Gil (1998) re-analysed data that had been generated from two previous studies (Briere et al. 1995; Elliott 1997) that had sought to investigate possible associations between childhood traumas, adult traumas and subsequent DSH. Although the conclusions of these studies that pertain to trauma and DSH will be examined later in this literature review, data obtained with respect to the gender of self-harmers will be briefly reviewed here. One of these previous studies (Elliott 1997) examined data derived from a representative North American sample comprising over 1000 participants. The other study (Briere et al. 1995) analysed data derived from clinical groups comprising nearly 400 psychiatric inpatients and outpatients, 82 of whom had engaged in at least occasional DSH within the preceding six months. Briere and Gil (1998) noted that DSH was recorded equally among male and female subjects within both of the re-analyses of the two earlier studies. These authors emphasise that "...contrary to common clinical assumption, neither sex is more likely than the other to engage in self-mutilation" (p.617).
Briere and Gil (1998) also examined the completed questionnaires of 93 subjects with histories of DSH who had answered advertisements placed in various publications (including publications targeted at survivors of childhood sexual abuse). Ninety-six per cent of the subjects who responded to these advertisements and who took part in this study were female. This high response rate by females is almost identical to that reported within an earlier study into DSH by Favazza and Conterio (1989) where over 94% of the responses to a television programme that had discussed DSH and abuse were female. It is not unreasonable to suggest that the reporting of DSH by such large numbers of female self-harmers may have arisen at least partly as a result of the reported greater tendency among females to access and to seek advice with regard to health matters from magazines and television programmes (Banks 2001).

The purported connection between DSH and females has also contributed to the suggestion that there is a link between this form of self-harm and menstruation (for example, Rosenthal et al. 1972). Within this analytic study by Rosenthal et al., 24 women with histories of non-suicidal repeated wrist-cutting (the case sample group) and 24 women with histories of 'suicidal gestures' and/or attempts at suicide but with no history of wrist-cutting (the control group) were interviewed over a six-month period whilst they were inpatients at an American psychiatric hospital.

The case sample group consisted of patients between the ages of 15 years and 42 years 20 of whom had first cut themselves before the age of 22 years whilst the remainder had only started to engage in DSH in their thirties. The majority of these patients had also cut parts of their bodies other than their wrists, including their forearms, legs, abdomens and hands. Almost half of the members of this group engaged in some other form of 'self-mutilation', including burning themselves with
cigarettes, carving into their skin, abrading their faces with glass fragments and traumatising recent fractures.

Rosenthal et al. (1972) noted that in this study, 60% of the incidents of cutting occurred during the patient’s menses. On the basis of this observation, the fact that no patient claimed to have cut herself before entering menarche, and the more negative attitudes of these patients toward the menarche than members of the control group, the authors confidently proposed that a strong relationship existed between wrist cutting and menstruation:

“There is a definite relationship between menstruation and wrist cutting ... Wrist cutting, then, as a means of dealing with genital trauma and conflict centering around menstruation, would accomplish three things: 1. The genitals are not involved. 2. The bleeding is not hidden but is seen by others ... 3. The bleeding is controlled by the patient, who does it to herself as the need arises. She thereby transforms a passive, frightening process into one that can be predicted and regulated” (Rosenthal et al., 1972, p.1367).

These conclusions regarding menstruation and DSH that were drawn by Rosenthal et al. (1972) were presented to the annual meeting of the American Psychiatric Association in 1971 prior to the paper’s publication the following year. These conclusions elicited some criticism, perhaps most notably from Clendenin and Murphy (1971), who emphasised that since their own study had demonstrated the use of wrist-cutting among such a relatively large number of men then this should raise “...a flag of caution against the perhaps too easy equation of wrist-cutting with menstrual concerns” (p.468). In support of this warning against the conflation of DSH and menstrual phenomena, Favazza and Conterio (1989) reported that among the 240 women who participated in their study of ‘female habitual self-mutilators’
only a small minority (that is, 10%) of subjects claimed to having occasionally harmed themselves in attempts to prevent a period from beginning or to make it end sooner.

A less literal interpretation of how an association between menstruation and DSH might be of use in terms of gaining some understanding of the role of the body for this particular form of self-harm was offered by Fiona Gardner (2001) who is a psychoanalytic psychotherapist. Perhaps unconvinced by any causal link between menstruation and DSH, Gardner considers instead how anxiety with respect to irregular periods might be similar to a self-harmer's fear of her body being out of control. Here the author refers to “...the link made between attacking the body and the conception of the body as something apart from the self. There is an intriguing link between the idea of uncontrolled bleeding and controlled bleeding” (p.63). With respect to males, and in particular adolescent boys, Gardner refers to Frankel's (1998) appreciation of how voice breaking and the development of facial hair might also contribute to a sense of disorientation and loss of control.

It appears, however, that Gardner (2001) does consider DSH to be a symptom of female pathology. She surmises from her clinical work with young people in both a public sector clinic and a private practice that “...at the clinic there were no young men cutting themselves – it generally seemed to be a female symptom” (2001, p.148). With regard to those clients who attended the public sector clinic, referrals were made on a tertiary basis – that is to say, these individuals had been assessed by their local mental health teams and then referred on to the clinic. From 51 initial referrals, 33 individuals (six men and 27 women) were seen in psychoanalytic psychotherapy. None of these men engaged in DSH and only one expressed suicidal ideation. In contrast, approximately half of the women seen in psychotherapy cut themselves.
This apparent predominance of DSH among young women that Gardner refers to "...as a particular characteristic of young adult females..." (2001, p.7) ought perhaps to be regarded in the context of the system of assessment, selection and referral noted above. Here, one should be mindful of Crowe's (1997) earlier observation that eventual gender differences that may become apparent after the operation of such a system are likely to have been subject to the influence of discriminatory factors that are inherent in that system. As such, statistical tendencies may tend to be manufactured that were either not apparent or were at least less significant in the original and more inclusive self-harming population. Indeed, as noted above, data obtained from certain epidemiological studies that have examined DSH among adults (for example, Clendenin and Murphy 1971; Klonsky et al. 2003) and are necessarily not subject to such discriminatory factors have revealed a much more even distribution of DSH between men and women.

A recent epidemiological study (Horrocks et al. 2003) that sought to investigate 'self-injury' attendances and 'self-poisoning' attendances in two accident and emergency departments in England also challenges the validity of assumptions regarding the predominance of DSH among females. Attendances involving cutting behaviours were included within the self-injury category - a category that subsumed a broad range of self-injurious behaviours including hanging, jumping from heights, carbon monoxide poisoning and drowning among others. Before briefly reviewing the results of this study it is important to note two possible limitations concerning potential dissimilarities between these cutting behaviours and DSH as it is defined in this current research. First, the authors do not differentiate between cuts that were attempts at suicide and those that were not suicidally motivated. Second, no details are given regarding any psychiatric diagnoses of the self-harmers. As such, it is
possible that these authors included attendances by patients who had attempted suicide and patients with psychiatric diagnoses that are specifically excluded from this research (for example, schizophrenia or a learning disability).

Results of the data-gathering exercise that was conducted by Horrocks et al. (2003) over a period of 18 months demonstrated that a minority (885 attendances) of the 4877 attendances made by 3167 patients involved presentations for self-injury. Approximately three-quarters of these 885 attendances involved self-laceration. A subsample of more detailed data was also collected by these authors for 368 self-injury attendances among 275 patients over a six-month period. Here the most common form of self-injury was cutting (227 attendances). In terms of the numbers of males and females who presented with cuts or with both cuts and self-poisoning the authors note that the “...nature of the acts was similar for males and females: for self-cutting there were 117 female episodes and 110 male episodes; for a combination of poisoning and cutting there were 30 episodes in females and 18 episodes in males” (2003, p.37). With regard to this approximately equal incidence of self-cutting among males and females the authors emphasise how such a finding “...goes against the common perception of self-injury or self-laceration being carried out predominantly by women” (2003, p.37).

The results obtained by Horrocks et al. (2003) with regard to the gender of patients who engaged in self-cutting are very similar to those of an earlier investigation (Hawton and Catalan 1987) that examined details of self-injuries in patients who attended a general hospital in Oxford over a five-year period in the 1980’s. In this earlier study the authors stressed that they were careful to identify all cases of self-harm attending the hospital regardless of whether they were referred onto the hospital’s psychiatry service.
A total of 480 cases of cutting were identified by Hawton and Catalan (1987) out of a total of 554 attendances that involved some form of self-harm. Cutting to the wrist and/or forearm accounted for 444 of these 480 presentations. The other 36 cases of cutting were to other parts of the body including to the neck or throat. Approximately 70% of these attendees who had cut other parts of their body were men. Here, the authors distinguished this minority of cutting behaviours from those others partly on the grounds that they were suicidally motivated or were more appropriately classified as acts of gross self-mutilation.

In terms of the gender of the 444 patients who only made cuts to the wrist and/or forearm, approximately 48% were men. In light of this result, Hawton and Catalan comment that although the "...typical self-cutter has been described as a young, single, attractive female who repeatedly cuts her wrist or forearm ... almost as many males as females are referred to hospital after self-cutting" (1987 p.152).
DSH and gross trauma

The experience of extreme stressors (for example, sexual and/or physical abuse, abandonment, rape, torture, major physical injury, and death of a significant other) may have the potential to cause significant psychic insult and achieve traumatic status when they occur on one occasion only. For the purposes of clarity in this current research, the use of the term 'gross trauma' relates only to the experience of such events.

Grunebaum and Klerman (1967) were among the first authors to suggest that early childhood experiences of gross trauma might be implicated in the development of DSH. In particular, these authors stressed the potential significance of these self-harmers’ grossly dysfunctional family environments to the later presentation of cutting behaviours during adolescent and adult life:

“Invariably their early lives and family relationships were unstable ... The most striking features of parental behavior are the open display of sexuality and aggression. One patient had seen her mother raped frequently; another's father threw knives at her ... Premature sexual experience, often incestuous, is typical. The patient has usually gone to her father and other men for the affection she did not receive from her mother and has been overstimulated sexually or seduced. We hypothesize that the family experience of rejection, open aggression, and sexuality has led to the development of ego defects in the patient...” (1967, p.114).

In addition to childhood experiences of abuse or the witnessing of violence, Rosenthal et al. (1972) reported that an examination of the social and family histories of case sample group participants and control group participants in their study revealed that half of all participants had come from homes disrupted by the death of a parent or...
divorce during adolescence. Maternal deprivation was also a commonly reported experience and fewer than 10% of all participants reported that they were able to communicate with either of their parents during childhood or adult life. With regard to their physical health during childhood 60% of the patients who cut themselves had histories of serious illness and/or surgical intervention before the age of five years. No member of the control group had any such medical history before the age of four years.

It is important to note that in this study by Rosenthal et al. (1972) 14 members of the case sample group had diagnoses of schizophrenia and one was learning-disabled. Individuals with these diagnoses were specifically excluded from participating in this current research. Justification for such exclusions on the grounds of psychiatric diagnoses are presented later (see pages 65-67). Nevertheless, certain of the above findings regarding the social and family circumstances of self-harmers that were reported within this study by Rosenthal and his colleagues have been replicated by subsequent studies (for example, Favazza and Conterio 1989) that did not use subjects with diagnoses of schizophrenia or learning disability. Here, Favazza and Conterio’s analyses of the childhood and family histories obtained for 240 female self-harmers indicated that childhood medical problems (for example, chronic illness, multiple bone fractures and surgery other than tonsillectomy), parental divorce and/or death of a family member and marked dysfunction with respect to communication between family members (for example, growing up with frequent ‘double messages’ and the discouragement of expressing feelings) were recalled by large numbers of participants who cut themselves.

In a controlled study that used structured interviews to examine certain features of the early childhood developmental histories of individuals who engage in DSH, Carroll et
al. (1980) recorded several differences between the recalled family experiences of 14 'self-mutilating' psychiatric patients and 14 non-mutilating psychiatric patients. Members of the self-mutilating group reported significantly more childhood experiences of major separations from caregivers before the age of ten years and more incidences of physical abuse and sexual abuse than members of the control group. Indeed, only one member of the self-mutilating group did not report any experience of physical or sexual abuse. Ten members of the self-mutilating group and no control group members recounted histories of excessive family violence. Furthermore, 13 self-harmers and one non self-harmer recounted how expressions of anger were not tolerated in their family. Finally, the authors reported that more self-mutilating group members than control group members recalled that they were able to establish a positive relationship with only one of their parents whilst enduring a sharply negative relationship with the other.

In light of the above data, Carroll et al. postulated how DSH might present as a result of such disturbed familial dynamics: "...parental hostility fosters development of a punitive superego that, under stress overwhelms ego defenses and triggers self-mutilation ... self-mutilation is followed by a sense of calm, relief, and decreased tension and thus may promote a reintegration of ego defenses" (1980, p.853).

In a research design that generated both historical and prospective data from a sample population consisting of 39 women and 35 men between the ages of 18 years and 39 years, van der Kolk et al. (1991) examined how childhood experiences of trauma might contribute towards 'self-destructive behaviours' that included DSH. According to DSM-III criteria, 55% of these subjects had a diagnosis of BPD or had borderline traits. Other diagnoses were bipolar affective disorder, antisocial personality disorder and schizotypal personality disorder. At intake, subjects’ ratings for suicidal ideation
and their histories of attempts at suicide, DSH and other forms of self-harming
behaviours were recorded. Data for these variables were later assessed on a weekly
basis. Historic data obtained included childhood histories of physical and/or sexual
abuse, witnessing of domestic violence, and disruptions in parental care (for example,
physical and/or emotional neglect and significant separations from primary
caregivers).

With regard to experiences of childhood trauma, 22 of the 28 subjects who reported
DSH at the start of the study disclosed histories of childhood trauma (including sexual
abuse) and 25 subjects revealed significant disruptions in parental care. Of interest,
van der Kolk et al. (1991) highlighted that only one of these 28 subjects disclosed no
experience of either such disruptions or abuse. No significant association was found
between DSH and the experience of witnessing domestic violence. The longitudinal
data indicated that during the course of the research only DSH and persistent attempts
at suicide were predicted by childhood sexual abuse. Furthermore, subjects’
engagement in repeated DSH was associated with the experience of trauma at any age
during childhood but particularly when it occurred during early childhood and
latency.

In terms of disruptions in parental care and attachment during childhood (in particular,
experiences of parental neglect and chaotic family dynamics), van der Kolk et al.
(1991) reported that “...such disruptions of attachment were significantly associated
with cutting but not with suicide attempts or other self-injurious behavior” (p. 1667).
The longitudinal data recorded a statistically highly significant correlation between
neglect and continued DSH.

In order to assess the separate contributions to the predictive power for DSH of the
data obtained at intake regarding childhood histories and that obtained during follow-
up, regression analyses revealed how experiences of neglect and trauma significantly predicted approximately 21% of the reported variance for DSH at intake whilst experiences of neglect and separations during childhood predicted approximately 18% of the reported variance for DSH during follow-up. Here, van der Kolk et al. hypothesised that "...although childhood trauma contributes heavily to the initiation of self-destructive behavior, lack of secure attachments maintains it" (1991, p.1669).

This detailed study by van der Kolk et al. (1991), although of significant value to those involved in attempting to understand those developmental and social phenomena that might be implicated in an individual's adoption and maintenance of DSH, requires one substantial qualification particularly in respect of this research. The authors note: "The subjects were initially chosen for an ongoing longitudinal study to validate the diagnosis of borderline personality disorder..." (1991, p.1666). Indeed, 55% of these subjects conformed to the DSM-III diagnosis of BPD or had borderline traits. In light of reported associations between child abuse and the diagnosis of BPD (Zanarini et al. 1989; Lobel 1992) that were referred to above, it is important to recognise the potential bias that such subject recruitment criteria might have had on the reporting of those childhood experiences that were considered to have contributed towards the development of DSH.

Within their re-analysis of the data obtained by Briere et al. (1995) and Elliott (1997), Briere and Gil (1998) reported that although experiences of childhood sexual abuse were significantly associated with DSH no such significant associations could be found between DSH and several other potentially traumatic childhood experiences including childhood physical abuse, childhood psychological abuse, parental domestic violence and parental substance abuse. This lack of association that was detected between childhood experiences other than sexual abuse and DSH was not replicated
in that part of these authors’ study that examined the completed questionnaires of those 93 subjects who responded to advertisements placed in popular magazines and publications aimed at child abuse survivors. Here, experiences of childhood physical abuse, childhood psychological abuse, parental substance abuse and parental domestic violence were found to be significantly associated with DSH when they occurred in the context of concomitant childhood sexual abuse.

Briere and Gil (1998) were unable to detect any association between variables associated with incidences of adult trauma and subsequent acts of DSH. This observation stands in contrast to Greenspan and Samuel’s (1989) study of DSH and adult trauma among three female psychiatric inpatients who had been victims of rape during adulthood. Here, Greenspan and Samuel considered how, for these women, “...the self-cutting was part of a posttraumatic stress disorder (PTSD) and that it began after the rape” (p.789). However, a significant qualification to Greenspan and Samuel’s study concerns the childhood histories of these women who engaged in DSH for the first time as adults. Details given of the childhood histories of these patients revealed that two women (both diagnosed with major depression) gave no history of childhood sexual abuse. However, the authors refer to an earlier incident when one of these women had taken an overdose in response to “...a sudden and traumatic separation from her foster family as a child” (1989, p.790). The third patient (diagnosed with BPD) had disclosed the experience of childhood sexual abuse. It is possible, therefore, that for these two patients, the adult presentation of DSH, although possibly triggered by the traumatic experience of rape during adulthood, was nevertheless influenced by the much earlier experiences of traumatic separation and childhood sexual abuse.
The potential contribution of traumatic experience during adult life to DSH was also referred to by Zlotnick et al. (1997). Here, 49 male and 36 female participants aged between 16 and 69 years who were admitted to an inpatient substance abuse treatment program were assessed for traumatic experience (for example, rape, loss, witnessing family violence as a child, serious accident and suffering violent crime), dissociative symptoms, impulsiveness and 'self-mutilative behavior'. Among the 48 participants who reported experiences of 'distressing traumatic event(s)' significantly higher dissociative experience scores, raised levels of impulsiveness and a greater rate of cutting, burning and/or skin-carving behaviours were recorded than for those 37 participants who did not report experiences of such events. The authors conclude: “This link between distressing traumatic events and these symptoms supports the notion that the presence of these clinical features among substance use disordered patients constitutes a symptom constellation that is related to the effects of trauma” (p.652).

However, within this study by Zlotnick et al. (1997) approximately 42% of the 102 incidents of trauma reported by the total sample population of 85 participants arose after a mean age of 18 years. Although a minority of participants disclosed experiences of multiple traumas, some of which may have arisen during childhood, it would nevertheless appear possible that at least among substance-abusing patients, such a relatively high incidence of trauma during adult life is to some extent implicated in the development of DSH. Indeed, the results of these authors’ study are interpreted in a later paper by Klonsky et al. (2003) as suggesting that there is “...evidence that patients who deliberately harm themselves experience more traumatic events as adults” (p.1502).
Referring to the apparent high frequency with which women who engage in DSH report experiences of childhood trauma, Low et al. (2000) aimed to explore those mechanisms that might mediate between the experience of childhood sexual and/or physical abuse and subsequent DSH among female patients detained at Rampton Hospital. The results obtained from this study enabled Low et al. to suggest that

"...there is a clear link between early sexual abuse and later self-harm. One route occurs via an increased likelihood of dissociative experiences, and a second route occurs via a general lowering of self-esteem which is also likely to lead to self-harm. Finally, our analyses showed that these effects were linked specifically with sexual abuse in this population; when the analyses were repeated with just physical abuse, or with a summary score for total abuse, one or more of the pathways became non-significant" (2000, p.276, italics in original).

Low et al. (2000) recognise that their investigation has limitations, in particular the nature of the self-harming sample used. They note that data derived from patients at a high security hospital might not be representative of self-harming populations that exist outside of such a secure environment.

A useful contribution toward elucidating the relationships that might exist between the experience during childhood of potentially traumatic events, BPD and DSH was made by Stanley et al. (2001) in a paper that examined differences between individuals diagnosed with a cluster B personality disorder who engaged in DSH and who had also attempted suicide and individuals with a cluster B personality disorder who had attempted suicide but without histories of DSH. Within this study, 94% of the subjects were diagnosed with BPD.
The results of this study revealed that for the former group of subjects, significantly higher levels of affect dysregulation, depression, anxiety, impulsivity, hopelessness, aggression and suicidal ideation were recorded. With regard to subjects' developmental histories, Stanley et al. emphasised that the “...self-mutilation group reported significantly greater frequency of physical punishment during childhood ... but did not report more frequent sexual abuse. Ratings of severity of physical abuse were not significantly different between groups...” (2001, p.430, emphasis added). In light of this observation, it would not appear unreasonable to suggest that since both of the personality disorder groups reported experiences of childhood sexual abuse with equal frequency yet DSH featured within only one of these groups, then childhood sexual abuse might be implicated less in the eventual development of DSH than it is in the pathogenesis of personality disorder. Indeed, in contrast to the earlier study of Low et al. (2000), these results would appear to suggest that the frequency of childhood physical abuse might have a more significant role in the prediction of self-cutting behaviours.

Walsh and Rosen (1988) emphasise how DSH, or, to use their terminology, 'self-mutilation' often begins during adolescence. These authors draw attention to the lack of reliable research that investigated how this behaviour might develop and be maintained during this developmental period. Walsh and Rosen re-analysed data that had been generated by an earlier study conducted by one of the authors (Walsh 1987) that examined 42 female and 10 male active self-mutilators between the ages of 14 years and 20 years within four treatment settings. Half of these individuals were found to employ at least one method of causing self-harm in addition to self-mutilation. These other methods included burning their own skin with lit cigarettes, punching themselves and wound-excoriation. Comparative data was obtained from a
matched control group of 52 non-mutilating individuals who were drawn from the same four adolescent treatment settings.

This statistical re-analysis of the data highlighted four childhood conditions (divorce/placement, physical and/or sexual abuse, illness and/or surgery, and domestic violence and/or alcohol abuse within the family) and four adolescent conditions (substance abuse, recent loss, body alienation, and peer conflict and/or isolation) that Walsh and Rosen (1988) considered were able to account for some 67% of the variance between the subsequent presentation or absence of self-mutilation during adolescence. Further analysis of the data indicated that the most significant predictor of subsequent self-mutilation was adolescent body alienation (within which the authors included eating disorders and anxiety regarding sexual orientation) followed by significant loss during childhood and sexual abuse. In light of this observation, the authors call attention to how an understanding of an individual’s epigenetic vulnerability to self-mutilating behaviours requires a consideration of this individual’s experiences over the extended, childhood developmental span that also includes adolescence.

Walsh and Rosen hypothesised why it was that the above experiences should have fostered self-mutilating behaviours (SMB) among these adolescents and what current psychological needs were serviced by these behaviours:

"...SMB was selected because it expressed within a single act the collective impact of the various childhood and adolescent conditions. Via the act of self-mutilation, these individuals acted out all of the familiar roles from childhood: the abandoned child, the physically damaged patient, the abused victim, the (dissociated) witness to violence and self-destructiveness, and finally, the aggressive attacker ... It also met all of their current psychic
requirements. It discharged tension in a concrete, abrupt, dramatic impulsive fashion. It was directed against their bodies in a deliberate, self-defacing, self-disfiguring way, derived from their sense of body alienation. And it was one of the few ways in which they were able to attract solicitous attention from peers and adults. Finally, the act expressed their cumulative despair and rage at having experienced profound losses in the past and at experiencing additional painful losses in the present" (1988, p.75-76, italics in original).

The last study (Jones and Daniels 1996) to be reviewed in this section that considers purported links between DSH and gross trauma stands out from those referred to above in so far as it considers self-injurious behaviours (that include DSH) from an ethological orientation. These authors suggest that during current periods of frustration and/or states of heightened arousal (referred to as 'proximate causes' by the authors), self-injury might occur in physically isolated animals that had also been subject to such isolation during early life. However, for those animals that are not subject to current conditions of isolation, the same proximate mechanisms provoked externally directed, social aggression.

Extrapolating from this model, Jones and Daniels (1996) propose that such proximate causes of self-injury for animals correspond to their cognitive and affective counterparts for humans, namely feelings of frustration, anxiety, and fear of abandonment. The authors suggest how the childhood ‘equivalents’ of early physical isolation for animals might arise in conditions of neglect, abuse and abandonment by primary caregivers: “We suggest that while the humans may not be physically isolated the feelings of isolation and abandonment which arise from experiences of separation from parents, abuse and violence are similar to those experienced by individuals of other species which have been physically isolated” (p.265). Similarly, with respect to
the current condition of physical isolation in which the animal self-injures, such deprivation might correspond to the abstract quality of a sense of social isolation for humans often independently of any conditions within the physical environment. However, similar to the case for animals, where the current social environment did not contribute to the experience of isolation, the same proximate mechanisms provoked externally directed, social aggression.

Although Jones and Daniels (1996) are clear to point out the limitations of their model (in particular, the difficulties inherent in drawing inferences between observations of human and animal behaviours), they emphasise how an ethological approach taken towards gaining an understanding of self-injurious behaviours might allow for the identification of “... a common set of features to self-injury which cut across the traditional psychiatric diagnostic classifications and aetiological approaches” (p.263).

The studies that have been reviewed in this section of the literature review have all considered potential links between gross forms of trauma and acts of DSH. Although there would appear to be some divergence between these studies in terms of the varying degree to which different types of gross trauma have been suggested to be implicated in DSH they have nevertheless tended to emphasise that childhood experiences of loss, neglect, physical abuse, and in particular, sexual abuse are contributory factors for this type of self-harm. The next section reviews the small number of studies that have questioned the significance of gross trauma for DSH and those that have suggested other aetiological factors that may be involved in the development of this behaviour.
**DSH and non-gross trauma**

Two relatively recent studies investigated the extent to which DSH might be associated with various psychological risk factors (including sexual abuse, physical abuse, loss or separation, and dissociation) among female patients with BPD (Zweig-Frank *et al.* 1994a) and among male patients with BPD (Zweig-Frank *et al.* 1994b).

With regard to female participants, the authors concluded that although the frequency of sexual abuse was higher for self-harmers than for non self-harmers the results of multivariate analyses indicated that "...none of the psychological risk factors (including child sexual abuse), nor dissociation, discriminated between borderline patients who mutilated and those who did not" (Zweig-Frank *et al.* 1994a, p.263). Data obtained from the male participants replicated these findings.

Potential associations between dissociation, gross trauma during childhood and DSH have also been investigated by Brodsky *et al.* (1995) in a study of 60 female psychiatric inpatients with BPD. Here, the authors sought to determine whether DSH and dissociation might be related independent of abuse history; that is, whether DSH might occur subsequent to dissociative phenomena irrespective of whether the individual had experienced childhood sexual abuse. Half of all participants disclosed a history of DSH. Sixty per cent of all participants reported experiences of sexual and/or physical abuse. The results of this study led the authors to surmise:

"The subjects who reported a history of sexual and/or physical abuse had significantly higher Dissociative Experiences Scale scores than those who did not report abuse ... Self-mutilation was correlated only with dissociative experiences and no other variable, including child abuse ... One interpretation of this finding is that self-mutilation is a direct response to dissociative experiences" (p.1790-1791).
Referring to the controversy surrounding 'repressed memory syndrome', Brodsky *et al.* (1995) conclude their paper by advising those practitioners who might be involved in the clinical care of female inpatients with BPD and a history of DSH “...to address symptoms of dissociation and self-mutilation first and to exercise caution in attributing them to a trauma history” (p.1792).

These three studies (Zweig-Frank *et al.* 1994a; Zweig-Frank *et al.* 1994b; Brodsky *et al.* 1995) are a selection of the very small number of those studies that have not found evidence for a direct correlation between childhood abuse (that is, gross trauma) and DSH. With respect to the role of childhood abuse in aetiological models of DSH, Crowe (1997) notes that although abuse is disclosed by many patients who engage in DSH “...it is not entirely clear whether the abuse by itself contributes to the problem or whether the emotional and other forms of deprivation in these families is a more powerful influence” (p.223). The remaining part of this section of the literature review considers those studies that have explored the potential contribution of a diversity of developmental factors other than child abuse and other forms of gross trauma that might predispose an individual to later acts of DSH.

Kafka (1969) considered how his female analysand who had engaged in DSH over a number of years might have made use of her body, and more specifically her blood, as transitional objects. Drawing upon Winnicott’s earlier conceptualisation of transitional phenomena (Winnicott 1951), Kafka hypothesised how this woman’s childhood experience of allergic dermatitis might have interfered with the establishment of transitional relatedness: “Genetically, the intensity of the early contact hunger, and the pain when there was contact, is conceptualized as a traumatic fixation point ... early traumatic fixation points, relating particularly to the formation of the membrane of the body scheme, may play a part in the developmental history of
other patients with the cutting syndrome” (1969, p.211, italics in original). Here, Kafka suggests that the act of DSH might serve to arrest the individual’s affective and structural regression by enabling a recathexia of the body-membrane and self-representation. During analysis and recalling the moment when she cut herself “...she managed to convey the exquisite border experience of sharply ‘becoming alive’ at that moment” (1969, p209). Kafka’s fertile contribution towards an understanding of some of the potential developmental antecedents of DSH will be returned to later during an examination of the concept of cumulative trauma.

Although Kafka’s (1969) interpretation of those factors that might be implicated in the pathogenesis and maintenance of DSH was generally well received within the mental health field, his application of Winnicott’s (1951) conception of transitional objects was criticised. Burnham and Giovacchini (1969) consider that it is incorrect to equate a child’s development from a state of primary narcissism through an intermediate transitional period of discriminating the self from ‘not me’ objects to more mature object relations with the unconscious motivations that might promote DSH. Although the authors recognise that primary gain achieved through symptom formation (DSH) might enable the self-harming individual to establish, albeit pathologically, some awareness of and control over the differentiation between the self-representation and the object representation, they contend that such processes do not equate with Winnicott’s (1951) notion of transitional phenomena since the control achieved by this individual is transient and of restricted developmental potential.

Burnham and Giovacchini (1969) usefully consider how issues involving dependency needs might be implicated in DSH. Developing Pao’s (1969) interpretation of a patient’s self-imposed isolation and exaggerated self-sufficiency as symptomatic of her denial of dependency needs, these authors refer to a self-harming patient for
whom episodes of DSH reflected a markedly punitive attitude toward herself. This attitude was evoked subsequent to her becoming aware of having developed needs and desires for something that was outside of her control and that she was unable to provide herself— a satisfaction that could only be obtained from another person and therefore made her vulnerable to frustration. Burnham and Giovacchini propose that her recall of early experiences involving deficiencies in significant object relationships where the realisation of dependent needs was not achieved was liable to provoke a regressive symptomatology that for this patient culminated in DSH. It is in the context of this hypothesis that Burnham and Giovacchini are reminded of Podvoll’s earlier suggestion that DSH might represent “...a flight from deeply dependent even symbiotic wishes toward a primitive love object to a reliance on the autoerotic use of one’s own body” (Podvoll 1969, p.220). Burnham and Giovacchini emphasise how the social context within DSH occurs reflects this desperate, chronic isolation experienced by the self-harmer:

“Of central importance is the defence mechanism of denial, and the rejection of relatedness which characterizes the acts of self-mutilation. The patient suddenly retires into self-sufficiency, beyond the reach of all who are involved with her ... (she) is not aware of the interaction with others and regards the cutting as a private act which does not involve anyone else” (1969, p.224).

Burnham and Giovacchini suggest how the disturbed self-representation of the self-harmer might find expression in the act of cutting, an act within which the adaptive function of pain serves to arrest, albeit temporarily, the regressive symptomatology. Here they propose that self-harming individuals who suffer

“...characterological defects have a poorly (defective) developed self-representation. There is considerable ambiguity about whether one exists or,
more precisely, whether the self-representation can maintain coherence in the context of the surrounding reality ... Feeling is equated with life, non-feeling with non-existence. To feel is reassuring that one is alive, even if that feeling is pain” (1969, p.227).

Extrapolating from his clinical experience with female analysands and female psychiatric inpatients, Asch (1971) hypothesised that the disturbed self-representations of individuals who engaged in ‘wrist scratching’ had arisen as a result of severe difficulties with mothers who were distant, preoccupied and unreceptive to their child’s developmental needs. Referring to the precarious differentiation achieved by these individuals between the self-representation and the object representation and the ‘primitive’ quality of depression or anhedonia displayed by them, the author suggested that their early maturation and development was characterised by mothers who

“...seemed unable to involve themselves in any affective give-and-take with their daughters. The impression is that, for one reason or another, these girls were never able to develop a reliable relationship with important objects. There is often a history of the mother’s inability to respond affectively during the first year or two of life, while the father was unavailable or preoccupied” (p.617).

Asch (1971) proposes that these anhedonic females’ relations to significant objects had been achieved principally through the process of identification and were essentially narcissistic in nature. As they progress through childhood and reach adolescence, the author considers how their ambivalent experiences of increased developmental pressures to separate from the mother that arise during puberty threaten a loss to their own identities. Vulnerable to real or imagined threats of separation, experiences of separation anxiety tend to provoke the emergence of
aggressive affect which can become overwhelming and sponsor the regressive experience of increasingly blurred boundaries between the self-representation and object-representation. The use of denial and repression against this escalating aggression serves only to exacerbate the experience of dissolved self-object boundaries. In order to bring to an end this regressive symptomatology of ambiguous self-object boundaries, Asch hypothesises that patients cut themselves in an effort to cathect their body membrane and subsequently their self-representation.

Asch was clear to point out, however, that any improvement experienced by these self-harmers subsequent to an act of DSH was transient:

"These experiences of *existing*, however, only last as long as they continue to *feel* the immediate sensation since they seem unable to retain its memory. The experience of sensation does not alter the individual psychic structure. Some interference with the process of internalization seems to be present with little evidence of either identification being made with objects or of the development of a stable object constancy" (1971, p.608-609, italics in original).

This important reference to disturbed object relations will later be explored in depth within the review of the concept of cumulative trauma.

Friedman *et al.* (1972), also noted that DSH and attempted suicide rarely occur prior to adolescence and sought to investigate the developmental significance of adolescence for these behaviours. Data for this study were derived from the five-times-a-week psychoanalytic sessions of ten analysands, three of whom engaged in 'self-mutilatory acts' including burns with steam, lacerations to the legs, and superficial lacerations to the upper eyelids. None of these three individuals had made any attempt at suicide.
Friedman et al. (1972) hypothesised that failures in the process of disengagement from the libidinal ties to primary caregivers might be implicated in self-harming behaviours. First, they observed that these patients displayed high levels of ambivalence towards their mothers who were experienced by them as intrusive and overwhelming. Drawing upon Freud’s (1917) theory of the dynamics of melancholia, it was proposed that the threat of loss anticipated by these patients as a result of libidinal detachment prompted them not to give up the significant object but rather to preserve it via a process of introjection. Second, the authors suggested how these patients, in an effort not to yield to their regressive urges, displayed intense aggression towards the source of such urges. The subsequent guilt experienced by them as a consequence of their overt expression of aggression promotes an internalisation of this aggression as an attempted solution. According to the authors, such processes of internalisation are typically manifested in the patients’ highly self-critical and self-denigratory attitudes. Friedman et al. suggest that these patients tended to cut and/or burn themselves in response to real, imagined or anticipated threats of abandonment; for example, after an argument with parents or a rejection by a boy-friend or a girl-friend.

The types of developmental factors that might be implicated in DSH have recently been clarified and expanded upon by Fiona Gardner (2001), a psychoanalytic psychotherapist, whose clinical work with women who cut themselves has lead her to emphasise the pathogenic influence of an ‘enaptive conflict’ for such individuals. Referring to Glasser’s (1979, 1992) concept of the ‘core complex’, a narcissistic psychic organisation, Gardner suggests how the child’s cumulatively traumatic experiences of an overwhelming and avaricious mother might sponsor the development of a defensive compromise within which aggression is redirected away
from the external object and towards the self. In order to appreciate the application of this theoretical suggestion to an understanding of the development of DSH, it is worthwhile briefly outlining the more pertinent elements of Glasser’s conceptual proposition.

The ‘Core Complex’ (Glasser 1979, 1992) comprises a fantasy of primary narcissism within which an idealised mother realises the individual’s profound need for security and satiety. However, this author emphasises how the mother is experienced as a split figure who relates exclusively in narcissistic terms to the subject so that the individual’s fantasy of fusion would necessarily also involve a “...complete and permanent incorporation by the mother and thus annihilation of the self – expressed in such ideas as engulfment, envelopment, intrusion, possession, and so on...” (Glasser 1992, p.496). Furthermore, this split figure’s total lack of recognition of the individual’s emotional needs is consistently experienced as rejection. The attendant ‘annihilation anxiety’ fosters the contemporaneous defensive responses of both ‘narcissistic withdrawal’ and ‘self-preservative aggression’ that are met with indifference on the part of the split mother. Glasser concludes: “Since the withdrawal and aggressive responses are concurrent, the aggression is also turned onto the self” (Glasser 1992, p.496, italics in original).

Gardner (2001), whilst recognising that her own conceptualisation of an ‘encaptive conflict’ is substantially informed by Glasser’s (1979, 1992) theoretical contributions, nevertheless calls attention to a significant qualitative difference that exists between them. Here, Gardner is concerned less with the individual’s fantasised fusion with the idealised and frustrating mother than she is with this individual’s captivation by “…the malevolent figure of the avaricious, overwhelming mother ... whereby the self is captivated and held in thrall by the particular aspect of the mother that threatens
complete incorporation. This then forms into a tyrannical inner object configuration who both overwhelms, and from whom there is ambivalence about separation” (2001, p.11).

Gardner (2001) applies her understanding of this suggested, fundamental internal object relationship to the processes that might underlie DSH:

“The psychotherapy with the patients who were cutting revealed this intrapsychic struggle, characterised both by a quality of enslavement and a longing to cut the ties that so tightly bound this relationship. The patients appeared stuck and imprisoned in an enclave, where they were dominated by conflicting desires. It was as if the cutting represented both the marks of the bondage, and the signs of the desire to cut loose and break free. A further characteristic of this psychic conflict was that the young women appeared to be almost enthralled with this stuck state of mind. This has led me to term the internal formation that I am suggesting the ‘encaptive conflict’ ” (2001, p.12).

A review of how Gardner’s conceptualisation of the encaptive conflict might contribute towards an understanding of the role of cumulative trauma in the development of DSH will be presented later (see page 107).
DSH and psychiatric diagnoses

Grunbaum and Klerman (1967) were among the first psychiatrists to argue that DSH ought to be considered as part of the diagnostic criteria that belong to a syndrome in the ‘borderline group.’ However, these authors also warned against the preoccupation with suggested diagnostic correlates of this behaviour for the reason that “…while diagnostic considerations are important for treatment planning, far too often the ‘correct diagnosis’ becomes the battleground for widely divergent views and feelings about therapeutic management” (p.531). As noted in the previous section that reviewed the notion of a ‘typical wrist cutter’ this concern has been repeated on several occasions (Lewis and Appleby 1988; Kendall 2002).

At present, the only reference to DSH in DSM-IV is as one of the nine diagnostic criteria for BPD. Although Klonsky et al. (2003) recently emphasised that “…studies have also indicated that self-harm occurs across a variety of diagnoses, as well as in nonclinical subjects” (p.1501) there nevertheless remains a tendency to associate DSH with members of BPD clinical populations.

In a re-analysis of the data obtained in the study by Carroll et al. (1980) Schaffer et al. (1982) observed the degree to which members of the ‘self-mutilating’ group and the control group exhibited features of BPD. These authors hypothesised that members of the former group would both be more likely to have the diagnosis of BPD than controls and that they would score significantly higher than controls on the several dimensions of the Diagnostic Interview for Borderlines (Gunderson et al. 1981).

The results revealed significantly higher mean scores among members of the self-mutilating group on the four dimensions of impulse action patterns, interpersonal relations, affects, and psychosis. The greatest variance between the two groups was recorded on the first two dimensions. Furthermore, according to independent
diagnoses made by subjects’ therapists prior to the start of this study, members of the self-mutilating group were more likely to have features that were consistent with a diagnosis of BPD. Schaffer et al. concluded that the “...results of this study support the formulation that non-psychotic self-mutilators in psychiatric settings are borderline personalities” (1982, p. 471–472).

The validity of the conclusion drawn by Schaffer et al. (1982) is open to question. First, the self-mutilating group and the control group were each comprised of only 14 subjects. Differences between mean scores of these two groups cannot be taken to offer support for so confident a conclusion. Second, although the two groups of subjects were matched for age, gender, and inpatient/outpatient status, any difference detected between the two groups, regardless of its statistical validity, is likely to have been biased by the overwhelming predominance of the occurrence of potentially catastrophic events (for example, domestic violence and physical abuse) in the childhood histories of members of the self-mutilating group. It is possible that the results of this study might have been influenced by this sampling bias. Finally, there appears to have been a lack of clarity with regard to the incidence of self-inflicted lacerations within the self-mutilating group. Schaffer et al. stated that members of this group “...reported at least one (and often several) deliberate acts of self-inflicted injury” (1982, p.469). It is apparent, therefore, that some members of the self-mutilating group had only cut themselves on one occasion only. As such, although members of this group might have shared similar scores with regard to some of the dimensions of the Diagnostic Interview for Borderlines, it is unlikely that these same subjects formed a homogeneous sample with regard to their cutting behaviours. Furthermore, six members of the self-mutilating group were psychiatric inpatients at the time of the study. Should any of these inpatients have cut themselves on one
occasion only, it is possible that this act might have been less of a manifestation of any repetitive pattern of DSH than a function of contagion (Walsh and Rosen 1988) on an inpatient psychiatric ward. Self-cutting on psychiatric wards and within institutional settings (for example, prisons) will be referred to again when the literature regarding purported motivations to engage in DSH will be reviewed (see pages 73-80).

Certain other studies of DSH have either examined this behaviour only among subjects diagnosed with BPD (for example, Shearer et al. 1988; Fowler and Hilsenroth 1999) or have used subjects that had originally been selected for studies investigating the validity of the BPD diagnosis (van der Kolk et al. 1991). Although certain other studies (for example, Dulit et al. 1994) have reported that subjects who frequently cut themselves are also likely to receive comorbid diagnoses of current major depression, anorexia nervosa and bulimia nervosa, these subjects all had long-standing diagnoses of BPD. It is possible that an effect of such studies that have examined DSH by concentrating on participants who in most cases have a diagnosis of BPD is that the reported incidence of DSH both among individuals with non-BPD psychiatric diagnoses and those without psychiatric diagnoses has been inadvertently underestimated.

Shearer et al. (1988) investigated self-harm among 40 female inpatients in a private psychiatric hospital. All of these patients fulfilled the DSM-III diagnostic criteria for BPD. The authors reported that 80% of this sample had a history of repetitive DSH. In the study by Dulit et al. (1994) that was referred to above, the authors concluded that among 124 consecutively admitted psychiatric patients with BPD, half had engaged in cutting. The study by van der Kolk et al. (1991) that has already been discussed with respect to suggested traumatic pathways towards DSH reported that in
terms of the relation between diagnoses and ‘self-destructiveness’, BPD was significantly associated with attempts at suicide, DSH and other self-harming behaviours whereas none of the other diagnostic categories showed any clear association with such behaviours.

The controlled, psychoanalytically-informed study by Fowler and Hilsenroth (1999) that aimed to empirically study the unconscious dynamics associated with DSH examined differences obtained on Rorschach tests between one BPD inpatient sample that had engaged in DSH whilst hospitalised and another BPD inpatient sample that had not engaged in DSH whilst hospitalised. These authors reported that despite the demographic and diagnostic similarities between both samples, the ‘self-mutilating’ sample manifested greater primary process aggression, heightened boundary disturbance, tendencies to employ primitive defenses (splitting, idealisation, denial and devaluation), and malevolent object representations. Fowler and Hilsenroth concluded that despite these apparent differences between the two BPD groups, there was also substantial variation on the Roscharch test results that had been generated by participants within the DSH sample suggesting that these self-harmers did not form a heterogeneous group simply by virtue of the BPD diagnosis: “...the great dispersion of Rorschach scores within the self-mutilating group is suggestive of great variation within this sample ... (and) precludes any definitive statement regarding this population” (1999, p.728).

Although DSH is most often linked with BPD it has also been variously reported as an associated feature of depression (for example, Gardner and Gardner 1975; Favazza and Conterio 1989; Favazza 1996; Crowe 1997). Gardner and Gardner (1975) reported that second to personality disorder, depression was the next most frequent diagnosis within their sample of 22 patients who cut themselves. Favazza (1996)
considers that depressed individuals are at high risk of episodic self-mutilation. This risk exists not only for those individuals diagnosed with major depression but also for those individuals whose depression is secondary to a medical disorder (for example, where the patient suffers chronic pain), or where depression arises subsequent to a stressful life event (for example, adjustment disorder with depressed mood), or depression induced by substance misuse, abuse or dependence. Favazza considers how for some depressed individuals "...cutting and burning may effect a temporary respite from their misery. Self-mutilation may, for example, alleviate guilt through self-punishment" (1996, p.248).

Emphasising how DSH might develop among diagnoses other than BPD Crowe also refers to the potential for DSH to manifest in response to depression:

"It is rather unsatisfactory that the only diagnostic group to include self-harm as a criterion is that of a personality disorder, since in some cases it seems that the self harm is really the patient's only major problem, and that there are few of the other signs of personality disorder. In addition, in some cases, the behaviour has occurred for only a short period in adult life, perhaps in the context of a depressive illness ... The fact that the behaviour occurs in many different diagnostic groups suggests that, rather like a pyrexia, it is an indication that something is wrong rather than a diagnostic syndrome per se" (1997, p.208).

In light of the above suggestion, it is somewhat surprising that data obtained from the 74 patients (58 of whom had engaged in DSH) admitted to the Crisis Recovery Unit between 1992 and 1996 revealed that the overwhelming majority (also 58 individuals) were diagnosed with BPD. Crowe, however, later elaborated upon these data:

"There was a greater tendency in the early 1990's to diagnose BPD with only some of the criteria fulfilled, and I would not think in reality that that group of
patients are very different from those we have as inpatients at present. You will be aware that at one level the decision between BPD and depression with self-harm is a bit arbitrary. The 58 patients with BPD were not, however, identified with the 58 patients who self-harmed. There was considerable overlap, but there were certainly some who did not have both criteria” (personal communication, November 19, 2001).

The likely heterogeneity of psychological features among individuals who have the same psychiatric diagnosis and who cut themselves has prompted several authors (for example, Pattison and Kahan 1983; Favazza and Conterio 1989) to recommend that a better understanding of this type of self-harm might be achieved by considering it in terms of a discrete, behavioural syndrome instead of continuing to regard it only as a symptom of BPD.

From an analysis of 56 published case reports of self-harm, Pattison and Kahan (1983) reported that 30 cases illustrated features that offered substantial evidence “...to support a relatively uniform pattern of clinical features of the deliberate self-harm syndrome” (p.870). According to these authors, this syndrome “...is distinguished by direct self-harm behavior, with low lethality, in a repetitive pattern” (p.870). Pattison and Kahan conclude that although further research is required to clarify issues of proposed diagnostic classification, this deliberate self-harm syndrome meets the essential criteria for the axis I diagnosis of ‘disorders of impulse control not elsewhere classified’ (DSM-III).

In the study by Favazza and Conterio (1989) that was referred to above with regard to DSH and gender, most of the 240 female self-harmers had a history of harming themselves by cutting (72%) or burning (35%) their skin. In addition, self-punching (30%), wound excoriation (22%), severe scratching (22%), trichotillomania (10%)
and bone-fracturing (8%) were also reported. These authors emphasised the high level of impulsiveness associated with acts of DSH. Here, 78% of these subjects revealed that their decision to self-harm was spontaneous and that once the decision to self-harm was made, only 4% did not harm themselves. Favazza and Conterio hypothesise that the "...evolution of a self-mutilative act into a repetitive behavior reflects its efficacy in providing relief from symptoms such as mounting anxiety, depression, depersonalization, and a sense of loss of control" (1989, p.288). They go on to recommend how it might be more profitable to consider individuals who rely upon this behaviour less in terms of possibly inappropriate extant diagnostic categories:

"While self-mutilation may be associated with a wide variety of mental disorders, most clinicians tend to associate it with patients diagnosed as having a borderline personality disorder who, in turn are increasingly being conceptualized as forming heterogeneous subgroups. The more contact we have with habitual self-mutilators, the more we are impressed by their impulsiveness ... Rather than force these patients into an existing diagnostic category, we recommend that researchers carefully examine the concept of a deliberate self-harm syndrome" (1989, p.288).

This reported high level of impulsiveness that Favazza considers to be the defining feature of repetitive skin cutting has been emphasised in this author's subsequent publications that have explored this behaviour (for example, Favazza 1996 & 1998). Favazza has endeavoured to establish alternative diagnostic subtypes of skin cutting. Two of these are 'episodic self-mutilation' and the 'repetitive self-mutilation syndrome'. The former relates to "...behaviors that occur every so often. Episodic self-mutilators do not brood about this behavior, nor do they have a self-identity as a
'cutter' or 'burner' " (1996, p.243). With regard to skin cutting as a syndrome, Favazza echoes the conclusion drawn earlier by Pattison and Kahan (1983) and stresses two features that define this suggested syndrome – impulsiveness and low lethality:

"Unlike episodic SM, which is best regarded as a symptom or feature of a mental illness such as borderline personality, repetitive SM is best regarded as a separate axis I disorder of impulse control known as the deliberate self-harm or repetitive SM (DSH/RSM) syndrome ... The essential feature of the syndrome is a recurrent failure to resist impulses to harm one's body physically and directly without conscious suicidal intent ... repetitive self-mutilation syndrome meets all the criteria for an impulse control disorder" (1998, p.264-265).

Favazza (1996 & 1998) argues that although raised impulsivity and self-cutting are already included as diagnostic criteria for BPD there is nevertheless a need to establish a distinct RSM syndrome. The author gives three reasons for recognising this syndrome separately from BPD. First, he considers that BPD has become too eclectic a diagnosis with regard to its diagnostic criteria to be of value in terms of treatment. Second, he suggests how self-mutilation is one of the eight (DSM-III-R) diagnostic criteria of BPD "...but by itself is neither necessary nor sufficient to establish a diagnosis. Its presence may indicate a more severe form of the disorder. When the behaviour becomes repetitive, it may develop into the RSM syndrome" (1996, p.257). Finally, he proposes how the recognition of this syndrome would both encourage repetitive self-mutilators to ask for and accept treatment for their self-harm and stimulate research into the origins, development and treatment of this behaviour.

Favazza (1998) refers to the study by Gunderson and Zanarini (1987) which mentions that several features of certain DSM Axis I disorders (for example, substance abuse,
factitious disorders, and eating disorders) coexist with BPD. Favazza reasons that since the diagnostic criteria for BPD include symptoms of these DSM Axis I disorders, the

"...presence of a concurrent disorder often depends on the quantity of the symptoms. Occasional binge eating ... for example, falls(s) within the BPD diagnosis, but a problem of frequent, uncontrolled, repetitive episodes warrants the axis I diagnosis of bulimic nervosa. The same argument holds for repetitive self-mutilators who are preoccupied with acts of self-harm, experience cravings to self-mutilate and withdrawal symptoms when prevented from indulging their craving, and may assume an identity as a cutter. These patients differ from those who sporadically cut their wrists" (1998, p.265).

Tantam and Whittaker (1992) also advise caution against simply regarding skin-cutting only as an expression of some wider disorder. Here, they draw attention to how such disturbed behaviour might not simply exist as a consequence of a personality disorder but may instead arise a consequence of dysfunctional relationships and/or distressing environmental situations. In terms of any suggested connection between self-wounding and BPD, they also refer to the notion of a deliberate self-harm syndrome:

"Separation of a deliberate self-harm syndrome from the pervasive impairment of relationships and emotions characteristic of personality disorder would have the added advantage that it would make it possible to investigate how often repeated self-wounding leads to an impairment in relationships and emotions: whether in other words, personality abnormality may be consequent on, rather than antecedent to, repeated self-harm" (1992, p.454-454).
The notion of skin-cutting as a distinct syndrome has been subject to criticism (for example, Clendenin and Murphy 1971; Weissman 1975; Walsh and Rosen 1988). As noted above (see page 24) Clendenin and Murphy challenged this notion partly on the grounds that certain of these studies (Graff and Mallin 1967; Grunebaum and Klerman 1967) reported on unrepresentative samples of self-harming patients drawn from private psychiatric hospitals that tended to comprise disproportionate numbers of unmarried, well-educated young females. In addition, they argue that certain of these suggested, common characteristics among individuals who engage in DSH (that is, being young, single and female) are not justifiable grounds for the recognition of such a syndrome since what these consistencies may reflect are certain social rather than pathological regularities. They suggest instead that sharp instruments are more likely to be available in the households within which the young live as opposed to sleeping pills for example, which although relatively ubiquitous, are possibly much less available and familiar to the young. Furthermore, young people, and particularly those who live in the parental home are most likely to be single. As mentioned above (see page 23) these authors also detected 'wrist cutting' behaviours among a large number of male subjects.

Weissman (1975) sought to test the validity of the notion of a wrist-cutting syndrome by examining the data derived from 273 self-harming patients who attended an urban, major medical complex. This patient population consisted of 32 individuals who had self-harmed by cutting their wrists and 241 individuals who had self-harmed by other means. Here, Weissman concluded that her findings replicated those of Clendenin and Murphy's (1971) study regarding the lack of evidence available to support the establishment of a wrist-cutting syndrome: "The stereotype of the persons who cut their wrists as distinct from other suicide attempters did not hold ... the portrayal of
the person who cuts his wrists is simply a description of the larger population of suicide attempters" (1975, p.1170).

Regardless of the validity of any suggested wrist-cutting syndrome, Weissman's (1975) conclusion requires substantial qualification. First, the author makes explicit reference to a number of earlier, published papers (including Graff and Mallin 1967, Pao 1969 and Rosenthal et al. 1972) that she incorrectly presumes to have included attempts at suicide within a wrist cutting syndrome: “Prior to the Clendenin and Murphy report in 1971, suicide attempters who used the method of wrist cutting were described typically as young, single, attractive women who made repeated unsuccessful attempts ... Implicit was the notion that persons who cut their wrists were different from other suicide attempters...” (p.1166, emphasis added). This statement significantly misrepresents the findings of several of these papers. For example, Graff and Mallin emphasised that the extent of the injury and the degree of suicidal intent that are features of this suggested syndrome differ substantially from those that are involved in motivated attempts to complete suicide since the “...destructive impulse is concentrated on only a part of the personality; the patient assures her survival” (1967, p.40). Further, Rosenthal et al (1972) emphasised how the patients in their study experienced DSH as a specifically ‘nonsuicidal gesture’. Clearly, Weissman (1975) is mistaken to infer any suicidal intent from the self-harming behaviours reported within these earlier studies.

With regard to the second qualification, Weissman’s study specifically excluded patients where “...there was good evidence that there was not any self-destructive intent” (1975, p.1167). However, it was specifically this group of patients for whom the notion of a ‘wrist cutting syndrome’ was proposed (Pattison and Kahan 1983). It is possible therefore, that this study set out to examine differences between
individuals who used alternative methods to attempt suicide. As such, it would appear to have been investigating a wholly different behavioural phenomenon to that suggested by a wrist cutting syndrome.

Walsh and Rosen (1988) identified three factors that they consider to be central to an understanding of 'self-mutilation'. First, the extent of the physical harm incurred was relatively superficial and frequently required no medical intervention. Second, self-mutilation was likely to develop into a repetitive behaviour. Third, the individual self-harmer is likely to employ more than one method to self-mutilate. The first two of these factors are comparable to some of the features that were suggested by Pattison and Kahan (1983) to be characteristic of a deliberate self-harm syndrome. However, Walsh and Rosen state that in so far as regarding self-cutting as a syndrome distinct from all other forms of direct self-harm any present reference to such a syndrome would be premature:

"It would appear that the epidemiological studies demolished the syndrome as a meaningful idea ... The Clendenin and Murphy (1971) and Weissman (1975) studies also had a far-reaching methodological impact. Following the publication of their epidemiological studies, clinical researchers using small samples from single settings have tended to be more cautious in claiming generalizability for their findings" (1988, p.24).

Several authors (for example, Gardner and Gardner 1975; Simpson 1976; Yaryura-Tobias and Neziroglu 1978) have considered whether skin cutting might be associated with certain features of obsessive-compulsive disorder. Recognising how certain behavioural phenomena associated with DSH might betray obsessional characteristics, Gardner and Gardner (1975) noted that among the self-harming sample "...although in some ways the build-up of tension and repeated act resembled obsessional behaviour,
in only three cases was there any inner struggle to resist the act, and two of these patients were suffering from a definite obsessional illness” (1975, p.129). However, according to data generated from the administration of the Middlesex Hospital Questionnaire (Crown and Crisp 1966) and the obsessive-compulsive section of the Tavistock Inventory (Sandler 1954), significant differences were observed between the control group and self-harming group with the latter recording significantly higher scores in terms of obsessional items.

The notion that DSH might be symptomatic of an obsessive-compulsive disorder is problematic. Referring to Simiopoulos’ (1974) earlier conceptualisation of DSH as a symptom of an impulse neurosis, Simpson suggests “…that the irresistibility of the urge to cut was different from compulsive behaviour in that the obsessive-compulsive person experiences his impulses as ego-alien, while the cutter feels his unavoidable behaviour to be ego-syntonic even if unwelcome” (1976, p.302). Although DSH is a repetitive behaviour that the individual is most likely motivated to perform in order to reduce distress, it would appear to be inappropriate to refer to it in terms of an obsessive-compulsive disorder. The degree to which an individual experiences his need to engage in DSH as ego-dystonic or at least experiences ambivalence toward the prospect of cutting will be discussed in detail later in this literature review (see pages 81-83).

Individuals who engage in cutting and/or burning behaviours and who have a diagnosis of schizophrenia or who are learning disabled are specifically excluded from the case sample group in this current research. The reasons for this exclusion are numerous. In a review of the literature that examined these behaviours, Walsh and Rosen (1988) proposed that the aetiology, dynamics, assessment and treatment of such forms of self-harm among these populations ought to appreciated as pathologies
discrete from those ostensibly similar self-harming behaviours that present within other diagnostic groups.

With regard to schizophrenic self-harmers, Walsh and Rosen (1988) advise that 'self-mutilating' behaviours should be appreciated within the broader context of these individuals' psychotic thought processes. The authors contend that although the degree of injury associated with individual acts of self-harm among psychotics often exceeds the degree of injury among non-psychotic self-harmers, it is the impaired reality-testing of the former group that most reliably distinguishes their behaviours. Here, six features of their behaviour that betray such impairment are considered.

First, the delusional thought processes of some psychotic self-harmers would significantly contribute to their motivation to cut and/or burn themselves. Second, the form that an act of self-harm takes and the meaning that is ascribed to it by psychotics may reveal the tendency among this diagnostic group for concrete thinking. Third, an act of self-harm may arise as a result of a command hallucination. A suggested fourth feature of self-mutilation among psychotic individuals is that it may present as a manifestation of a psychotic transference. Walsh and Rosen (1988) comment that the person might cut himself in order to establish contact with the person toward whom this transference had developed. The authors propose that although the 'manipulative' use of self-mutilation is apparent among non-psychotic self-harmers, the manipulative use of self-harm by a psychotic individual is informed by delusional beliefs. A fifth feature concerns the site on the body where the injury is inflicted, for example the eyes or genitalia, locations that are less frequently injured within non-psychotic populations. Finally, acts of self-harm may be enacted within a ritualised framework to which some symbolic significance might have been ascribed. The
meaning of this ritual and its significance to the self-harmer should be recognised within the context of this individual’s delusional thought processes.

As noted above, learning disabled self-harmers are also excluded from this research design. Walsh and Rosen (1988) use the term ‘self-injurious behaviour’ to distinguish the self-harming behaviours that are most common among members of this diagnostic population from the ‘self-mutilative behaviours’ of non learning-disabled individuals. Furthermore, the authors note that a substantial body of literature that examined self-harming behaviour among developmentally disabled individuals had invariably used this term.

Although both types of behaviour appear to have certain features in common, for example, as a means to reduce tension or as a mode of communication, Walsh and Rosen (1988) draw attention to four significant differences between them. First, self-injurious behaviours tend to be more ‘primitive’ than DSH. Here, examples of the former that are given include head-banging and self-biting. Second, both the frequency and the rate of self-injurious behaviours tend to exceed those for DSH. Third, short-term environmental factors, for example, the availability of reinforcement, would appear to influence incidences of self-injurious behaviour to a greater extent than they do for DSH. In contrast, the occurrence of incidences of DSH tend to reflect more intricate psychological factors. Finally, in contrast to self-injurious behaviour, the authors state how DSH is less likely to be a manifestation of organic dysfunction.

This review of the literature that has considered associations between psychiatric diagnoses and DSH demonstrates that although this behaviour has been observed to occur among individuals with various diagnoses such as depression and eating disorders (for example, Gardner and Gardner 1975; Dulit et al. 1994), it is still most
often associated with BPD. The suggested heightened levels of impulsiveness that some authors (for example, Favazza 1996) consider to be a defining characteristic of DSH has also led to proposals that this behaviour could be more accurately accommodated within a self-harm syndrome.

The note of caution that was expressed by Grunebaum and Klerman (1967) with regard to the excessive preoccupation with diagnostic issues that might inadvertently serve to detract from an informed understanding of the dynamics surrounding DSH and frustrate the effective provision of care for those individuals who engage in this form of self-harm is undoubtedly a valid concern. It is certainly feasible that the study of DSH that is conducted independently of current diagnostic categories is likely to allow for the identification of alternative models for the aetiology and treatment of this behaviour. Nevertheless, the likely consequence of not addressing issues of diagnostic concern and in particular of overlooking the repeated tendency to conflate DSH with BPD are possibly similarly liable to sponsor a less than comprehensive understanding of why individuals might be motivated to repeatedly engage in DSH and how best to provide for their care. Here one is reminded of Tantam and Whittaker’s advice regarding the value of the BPD diagnosis with respect to DSH: “The attribution of upsetting behaviour to abnormal personality tends to blunt the normal caring response ... Too often, further inquiry into the reasons for the behaviour, in particular to the situational determinants of self-wounding, stops once a diagnosis is made” (1992, p.454).
**DSH and substance abuse/dependence**

Numerous studies have reported a high prevalence of substance abuse or substance dependence among individuals who engage in DSH (Graff and Mallin 1967; Grunebaum and Klerman 1967; Asch 1971; Simpson 1976; Pattison and Kahan 1983; Walsh and Rosen 1988; Favazza and Conterio 1989; Langbehn and Pfohl 1993; Favazza 1996; Zlotnick et al. 1997; Zlotnick et al. 1999; Crowe and Bunclark 2000).

In contrast, studies that have not detected an increased rate of psychoactive substance use among such individuals (for example, Rosenthal et al. 1972; Dulit et al. 1994) are extremely rare in the published literature.

From their analyses of 56 published case reports of individuals who cut themselves, Pattison and Kahan (1983) disclose that 36% of index subjects had a history of drug or alcohol abuse. There was no difference between male and female self-harmers with respect their use of drugs and alcohol. These authors infer that not only is substance abuse associated with DSH among men and women but that it also operates as a significant predisposing factor for this type of self-harm. Unfortunately, no explanation is provided as to why substance abuse might predispose individuals to engage in DSH. This suggestion that the harmful use of drugs and alcohol might be implicated in the aetiology of DSH has also been made by Walsh and Rosen (1988) who propose that it is one of four adolescent conditions (see page 41) that is able to predict adolescent DSH.

Walsh and Rosen (1988) suggest that a self-harmer may be motivated to use alcohol and/or drugs in an attempt to gain relief from escalating tension. These authors argue that in such circumstances, the abuse of drugs and alcohol is symptomatic of the individual’s recourse to an “...unintegrated (fragmented) range of impulsive acts ... as an attempt at tension reduction and release” (p.47-48). Walsh and Rosen suggest that
DSH and aggression directed outwards are further examples of behaviours that are located within this range of behaviours that betray the self-harmer's 'fragmented', 'random' and 'impulsive' decision-making processes. This focus upon impulsiveness in the context of substance abuse and DSH is repeated by Favazza (1996) who appears to relegate the significance of alcohol abuse for acts of DSH to the level of co-existent 'other impulsive behaviours' that he suggests also include eating disorders and kleptomania.

The proposition that both DSH and substance abuse might be used to defend against experiences of dysphoric affect that arise secondary to experiences of trauma has been considered by Zlotnick et al. (1997). As noted above (see page 38), all participants in their study were substance abusing or dependent patients. Emphasising the likely implications for the treatment of substance abusing self-harmers with histories of trauma, Zlotnick et al. stress the importance of understanding whether DSH (considered by these authors to be one of a complex of behaviours that also included impulsiveness and dissociative symptoms) might arise either as a reaction to trauma or as manifestation of substance abuse. Results from this study demonstrated that variables associated with substance abuse (that is, the number of different substances used, the age of onset of substance use, and the frequency of use of treatment programmes for substance abuse) were unable to differentiate between subjects with and without histories of trauma. These observations appear to suggest that at least in terms of these measures associated with substance abuse, the presence or absence of a history of trauma was of limited predictive power. However, Zlotnick et al. reveal that "...substance abusers with histories of distressing trauma were more likely than those without such histories ... to have engaged in acts of self-mutilation" (1997,
p.652). Here, it would appear that in contrast to substance abuse, DSH can be understood as a reaction to intense distressing affect.

Certain studies have failed to detect an increased use of drugs and/or alcohol among participants who cut themselves. For example, having examined differences in histories of substance abuse between female self-harmers and female non self-harmers, Rosenthal et al. (1972) reported that although approximately "...half of the cutters used drugs (primarily marijuana) and alcohol in excess; this was also true for half of the control group" (p.1365). Similarly, in a study of self-cutting and non self-cutting male and female inpatients with BPD, Dulit et al. (1994) were unable to detect significant differences with respect to rates of psychoactive substance abuse.

Certain studies (for example, Gardner and Gardner 1975) have specifically excluded from participation those self-harmers who engage in DSH whilst intoxicated with alcohol or drugs. In contrast, Frankel et al. (1976) examined potential, contributory roles of the consumption of alcohol prior to acts of 'self-injury'. That these authors chose to study the potential role of alcohol and not that of any other substance is perhaps not surprising since alcohol has, on several occasions, been referred to as the substance most often abused by self-harmers, or at least by individuals who engage in DSH (for example, Simpson 1976). Here, Frankel et al. sought to investigate whether the physiological effects of alcohol consumption might influence the probability that acts of self-harm (referred to by the authors as manifestations of risk-taking behaviours) might occur. In addition, the notion that "...alcohol consumption prior to self-injury mediates the relationship between feelings of powerlessness and self-injury" (p.303) was also examined.

The results of this study revealed that 44% of cases had consumed alcohol prior to injuring themselves. In terms of the nature of the acts of self-injury, 85% of
participants had taken an overdose, 11% had cut themselves, and 4% had attempted to hang themselves. Although these authors state that they were concerned with self-injurious behaviours regardless of evidence of suicidal intent, they emphasised that ‘cutting’ behaviours were the least severe episodes of self-injury and that “...nearly all cases of cutting involved superficial cuts to the wrist” (p.302). As such, it is not unlikely that this type of self-cutting is comparable to DSH as defined in this current research.

Frankel et al. (1976) were unable to identify a contributory role for alcohol consumption prior to self-injury. However, they conclude that since significant numbers of individuals do consume alcohol prior to injuring themselves, it “...is highly unlikely that we are dealing with a simple coincidence wherein the consumption of alcoholic beverages merely plays the role of an innocent bystander in the personal and social drama of self-inflicted injury” (1976, p.305).

As mentioned above, studies that have not detected increased rates of substance abuse and/or dependence among individuals who cut themselves are uncommon. Certainly, a review of the literature suggests that there is substantial cumulative evidence of an association between harmful levels of drug and alcohol use and DSH. Beyond suggestions that the self-harmer might abuse drugs and alcohol in order to achieve some transient respite from painful affect there is a paucity of data available that has successfully identified dynamics that may be involved in the relationship between substance abuse and DSH.
Motivational aspects of DSH

In an early examination of various forms of self-harm that included DSH, trichotillomania, auto-amputation, nail-biting and excoriation of the skin in psychotic and neurotic conditions, Menninger (1935, 1938) proposed that among neurotic patients, such forms of self-harm could be interpreted as a form of psychic bargain that had been struck between physical survival and suicide. Here, these behaviours (collectively referred to by the author as ‘self-mutilations’) were considered as a consequence of a guilt complex that originated from a patient’s unconscious indulgence in some prohibited behaviour or phantasy, that is to say, a compromise between self-directed aggressive impulses guided by the super-ego and self-preservation.

Drawing from case histories, Menninger understood 'self-mutilation' within a classical psychoanalytical model that viewed these forms of self-harm as an extension of suicide. Menninger’s conceptualisation of non-lethal self-harm was that of self-healing: “Local self-destruction is a form of partial suicide to avert total suicide” (1938, p.271). This tendency to appreciate an individual’s motivations to engage in DSH within the same theoretical model that also accommodated attempted suicide, completed suicide and gross self-mutilation persisted within the international psychoanalytic and psychiatric communities until the second half of the twentieth century. Dissatisfaction with the limited heuristic value of combining disparate forms of self-harm within the same theoretical model encouraged debate in the mental health literature that subsequently recognised the need to distinguish between the various degrees of lethal intent involved in such heterogeneous behaviours. Certainly, it is now rare to find references that suggest motivations to engage in DSH and to attempt suicide are comparable. This is not to imply that some self-harmers do not make
claims that they engage in DSH in order to kill themselves. For example, nine out of the 22 female patients studied by Gardner and Gardner (1975) asserted that their acts of DSH were suicidally motivated. However, during the course of subsequent detailed interviews, all of these patients revealed that they had not intended to kill themselves.

Offer and Barglow (1960) analysed data generated from interviews conducted with self-harming inpatients between 14 and 22 years of age and hospital personnel involved in their care on a general psychiatric ward. Following a 72-hour 'epidemic' of 'self-mutilation' among 12 patients, the authors reported

"... that self-mutilation incidents were 'suicidal gestures' rather than 'suicidal attempts' ... the 'real' goal of death was apparently a major factor in only one incident. In this patient we observed the classical 'suicidal attempt' dictated by a severely punitive superego associated with a complete loss of self-esteem and hope. In all other incidents 'secondary gain' was involved" (1960, p.201).

These patients described motivations to engage in DSH that included attempts to gain attention; to control aggressive urges by expressing their aggression against the self; to relieve tension and to facilitate identification with the patient group by imitating DSH.

Although an examination of the confusion that has been generated in the mental health literature by the adoption of ambiguous and potentially misleading nomenclature when examining DSH will be referred to later in this section of the literature review, this early study's somewhat clumsy usage of such terms as 'self-mutilation' and 'suicidal gestures' ought to be appreciated in the context of the general lack of understanding of the motivational dynamics surrounding DSH that prevailed at this time. Such limitations, however unsatisfactory they might have been,
nevertheless failed to detract from the significance of the distinction that had now been made between repeated and deliberate, self-inflicted lacerations that did not reflect suicidal intent and those attempts at self-harm where completed suicide was the principal motivating factor. The importance of this distinction was further elaborated upon by Stengel (1964) who sought to distinguish between various forms of self-destructive behaviours by isolating those behaviours that resulted in completed suicide from all other attempts at self-harm.

With regard to the immediate circumstances surrounding episodes of DSH, Grunebaum and Klerman (1967) report that patients experience the onset of diffuse anger and anxiety. Neither able to locate the source of this escalating tension or to distinguish between and express the subtleties of their affective state, these patients become increasingly preoccupied with an intense urge to cut themselves. A form of dissociative state ensues which dissipates only after the patient has cut herself. The absence of physical pain during the act of DSH reported by several patients is considered by the authors to be attributable to this dissociative phenomenon.

With regard to the patients' motivations to cut themselves Grunebaum and Klerman conclude: "Most patients report a great sense of relief from tension or discomfort afterwards ... Wrist slashing is thus a self-prescribed treatment that does not involve verbalizing feelings ... In addition, it acts as an attention-seeking device which leads to considerable secondary gain" (1967, p.529).

The choice of terms used here is somewhat unfortunate. To consider that individuals are motivated to engage in DSH in order to attract the attention of others is an overgeneralisation and presumably derives at least in part from the type of environment within which the authors sourced their self-harming population. As with those self-harmers interviewed in Offer and Barglow's (1960) investigation who were
also considered to be motivated primarily by secondary gain, the subjects used in this
study were all psychiatric inpatients.
The functions of DSH within an institutional setting and particularly within an
inpatient psychiatric unit are complex and cannot be reduced to any one common
denominator such as ‘attention-seeking.’ Furthermore, the understandable attraction
to interpret an individual’s motivation to engage in DSH as one of secondary gain is a
gross oversimplification of the systemic dynamics that operate within the culture of a
psychiatric inpatient ward. Clearly, a patient who engages in DSH and draws
attention to this behaviour is sometimes able to negotiate an accommodation of his
requirements thereby securing some favourable adjustment in his environment.
However, the use of the term ‘attention-seeking’ when referring to the conscious
motivations of an individual to engage in DSH is pejorative and ought to be used with
care only after a careful consideration of the social context within which DSH occurs.
This brief consideration of individuals’ motivations to engage in DSH within
institutional settings ought to take into account the reported high incidence of DSH
within correctional facilities. Despite the relatively ubiquitous trend to underreport
incidences of DSH that occur within prisons (Toch 1975), Ross and McKay 1979
reported that within one Canadian young offenders unit for females, 86% of inmates
cut themselves. These authors consider how DSH for these inmates “…was a very
adequate way of controlling their social environment. Through this behavior they
could initiate and control adult intervention” (p.134). Hillbrand et al. (1994)
concluded from their controlled study of 53 male, forensic inpatients who engaged in
DSH whilst at a maximum security hospital that such behaviour was motivated by its
secondary benefits, most typically the prospect of transfers to less restrictive
institutional environments. Similarly, Johnson and Britt (1967) observed how
prisoners who had cut themselves were motivated by such factors as the prospect of being moved to a particular cell block in order to take part in a homosexual relationship with another inmate or to gain access to illicit drugs.

DSH can have a powerful effect on other people including ward staff. Indeed, Podvoll (1969) contends that an act of DSH aims to achieve two goals. First, there is an internal goal, which is the amelioration of escalating psychic tension. Second, Podvoll proposes that there is an external goal, "...which can often be considered as a restitutive attempt at changing the interpersonal field. It is the latter goal which is usually least within the conscious awareness of these patients and the one most difficult for them to verbalize" (1969, p.213).

Addressing the issues surrounding the social context within which DSH occurs, Burnham and Giovacchini refer to the desperate isolation experienced by the self-harmer: "The patient suddenly retires into self sufficiency, beyond the reach of all who are involved with her ... (she) is not aware of the interaction with others and regards the cutting as a private act which does not involve anyone else" (1969, p224). This observation is consistent with that made by Podvoll (1969) where the self-harmer is not consciously aware of a second and external objective of DSH that might involve changes to her social environment. Burnham and Giovacchini propose that this lack of awareness is sponsored by "...the defence mechanism of denial, and the rejection of relatedness which characterizes the acts of self-mutilation" (1969, p.224). It is apparent, therefore, that although DSH is a highly intrapersonal act it nevertheless occurs within an interpersonal context.

A contention of this research is that the overriding conscious motivation of an individual to engage in DSH who is not subject to detention (whether psychiatric or penal) is that it helps to relieve the experience of dysphoric affects (negative
reinforcement). For example, the reasons given by subjects in the study by Favazza and Conterio (1989) for their use of DSH were to stop their minds from ‘racing’ (72%), to counter depressed affect (58%), to feel less ‘unreal’ (55%), and to reduce their sense of loneliness (47%). Gardner (2001) suggests that the meaning attributed to acts of DSH that are most available to conscious recognition on the part of the self-harming individual is that it relieves escalating tension.

In contrast, Gardner and Gardner (1975) consider how DSH is maintained instead via a process of positive reinforcement “...as a result of the pleasurable relief of tension, strengthening the patient’s tendency to repeat her behaviour” (1975, p.131). Although positive social reinforcement has been shown to be implicated in the self-harming behaviours of many learning disabled individuals (Favazza 1996), it is perhaps an over-generalisation to refer to this form of reinforcement as being significant for all diagnostic groups. Since DSH allows the individual to achieve relief, albeit temporarily, from dysphoria, it would appear reasonable to consider that DSH might be maintained by negative reinforcement. Issues concerning reinforcement are important since they inform many of the treatment interventions available to self-harmers. Differences of opinion as to which reinforcement model might best apply to different patient groups have extended beyond the boundaries of the psychoanalytic community. Neurobiological models of DSH have variously hypothesised that DSH might be positively reinforced by the release of endogenous opiates during the act of self-harm (Winchel and Stanley 1991) or alternatively, negatively reinforced by virtue of the reduction of tension that reflects a reduction in psychophysiological arousal (Haines and Williams 1995). Such differences of opinion ought to warn against making overgeneralisations.
How DSH is interpreted after the event by those in the self-harmer’s environment is most often of secondary importance to the self-harmer. When others do become aware that an individual has self-harmed they should perhaps be minded to look beyond oversimplistic interpretations of this behaviour as simply manipulative and attention-seeking. Walsh and Rosen (1988) emphasise that DSH, or ‘self-mutilative behaviour (SMB)’ as they refer to it, is a powerful vehicle through which a patient’s experience of distress can be communicated:

“Individuals who mutilate themselves generally have limited ability to use verbal communication for dealing with emotions. They are not adept at expressing feelings for the purpose of ventilation. Even when they are able to find the words to say how they feel, they do not seem to experience emotional relief ... One ‘advantage’ of SMB, therefore, is that it delivers a message in a powerful fashion for individuals deficient in skills of verbal expression” (p.87).

Such deficiency in an individual’s ability to verbalise dysphoric affect in combination with the interpersonal social dynamics peculiar to psychiatric wards and other institutional settings suggest that where passivity, compliance and conformity with restrictions on freedom are encouraged, the alternatives that a self-harming patient might see as available to him to express his distress are severely limited. The responses of staff to a patient once they have become aware of this dramatic form of communication are frequently those of anger and disappointment. It is perhaps easiest for these staff to interpret instances of DSH on their ward as manipulative and attention-seeking. Examining what are essentially issues of countertransference, Tantam and Whittaker (1992) propose that

“...the identity of self-harming patients seems to become little more than their acts, and it is easy for their own aspirations or intentions to be drowned out by
those of their carers. Carers may relieve their disappointment and frustration with the patient by stigmatising her as ‘bad’, ‘attention-seeking’ or ‘manipulative’, terms which have no explanatory value but do subtly devalue the patient’s distress...” (p.459).
Levels of impulsiveness and ambivalence associated with DSH

The existence of a potential relationship between a self-harmer’s experience of ambivalence towards the prospect of engaging in DSH and the level of impulsiveness associated with an act of DSH has received little attention in the literature. In contrast, the high level of impulsiveness that has been suggested by numerous authors (for example, Walsh and Rosen 1988; Favazza and Conterio 1989; Favazza 1996 & 1998) to be a defining feature of DSH has been referred to on many occasions within this literature review. On those occasions when ambivalence has been considered within the literature, it has most often been referred to in the context of the proposed dissimilarity that might exist between an individual’s lack of ambivalent struggle with respect to a prospective act of DSH and an individual’s heightened experience of ambivalence prior to an attempt at suicide (Walsh and Rosen 1988). Here, Walsh and Rosen suggest that as opposed to the suicide attempter’s ambivalence towards the prospect of death, the person who cuts without any suicidal motivation is resigned to the necessity of his actions in order to achieve relief from dysphoric affect, and as such, rarely anticipates ambivalence in anticipation of the self-injury.

Although Favazza (1996) did not refer explicitly to how the experience of ambivalence and impulsiveness might function within his conceptualisation of a ‘repetitive self-mutilation syndrome’, he nevertheless suggested that although “...self-harm results from a failure to resist an impulse, people with the disorder may brood about harming themselves for hours and even days and may go through a ritualistic sequence of behaviours...” (p.254). Unfortunately this author did not suggest why such individuals who he considers demonstrate heightened impulsiveness specifically with respect to acts of DSH might also postpone engaging in such acts for days after they recognise their need to do so.
Pao (1969) referred to dissociative phenomena when he suggested that not only do individual differences exist between self-harmers with regard to their experiences of ambivalence towards the prospect of engaging in DSH, but also that the occurrence and extent of this ambivalence is liable to change for each individual. Referring to his detailed observations of several female self-harmers Pao suggests that "...during the period of tenseness she was conscious of her wish to cut herself and often struggled with herself over cutting or not cutting, for her own or some contemporary object's sake" (1969, p.198). However, during the subsequent period of escalating depersonalisation that preceded the act of DSH, the extent of the individual's object-relatedness and capacity to experience ambivalence declined until she was eventually "...totally self-engrossed and was oblivious of her surroundings or of the people in it; she was unrelated to contemporary objects" (1969, p.198). According to Pao, the act of DSH was prompted by and arose subsequent to entering this episode of depersonalisation. It would not appear unreasonable to suggest that for this individual, her diminishing ability to experience ambivalence towards the prospect of DSH operated, at least partly, as a function of escalating depersonalisation.

Pao (1969) hypothesises that this self-harmer's transitory experience of ambivalence might have arisen not only on account of her struggle "...for her own or for some contemporary object's sake..." (p.198) but that it also might have functioned as "...an obsessive device employed to facilitate the denial or repression of the conflicts that evoked the tension" (p.198). Regardless of the object of this individual's ambivalence, it would nevertheless appear likely that its incidence caused the individual to delay cutting herself. That this period of delay would appear to have been brought to an end by the experience of depersonalisation as opposed to some impulsive urgency directly associated with self-harm then it is arguable that at least
for this self-harmer, impulsiveness was not a significant and defining characteristic of
the cutting that determined whether or not it would occur.

Both the degree to which self-harmers demonstrate raised impulsiveness as a general
character trait and the nature of a potential relationship between impulsiveness and
ambivalence with regard to acts of self-cutting are examined within the analyses of
the results relating to hypotheses 11 to 14.
Part 2: Literature Review of Cumulative Trauma

As noted above, the significant majority of research into developmental antecedents of DSH has considered catastrophic, early childhood experience (for example, sexual abuse, physical abuse and loss) as of overriding aetiological significance. Although such potentially traumatic events would appear to be implicated in the eventual presentation of DSH for many individuals, there remains a substantial clinical subpopulation of self-harmers for whom such experiences have not been reported (Crowe 1997; Gardner 2001). The existing body of literature is characterised by a paucity of reliable research that seeks to account for aetiological factors that might be implicated in the presentation of DSH within this subpopulation.

The concept of cumulative trauma

The concept of 'cumulative trauma' was introduced into the psychoanalytic literature in 1963 by Masud Khan. This theoretical construct was intended by Khan to accommodate the "...result of the breaches in the mother's role as a protective shield over the whole course of the child's development, from infancy to adolescence – that is to say, in all those areas of experience where the child continues to need the mother as an auxiliary ego to support his immature and unstable ego functions" (1963, p.290). The validity of the term 'cumulative trauma' has been questioned most notably by Anna Freud (1967) and Henry Krystal (1978). Much of this criticism has been concerned with the appropriateness of using the term 'trauma' in the context of a theoretical construct that describes individually insignificant, parental failures to function as effective stimulus barriers for the child. Krystal considers that Khan's (1963) lack of precision when using the term 'trauma' renders it practicably useless:
“Khan makes it clear that he is talking about ‘pathogenic effects’, which he attributes to failure of the mother to function as a protective shield by definition, but this becomes so broad as to include any development or experience which is not conducive to the child’s optimal development ... Khan used the term trauma to cover a multiplicity of sins; in fact, just about anything except trauma itself” (1978, p.85-86).

Although such criticism would appear to be justified to the extent that a traumatic event is typically one where a catastrophic experience effects a psychic injury, Khan was nevertheless explicit that his application of “...the word trauma in the concept of cumulative trauma should not mislead us into considering such breaches as traumatic at the time or in the context in which they happen. They achieve the value of trauma only cumulatively and in retrospect” (1963, p.291).

It is not to be suggested here that such criticisms of ‘cumulative trauma’ rest only at the level of nomenclative semantics. Indeed, Krystal’s preference for the term ‘ego strain’ to denote “…an accretion of pathogenic influences...” (1978, p.85) would appear to be reasonable. However, despite the probable inaccuracies in Khan’s application of terminology, the explanatory value of his theoretical construct lies in allowing one to appreciate how pathology might emerge from the synergistic relationship between patterns of parental dysfunction that serve to bias the affective and structural development of the child. This point is succinctly made by Khan:

“It is important to remember that though the ego can survive and overcome such strains ... it nevertheless can in later life break down as a result of acute stress and crisis. When it does so – and this is of great clinical importance – we cannot diagnostically evaluate the genetics and economics of the total processes
involved if we do not have a concept like cumulative trauma to guide our attention and expectancy” (1963, p.300).
**Cumulative trauma and dysfunctional caregiving**

A principle suggestion of this research that informs several of its hypotheses is that such ‘breaches’ of the protective shield constitute intrusions of dysfunctional caregiving into the child-parent dyad. Although Khan (1963) did not examine the potential influence that cumulative trauma might have on the development of any particular pathology, but considered instead its bearing upon dysfunctional ego development in general, his fertile theoretical contribution nevertheless has substantial implications for the development of a psychodynamic model for the aetiology of DSH.

Khan (1963) considers how the chronic intrusions of the needs and conflicts of the caregiver (or according to the author, the mother) epitomise her failure to function as a protective shield or 'stimulus barrier' for the child and adolescent against impingements from both the human and non-human environment. Attention is also drawn to how the caregiver's function as a protective shield serves not only to defend against such impingements but also to provide for the child's experience of tolerable frustrations. Here, the author acknowledges the relevance of the earlier work of Rubinfine (1962) who had suggested that exposure to such frustrations encourages the child's development of the capacity to withstand states of tension and dysphoria, thereby fostering structural development:

“Without appropriately-timed experiences of frustration and delay, there may result retardation in the development of various ego functions, among them the capacity to distinguish between self and nonself ... the consequent failure of defusion of self- and object representations leads to interference with the development of the capacity to discharge aggressive drives towards an external object, and results in the turning of aggression against the self” (p.268).
This concept of the caregiver as a protective shield for the child should not be viewed in terms of some static or an immutable function. Indeed, the dynamic nature of this developmental concept derives from the contributions made to it from both the caregiver and the child. Here, the caregiver’s selection, organisation, and regulation of stimuli are liable to be influenced by the effect that her earlier selective and regulative behaviours have had on the child.

Commenting upon Khan’s (1963, 1964) notion of cumulative trauma and ego distortion and his interpretation of the concept of a protective shield, Galenson (1964) also suggests how the nature of this transactory process between the child and the caregiver changes according to the caregiver’s experience of the child’s attempts at individuation. Of particular relevance to this current research’s focus on parental overprotection and control of the child and adolescent, Galenson (1964) emphasises how the caregiver’s interaction with the child is a function of the synergistic intersection between the child’s own needs and desires and those of the caregiver.

Here, the author suggests that for certain caregivers, their relative proficiency at providing for their children’s needs for unity and closeness during infancy stands in contrast to their relative failure to accommodate and encourage their children’s efforts during the later periods of separation and individuation. It is proposed that this failure might reflect the extent to which the caregiver’s own needs for interpersonal closeness remained unsatisfied during her childhood and adult life.

The suggested role of the caregiver as a source of non-overwhelming experiences of frustration for the young child has been extended by Kafka (1971) to also include the developmental value of the caregiver’s provision of ambiguous communications. It is suggested that the provision of these experiences of ambiguity during crucial developmental periods is important in so far as they contribute toward a ‘space’ in
which the child is left relatively free and unhindered to gradually integrate paradoxical experiences of reality - a fundamental developmental challenge that is an essential preparation for the process of individuation.

In a reformulation of double-bind theory that had emphasised how an overexposure to paradoxical stimuli might be implicated in the development of schizophrenia (Bateson et al. 1956), Kafka (1971) hypothesised how parents’ anxiety with regard to their own experiences of ambiguous phenomena and their avoidance of paradoxical communications might contribute towards their child’s inability to achieve such an integration. As a consequence of such parental dysfunction, it is suggested that the individual experiences heightened degrees of dissonance and/or depersonalisation when confronted with ambiguous experiential stimuli in the environment that as a child he had been ill-prepared to reconcile and accommodate within his own inflexible ‘reality’. Kafka suggests that where the caregiver encourages exposure to stimuli that challenges the child’s preconceived notions of reality then that child is able to achieve object constancy by virtue of the “...relative ‘integration’ of parental, and gradually evolving individual, formulations of reality...” (1971, p.234). During later life, this individual when confronted with ambiguous and conflicting stimuli is more likely to be able to accommodate the levels of abstraction required for processing such phenomena, and as such, avoid dysphoric experiences of dissonance that threaten the self-representation.

Within this seminal paper, Kafka emphasises how a caregiver’s encouragement of an ‘open’ system of affective communication between herself and the young child that incorporates appropriate levels of ambiguous experience sponsors “...the gradual formation of a (body) membrane which is ego-syntonic to the extent to which it was not prematurely and externally imposed but individually
established through much active and exploratory crossing and recrossing of the culturally poorly or ambiguously defined border territory ... More centrally, individuation without alienation involves the development of personal ‘realities’ which incorporate paradoxical discontinuities of the personal from maternal or paternal realities” (1971, p.237-238).

Kafka (1971) makes explicit how the developmental failures concerning individuation as noted above might be implicated in the pathogenesis of DSH. Referring to his earlier paper (Kafka 1969) in which a female patient who engaged in DSH was described as using her body as a transitional object, the author considers how this patient’s experiences surrounding DSH might derive both from her inadequate differentiation between internal and external reality and her unconscious uncertainty about the ‘aliveness’ of her body. Here, it is suggested that intrusive parental interference with a child’s experimentation with transitional experience might sponsor premature ego compartmentalisation and the precocious development of the child’s body membrane. This suggestion is compatible with Khan’s (1964) earlier proposition concerning failures in the caregiver’s role as a protective shield where such precocious development in combination with the caregiver’s collusive reinforcement interferes with a “...phase-adequate differentiation into a self-unit and personalization. Instead of a separate coherent ego-structure integration multiple dissociations take place intrapsychically. These dissociations enable the child to retain an archaic dependency bond to the mother and the environment on the one hand and lead to precipitate independence on the other” (p.274).

Kafka’s (1971) employment of Winnicott’s conceptualisation of transitional phenomena is particularly pertinent to this examination of the ways in which a caregiver’s intrusive attachment style might interfere with and prohibit the young
child’s experiences of transitional relatedness. Winnicott suggested that in addition to
the emergence of a ‘limiting membrane’ which serves to delineate the child’s inner
and outer realities “...there is the third part of the life of a human being ... an
intermediate area of experiencing, to which inner reality and external life both
contribute. It is an area which is not challenged, because no claim is made on itself
except that it shall exist as a resting-place for the individual engaged in the perpetual
human task of keeping inner and outer reality separate yet inter-related” (1951, p.230,
italics in original). A central proposition of this current research is that for some
caregivers, the child’s use of this ‘intermediate area’ of relatedness might come to be
experienced by them as challenging their perception of themselves as the only
legitimate source of need satisfaction for the child. This persistent offering of
themselves as the sole source of satisfaction is liable to detract from the child’s
nascent capacity for achieving a stable differentiation between self- and object
representations and object constancy. Indeed, as emphasised by McDougall, for
example, “...there are specific ways in which a mother, for her own unconscious
reasons, relates to, and attempts to control her child’s bodily self and affective vitality
... she regards these as narcissistic or libidinal extensions of herself” (1982, p.82). It
is a suggestion of this current research that when this type of parental interference
develops into a chronic and inflexible behavioural pattern, then for some children, a
state of cumulative trauma might begin to evolve.
This focus on the consequences of invasive caregiver attachment styles for an infant’s
constructions of self-representations and object-representations extends to the later
development of the child’s capacities for the regulation of affect, self-soothing and
self-care. Recently, Emde (1999) drew attention to the integrative influences of
affective processes during early childhood. Here, it was emphasised that although the
infant's organisation of early affective experience is almost completely dependent upon the caregiver's attunement with such experience, such a dependence is nevertheless subject to revision: "...emotional expressions also indicate signalling processes wherein the newborn gains experience and confidence in capacities for self-soothing in the context of regulation by others ... the newborn begins to experience and express an individuality in the midst of an intimate connectedness with a caregiver" (Emde 1999, p.321). Recognising the developmental significance of this 'connectedness', Krystal (1972 & 1978) underscores the importance of the child's gradual renunciation of his reliance on the regulating functions of the need-satisfying symbiotic object. This author considers how the caregiver's encouragement of this gradual renunciation assists the child's development of object constancy and evocative memory (that is, an easily recallable representation of the caregiver) – a fundamental developmental achievement on the path towards relative independence and autonomous functioning.

Greenspan (1979) referred to three stages of psychic reorganisation that are implicated in the individual's capacity for self-regulation. The first and somatic stage (typically until six to eight months of age) involves the infant's total dependence on the caregiver for bodily satisfactions. An intermediary stage is then presumed to persist until approximately 18 months of age during which the child internalises elements of the preverbal exchanges with caregivers. Finally, an extended period involving representational learning and more complex affect regulation ensues.

Khantzian and Mack (1983) suggest how the child's ability to self-soothe (a developmental precursor to self-care) most typically starts to evolve during the somatic and pre-verbal stages whilst a self-care function starts to develop during the stage of representational learning. The degree of proficiency with which the
individual is able to accomplish these regulatory achievements is contingent upon the success with which he has negotiated certain developmental challenges (for example, the organisation of a self-representation distinct from the object-representation and the desomatisation and differentiation of affective experience).

Khantzian and Mack consider how a child might have achieved some of those skills required to practise self-soothing functions without acquiring the later capacity to self-care:

"It is possible that older children and adults, who have a good capacity for self-soothing or self-nurturing but poor ability for self-protection, may have identified strongly with nurturant qualities of caretakers during the somatic and contingent periods, while failing later to internalize the more complex representations out of which caretaking and self-protection are structured" (1983, p.218).

It is a suggestion of this current research that this maturational failure may betray the child’s lack of success whilst attempting to negotiate those transitional phenomena that could have threatened the satisfaction of the caregiver’s need for symbiotic interdependence with the child. Here, in contrast to this underdeveloped capacity to self-care, the relative degree of success with which the child was able to acquire self-soothing functions might point towards the caregiver’s collusive encouragement of the child’s heightened dependence on her during those periods of early childhood development which did not yet involve dynamics surrounding issues of separation and individuation. Referring to a case history of a female analysand, Khantzian and Mack (1983) propose how this individual’s inability to develop independent skills in self-care could be at least partially accounted for by her mother’s chronic and anxious
overprotection and communication of messages that her daughter's potential attainment of autonomy would threaten the mother's survival.

Although the above consideration of early self-regulatory functions has focussed on the failure to develop a capacity for self-care, Khantzian and Mack acknowledge that “...even if a reasonably good capacity for self-care has been acquired, it is, like other ego capacities and functions, subject to erosion and regression” (1983, p.222).

Within this examination of the potential consequences of non-optimal nurturance, Khantzian and Mack (1983) conceptualise how forms of self-harm might reflect less an individual's unconscious self-destructive motives than they do deficiencies in those ego functions responsible for self-care. Although the authors do not refer directly to DSH but mention instead other behaviours such as alcohol abuse and hypochondriacal behaviour as symptomatic of the presence of a level of self-soothing behaviours coexistent with deficient self-care functions, it would not appear unreasonable to infer how DSH might for some individuals provide for the soothing management of dysphoric experience in the absence of a mature capacity for self-care.

At first, it may appear to be counter-intuitive to suggest that the child’s experience of overprotective and intrusive caregiving not only negatively effects the capacity to self-soothe and regulate and express dysphoric affect but also interferes with the tolerance of positive affect. The term 'proleptic' affect was coined by Spitz (1963) to refer to the young child’s anticipation of gratification. Extending Krystal’s (1975) application of the dynamic concept of affect tolerance, it is not implausible to consider how the child’s tolerance of proleptic affect might be encouraged by the consistency of the caregiver’s attunement to the child’s affective experience during the transitional phase of individuation (Marchetto 1999). In this regard, the successful evolution of the child’s self-representation during this phase requires that the
caregiver communicates that "...he has permission to 'take her place', as a source of succor" (Krystal 1975, p.193). Indeed, the degree to which the child is able to progress from a highly dependent relationship with the caregiver is largely reliant on the caretaker’s affirmation that the child’s ‘hopes’ of achieving relative independence and a greater sense of autonomy are legitimate and permissible. Clearly, "...if the child is not helped to feel that his hopes are permissible, he is pushed in the direction of hopelessness" (Krystal 1975, p.197). It therefore can be appreciated that challenges to the child’s developing ego are not only restricted to ambiguous or painful affects but also accommodate those otherwise pleasurable affects that are associated with the anticipation of gratification. Without the caregiver’s encouragement of the child’s hopes for achieving a relative autonomy and affirmation of his ‘right’ to attain satisfactions independently of her, then "...for this child, proleptic affects may be experienced with hopelessness, and as such, represent trauma signals" (Marchetto 1999, p.8).

It may perhaps seem contradictory to have suggested that an individual’s ability to self-soothe, albeit maladaptively, by engaging in DSH might co-exist with a disturbed capacity to tolerate proleptic affect. That is to say, the individual’s motivation to cut and/or burn himself in order that he might achieve surcease from dysphoric affect would imply that this individual is able to anticipate a reduction in escalating tension that would arise subsequent to the act of DSH. To resolve this apparent incongruity it is worthwhile briefly considering how an individual’s ability both to generate and to tolerate proleptic affect may nevertheless arise within the context of impaired, *internalised* regulatory mechanisms.

In a development of the earlier work of Tronick (1989) that had sought to understand how the young child is able to internalise an affective and structural representation of
those reparative processes initiated by the caregiver within the child-caregiver dyad, Schore proposed how such representations allowed "...the infant to recover from negative affect states, to construct a multimodal nonverbal concept of the caregiver as predictable, and permit him to develop the capacity for anticipation of relief and a sense of his own efficacy" (1994, p.246, emphasis added). In contrast to this optimal caregiving environment, it is a suggestion of this current research that if during the extended developmental span from the late pre-verbal period through the practising period and on to the rapprochement period, the caregiver withdraws the provision of her reparative and regulatory functions in response to the child’s attempts at individuation (Masterson and Rinsley, 1975), then this withdrawal is likely to potentiate disturbances within the child’s emerging capacity to develop mature, internalised self-soothing skills. For the purposes of this current research, such a withdrawal of reparative and regulatory care in response to the child’s efforts at separation is referred to as selective or contingent care. The epigenetic bias of such cumulative detrimental caregiving is likely to kindle dysfunctional self-regulatory functions to the extent that in the absence of regulatory evocative memory traces of ’good enough’ reparative processes the child is more likely to be motivated to seek relief from the external environment. It is also a suggestion of this current research that in later life, unable to draw upon internalised reparative structures that might otherwise have afforded a degree of psychic quiescence during experiences of dysphoric affect, the individual is only able to anticipate relief from externalised behaviour, in this instance, DSH.
Cumulative trauma, alexithymia and DSH

The aetiological significance of the types of pathogenic caregiving styles mentioned above for disturbances in self-regulation might also have implications for the development of alexithymia (Sifneos 1973 & 1994). The co-existence of alexithymic traits among individuals who engage in DSH has rarely been reported. In a psychoanalytic interpretation of suggested developmental antecedents of alexithymia, McDougall (1974, 1982 & 1984) explored how certain childhood experiences (in particular, those arising during what are essentially the practising and rapprochement subphases of separation-individuation (Mahler et al. 1975) when experiences of transitional phenomena are in the ascendance) might interfere with the child’s abilities to organise, mentally represent and regulate affects. Referring to several alexithymic analysands, McDougall had

“...frequently been able to reconstruct with these patients a paradoxical mother-child relationship in which the mother seems to have been out of touch with the infant’s emotional needs, yet at the same time has controlled her baby’s thoughts, feelings, and spontaneous gestures in a sort of archaic ‘double-bind’ situation. One might wonder whether such mothers felt compelled to stifle every spontaneous affective movement of their babies because of their own unconscious problems” (1984, p.391).

Indeed, in one of McDougall’s earlier papers it was emphasised how certain mothers do not permit their young children to develop their own autonomous ability to maintain a protective barrier against both interpersonal and intrapersonal stimuli: “...she does not create conditions in which the baby can take over this function ... she may overdo her protective role, thus keeping her baby tied to her bodily presence” (1974, p.446).
The degree to which a child is able to evolve from a preconceptual and somatic level to a conceptual level of affect regulation thereby enabling a gradual desomatisation, differentiation and articulation of affective experience is largely a function of a caregiver's encouragement of the child's experimentation with experiences of transitional relatedness (Bagby and Taylor 1997). This child's progress from conditions of initial dependency on the caregiver to a state of relative autonomous functioning allows for the child's gradual appreciation of the meaning and signal function of affects and for the development of the capacity to contain, tolerate, and articulate dysphoric affect without having to rely either upon the caregiver or some externalised physical behaviour aimed at reducing unpleasant tension (Taylor 1992). Similarly, such progress not only fosters the child's tolerance of negative emotional experience but also contributes towards the capacity to anticipate and experience positive affect as well (Bagby and Taylor 1997).

Typically, although the overwhelming majority of mental health literature only indirectly suggests a contributory role for alexithymia towards the development of DSH, that is to say, alexithymia is reported as a correlate of BPD (Bagby and Taylor 1997) for which DSH is one of nine DSM-IV diagnostic criteria, numerous implicit but nevertheless persuasive published references to its pathogenic bearing upon the development of DSH can be found. For example, within an early examination of 'wrist slashing', Grunebaum and Klerman relate how "...the patient reports, usually inarticulately, the onset of vague feelings of discomfort ... and often does not or cannot verbalize the extent of her tension to her doctor or other members of the staff. The ability to communicate discomfort is a critical variable in determining whether a slash will occur" (1967, p.528).
More recently, in one of the few studies that set out to investigate several suggested key correlates of DSH (including alexithymia), Zlotnick et al. hypothesised how the “...diminution in the communication of affect has been described as one of a sequence of events that lead to a self-mutilative act. The act of self-mutilation itself becomes an expression of these unspoken feelings of anger or despair ... Rather than use words to express feelings, an alexithymic’s communication is an act aimed at making others feel ... Thus, alexithymia can be conceptualised as a key characteristic of self-mutilators” (1996, p.12).

In order to investigate the potential significance that certain variables including alexithymia and the number of different self-injurious behaviours carried out by self-harmers might have for DSH, Zlotnick et al. (1996) tested for the presence of these variables among 103 female psychiatric inpatients who had recently engaged in DSH. Furthermore, the independence and relative associations between these variables were also examined. The data generated revealed that 79% of these self-harmers disclosed histories of childhood sexual abuse. With regard to the predictive power of these variables for the presentation of DSH, it was observed that the number of self-injurious behaviours was most significant. The next most significant predictive value was generated for subjects’ scores on the Dissociation Experiences Scale (Bernstein and Putnam 1986). The third highest value was obtained for scores on the Toronto Alexithymia Scale (Taylor 1984). Furthermore, with regard to the independence of these various features of DSH, Zlotnick et al. emphasised how the “…finding that dissociative symptoms, alexithymia, and number of self-injurious behaviours were independently related to self-mutilation supports the notion that self-mutilators are a heterogeneous group characterized by different key problems” (1996, p.15). This observation would appear to offer some support for the suggestion made earlier within
the literature review of DSH that such a behaviour ought not to be considered only as a symptom of one diagnostic category (for example, BPD). Rather, DSH might best be viewed as a means of managing experiences of dysphoric affect that develop within the context of a diverse spectrum of neurotic and characterological disorders.

To conclude this brief review of the literature that investigates possible associations between alexithymic disturbance and DSH it is worthwhile referring to Margaret Woodruff's (1999) recent psychoanalytic interpretation of the posited relationship between DSH and the self-harmer's disturbed capacity for symbolisation. The analysand (Ms. A), a 21 year-old victim of repeated childhood physical and sexual abuse that had involved extreme levels of psychological and physical sadism by multiple perpetrators, was considered not so much incapable of verbalising her distress as she was unable to tolerate putting her anguish into words. Woodruff proposes a reformulation

"...of what other authors have noted about self-cutters: their inarticulateness and their impoverished use of symbolization ... In my work with Ms. A it became clear to me that she did not have a deficit in her capacity for symbolization; indeed, she had superior verbal intelligence ... How, then, could I understand her speechlessness and the insistent, self-destructive acting out in our work? I believe that her capacity for symbolization was intact but intolerable to her" (1999, p.701).

Although it is not an intention of this research to accommodate Lacanian theoretical interpretations of either the pathogenesis or the meaning of the dynamics surrounding DSH, Woodruff's (1999) reinterpretation of how the use of language might bear upon the activity of DSH is included here by virtue of its ability to challenge the relatively ubiquitous assumption that DSH reflects some kind of disturbed capacity for
symbolisation. Perhaps then, for Ms. A, language was not capable of imparting the significance of her childhood experiences. Drawing upon Lacan’s (1978) conceptualisation of how the linguistic signifier comes to replace that which it signifies thereby negating the immediacy of the entity it represents, Woodruff proposes “…that in self-mutilation, the thing, the cut, takes the place of a word, or symbol. Although I do not disagree with those who have focussed on cutting as a communicative act, I argue that what is being communicated is a *violent rejection of speech*” (1999, p.702-703, italics in original).
Cumulative trauma and dissociative states

Purported associations between DSH and dissociation (for example, Low et al. 2000), or more specifically, DSH and depersonalisation (for example, Pao 1969), are not principal subjects of inquiry within this research. Certain studies that have investigated the relationship between dissociative states and DSH have been referred to in the preceding literature review to the extent that they have challenged commonly held assumptions of a direct association between gross trauma and DSH (for example, Zweig-Frank et al. 1994a, 1994b; Brodsky et al. 1995) or have a bearing upon an understanding of the potential relationship between impulsiveness, ambivalence and DSH (Pao 1969). However, as part of this literature review of cumulative trauma it is useful to briefly refer to the those studies that have suggested possible links between the experience of cumulative trauma (as distinct from gross trauma) and dissociative states.

Within a review of purported associations among trauma, dissociative states, and somatisation, Rodin et al. (1998) consider that for the most part, the potential significance of non-catastrophic cumulative trauma to the later development of dissociative disorders has not been adequately assessed. Indeed, Rodin et al. emphasise that any consideration of the relationships that might exist between antecedent trauma and dissociation needs to be extended

"...to include not only discrete gross events but also 'microscopic', repetitive emotional injury. Most of the psychiatric literature linking dissociation with trauma has focussed on gross trauma, particularly physical and sexual abuse. However, repetitive subtle trauma, specifically parental failures in attunement and responsiveness to the emotional experience of the child, may have profound effects on the child's capacity to organise affects and perception" (1998, p.162).
Draijer and Langeland (1999) investigated the predictive value of childhood experiences of gross trauma, prolonged separations from caregivers, and neglect (which was defined by the authors as non-catastrophic caregiver dysfunction) to the development of adult dissociation. Here, adult dissociation included experiences of depersonalisation. Results obtained from this study of 160 psychiatric inpatients demonstrated that overwhelming childhood experience (for example, physical and/or sexual abuse) was most strongly related to severe dissociative episodes during adult life. However, these results also revealed the significance of perceived caregiver dysfunction in the absence of such overwhelming childhood experience for adult dissociation.

Draijer and Langeland conclude how a child’s experience of such dysfunctional caregiving (in particular, maternal dysfunctional caregiving) is liable to adversely bias the acquisition of self-regulatory functions and thereby increase later susceptibility to dissociative experiences:

“The fact that maternal dysfunction is important in the explanation of adult dissociation disconfirms the theoretical assumption of a sheer trauma-related etiology of dissociation. We suppose that dysfunction and unavailability of caretakers contribute to ... the vulnerability to overwhelming feelings and the use of dissociation as a defence against them” (1999, p.383).

Furthermore, the authors observe that, “…the quality of the object relations (measured by ... parental availability measures and the Parental Bonding Instrument) is a major factor in adult outcome” (1999, p.383). This observation is especially pertinent to this current research within which the Parental Bonding Instrument (Parker et al. 1979) is used to examine recalled childhood and adolescent experiences of dysfunctional
caregiving methods by those participants who have engaged in DSH and control
group participants.

It should be emphasised that an important qualification to the relevance of Draijer and
Langeland’s (1999) study to this current research concerns the psychiatric diagnoses
of a large minority of the inpatients who participated in their study. Here, the authors
disclosed that 36% of these participants suffered from ‘psychotic symptoms’.
Although no details were given regarding the precise diagnoses for these individuals,
it is not unlikely that schizophrenia was among them. As was previously noted (see
page 33), the diagnosis of schizophrenia is one of several exclusion criteria for this
research design.
Cumulative trauma and the importance of adolescence

The presentation of DSH prior to adolescence is highly atypical. Although references can be found that refer to an individual’s use of some indirect and/or direct self-harming behaviours before the onset of puberty (for example, a female analysand’s recollection of her repeated interference with wound healing from six years of age (Kafka 1969) or the superficial lacerations to the wrist by a nine year-old (Gardner and Gardner 1975)), such reports are exceptional.

Reference has already been made (see page 41) to several adolescent conditions posited to be involved in the development of DSH during this period of development (Walsh 1987; Walsh and Rosen 1988). These adolescent conditions (for example, recent loss, body alienation, peer conflict and substance misuse) were considered to influence the adoption of DSH during adolescence only when they occurred in the context of certain potentially catastrophic, earlier childhood conditions (namely, placement or divorce, physical and/or sexual abuse, illness and/or surgery, and domestic violence and/or alcohol abuse). It is a suggestion of this current research, however, that although such indices might account for the presentation of DSH among a significant proportion of adolescents, the combination of such childhood and adolescent indices are frequently not reported by many others.

Any theoretical model that considers the relevance of adolescence to the presentation of DSH must recognise not only how this ‘transitional’ phase is influenced by the earlier period of childhood development that was characterised by chronic dysfunctional caregiving but must also take into account how such disturbed caregiving might persist throughout puberty and early adult life. Indeed, recognising the importance of the continued development of an increasingly autonomous capacity for affect tolerance during adolescence, Krystal emphasises that
“...whereas the fundamental operations related to this freedom to use one’s own resources take place in the establishment of the separation of the self-representation from the object representation in early childhood, they are subject to repeated revisions. The time such revisions occur most frequently and conspicuously is adolescence, when it is necessary for the youngster to practice assuming an adult role and to function with increasing self-sufficiency” (1975, p.198).

This gradual detachment from the libidinal tie to the original objects is integral to the adolescent’s successful adoption of those self-regulatory functions that had been previously reserved for caregivers. Returning to Krystal,

“...the renunciation of the mother-child relation as the model for the world, which takes place in adolescence, makes possible the advancement of conscious self-integration, self-possession, and self-awareness of one’s affects as signals to oneself ... What one needs to be able to do with one’s emotions is not to ‘discharge them’ or ‘express them’ but to live them and experience them consciously, fully, and in an undissociated or distorted form” (1972, p.121, italics in original).

It is a contention of this current research that the degree to which the adolescent is able to successfully replace this closed and dyadic representation of the world with one that is able to accommodate increasingly mature object relationships is partly a function of the encouragement received throughout early childhood and adolescence that such autonomous functioning is at least acceptable to caregivers. Drawing upon Masud Khan’s (1963) conceptualisation of cumulative trauma as chronic environmental failure, Cooper (1993) proposes how a prolonged and ‘over-involved’ caregiver-child interaction is liable to sponsor disturbances in the adolescent’s body-
ego development – an otherwise fundamental developmental achievement that occurs within the extended course of psychic integration.

The importance that Khan attached to adolescence in the context of cumulative trauma was explicit:

"The phase at which the child himself acutely becomes aware of the distorting and disruptive effects of this collusive bond with the mother is at adolescence. Then the reaction is dramatically rejective of the mother and all the past cathexes of her ... This, of course, makes the adolescent process of integration at once tortuous and impossible. At this point attempts at integration which willfully (sic) negate past libidinal investments, ego interests, and object ties are instituted" (1963, p.301-302).

Examining the influence that adolescence might have upon DSH, Gardner (2001) considers how those conflicts surrounding separation-individuation that are associated with this developmental phase might persist beyond the limited chronological span of adolescence. Here, Gardner draws attention to how

"...some of the psychic dilemmas so characteristic of adolescence are the same oscillations that characterise the deeply embedded encaptive conflict – those involved in wanting and leaving, possession and rejection. Self-harm typically begins in adolescence, and is characterised by an adolescent state of mind, even when the person harming themselves may be long past adolescence. An adolescent mind-set is not necessarily chronologically based, but can remain powerfully present and unresolved and so reactivated under pressure" (2001, p.58).

To conclude this review of cumulative trauma and the importance of adolescence it is useful to mention a case history reported by Waldenberg that demonstrated an
adolescent self-harmer’s violent rejection of her mother, who was considered by her
to represent an overwhelming challenge to her attempts at achieving and maintaining
autonomy and independence:

“This patient cut herself actually in her mother’s presence, threatening to cut her
own throat if her mother tried to hinder her. She complained that her mother
was overwhelming, domineering and interfering ... It is here undeniable that
cutting was an act against the patient’s mother and that part of the patient’s
satisfaction was in compelling her mother to sit by helpless for once until she
finished slashing herself. This could be viewed as a struggle for autonomy and
individual existence as opposed to continuing the symbolic relationship with
her” (1972, p.43).
BPD, DSH and resilience against dysfunctional caregiving

Several studies (for example, Goldney 1985; Martin and Waite 1994) have sought to examine suggested continuities between the experience of dysfunctional caregiving in terms of selective care and overprotection and the later presentation of self-injurious behaviours. These studies have typically investigated relationships between such dysfunctional caregiving and self-injury where the type of self-injury examined is either limited to suicide attempts by overdose (Goldney 1985) or else is not clearly defined either in terms of the degree of suicidal intent involved or the form of self-harm employed (Martin and Waite 1994). In addition, several other studies (Frank & Paris 1981; Paris & Frank 1989; Zweig-Frank & Paris 1991) have only indirectly considered the implications of dysfunctional caregiving for the development of self-harm. These investigations focussed on the aetiological significance of recalled experiences of overprotection and selective care for the development of BPD for which DSH is one of several diagnostic criteria and was therefore only considered by implication.

Despite several limitations in the design of these studies, for example, the use of instruments of limited reliability and validity to measure the variables of parental overprotection and neglect (Frank & Paris 1981) and the absence of male subjects within case sample groups (Frank & Paris 1981, Paris & Frank 1989), they nevertheless have generated findings that do point towards the need to consider in greater depth how intrusive caregiving styles might be implicated in the pathogenesis of DSH. In particular, such investigations can be used to help explore how alternative combinations of maternal and paternal caregiving styles in terms of care and overprotection might account for some of the variance in the development of BPD, and by implication, DSH. Furthermore, as will be discussed later, an awareness of
how such combinations might influence the child’s psychic development could allow for a broader understanding of the role of autonomy in the acquisition of resilience (Fonagy et al. 1994) for those adolescents and adults who have experienced disturbed, non-catastrophic chronic caregiving failure yet who do not to engage in DSH.

Referring to Masterson and Rinsley’s (1975) hypotheses regarding overprotective maternal interference with the child’s autonomous development, Zweig-Frank & Paris (1991) studied both male and female borderline and non-borderline patients who were drawn from a psychiatric clinic and a student mental health clinic. Data generated from the use of the Parental Bonding Instrument (Parker et al. 1979) showed that in contrast to previous studies whose results did not support an overprotection hypothesis with regard to the aetiology of BPD (Frank & Paris 1981, Paris & Frank 1989), “…patients with borderline personality disorder remembered both their fathers and their mothers as having been significantly less caring and more controlling than did the nonborderline patients” (Zweig-Frank & Paris 1991, p.648). Recognising how these data conformed to Parker’s (1983) conceptualisation of ‘affectionless control’, the authors emphasised how such a biparental failure stood in contrast to earlier “…theoretical speculations which have tended to focus exclusively on the role of the mother … It is possible that the child who will become a patient with borderline personality disorder is unable to buffer negative experiences with one parent by positive experiences with the other” (Zweig-Frank & Paris 1991, p.650).

Within a framework provided by attachment theory (Bowlby 1969, 1973, 1980), Fonagy et al. (1994) investigated how the psycho-social processes involved in the child’s acquisition of a reflective self-function might contribute towards the development of resilience. Here, the authors distinguish between the ‘pre-reflective or physical self’, an earlier developmental achievement that contains immature,
concretised and inaccurate representations of interpersonal relations, and the 'reflective or psychological self', a later maturational attainment that is characterised by the capacity to “...represent interactions between self and other which contain mental experiences, feelings, perceptions, beliefs, and so on, as well as reflections upon these experiences in mental state terms” (Fonagy et al. 1994, p.247). This later faculty is considered not to fully evolve until after latency and might not completely emerge until late adolescence.

Fonagy et al. (1994) consider the bearing that qualitatively different disturbances in caregiving might have upon the child’s acquisition of reflective-self functions. With regard to gross potentially traumatic events such as child abuse, the authors suggest how such aversive experiences “...may lead to a defensive inhibition of particular mental functions if the use of such functions is consistently linked with the experience of anxiety or unpleasure. Reflective-self function is vulnerable to such inhibition ... In our view, narcissistic or borderline states may be understood as severe dysfunctions of reflective-self functions” (Fonagy et al. 1994, pp.249).

In contrast to these severe disturbances of reflective-self function that might arise subsequent to gross childhood experiences such as physical and/or sexual abuse, Fonagy et al. (1994) point out that a mild inhibition of this mental process may be relatively common among individuals who had experienced inattentive and insensitive caregiving as children. Similarly, in the context of this current research, it is not unreasonable to suggest how such a mild inhibition or impairment of reflective-self function might also develop subsequent to the child’s experience of caregiving styles characterised by the combination of chronic parental overprotection and control and selective care that reflect the intrusion of parental pathology into the parent-child dyad. For example, within the context of Khan’s (1963, 1964) conceptualisation of
cumulative trauma, Galenson proposes that the mother’s interaction with the child is a function of

"...the child’s current needs and the particular manner in which these needs intermesh with both the conflict-free and conflictual portions of the mother’s personality ... I know of some very ‘successful’ mothers who thrive on their closeness to their newborns and young infants, particularly as a satisfaction of their own unresolved infantile attachments. Yet these same ‘successful’ mothers of young infants have trouble when the era of separation begins in earnest...” (1964, p.279).

This proposal is congruous with Fonagy et al.’s (1994) consideration of how the hypothesised protective aspect of reflective-self function is most likely to be at risk of compromise in those circumstances where a repetitive, transgenerational transmission of disadvantage occurs. Here, the authors emphasise that the “...extent of this risk will correspond to the likelihood that the caregiver inaccurately attributes his or her own mental states to the child” (1994, p.249). Should such attributions develop into a chronic pattern of disturbed caregiving that is characterised primarily by the caregiver’s unsatisfied needs for narcissistic supplies from the environment then it is possible that the child will not have the opportunity to develop resilience against the psychopathogenic effects of cumulative trauma.

It is worthwhile returning to Zweig-Frank & Paris’ (1991) suggestion that a developmental risk for the evolution of BPD might involve the child’s inability to defend against the detrimental experiences associated with one caregiver with the favourable experiences associated with the other. In an extension of this suggestion, it can be argued that for those other children who are able to achieve such a defensive
compromise that would allow for the development of at least some degree of reflective-self function, the risk of developing BPD is reduced.

This argument is compatible with the conclusions drawn by Fonagy et al. (1994) who analysed the data generated from transcripts of the Adult Attachment Interview (George et al. 1985) that were completed by mothers and fathers who were expecting their first child. Here, the authors proposed that

"...the data offer clear support for the independence of the influence of the two parental internal working models and the security of infant-parent relationship in the first 18 months of life ... We assume that on the basis of manifestations of the parent’s working model the child develops and maintains distinguishable sets of mental representations of relationship expectations with each of his or her primary caregivers. We do not yet know if, how and when such separate internal working models are combined...". (Fonagy et al. 1994, p.240).

Since it has been suggested (see page 111) that self-reflective functions do not fully emerge until late adolescence, then the development of these functions remains susceptible to environmental impingement (or cumulative trauma in the context of this current research) during those maturational periods when issues relating to autonomy and independence are in the ascendance (Burnham & Giovacchini 1969; Khan, 1963; Krystal, 1975). The importance of the role of adolescence to the development of DSH has already been discussed in some detail. However, it is important to briefly reconsider this role in light of Fonagy et al.’s (1994) notion of resilience.

Although Fonagy et al. (1994) recognise the difficulty in predicting if and when the child’s separate internal working models of relationship expectations with either caregiver combine, it is most probable that any such combination would have at least arisen at some point during adolescence. This assumption would appear to be
consistent with the authors’ proposal that reflective-self functions may not become fully operational until late adolescence. It is a suggestion of this current research that during adolescence, the combination of these models (and thereby the erosion of any protective insulation that might have existed between them) is contemporaneous with the child’s markedly increased efforts to achieve independence from both caregivers. Where this heightened struggle for autonomy arises against the background of persistent caregiver control and overprotection and caregiver provision of care that is contingent upon the child’s avoidance of attempts at separation, the child is no longer able to resort to his previous defensive manoeuvre of relying upon any separate and benign parental working model that might have provided reassurance that his efforts towards attaining independence are permissible. As such, the child may be confronted with the uncomfortable experience of ambivalence both towards this combined internal representation and his recognition of his own dependency needs.

To conclude this appreciation of adolescence as a developmental phase occurring within the epigenetic context of the earlier, disturbed caregiver-child environment, it is useful to briefly refer to Burnham’s and Giovacchini’s (1969) understanding of the implications that puberty might have for the instigation of DSH. This understanding is not incompatible with that aspect of Fonagy et al.’s (1994) paper that suggested how the pre-adolescent, ‘resilient maltreated child’ is able to achieve some degree of resilience in early life that affords him the opportunity to overcome early childhood developmental challenges. It was within Burnham and Giovacchini’s ‘Symposium on impulsive self-mutilation’ that Burnham proposed how individuals who engage in DSH “...experience difficulty in all stages of childhood, including the oedipal, and they have the skills and intelligence to carry them through a storm latency. But puberty brings an upsurge of desire for intense object relationships with, for them,
significant failures that recall the dismal failures of infancy and evoke the regressive symptomatology" (1969, p.225).
CHAPTER 2: RESEARCH OBJECTIVES AND HYPOTHESES

Research objectives

The literature review has illustrated that DSH has most often been conceptualised as occurring predominantly among females who have experienced gross trauma during childhood, in particular, childhood sexual abuse, physical abuse, gross neglect and loss. Alternative aetiological models that seek to investigate the development of DSH among individuals for whom such experiences have not been reported are noticeable by their near absence from the published literature. This review has also highlighted the significant tendency to characterise DSH almost exclusively as an impulsive behaviour that occurs most often among individuals diagnosed with BPD.

Apparent regularities with regard to the gender and diagnosis of individuals who engage in DSH and those developmental factors that are considered to be implicated in the aetiology of DSH might have arisen partly as a result of conducting research on inpatient psychiatric wards, the recruitment criteria used for selecting research participants, the quality of research method and design, and the past inclination to diagnose BPD with several of the diagnostic criteria unfulfilled. Furthermore, the idiosyncratic features of the BPD diagnosis with regard to differential gender prevalence rates and sexual abuse as a predisposing factor can be seen to have influenced the reporting of such regularities.

The perception of DSH as an impulsive behaviour is ubiquitous in published literature wherein self-harmers are perceived as tending to spontaneously engage in episodes of DSH with relatively little or no deliberation. There has been a noticeable failure within the literature to adequately differentiate between impulsiveness as a general character trait among self-harmers and impulsiveness with regard to an act of DSH.
itself. Furthermore, both the incidence and the function of the experience of ambivalence prior to acts of DSH can be seen to have been open to debate. Significantly, there has been no examination of whether impulsiveness with regard to acts of DSH might be influenced by the experience of ambivalence towards the prospect of engaging in DSH.

Several studies referred to in the literature review reported an excessive use of alcohol and drugs among individuals who engage in DSH and these individuals reliance upon alcohol as attempts to reduce the experience of escalating tension. However, insufficient systematic research into the potentially contributory role of alcohol consumption to acts of DSH has been generated. Those few studies that have investigated the degree to which alcohol use might be implicated in DSH or whether individuals who engage in DSH do so whilst under the influence of alcohol have either failed to detect discernible patterns linking alcohol consumption with self-harm or have examined the co-occurrence of alcohol intoxication and DSH only among females who had in the majority reported histories of childhood sexual and/or physical abuse.

There are eight primary objectives within this research and these are listed below.

**Objective 1:** To consider the validity of the assumption that more females than males have histories of DSH (principal hypothesis 1).

**Objective 2:** To examine the extent to which DSH occurs most often among individuals diagnosed with BPD (principal hypothesis 2).

**Objective 3:** To consider how the experience of caregiver overprotection might be implicated in the development of DSH among those individuals who have not experienced gross trauma (principal hypothesis 3). This potential influence of
parental overprotection will also be examined separately for self-harmers diagnosed with BPD and for self-harmers without a diagnoses of BPD (subsidiary hypotheses 4 to 6).

**Objective 4:** To consider how the experience of selective parental care might be implicated in the development of DSH among those individuals who have not experienced gross trauma (principal hypothesis 7). As with parental overprotection, the influence of selective parental care will also be considered separately for self-harmers diagnosed with BPD and for self-harmers without a diagnoses of BPD (subsidiary hypotheses 8 to 10).

**Objective 5:** To examine the level of self-harmers’ impulsiveness (principal hypothesis 11). The extent to which levels of impulsiveness differ according to whether subjects have been diagnosed with BPD or have not been diagnosed with BPD are investigated within subsidiary hypotheses 12 and 13.

**Objective 6:** To consider whether impulsiveness associated with DSH might function partly as a result of ambivalence experienced by self-harmers towards this behaviour (principal hypothesis 14)

**Objective 7:** To investigate how self-harmers’ use of alcohol might be involved in DSH (principal hypotheses 15, 17 and 18 and subsidiary hypothesis 16).

**Objective 8:** To examine the degree to which individuals with histories of DSH demonstrate dysfunction in terms of alexithymia, frustration tolerance, and dependency and separation (principal hypothesis 19 and subsidiary hypotheses 20 to 22).
Hypotheses

There are 22 hypotheses, 10 of which are principal hypotheses. Principal hypotheses are shown in bold type. Principal and subsidiary hypotheses are listed below.

1. **There is no significant difference between the total number of male patients and the total number of female patients with histories of DSH referred to the researcher.**

2. **There is no significant difference between the total number of case sample group participants diagnosed with BPD and the total number of case sample group participants not diagnosed with BPD.**

3. **Case sample group participants (BPD and non-BPD) will record significantly higher scores than psychiatric control group participants (BPD and non-BPD) for recalled maternal overprotection and recalled paternal overprotection.**

4. **Case sample group participants (BPD) will record significantly higher scores than psychiatric control group participants (BPD) for recalled maternal overprotection and recalled paternal overprotection.**

5. **Case sample group participants (non-BPD) will record significantly higher scores than psychiatric control group participants (non-BPD) for recalled maternal overprotection and recalled paternal overprotection.**
6. There are no significant differences in terms of subjects’ scores for recalled maternal overprotection or recalled paternal overprotection between case sample group participants (BPD) and case sample group participants (non-BPD).

7. **Case sample group participants (BPD and non-BPD) will record significantly lower scores than psychiatric control group participants (BPD and non-BPD) for recalled maternal care and recalled paternal care.**

8. Case sample group participants (BPD) will record significantly lower scores than psychiatric control group participants (BPD) for recalled maternal care and recalled paternal care.

9. Case sample group participants (non-BPD) will record significantly lower scores than psychiatric control group participants (non-BPD) for recalled maternal care and recalled paternal care.

10. There are no significant differences in terms of participants’ scores for recalled maternal care or recalled paternal care between case sample group participants (BPD) and case sample group participants (non-BPD).

11. **There are no significant differences in terms of participants’ scores for 17 impulsiveness and KAPP impulse control between case sample group participants (BPD and non-BPD) and psychiatric control group participants (BPD and non-BPD).**
12. There are no significant differences in terms of participants’ scores for I7 impulsiveness and KAPP impulse control between case sample group participants (BPD) and psychiatric control group participants (BPD).

13. There are no significant differences in terms of participants’ scores for I7 impulsiveness and KAPP impulse control between case sample group participants (non-BPD) and psychiatric control group participants (non-BPD).

14. There is a significant positive association between the experience of ambivalence towards the prospect of engaging in DSH and the tendency to delay or postpone DSH among case sample group participants (BPD and non-BPD).

15. Case sample group participants (BPD and non-BPD) will record significantly higher scores than psychiatric control group participants (BPD and non-BPD) with regard to average units of alcohol consumed per week.

16. There is no significant difference with regard to average units of alcohol consumed per week between case sample group participants (BPD) and case sample group participants (non-BPD).

17. There is no significant difference in terms of the frequency with which participants engage in DSH whilst intoxicated with alcohol between case sample group participants (BPD) and case sample group participants (non-BPD).
18. Among case sample group participants (BPD and non-BPD) who typically or always engage in DSH whilst intoxicated with alcohol there is no significant difference between the number who are aware of the need to engage in DSH prior to intoxication and the number who are not aware of the need to engage in DSH prior to intoxication.

19. Case sample group participants (BPD and non-BPD) will record significantly higher scores than psychiatric control group participants (BPD and non-BPD) with regard to Karolinska Psychodynamic Profile (KAPP) subscales for alexithymic traits, frustration tolerance and dependency and separation.

20. Case sample group participants (BPD) will record significantly higher scores than psychiatric control group participants (BPD) with regard to KAPP subscales for alexithymic traits, frustration tolerance and dependency and separation.

21. Case sample group participants (non-BPD) will record significantly higher scores than psychiatric control group participants (non-BPD) with regard to KAPP subscales for alexithymic traits, frustration tolerance and dependency and separation.

22. There are no significant differences with regard to participants’ scores for KAPP subscales for alexithymic traits, frustration tolerance and dependency and separation between case sample group participants (BPD) and case sample group participants (non-BPD).
CHAPTER 3: METHODOLOGY

The choice of the type of clinical environment within which to conduct this research, the criteria applied with regard to the selection of participants with histories of DSH, the choice of which NHS Trust to use and the decision to make use of case histories in addition to quantitative research instruments were informed by several important points that were considered fundamental to the validity of this research. These points are detailed below.

The clinical environment and the criteria for selection of participants.

1. A decision was made not to conduct research within any psychiatric inpatient unit in order to avoid potentially reporting a disproportionate predominance of female self-harmers.

2. Since the overwhelming majority of psychiatric patients who presented to A&E with current or past histories of DSH were not admitted to psychiatric wards, research that was conducted exclusively on such wards would have failed to take into account a substantial number of potential participants.

3. The conduct of research outside of psychiatric wards enabled a more inclusive and representative case sample group to be collected by including patients with both past psychiatric and DSH histories who attended A&E with non-psychiatric presentations.

4. Patients who had never been in contact with mental health services but who had a past history of DSH were also included in the case sample group. Here, since a significant majority of episodes of DSH may not result in presentations to hospitals for treatment (Hawton et al. 2002), the inclusion of this group of participants within
the case sample group was considered to be essential to obtaining a more representative sample of that wider population who engage in DSH.

5. The collection of information from subjects outside of psychiatric inpatient wards avoided the potential influence that any psychiatric treatment effects might otherwise have had on subjects' responses.

The choice of the NHS Trust

The Accident and Emergency Department at University College London Hospital (UCH) is a clinical facility associated with University College London. Several features that are peculiar to this hospital made significant contributions to the successful recruitment of case sample group participants.

1. UCH provides a specialist plastic surgery service. Several neighbouring NHS Trusts use this service when they refer patients to it who require surgery as a result of having engaged in relatively severe DSH. Several of these patients referred for plastic surgery were approached by the researcher so that they might take part in this research.

2. The A&E department at UCH operates a policy of common law detention that relates to patients who are considered to be at risk to themselves or others. All patients whose presentations included current DSH were prevented from leaving A&E by security staff during the course of this research until they had been declared fit for discharge on both medical and psychiatric grounds. Although no patient was detained under common law for the purposes of this research, this policy nevertheless provided the researcher with sufficient opportunities within which to assess patients' suitability for inclusion in the research and, where appropriate, to collect data from consenting participants.
3. UCH is located in central London and serves the health care needs of several, densely populated, ethnically diverse and socio-economically eclectic boroughs including Camden and Islington. UCH also provides medical services to a significant number of transient or temporary subpopulations (for example, students, tourists and commuters), to those with no fixed abode (rough sleepers) and to those with no fixed permanent abode (residents in hostels and shelters). The location of UCH was seen to be able to provide this study with a markedly catholic resource of potential research subjects, and as such, the opportunity to collect data from groups that were substantially representative of the broad spectrum of people who engage in DSH.

The use of case histories

The substantial amount of information that was recorded during interviews with case sample group participants allowed for the presentation of case histories of several self-harming patients (see pages 230-264). The value of using case histories in addition to quantitative research instruments is that they are able to vividly highlight features of participants’ developmental histories and details of episodes of DSH that are considered to be central to the premises of this study.
CHAPTER 4: RESEARCH METHOD

Project registration and ethical approval
This research was registered with the University College London Hospitals Research and Development Directorate and approved by the Joint UCL/UCLH Committees on the Ethics of Human Research, the Local Research Ethics Committee of Camden and Islington Community Services NHS Trust and the Ethical Committee (Research) at the Institute of Psychiatry, King’s College London (see Appendix X).

The status of the researcher
During this research, the researcher was appointed an honorary research fellow in the A&E Department at UCH.

Subjects
(a) Case sample group subjects
Participants: Individuals between 16 and 60 years of age with a current or past history of DSH by laceration or burning who presented to the A&E Department at UCH.

Exclusion criteria:
1. Diagnoses of schizophrenia, learning disability or pervasive developmental disorders.
2. Individuals whose self-harming behaviours had occurred for the first time at any point after the experience of traumatic life events. These events included childhood sexual and/or physical abuse, gross neglect during childhood, rape, torture, death of a family member or a close friend, parental divorce or separation, own divorce or separation, placement in Social Services care and significant illness.
3. Individuals who had engaged in DSH on less than five separate occasions.

4. Individuals who cut themselves as a means to complete suicide.

5. Individuals who had last engaged in DSH more than three years ago.

Number of subjects in the case sample group: 81.

(b) Psychiatric control group subjects

Individuals between 16 and 60 years of age without a history of DSH by laceration or burning who attended the A&E department with psychiatric presentations. Members of the control group were matched with members of the case sample group according to age, sex, psychiatric diagnoses, socio-economic status and ethnicity.

Exclusion criteria: The exclusion criteria with regard to psychiatric diagnoses and gross trauma are the same as for case sample group participants (see above).

Number of subjects in the psychiatric control group: 62.

(c) Frequency and duration of procedures

Data from patients were gathered over a period of 25 months between November 2000 and December 2002.

Each subject participated in the data-gathering exercise on one occasion only. The duration of the administration of the self-report tests and the semi-structured interview was approximately 45-60 minutes.

(d) Payments to subjects

Nil to members of the case sample group. £10 to each member of the control group. Case sample group members did not receive payment in order to remove any slight risk of indirectly 'encouraging' DSH by patients for financial reward.
1. The researcher was notified by airpager and/or mobile telephone on a 24-hour basis (seven days a week) when any patient with a current or past history of DSH presented to the A&E department. These referrals were made by A&E staff and/or members of the psychiatric liaison team. Patients were not told by these staff members that a referral had been made to the researcher. Information given to the researcher during these referrals included the patient’s name, date of birth and presenting complaint. As a member of the A&E team and being bound by a duty of confidentiality to patients, this disclosure of information to the researcher did not compromise the confidentiality of information or the privacy of these patients.

2. This system of referral was not considered to have been necessary with regard to collecting data from psychiatric control group participants. This was because the majority of psychiatric patients attending the A&E department did not have past or current histories of DSH. As such, since the researcher was present within the A&E department for approximately 80 hours per week during the data-gathering exercise, a sufficient number of control group participants were recruited without having to resort to taking referrals whilst outside of the A&E department.

3. Patients’ current casualty cards were examined in order to ascertain whether they met any of the exclusion criteria noted above. Where patients had attended UCH on occasions prior to their current presentation, additional information regarding their potential suitability for inclusion in the research was obtained from scanned old notes accessed from the Electronic Patients Records System available in the A&E department.

4. Where patients had previously been admitted to psychiatric wards within the United Kingdom, these wards were contacted immediately with the patients’ consent
and requested to fax any pertinent information (for example, psychiatric discharge summaries) that they had with regard to these patients to the A&E department. This information was also used to check whether patients met any of the exclusion criteria.

5. In addition to reviewing current casualty cards, scanned old notes and psychiatric discharge summaries, patients were also 'screened' for meeting exclusion criteria during their interview with the researcher (see Appendix V, page 361 and Appendix VI, page 367).

6. At the start of all interviews that were held in private with potential participants, the researcher introduced himself as an honorary research fellow investigating repetitive skin-cutting. Details regarding procedures used to obtain informed consent from potential participants are described below.

7. No acutely distressed patients or patients in a dissociative state were approached by the researcher until they were settled. When there was insufficient time available to the researcher to seek consent from such patients after they had become settled and before their discharge from the A&E department, these patients were given copies of the participant information sheet, the participant consent forms and the researcher's contact details to take away. Where appropriate, provision was made for these patients to participate in the research at a later date in the Outpatients' Department of Psychological Medicine at UCH.

8. Where patients met any of the exclusion criteria or refused to participate in the research, the following details were recorded: patient’s name, sex, date of birth, ethnic status, socio-economic status, presenting complaint and psychiatric diagnosis. In addition, either the exclusion criteria met or any reasons given by the patients for their refusal to participate were also recorded.
(f) Obtaining informed consent

The following procedures were used to obtain informed consent from participants:

1. Potential participants were individually told of the nature, design and procedures that were involved in the research. They were given copies of the participant information sheet and participant consent forms. All participants were encouraged to ask the researcher questions regarding the research and their potential involvement in it. When individuals gave their oral consent to participate in the research they were asked to complete and sign the consent forms in the presence of the researcher.

2. The researcher emphasised that participation in the research was voluntary, that no reason needed to be given for refusal to participate in the research and that the patient was free to withdraw from the research at any stage and without any consequence for his or her treatment.

3. No individuals were approached for their consent whilst they were under the influence of alcohol and/or illicit drugs.

4. No individuals who were considered by the researcher to be actively suicidal were approached for their consent.

5. As noted above, no acutely distressed patients or patients in a dissociative state were approached for their consent.

6. The exclusion criteria relating to patients’ psychiatric diagnoses noted above did not allow those patients to participate in the research who were unlikely to have been able to give informed consent.

7. No individual under the age of 16 years of age was approached for the purposes of this research.
**Setting**

This research was carried out at the following locations within University College London Hospitals NHS Trust:

1. UCH Cecil Fleming House: The A&E department, two A&E admission wards, the Intensive Care Unit, four medical admissions wards, one paediatric ward and the Outpatients’ Department of Psychological Medicine.

2. The Middlesex Hospital: The Intensive Care Unit and four medical admission wards.

3. The Elizabeth Garrett Anderson and Obstetric Hospital: One gynaecological ward.

**Procedure**

1. The researcher aimed to arrive at A&E within one hour of having received a referral from the A&E department.

2. Patients whose presenting complaints required their admission to a medical ward were not approached by the researcher whilst they were in A&E. These patients were interviewed on medical wards once their medical conditions had stabilised.

3. Patients brought to A&E under Section 136 of the Mental Health Act 1983 were only approached by the researcher after this section had been removed.

4. All interviews with members of the case sample group and the control group were conducted in private on University College London Hospitals NHS Trust premises within psychiatric cubicles, consulting rooms attached to wards, or interview rooms in the Outpatients’ Department of Psychological Medicine in order to preserve patient confidentiality.

5. Subjects were asked to complete the self-report questionnaires first. Before continuing to the next stage of the interview, the researcher checked that the
questionnaires had been completed correctly. Where items had not been completed correctly, subjects were made aware of this and asked to complete the items appropriately. The remaining two stages of the data-gathering exercise that is, the Karolinska Psychodynamic Profile (Weinryb and Rossel 1991) and then the semi-structured interview were subsequently conducted.

6. Before terminating the interview, subjects were debriefed by the researcher. Here, any questions relating to the research that the subjects had were answered. Subjects were thanked for their participation.

7. Control group participants were paid £10 each at the end of the interview.

8. When, during the course of the interview, a subject disclosed information that met any of the exclusion criteria, the subject was allowed to complete the part of the data-gathering exercise that he was currently engaged in before the interview was brought to an end. Subjects were not made aware that the interview had been prematurely concluded and were still paid £10.

9. Completed casualty cards were photocopied and retained by the researcher for those patients who took part in this research. Any additional information that was available relating to the patients that had a bearing upon this research (for example, psychiatric discharge summaries that referred to patients’ previous psychiatric admissions) were also photocopied and retained. Where a subject was later admitted to a psychiatric ward, a discharge summary pertaining to that admission was obtained in due course by the researcher.
Quantitative measures of subjects’ characteristics


Cumulative trauma as defined in this research encompassed dysfunctional caregiving styles that were characterised principally by chronic, intrusive and excessively controlling parental caregiving (overprotection) that encouraged dependent behaviours and denied efforts to attain autonomy on the part of the child and adolescent. It was posited that attempts by the child to achieve and maintain autonomy and independence were met by the withdrawal of reparative and regulatory functions by the caregiver (selective/contingent care).

The two dimensions of recalled parental behaviour measured by the PBI are overprotection and care. According to the authors, the “...overprotection scale has items suggesting control, overprotection, intrusion, excessive contact, infantilization and prevention of independent behaviour which load high on overprotection, and items suggesting encouragement of independence, which load low on overprotection” (Parker and Lipscombe 1981, p.304). With regard to the care scale, items scoring high on care suggested caregiver affection, sensitivity and emotional support whilst items scoring low on care suggested care provision that was insensitive to a child’s needs.

Subjects are asked to score each of their parents on both of these dimensions as remembered during their first 16 years. The PBI’s two scales comprise 12 items that measure the dimension of recalled care and 13 items that measure the dimension of recalled overprotection. A four-point Likert scale (0 to 3) is used for each item allowing a maximum care score of 36 and a maximum overprotection score of 39.
In terms of validity and reliability, Parker and Lipscombe state that the FBI is "...acceptable as a measure of actual, and not merely perceived parental characteristics" (1981 p.304). Furthermore, the authors observe that those parents "...judged by their children as overprotective also scored themselves as overprotective, and that the children’s judgements of maternal overprotection correlated significantly with overprotection judged by a rater" (1981 p.308). Similar observations were also recorded regarding the validity and reliability of the care scale.

An earlier assessment of the scales’ test-retest reliability (Parker, Tupling, and Brown 1979) was found to be acceptable. Finally, The PBI was found to be suitable for use with subjects drawn from all socio-economic groups (Parker, Tupling, and Brown, 1979).

Parker, Tupling, and Brown (1979) have obtained normative data for the PBI. This data was generated by 131 male subjects and 279 female subjects who attended three general practitioners in Sydney. These subjects’ ages ranged between 12 and 74 years (mean age was 36 years). The authors emphasised that this group of subjects was representative of all socio-economic classes. This normative data is in the form of overprotection and care values according to subjects’ age and sex.


The impulsiveness construct incorporates several broad behavioural dimensions. As such, the choice of which particular measure of impulsiveness to use ought to be guided by a careful consideration of the dimensions that are to be assessed. The aspects of impulsiveness that have been reviewed in this research concern the
supposed inability of self-harmers to endure and contain dysphoric affects without resorting to impulsive behaviours and their inability to delay or postpone acts of DSH. As such, measurements of both an inability to tolerate negative feelings and a tendency to act with relatively little deliberation were considered to be the requisite properties of the psychometric tests to be used.

The impulse control subscale of the KAPP is designed to measure an individual’s capacity to endure urgent and disagreeable affects and the extent to which such affects are expressed adaptively. The Eysenck Impulsiveness Questionnaire (17) separately measures two broad impulsiveness dimensions – venturesomeness and impulsiveness. The former corresponds to risk-taking and adventure-seeking behaviours and is not relevant to this research. However, the latter is conceptualised by Eysenck et al. (1985) as acting without thinking and as such, is relevant to that dimension of impulsiveness reviewed in this research.

The impulsiveness section of the 17 Questionnaire is a self-report instrument consisting of nineteen questions. These questions are in the ‘yes/no’ format and generate binary data (that is, scores of 0 or 1).

The KAPP, an interview-based rating instrument founded substantially on psychoanalytical theory, was designed to measure relatively stable character traits and modes of mental functioning. The KAPP consists of 18 ordinal subscales where each subscale has a definition of the trait or mode to be measured. Of the 18 subscales, 4 were selected for use within this research: Impulse control, dependency and separation, frustration tolerance, and alexithymic traits. Each subscale has three levels and two intermediate levels, resulting in a five-point scale that ranges from a score of 1 (“most normal”) to 3 (“least normal”). Definitions and detailed examples accompany levels 1, 2, and 3. As noted above, the procedure for conducting the
KAPP is that of a semi-structured interview. Weinryb and Rossel state however, that this interview "... should be complemented with open questions designed to elicit the information necessary for the assessment of the subscales. The interview does not consist of structured interrogation, but takes the form of free conversation ... Where vagueness or confusion arise, the interviewer should ask clarifying questions and even confront the subject" (1991, p.8).

The KAPP has been found to be a valid rating instrument in terms of constructs measured and has also demonstrated good test-retest reliability (Weinryb et al. 1991). Significantly, this instrument has also been shown to possess high interrater reliability among interviewers who had received no training in its use (Weinryb et al. 1998).

Eysenck et al. (1985) have shown the I7 Impulsiveness Questionnaire to be a highly reliable measure of impulsiveness and that it is replicable among very different samples of subjects.

Normative data for The I7 Questionnaire was generated (Eysenck et al. 1985) from 559 male and 761 female subjects drawn from a broad spectrum of socio-economic classes in England. Their ages ranged between 16 and 87 years. Male and female age means were 44 years and 39 years respectively. This normative data is in the form of impulsiveness scores according to subjects' age and sex.

3. Dependency and separation: Karolinska Psychodynamic Profile. See Appendices V and VI, pages 356 and 363.

It was suggested in the literature review that difficulties self-harmers might experience with regard to issues surrounding dependency, separation and loss arising partly as a result of caregivers' encouragement of dependent behaviours and
discouragement of efforts at separation might be implicated in the later presentation of DSH.

The ‘dependency and separation subscale’ of the KAPP rates the degree of disturbance with regard to dysfunctional dependency needs and the individual’s experiences of ambivalence towards such needs; anxiety in response to real or imagined threats of separation; and, the capacity to endure external losses and come to terms with them.

See above for details regarding reliability and validity of the KAPP.

4. Frustration tolerance: Karolinska Psychodynamic Profile. See Appendices V and VI, pages 357 and 364.

The suggested contribution that an individual’s compromised capacity to tolerate and regulate frustration and ambiguity might have towards acts of DSH has been reviewed. The frustration tolerance subscale of the KAPP describes a variety of ways of responding to experiences of heightened frustration ranging from adaptive working through to acts of self-directed aggression.

See above for details regarding reliability and validity of the KAPP.

5. Alexithymic traits: Karolinska Psychodynamic Profile. See Appendices V and VI, pages 359 and 366.

Alexithymia has been hypothesised to be a common characteristic among people who engage in DSH. Here, it has been suggested how DSH might serve as a manifestation of unverbalised dysphoric affect. The alexithymic traits scale of the KAPP rates the individual’s capacity to experience, differentiate between and articulate affects and affective states. The scale rates the degree of alexithymic disturbance on a scale that
ranges from an ability to differentiate emotions and ambiguous affective states and articulate them to acting out behaviours.

See above for details regarding reliability and validity of the KAPP.

6. Use of alcohol and/or drugs. See Appendices V and VI, pages 360 and 367.

In order to assess whether an individual’s use of alcohol and/or drugs might be implicated in the sequence of behaviour that culminates in DSH, two simple and short questionnaires were designed for use in this research. Comprising five questions for case sample group participants and two questions for psychiatric control group participants, these questionnaires took the form of an interview and measured the average quantity of alcohol (in units) that participants consumed in a week and whether they used any illicit drugs. In terms of recalled experiences of DSH (for case sample group participants), this questionnaire was also used to assess the frequency with which DSH occurred whilst subjects were intoxicated with alcohol. Here, participants responses were recorded according to whether they 'never' (scored as 0), 'rarely' (scored as 1), 'typically' (scored as 2), or 'always' (scored as 3) engaged in DSH whilst intoxicated with alcohol. In addition, for those subjects who stated that they had engaged in DSH whilst intoxicated, the questionnaire was used to ascertain whether they are aware of the need to self-harm prior to intoxication. Here, participants responses were recorded according to whether they are aware (scored as 1) or are not aware (scored as 0) of the need to engage in DSH before drinking alcohol.

Prior to the start of the data-gathering exercise, both this questionnaire and the questionnaire that measures participants’ experience of ambivalence towards the prospect of engaging in DSH (see item 7 below) were subject to a pilot exercise over
a period of seven days. 30 patients (without diagnoses of schizophrenia, learning
disability or pervasive developmental disorders) who presented to UCH with current
or past histories of DSH were used in this exercise. At the end of the exercise, the
item that concerned the experience of ambivalence towards the prospect of engaging
in DSH item was subsequently revised.

In order to assess the test-retest reliability of these de novo questions, ten of these
patients were paid £10 each to be interviewed again with the same questionnaires two
weeks later. No significant differences were recorded for subjects' responses.

Data collected from these 30 subjects did not form part of the final data used in the
statistical analyses.

7. Ambivalence experienced towards the prospect of engaging in DSH and the ability
to delay/avoid acts of DSH. See Appendix V, page 360.

Within the literature review reference was made to the suggestion that some
individuals might experience ambivalence towards the prospect of cutting or burning
themselves. In order to ascertain whether any experience of ambivalence reported by
subjects might be associated with an ability to delay or avoid acts of DSH participants
were asked the following two questions – “When you become aware of the need to cut
or burn yourself do you immediately harm yourself or is there a period of time during
which you are able to delay or put off harming yourself?” and “During any such
period of time, do you feel ambivalent about the prospect of cutting or burning
yourself later on?”. Participants' responses to these questions were recorded as 'Yes'
(scored as 1) or 'No' (scored as 0).
CHAPTER 5: RESULTS

SECTION 1: QUANTITATIVE DATA

This results section relating to quantitative data is divided into three main parts. Part 1 (pages 140-163) contains descriptive and demographic data relating to patients that were referred to the researcher and the reasons for the exclusion of certain of these self-harming patients, the demographics of case sample group and control group participants, and the presenting complaints of these participants and their psychiatric diagnoses. Part 2 (pages 164-203) contains the results of the analyses of parametric assumptions and the descriptive data relating to participants’ scores for the research instruments used. Part 3 (pages 204-229) contains the results of the statistical analyses.

PART 1

Descriptive and demographic data relating to patient referrals

Case sample group referrals

1. Number of case sample group referrals

962 patient referrals were received from A&E staff and members of the psychiatry liaison team during the period of the data-gathering exercise. 279 of these patients were considered by the researcher not to have histories of DSH as conceptualised for the purposes of this research (see Table 2, page 144). An additional 167 patients who did have current or past histories of DSH were either not interviewed by the researcher or had their interviews prematurely terminated (see Table 3, page 146). The remaining 516 patients (266 males and 250 females) all had histories of DSH, 435 of whom disclosed experiences of potentially traumatic events (see Table 1, page 142) and were excluded from participating in the research. The residual 81 patients
(30 males and 51 females) completed the interview and questionnaires and comprised the case sample group.

2. **Referrals with potentially traumatic histories excluded from case sample group**

435 patients (236 males and 199 females) disclosed experiences of potentially traumatic events that had occurred at some point prior to their engaging in DSH for the first time and were excluded from participating in this research (Table 1). Where a patient’s history of DSH began after the experience of two or more different types of traumatic events that included abuse or gross neglect during childhood, certain exclusion criteria pre-empted others in terms of recording the reason for exclusion. In descending order, the pre-emptive rank of such criteria was childhood sexual abuse, childhood physical abuse, and childhood gross neglect. For example, if a patient had disclosed experiences of childhood sexual and physical abuse and the death of a family member prior to having engaged in DSH for the first time, then the exclusion criterion recorded for this patient would have been childhood sexual abuse.

Where a patient did not disclose one or more of these pre-emptive exclusion criteria but was excluded from the research on the grounds of having experienced more than one of the remaining eight criteria relating to potential trauma, the criterion recorded was that which the patient stated he or she had experienced first.
Table 1: Patients with Experiences of Potentially Traumatic Events Excluded from the Case Sample Group.

<table>
<thead>
<tr>
<th>Potentially Traumatic Event</th>
<th>Total</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Childhood sexual abuse or both childhood sexual and physical abuse</td>
<td>209</td>
<td>85</td>
<td>124</td>
</tr>
<tr>
<td>Childhood physical abuse</td>
<td>79</td>
<td>53</td>
<td>26</td>
</tr>
<tr>
<td>Childhood gross neglect</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Rape</td>
<td>11</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Torture</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Death of family member or close friend</td>
<td>65</td>
<td>48</td>
<td>17</td>
</tr>
<tr>
<td>Parental divorce or separation</td>
<td>34</td>
<td>20</td>
<td>14</td>
</tr>
<tr>
<td>Patient's own divorce or separation</td>
<td>7</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Placement in Social Services care</td>
<td>10</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Significant illness</td>
<td>5</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>435</td>
<td>236</td>
<td>199</td>
</tr>
</tbody>
</table>

1. 209 patients reported experiences of childhood sexual abuse or both childhood sexual abuse and childhood physical abuse. 79 patients disclosed experiences of childhood physical abuse without a sexually abusive component. An additional 3 patients disclosed experiences of gross neglect during childhood without a sexually or physically abusive component.

2. 144 patients disclosed that they had engaged in DSH for the first time at some point after having experienced potentially traumatic events other than child abuse or gross neglect. Here, the potentially traumatic event most frequently disclosed by
patients was the death of a family member or close friend (n=65). Parental divorce or separation accounted for a further 34 exclusions whilst patients’ own divorce or separation accounted for 7 exclusions. An additional 11 patients revealed how they had cut or burned themselves only after the experience of rape during adulthood. Placement under Social Services care during childhood for reasons other than abuse or neglect accounted for 10 exclusions. 5 patients reported self-harming after having been diagnosed with a life-threatening illness. 3 patients with histories of DSH had been victims of torture overseas and had longstanding diagnoses of posttraumatic stress disorder. With regard to those patients classified in Table 1 as having experienced some ‘other’ form of potentially traumatic event, 4 patients had been chronically bullied whilst at school, 2 patients had undergone abortions on medical grounds, 1 patient had witnessed the murder of a person unknown to him and 2 patients had been passengers on a tube train that was involved in the 1987 fire at Kings Cross underground station. None of these last 3 patients had existing diagnoses of posttraumatic stress disorder.

3. Other Referrals excluded from case sample group

1. 279 patients (179 males and 100 females) referred to the researcher were considered not to have histories of DSH as conceptualised for the purposes of this research (Table 2). Where a patient diagnosed with schizophrenia or a learning disability also met with those additional exclusion criteria listed in Table 2, these two diagnostic exclusion criteria pre-empted the remaining 3 criteria when the reason for exclusion from the research was recorded. No patient had diagnoses of both schizophrenia and a learning disability.
Table 2: Patients Without Histories of DSH Excluded from the Case Sample Group

<table>
<thead>
<tr>
<th>Reason For Exclusion</th>
<th>Total</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSH on fewer than 5 occasions</td>
<td>138</td>
<td>77</td>
<td>61</td>
</tr>
<tr>
<td>Attempted suicide</td>
<td>36</td>
<td>23</td>
<td>13</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>65</td>
<td>50</td>
<td>15</td>
</tr>
<tr>
<td>Learning disability</td>
<td>28</td>
<td>18</td>
<td>10</td>
</tr>
<tr>
<td>Other</td>
<td>12</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>279</td>
<td>179</td>
<td>100</td>
</tr>
</tbody>
</table>

Approximately half of these excluded patients had cut or burned themselves on less than 5 separate occasions (n=138), 125 of whom had cut or burned themselves on one occasion only. All of these 138 patients emphasised that there had been no suicidal motivation associated with these behaviours. With regard to those patients who had stated that they had harmed themselves as an attempt at suicide (n=36), all had cut their wrists on one occasion only and had never burned themselves. Diagnostic criteria accounted for a further 93 exclusions. With regard to the 12 patients whose methods of self-harm were classified under ‘Other’ in the above table, 8 had histories of self-harm that approximated self-mutilation. Such self-mutilative behaviours included the removal of skin and flesh from forearms with sharp objects that exposed the radius and ulna and the infliction of burns to arms and legs with accelerants that required treatment from specialist burns units. The remaining 4 patients had either stabbed themselves or had smashed heavy objects against their heads and limbs. The behaviours of these four patients were not suicidally motivated.
2. 167 patients referred with current and/or past histories of DSH were either not interviewed or had their interviews prematurely terminated (Table 3). Where a patient who was under 16 years of age or over 60 years of age also met one of the other exclusion criteria listed in Table 1c then the criterion relating to the patient’s age preempted the remaining 10 criteria when the reason for exclusion from the research was recorded. With regard to those patients who were not excluded on grounds of their age (n=150), all available medical and mental health documentation relating to these individuals was examined by the researcher to ensure that they could not otherwise have been more appropriately excluded on grounds of not having histories of DSH as conceptualised for the purposes of this research (for example, diagnoses of schizophrenia or learning disability).
Table 3: Patients Who Were Not Interviewed or Who Had Interviews Terminated Prematurely.

<table>
<thead>
<tr>
<th>Reason for Termination of Interview or for Not Holding Interview</th>
<th>Total</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inconsistent historian</td>
<td>26</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>Poor recall</td>
<td>20</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Refused to participate</td>
<td>17</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>Self-discharge prior to completing research</td>
<td>26</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>Outside age range</td>
<td>17</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>Failure to refer patient to the researcher</td>
<td>13</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Researcher not on call</td>
<td>12</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Too distressed</td>
<td>10</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Non English speaker</td>
<td>11</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Illiterate</td>
<td>9</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>167</td>
<td>86</td>
<td>81</td>
</tr>
</tbody>
</table>

46 of these patients were either considered to be inconsistent and unreliable with regard to either their histories of DSH or their experiences during childhood or had poor recollections of DSH (that is, they had last self-harmed more than five years prior to the interview). 4 patients who had previously been excluded on grounds of having reported experiences of childhood sexual abuse were reclassified as inconsistent and unreliable historians when independent and corroborated information became available to the researcher that disputed such reported experiences. A further 43 patients either refused to participate in the research or had self-discharged prior to completing the questionnaires and/or interview. 17 patients were not interviewed because they were either below sixteen years of age (n=14, mean age 13.5 years) or
over 60 years of age (n=3, mean age 70 years). 25 patients were either not referred to
the researcher or presented to the A&E department when the researcher was not on
call. 10 patients were considered to be too distressed to participate in the research. 11
patients were not asked to participate in the research because they unable to speak
English and a further 9 patients were illiterate and were therefore unable to complete
the questionnaires. With regard to those patients classified in Table 1c under ‘Other’,
1 was intoxicated with alcohol whilst the researcher was in the A&E department and
was therefore unable to take part in the research. 3 patients were prison inmates who
were regarded by their accompanying prison officers to pose too great a risk of
violence towards A&E staff and the researcher if they were seen unaccompanied. It
was considered inappropriate to interview these patients in the presence of prison
officers and hence they were not invited to participate in the research. The remaining
2 patients disclosed during their interview with the researcher that they had taken
deliberate overdoses at some point during their treatment in the A&E department.
These two patients were immediately referred back to A&E staff and not asked to
participate in the research again.

Demographics of case sample group participants

1. Age

The ages of case sample group participants were recorded within 5 ranges 16 to 20
years (n=14, 17%), 21 to 30 years (n=39, 48%), 31 to 40 years (n=19, 24%), 41 to 50
years (n=7, 9%), and 51 to 60 years (n=2, 2%). Participants’ ages ranged from 16
years to 59 years. The mean age was 28.8 years (SD=8.74).
2. **Sex**

30 male participants (37%) and 51 female participants (63%) comprised the case sample group. There was, however, a small majority of males (n=266, 52%) in the total number of patients referred with a history of DSH (n=516) who were interviewed by the researcher prior to either their inclusion in the case sample group or exclusion due to reported experiences of potentially traumatic events.

3. **Ethnicity and country of birth**

The majority (n=63, 78%) of participants were recorded as White British. The next largest ethnic groups were South Asian (n=10), White Other European (n=3), White North American (n=2), Afro-Caribbean (n=2), and North African (n=1). The places of birth of 11 participants who were born outside of the UK were South Asia (n=4), Continental Europe (n=3), North America (n=2), the West Indies (n=1), and North Africa (n=1).

4. **Accommodation status**

At the time of taking part in this research, most participants were either renting property or were homeowners or were living with their parents (n=56). 4 participants were resident in short-term, community psychiatric facilities. With regard to participants registered to be of ‘no fixed abode’ or ‘no fixed permanent abode’, 11 were in hostels or in short-term bed and breakfast accommodation and 8 were rough sleepers. No accommodation details were available for 2 participants.
5. Employment status

Half of the case sample group participants (n=40) were either registered as unemployed or incapable of work at the time of interview, 30 of whom had not worked for at least 3 years. Most of these participants (n=31) were in receipt of long-term Incapacity Benefit and/or Disability Living Allowance. 20 participants were full-time adult students in higher or further education. 2 participants were still attending school. Those participants who were in employment were categorised according to the ‘analytic version’ of The National Statistics Socio-economic Classification (2000). Here, the majority of participants were classified within ‘intermediate occupations’ (n=7) or ‘small employers and own account workers’ (n=6). The remaining participants were categorised within ‘higher professional occupations’ (n=1) and ‘lower managerial and professional occupations’ (n=3). No employment details were available for 2 participants.

6. Participants from single parent households

4 case sample group participants (3 females and 1 male) grew up in single parent households where the mother was the only caregiver. It was not appropriate to have excluded any of these participants on grounds of having experienced parental divorce or separation or the death of a family member since in all cases, the fathers had either died or separated from the participants’ mothers before the participants’ births.
Presenting complaints of case sample group participants

On arrival in the A&E department, all case sample group participants were assessed by a triage nurse in order to establish the reasons for their attendance (the presenting complaint). These presenting complaints were recorded within 3 categories by the researcher: ‘medical and psychiatric complaints’, ‘psychiatric complaints without a medical component’, and ‘medical complaints without a psychiatric component’.

1. Medical and psychiatric complaints

This category included those participants (n=47) who had engaged in DSH or who had deliberately harmed themselves by more than one method that included DSH. All of these participants received medical treatment for their self-harm from members of the A&E casualty staff prior to their being referred to the psychiatry liaison team. 26 participants had engaged in DSH only. 4 participants had engaged in DSH and had also stated that they had taken a deliberate overdose. 17 participants stated that they had taken a deliberate overdose only.

2. Psychiatric complaints without a medical component

This category included those participants (n=24) whose presenting complaints required no emergency medical intervention from members of the A&E casualty staff prior to their being referred to the psychiatry liaison team. None of these participants’ presentations were due to a current episode of self-harm. The reasons recorded at triage for these participants’ attendance at A&E were depression (n=11), suicidal ideation (n=5), depression and suicidal ideation (n=2), anxiety (n=5), and alcohol-induced psychotic disorder (n=1).
3. Medical complaints without a psychiatric component

These members of the case sample group (n=10) presented to A&E with medical complaints only. All participants within this category received medical intervention for reasons other than self-harm.

Psychiatric diagnoses of case sample group participants

1. System of diagnostic classification

For the purposes of this research, psychiatric diagnoses of case sample group participants were recorded according to DSM-IV classifications. Where participants' psychiatric records documented diagnoses according to the 'ICD-10 Classification of Mental and Behavioural Disorders' these diagnoses were converted to their DSM-IV equivalents.

2. Source of participants' diagnoses

Participants' psychiatric diagnoses were obtained from a variety of sources. Diagnoses were obtained from inpatient psychiatric discharge summaries for 40 participants whom had been psychiatric inpatients at some point prior to participating in this research. An additional 6 participants who had had no previous psychiatric admissions were admitted to psychiatric wards after they had attended the A&E department and taken part in this research. Discharge summaries were later obtained for all of these 6 participants. Diagnoses detailed within discharge summaries had been approved by consultant psychiatrists.

With regard to those participants for whom past discharge summaries were not available, 6 had been receiving outpatient psychiatric care at the time of their
presentations to A&E. Details regarding psychiatric diagnoses for these participants were later obtained from these outpatient departments. Diagnoses for 26 of the remaining 29 participants were obtained from the assessments made by members of the psychiatry liaison team. Here, the on-call senior house officer in psychiatry assessed all 26 of these participants, 10 of whom were referred to the consultant in liaison psychiatry or the senior registrar in liaison psychiatry for further assessment. Additional information was available for the majority (n=13) of the remaining 16 participants since they had already received provisional diagnoses during previous psychiatric presentations to the A&E department. This information was available from The Electronic Patients Records System.

There was no corroborating information available for three case sample group participants who were admitted to medical wards. These participants attended the A&E department with medical complaints only and had had no previous contact with psychiatric services. During interviews conducted within the A&E department and on the admitting medical wards, information was obtained by the researcher that enabled provisional psychiatric diagnoses for the purposes of this research to be made for two of these three patients. The information obtained for the remaining patient suggested that there were no grounds upon which to justify the making of any psychiatric diagnosis. Decisions regarding provisional diagnoses and the participants' details upon which they were based were later reviewed by either the senior registrar or consultant in liaison psychiatry. Although these decisions regarding diagnosis were made by the researcher, they took account of the opinions of these psychiatrists.
3. **Summary diagnostic categories**

Case sample group participants were allocated to either of two, summary diagnostic categories for the purposes of this research – BPD or non-BPD. BPD was the principal diagnosis for 36 participants (44% of all case sample group participants). There were 45 participants without a diagnosis of BPD (that is, 'non-BPD'). The one patient referred to above who was not given a psychiatric diagnosis was allocated to the non-BPD category. Details regarding principal psychiatric diagnoses of these 45 participants without BPD are detailed in Table 4 below.
Table 4: Principal Psychiatric Diagnoses of Case Sample Group Participants (non-BPD)

<table>
<thead>
<tr>
<th>Principal Diagnosis</th>
<th>Number of Participants</th>
<th>% of Case Sample Group (non-BPD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minor Depressive Disorder</td>
<td>10</td>
<td>22</td>
</tr>
<tr>
<td>Major Depressive Disorder</td>
<td>9</td>
<td>20</td>
</tr>
<tr>
<td>Dysthymic Disorder</td>
<td>8</td>
<td>18</td>
</tr>
<tr>
<td>Bipolar Disorders</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>Adjustment Disorders</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Obsessive Compulsive Disorder</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Alcohol Dependence</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Generalised Anxiety Disorder</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Anorexia Nervosa</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>No Diagnosis</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

4. Substance-related disorders

Case sample group participants diagnosed with one or more substance-related disorder accounted for 49% (n=40) of the total membership of the case sample group. 2 participants had a substance-related disorder (alcohol dependence) only as a principal diagnosis, whilst 38 participants had a 'dual diagnosis'. Among these 38
participants with substance-related disorders as secondary diagnoses (Table 5), 35 participants had an alcohol-use disorder. 7 participants were either dependent on or abusing opioids and/or cocaine when they participated in the research, 5 of whom were using both types of drug. All participants who used cocaine used it in the form of Crack. Benzodiazepines accounted for all cases of anxiolytic dependence or abuse. 19 participants (23% of the case sample group) were teetotal at the time of participating in the research of whom 3 male participants were dependent on opioids, one of whom was also abusing Crack cocaine.

Table 5: Substance Related Disorders as Secondary Diagnoses Among Case Sample Group Participants

<table>
<thead>
<tr>
<th>Substance Related Disorder</th>
<th>All Diagnoses</th>
<th>BPD</th>
<th>Other Diagnoses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol abuse</td>
<td>25</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>Alcohol dependence</td>
<td>10</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Opioid abuse</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Opioid dependence</td>
<td>5</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Cocaine abuse</td>
<td>5</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Cocaine dependence</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Anxiolytic abuse</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Anxiolytic dependence</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
5. Multiple Diagnoses

8 case sample group participants (non-BPD) and 2 case sample group participants (BPD) had secondary diagnoses either in addition to or other than substance related disorders. These secondary diagnoses included Anorexia Nervosa (n=3), Bulimia Nervosa (n=3), Adjustment Disorder (n=1), Chronic Adjustment Disorder (n=1), Obsessive Compulsive Disorder (n=1), and Generalised Anxiety Disorder (n=1). No participant had more than one of these secondary diagnoses.

**Psychiatric control group referrals and exclusions**

**Number of psychiatric control group participants**

It was not considered to be relevant to the aims of this research to record the reasons why certain patients were excluded from participating as control group participants.

The psychiatric control group comprised 62 participants.

**Demographics of psychiatric control group participants**

1. **Age**

   The ages of psychiatric control group members were recorded within the same 5 ranges as case sample group members. Here, 11 (18%) participants were between the ages of 16 and 20 years, 28 (45%) were between 21 and 30 years, 15 (24%) were between 31 and 40 years, 7 (11%) were between 41 and 50 years, and 1 (2%) was between 51 and 60 years. 82% (n=50) of the controls were aged between 16 and 40 years of age. Participants’ ages ranged from 16 years to 55 years. The mean age was 29.7 years (SD=10.01).
2. Sex

24 male participants (39%) and 38 female participants (61%) were included in the psychiatric control group.

3. Ethnicity and country of birth

Those participants who were recorded as White British (n=46) accounted for 74% of the psychiatric control group. The next largest ethnic groups were South Asian (n = 6), White Other European (n=3), White North American (n=3), North African (n=2), and Afro-Caribbean (n=2). The places of birth of 14 participants who were born outside of the UK were Continental Europe (n=5), North Africa (n=2), North America (n=3), South Asia (n=2), and the West Indies (n=2).

4. Accommodation status

At the time of taking part in this research, 49 participants were either living in rented or owned accommodation or were living with their parents. 2 participants were resident in short-term, community psychiatric facilities. With regard to participants registered to be of ‘no fixed abode’ or ‘no fixed permanent abode’, 6 were in hostels and 5 were rough sleepers.

5. Employment status

Approximately half of the psychiatric control group members (n=30) were unemployed when interviewed, 19 of whom had been registered as unemployed for at least 3 years. The majority of all unemployed participants (n=18) received long-term Incapacity Benefit and/or Disability Living Allowance. 9 participants were full-time adult students in higher education and 1 participant was still at school.
According to The National Statistics Socio-economic Classification (2000), those participants who were in employment were variously classified within the ‘intermediate occupations’ category (n=10), the ‘small employers or own account workers’ category (n=2), the lower managerial and professional occupations’ category (n=4), or the ‘higher professional occupations’ category (n=2). No employment details were available for 4 participants.

6. Participants from single parent households

1 male psychiatric control group participant grew up in a single parent household where the father was the only caregiver. The mother of this participant died during childbirth, and as such, it was not appropriate to have excluded this participant on grounds of having experienced the death of a family member since he was less than an hour old at the time of his mother’s death.

**Presenting complaints of psychiatric control group participants**

The presenting complaints of psychiatric control group participants were recorded by the researcher within the same 3 categories that were used to categorise case sample group participants: ‘medical and psychiatric complaints’, ‘psychiatric complaints without a medical component’, and ‘medical complaints without a psychiatric component’.

1. Medical and psychiatric complaints

This category included 37 participants who claimed to have taken a deliberate overdose. These participants received medical treatment from the A&E casualty staff prior to their referral for psychiatric assessment.
2. Psychiatric complaints without a medical component

This category included 18 participants who presented to the A&E department with psychiatric complaints only. The reasons recorded at triage for these participants’ attendance were depression (n=8), suicidal ideation (n=3), depression and suicidal ideation (n=3), and anxiety (n=4).

3. Medical complaints without a psychiatric component

These members of the psychiatric control group (n=7) all had past psychiatric histories but attended the A&E department with medical complaints only.

Psychiatric diagnoses of psychiatric control group

1. System of diagnostic classification

The same system of diagnostic classification that was used for case sample group members was used for psychiatric control group members.

2. Source of participants’ diagnoses

Diagnoses were obtained from inpatient discharge summaries for 30 participants who had received inpatient psychiatric care at some point prior to participating in this research. An additional 3 participants who had had no previous psychiatric admissions was admitted to a psychiatric ward after having participated in this research. A discharge summary was later obtained for each of these participants.

With regard to those 29 participants for whom discharge summaries were not available, 13 had been receiving outpatient psychiatric care at the time of their participating in this research. Details regarding psychiatric diagnoses for these participants were later obtained from these outpatient departments.
Diagnoses for the remaining 16 psychiatric control group participants were obtained from the assessments made by members of the psychiatry liaison team. The on-call senior house officer in psychiatry assessed all of these participants, 8 of whom were referred to the consultant in liaison psychiatry or the senior registrar in liaison psychiatry for further assessment. Additional information was available for 8 of these 16 participants since they had already received provisional diagnoses during previous psychiatric presentations to the A&E department. This information was available from The Electronic Patients Records System.

3. Summary diagnostic categories

The summary diagnostic categories for the psychiatric control group comprised 17 participants within the BPD category and 45 participants within the ‘Other Psychiatric Diagnoses’ category. BPD was the principal diagnosis for 27% of all psychiatric control group participants. The principal diagnoses of participants within the ‘Other Psychiatric Diagnoses’ category are presented below in Table 6.
Table 6: Principal Psychiatric Diagnoses of Psychiatric Control Group Participants (non-BPD)

<table>
<thead>
<tr>
<th>Principal Diagnosis</th>
<th>Number Of Participants</th>
<th>% of Psychiatric Control Group (non-BPD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minor Depressive Disorder</td>
<td>10</td>
<td>22</td>
</tr>
<tr>
<td>Major Depressive Disorder</td>
<td>9</td>
<td>20</td>
</tr>
<tr>
<td>Dysthymic Disorder</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>Bipolar Disorders</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>Adjustment Disorders</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>Obsessive Compulsive Disorder</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Alcohol Dependence</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Generalised Anxiety Disorder</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Anorexia Nervosa</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Bulimia Nervosa</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Conversion Disorder</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
4. **Substance-related disorders**

Psychiatric control group participants diagnosed with one or more substance-related disorder accounted for 35% (n=22) of the total membership of the psychiatric control group. 2 participants had a substance-related disorder (alcohol dependence) only as a principal diagnosis, whilst 19 participants had a 'dual diagnosis'. Among these 19 participants with substance-related disorders as secondary diagnoses (Table 7), 14 participants had an alcohol-use disorder. 8 participants were dependent on or abusing opioids and/or cocaine when they participated in the research, 2 of whom were using both types of drug. All participants who used cocaine used it in the form of Crack. Benzodiazepines accounted for all cases of anxiolytic dependence or abuse.

12 participants (19% of the psychiatric control group) were teetotal at the time of participating in the research, of whom 1 male participant and 1 female participant were dependent on both opioids and Crack cocaine, whilst 1 female participant was abusing Crack cocaine.
Table 7: Substance Related Disorders as Secondary Diagnoses Among Psychiatric Control Group Participants

<table>
<thead>
<tr>
<th>Substance Related Disorder</th>
<th>All Diagnoses</th>
<th>BPD</th>
<th>Other Diagnoses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol abuse</td>
<td>12</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Alcohol dependence</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Opioid abuse</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Opioid dependence</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Cocaine abuse</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Cocaine dependence</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Anxiolytic abuse</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Anxiolytic dependence</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

5. Multiple Diagnoses

5 psychiatric control group participants had secondary diagnoses either in addition to or other than substance related disorders. These secondary diagnoses included Anorexia Nervosa (n=1), Bulimia Nervosa (n=2), Adjustment Disorder (n=1), and Generalised Anxiety Disorder (n=1). No participant had more than one of these secondary diagnoses.
PART 2

Analyses of parametric assumptions (homogeneity of variance, normal distribution and sample size)

In order to determine homogeneity of variance a series of Levene’s tests was performed for case sample group participants’ scores and psychiatric control group participants’ scores on the PBI dimensions of care and overprotection; the 17 impulsiveness Questionnaire; the KAPP dimensions of alexithymic traits, impulse control, dependency and separation, and frustration tolerance; weekly units of alcohol consumed; and for the frequency with which DSH occurred whilst intoxicated (case sample group only). A series of Kolmogorov-Smirnov tests of normality was also performed for these participants’ scores on the above measurements. Results from the Kolmogorov-Smirnov tests and the Levene’s tests are presented in Appendix IX (see pages 373 – 382).

Due to the combinations of inequalities of variance between samples and lack of normally distributed data for the significant majority of hypotheses and the relatively small size of the psychiatric control group (BPD), non-parametric tests were considered suitable for statistical analyses. In addition, the non-parametric tests used have greater power when there are outlying and extreme values within the data.

Power calculations were calculated using ‘nQuery advisor’ to determine the minimum sample size required for the case sample group and the psychiatric control group in order to detect a statistically significant difference. These calculations demonstrated that a sample size of at least 59 participants in each group would have at least an 80% power to detect a probability of 0.35 that an observation in one group is less than an observation in the other group using a Wilcoxon (Mann-Whitney) rank-sum test with a 0.050 two-sided significance level.
Tests were performed to detect statistically significant differences between various participant subgroups, some of which comprised fewer than 59 participants. The subgroup with the fewest number of participants was the psychiatric control group (BPD) with 17 subjects. Power calculations performed relating to this subgroup indicated that there is at least an 80% power to detect a probability of 0.22 that an observation in one group is less than an observation in the other group using a Wilcoxon (Mann-Whitney) rank-sum test with a 0.050 two-sided significance level. The relatively small size of this subgroup was not representative of the sizes of the other participant subgroups that were used in this research.

Analyses of descriptive data obtained for research instruments used

1. Parental Bonding Instrument (PBI): Overprotection

The descriptive data (medians and interquartile ranges) obtained for recalled parental overprotection for case sample group participants and psychiatric control group participants are displayed in Table 8 and Table 9. These data show that the degree to which self-harmers' scores differed from control group scores was most pronounced between those case sample and control group subjects who had psychiatric diagnoses other than BPD. An inspection of the median values reveals that although case sample group participants' (non-BPD) scores for recalled maternal and paternal overprotection were higher than those generated by psychiatric control group participants (non-BPD) it was the maternal component as opposed to the paternal component of recalled parental overprotection that contributed most to this difference. In comparison to these differences for recalled parental overprotection between case sample group participants (non-BPD) and psychiatric control group participants (non-
BPD), Table 8 illustrates that the median value for recalled maternal overprotection scores generated by case sample group participants (BPD) is only moderately higher than the median value obtained for psychiatric control group participants (BPD). Both these samples shared the same median value for recalled paternal overprotection (see Table 9). It will be noted later when the results of the analysis relating to hypothesis four are presented (see page 207), that neither maternal nor paternal overprotection scores were able to differentiate between these two BPD samples.

The boxplots presented in Figure 1 for maternal overprotection illustrate the dispersion of recalled overprotection scores that were recorded by the self-harming and non self-harming samples. Here median values are represented by the bold horizontal lines that are located within the interquartile ranges (the boxes). For case sample group participants (BPD) exactly 50% of scores are located below the median value of 14 that was obtained for this sample. That is to say, half of all scores generated for this sample are less than or equal to 13 points and are therefore within the bottom third of the possible range of scores (that is, 0 to 39) that can be achieved for the overprotection scale of the Parental Bonding Instrument. In contrast, only approximately 11% of case sample group participants’ (non-BPD) scores for maternal overprotection are within this lower range. In terms of atypical scores, the boxplot for the psychiatric control group (non-BPD) contains outliers. These outliers correspond to two scores of 36 and one score of 38. These results were checked by the researcher and did not represent errors in measurement, in data recording or in data entry. The potential bias that these atypically high outlying scores might have had on the validity of the result of a statistical test has been avoided since only non-parametric tests are used to measure differences between samples’ scores for this variable.
With regard to scores for recalled paternal overprotection, the descriptive data presented in Table 9 and illustrated graphically in Figure 2 shows that differences between case sample groups and control groups in terms of both the median values and the interquartile ranges of scores are substantially less noticeable than those differences that were observed for recalled maternal overprotection. Apart from the psychiatric control group (non-BPD) the other three samples share the same median value. The boxplot for the psychiatric control group (non-BPD) demonstrates that with the exception of one outlying value of 38 the dispersion of scores for this sample are located within a lower range than the other three samples. The other outlying value was generated by the case sample group (non-BPD) and corresponds to a score of 37. Both outlying values were valid scores.

There are several values missing in the data for the PBI. One member of the case sample group (BPD) and 3 members of the case sample group (non-BPD) grew up without fathers. As such, the size of the former sample was reduced from 36 to 35 participants and the size of the latter sample was reduced from 45 to 42 participants with regard to scores obtained for the overprotection and care components of the PBI. One member of the psychiatric control group (non-BPD) grew up without a mother reducing the size of this sample from 45 participants to 44 participants.
Table 8: PBI Overprotection (Mother) Scores for the Case Sample Group and the Psychiatric Control Group - Median Values and Interquartile Ranges

<table>
<thead>
<tr>
<th>Diagnostic Category</th>
<th>Case Sample Group</th>
<th>Psychiatric Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median</td>
<td>Interquartile Range</td>
</tr>
<tr>
<td>BPD</td>
<td>14.00</td>
<td>12.50</td>
</tr>
<tr>
<td>non-BPD</td>
<td>21.00</td>
<td>10.00</td>
</tr>
<tr>
<td>BPD &amp; non-BPD</td>
<td>18.00</td>
<td>11.00</td>
</tr>
</tbody>
</table>

Table 9: PBI Overprotection (Father) scores for the Case Sample Group and the Psychiatric Control Group - Median Values and Interquartile Ranges

<table>
<thead>
<tr>
<th>Diagnostic Category</th>
<th>Case Sample Group</th>
<th>Psychiatric Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median</td>
<td>Interquartile Range</td>
</tr>
<tr>
<td>BPD</td>
<td>15.00</td>
<td>9.00</td>
</tr>
<tr>
<td>non-BPD</td>
<td>15.00</td>
<td>10.25</td>
</tr>
<tr>
<td>BPD &amp; non-BPD</td>
<td>15.00</td>
<td>9.00</td>
</tr>
</tbody>
</table>
Figure 1: Boxplots of Participants’ Scores for PBI Overprotection (Mother)

**KEY: Participant subgroup**

1 = Case sample group (BPD)
2 = Case sample group (non-BPD)
3 = Psychiatric control group (BPD)
4 = Psychiatric control group (non-BPD)
○ = Outlying value
Figure 2: Boxplots of Participants’ Scores for PBI Overprotection (Father)

KEY: Participant subgroup

1 = Case sample group (BPD)
2 = Case sample group (non-BPD)
3 = Psychiatric control group (BPD)
4 = Psychiatric control group (non-BPD)
○ = Outlying value
2. Parental Bonding Instrument (PBI): Care

The descriptive data (medians and interquartile ranges) obtained for recalled parental care for case sample group participants and psychiatric control group participants are displayed within Table 10 and Table 11. The dispersion of these scores is represented within boxplots for maternal care (Figure 3) and paternal care (Figure 4).

Reference to Tables 10 and 11 shows that there are identical median values for maternal care and paternal care for case sample group participants (non-BPD). Although these median values were lower than those obtained for psychiatric control group participants’ (non-BPD), it will be noted later (see hypothesis 9, page 212) that only maternal care was able to differentiate between these two samples at a statistically significant level. Reference to the boxplots shows that in contrast to the range of scores generated by case sample group participants (non-BPD) the range of scores obtained for both maternal care and paternal care for the psychiatric control group (non-BPD) contains very few values located at the bottom end of the PBI Scale. Indeed, none of these control group participants rated their mothers’ or fathers’ care with scores that were lower than 8 points. This suggests that these participants did not consider their parents to be markedly uncaring.

There is only a 1 point difference between the median values for recalled maternal care for the case sample group (BPD) and the psychiatric control group (BPD). Reference to the boxplots in Figure 3 shows that the only marked difference between these two samples for this variable is the substantially larger size of the interquartile range of scores for the case sample group (BPD). This feature of the interquartile range was also apparent for recalled paternal care scores for this group of self-harming participants. There was a more pronounced difference between the median values for recalled paternal care that were generated for case sample group
participants (BPD) and matched controls. Here, the median value of 18 recorded for this latter sample was 4 points higher than that of the case sample group (BPD). The one outlying value noted within the psychiatric control group (BPD) represented the maximum care score of 36 points that is obtainable for the PBI.

Table 10: PBI Care (Mother) Scores for the Case Sample Group and the Psychiatric Control Group - Median Values and Interquartile Ranges

<table>
<thead>
<tr>
<th>Diagnostic Category</th>
<th>Case Sample Group</th>
<th>Psychiatric Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median</td>
<td>Interquartile Range</td>
</tr>
<tr>
<td>BPD</td>
<td>20.00</td>
<td>21.50</td>
</tr>
<tr>
<td>non-BPD</td>
<td>18.00</td>
<td>15.00</td>
</tr>
<tr>
<td>BPD &amp; non-BPD</td>
<td>18.00</td>
<td>17.00</td>
</tr>
</tbody>
</table>

Table 11: PBI Care (Father) scores for the Case Sample Group and the Psychiatric Control Group - Median Values and Interquartile Ranges

<table>
<thead>
<tr>
<th>Diagnostic Category</th>
<th>Case Sample Group</th>
<th>Psychiatric Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median</td>
<td>Interquartile Range</td>
</tr>
<tr>
<td>BPD</td>
<td>14.00</td>
<td>20.00</td>
</tr>
<tr>
<td>non-BPD</td>
<td>18.00</td>
<td>10.00</td>
</tr>
<tr>
<td>BPD &amp; non-BPD</td>
<td>18.00</td>
<td>13.50</td>
</tr>
</tbody>
</table>
Figure 3: Boxplots of Participants' Scores for PBI Care (Mother)

KEY: Participant subgroup
1 = Case sample group (BPD)
2 = Case sample group (non-BPD)
3 = Psychiatric control group (BPD)
4 = Psychiatric control group (non-BPD)
Figure 4: Boxplots of Participants' Scores for PBI Care (Father)

KEY: Participant subgroup

1 = Case sample group (BPD)
2 = Case sample group (non-BPD)
3 = Psychiatric control group (BPD)
4 = Psychiatric control group (non-BPD)
○ = Outlying value
3. **I7 impulsiveness questionnaire**

Descriptive data (medians and interquartile ranges) obtained from the impulsiveness section of the I7 questionnaire are presented in Table 12 for the case sample group and the psychiatric control group. Figure 5 contains boxplots that illustrate the dispersion of these I7 scores.

Differences between the median values obtained for the case sample group (BPD) and the psychiatric control group (BPD) and between the case sample group (non-BPD) and the psychiatric control group (non-BPD) are relatively small. As indicated by the boxplots, the scores obtained for the case sample group (BPD) and the psychiatric control group (BPD) are negatively skewed reflecting a greater concentration of data points towards the higher end of the I7 impulsiveness scale. Here, approximately 42% of the participants within the former group generated scores that were located within the fourth quartile of scores (that is, scores between 15 and 19 points) that can be obtained for the I7 Impulsiveness Questionnaire. This observation contrasts to only 23 percent of case sample group participants (non-BPD) who generated scores that were located within this quartile.

<table>
<thead>
<tr>
<th>Diagnostic Category</th>
<th>Case Sample Group</th>
<th>Psychiatric Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Median</strong></td>
<td><strong>Interquartile Range</strong></td>
</tr>
<tr>
<td>BPD</td>
<td>13.50</td>
<td>10.25</td>
</tr>
<tr>
<td>non-BPD</td>
<td>11.00</td>
<td>6.50</td>
</tr>
<tr>
<td>BPD &amp; non-BPD</td>
<td>12.00</td>
<td>7.00</td>
</tr>
</tbody>
</table>
Figure 5: Boxplots of Participants' Scores for I7 Impulsiveness

KEY: Participant subgroup

1 = Case sample group (BPD)
2 = Case sample group (non-BPD)
3 = Psychiatric control group (BPD)
4 = Psychiatric control group (non-BPD)
4. Experience of ambivalence towards DSH and the ability to delay DSH

The numbers and percentages of case sample group participants who stated that prior to episodes of DSH they do or do not experience ambivalence towards the prospect of cutting and/or burning themselves are displayed in Table 13. Here, case sample group participants with a diagnosis of BPD were more likely than those without such a diagnosis to state that they experience ambivalence towards the prospect of engaging in DSH.

The number and percentage of case sample group participants who stated that they are or are not typically able to delay or postpone engaging in DSH once they had felt the need to cut and/or burn themselves are recorded in Table 14. Here, case sample group participants with a diagnosis of BPD were more likely than those without such a diagnosis to claim to be able to delay acts of DSH.

Table 13: Number and Percentage of Participants who Report the Experience of Ambivalence Towards the Prospect of Engaging in DSH

<table>
<thead>
<tr>
<th>Diagnostic Category</th>
<th>Ambivalence Experienced</th>
<th>No Ambivalence Experienced</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>BPD</td>
<td>21</td>
<td>58</td>
</tr>
<tr>
<td>non-BPD</td>
<td>22</td>
<td>49</td>
</tr>
<tr>
<td>BPD &amp; non-BPD</td>
<td>43</td>
<td>53</td>
</tr>
</tbody>
</table>
Table 14: Number and Percentage of Participants Who are Able to Delay or Postpone DSH

<table>
<thead>
<tr>
<th>Diagnostic Category</th>
<th>Able to Delay DSH</th>
<th>Unable to delay DSH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>BPD</td>
<td>25</td>
<td>69</td>
</tr>
<tr>
<td>non-BPD</td>
<td>25</td>
<td>56</td>
</tr>
<tr>
<td>BPD &amp; non-BPD</td>
<td>50</td>
<td>62</td>
</tr>
</tbody>
</table>

5. Weekly alcohol consumption

Median values for units of alcohol consumed per week are displayed in Table 15 below. These values demonstrate that case sample group participants used larger quantities of alcohol than matched control group participants. The interquartile range for the case sample group (BPD) is considerably extended in comparison to both that of the psychiatric control group (BPD) and that of the case sample group (non-BPD).

The boxplots displayed in Figure 6 show that scores are positively skewed for all samples. All outlying scores were checked by the researcher and were valid scores. The markedly extreme score displayed for one participant within the case sample group (non-BPD) related to a male alcoholic who claimed to consume an average of 280 units of alcohol per week. The next highest value recorded for alcohol consumption was for a member of the case sample group (BPD) who stated that he used 230 units per week. This quantity did not represent an extreme value or an outlying value for this group of BPD self-harmers.
Table 15: Weekly Alcohol Consumption in Units for Case Sample Group Participants and Psychiatric Control Group Participants - Median Values and Interquartile Ranges

<table>
<thead>
<tr>
<th>Diagnostic Category</th>
<th>Case Sample Group</th>
<th>Psychiatric Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median</td>
<td>Interquartile Range</td>
</tr>
<tr>
<td>BPD</td>
<td>42.50</td>
<td>115.00</td>
</tr>
<tr>
<td>non-BPD</td>
<td>24.00</td>
<td>47.00</td>
</tr>
<tr>
<td>BPD &amp; non-BPD</td>
<td>30.00</td>
<td>66.00</td>
</tr>
</tbody>
</table>
Figure 6: Boxplots of Participants' Scores for Average Units of Alcohol Consumed per Week

KEY: Participant subgroup

1 = Case sample group (BPD)
2 = Case sample group (non-BPD)
3 = Psychiatric control group (BPD)
4 = Psychiatric control group (non-BPD)
○ = Outlying value
* = Extreme value
6. DSH whilst intoxicated with alcohol

Numbers of case sample group participants who never, rarely, typically or always engaged in DSH whilst intoxicated with alcohol are presented in Table 16. Median values and interquartile ranges for case sample group participants’ answers with regard to whether they never (scored as 0), rarely (scored as 1), typically (scored as 2), or always (scored as 3) engaged in DSH whilst intoxicated with alcohol are presented in Table 17.

Data regarding the frequency with which participants engaged in DSH whilst intoxicated with alcohol is also presented in percentage values in pie charts separately for case sample group participants (BPD and non-BPD), case sample group participants (BPD), and case sample group participants (non-BPD) in Figures 7, 8 and 9 respectively.

These data suggest that self harmers diagnosed with BPD were least likely to have never engaged in DSH whilst intoxicated with alcohol. With regard to the 31 participants (BPD and non-BPD) who never engaged in DSH whilst intoxicated 19 were teetotal. These teetotal self-harmers comprised 7 participants with a diagnosis of BPD.
Table 16: Number of Participants who Never, Rarely, Typically or Always Engage in DSH whilst Intoxicated with Alcohol

<table>
<thead>
<tr>
<th>Diagnostic Category</th>
<th>Never Intoxicated</th>
<th>Rarely Intoxicated</th>
<th>Typically Intoxicated</th>
<th>Always Intoxicated</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPD</td>
<td>10</td>
<td>5</td>
<td>13</td>
<td>8</td>
</tr>
<tr>
<td>non-BPD</td>
<td>21</td>
<td>8</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>BPD &amp; non-BPD</td>
<td>31</td>
<td>13</td>
<td>25</td>
<td>12</td>
</tr>
</tbody>
</table>

Table 17: Frequency with which Participants Engage in DSH whilst Intoxicated with Alcohol – Median Values and Interquartile Ranges

<table>
<thead>
<tr>
<th>Diagnostic Category</th>
<th>Median</th>
<th>Interquartile Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPD</td>
<td>2.00</td>
<td>2.00</td>
</tr>
<tr>
<td>non-BPD</td>
<td>1.00</td>
<td>2.00</td>
</tr>
<tr>
<td>BPD &amp; non-BPD</td>
<td>1.00</td>
<td>2.00</td>
</tr>
</tbody>
</table>
Here, approximately 46% (n=37) of case sample group participants (BPD and non-BPD) only or typically engaged in DSH whilst they were intoxicated.
Here, approximately 58% (n=21) of case sample group participants (BPD) only or typically engaged in DSH whilst they were intoxicated.
Here, approximately 36% (n=16) of case sample group participants (non-BPD) only or typically engaged in DSH whilst they were intoxicated.
8. Participants’ awareness of the need to engage in DSH before consuming alcohol

For those case sample group participants (n=50) who stated that they rarely, typically or always engaged in DSH whilst intoxicated with alcohol, Table 18 records the number and percentage of participants who were either aware or unaware of the need/impulse to cut and/or burn themselves prior to intoxication with alcohol. It can be seen that in contrast to the case sample group (non-BPD) the majority of participants within the case sample group (BPD) stated that on those occasions when they had engaged in DSH they were unaware of any impulse to cut and/or burn themselves until after they had started to consume alcohol.

Table 18: Number and Percentage of Participants Who Are or Who Are Not Aware of the Need to Engage in DSH Prior to Intoxication with Alcohol

<table>
<thead>
<tr>
<th>Diagnostic Category</th>
<th>Aware of Need to DSH Before Intoxication</th>
<th>Not Aware of Need to DSH Before Intoxication</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>BPD (N = 26)</td>
<td>10</td>
<td>38</td>
</tr>
<tr>
<td>non-BPD (N = 24)</td>
<td>14</td>
<td>58</td>
</tr>
<tr>
<td>BPD &amp; non-BPD (N = 50)</td>
<td>24</td>
<td>48</td>
</tr>
</tbody>
</table>
9. Karolinska Psychodynamic Profile (KAPP)

Descriptive data (medians and interquartile ranges) obtained for participants' scores on the KAPP dimension of alexithymic traits are presented in Table 19 for the case sample group and psychiatric control group. The frequency with which each of the five possible KAPP scores (that is, 1, 1.5, 2, 2.5 and 3) were generated within the case sample group (BPD and non-BPD) and within the psychiatric control group (BPD and non-BPD) are presented in histograms (Figures 10 and 11 respectively). These frequencies are also represented within separate histograms (Figures 12 to 15) for case sample group participants (BPD) and psychiatric control group participants (BPD) and for case sample group participants (non-BPD) and psychiatric control group participants (non-BPD). With regard to the three other KAPP dimensions, Table 20 and Figures 16 to 21 relate to KAPP impulse control scores, Table 21 and Figures 22 to 27 relate to KAPP frustration tolerance scores, and Table 22 and Figures 28 to 33 relate to KAPP dependency and separation scores.

KAPP alexithymic traits

The case sample group (BPD) and the case sample group (non-BPD) share the same high median value for alexithymic traits of 2.5. In contrast to the shared lower median value of 1.5 for both groups of controls, this is suggestive of relatively raised alexithymic disturbance among self-harmers regardless of diagnostic category. An inspection of the histograms reveals that the scores for both groups of self-harmers' scores are strongly negatively skewed.
Table 19: KAPP Alexithymic Traits Scores for Case Sample Group Participants and Psychiatric Control Group Participants: Median Values and Interquartile Ranges

<table>
<thead>
<tr>
<th>Diagnostic Category</th>
<th>Case Sample Group</th>
<th>Psychiatric Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median</td>
<td>Interquartile Range</td>
</tr>
<tr>
<td>BPD</td>
<td>2.50</td>
<td>0.88</td>
</tr>
<tr>
<td>non-BPD</td>
<td>2.50</td>
<td>1.25</td>
</tr>
<tr>
<td>BPD &amp; non-BPD</td>
<td>2.50</td>
<td>1.00</td>
</tr>
</tbody>
</table>
Figure 10: Histogram of Case Sample Group Participants’ (BPD and non-BPD) Scores for KAPP Alexithymic Traits

Figure 11: Histogram of Psychiatric Control Group Participants’ (BPD and non-BPD) Scores for KAPP Alexithymic Traits
Figure 12: Histogram of Case Sample Group Participants’ (BPD) Scores for KAPP Alexithymic Traits

Figure 13: Histogram of Psychiatric Control Group Participants’ (BPD) scores for KAPP Alexithymic Traits
Figure 14: Histogram of Case Sample Group Participants’ (non-BPD) Scores for KAPP Alexithymic Traits

![Histogram of Case Sample Group Participants' (non-BPD) Scores for KAPP Alexithymic Traits](image)

Figure 15: Psychiatric Control Group Participants’ (non-BPD) Scores for KAPP Alexithymic Traits

![Psychiatric Control Group Participants' (non-BPD) Scores for KAPP Alexithymic Traits](image)
KAPP impulse control

The histogram (Figure 16) representing case sample group participants' (BPD and non-BPD) scores for KAPP impulse control shows that 11 participants were allocated the highest score. However, it can be seen from Figures 18 and 20 that this observation arose due to the substantially larger number of case sample group participants (BPD) who were assigned this maximum score. Although case sample group participants (BPD) share the same high median value for KAPP impulse control as psychiatric control group participants (BPD) the histograms (Figures 18 and 19) reveal that the dispersion of scores obtained for these two groups is dissimilar. Here, no participants within the psychiatric control group (BPD) were assigned either of the two lowest scores obtainable on this behavioural dimension.

Table 20: KAPP Impulse Control Scores for Case Sample Group Participants and Psychiatric Control Group Participants - Median Values and Interquartile Ranges

<table>
<thead>
<tr>
<th>Diagnostic Category</th>
<th>Case Sample Group</th>
<th>Psychiatric Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median</td>
<td>Interquartile Range</td>
</tr>
<tr>
<td>BPD</td>
<td>2.50</td>
<td>1.38</td>
</tr>
<tr>
<td>non-BPD</td>
<td>2.00</td>
<td>1.00</td>
</tr>
<tr>
<td>BPD &amp; non-BPD</td>
<td>2.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>
Figure 16: Histogram of Case Sample Group Participants’ (BPD and non-BPD) Scores for KAPP Impulse Control

Figure 17: Histogram of Psychiatric Control Group Participants’ (BPD and non-BPD) Scores for KAPP Impulse Control

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Figure 18: Histogram of Case Sample Group Participants’ (BPD) Scores for KAPP Impulse Control

Figure 19: Histogram of Psychiatric Control Group Participants’ (BPD) Scores for KAPP Impulse Control
Figure 20: Histogram of Case Sample Group Participants’ (non-BPD) Scores for KAPP Impulse Control

![Histogram of Case Sample Group Participants’ (non-BPD) Scores for KAPP Impulse Control](image)

Figure 21: Histogram of Psychiatric Control Group Participants’ (non-BPD) Scores for KAPP Impulse Control

![Histogram of Psychiatric Control Group Participants’ (non-BPD) Scores for KAPP Impulse Control](image)
KAPP frustration tolerance

The median values displayed in Table 21 below suggest that both case sample groups demonstrate raised dysfunction in terms of their capacity to tolerate states of frustration compared to matched control groups. In terms of the distribution of these participants' scores, Figures 24 and 26 illustrate that scores allocated to members of both case sample groups are negatively skewed with no self-harming participants obtaining the lowest score for this KAPP dimension. The histograms of the scores for the control groups (Figures 25 and 27) illustrate a more even distribution for the psychiatric control group (BPD) and a positively skewed distribution for the psychiatric control group (non-BPD). Indeed, one third of participants in the psychiatric control group (non-BPD) were allocated the lowest score that can be obtained for this dimension. Only one member of the psychiatric control group (BPD) was given this lowest score.

<table>
<thead>
<tr>
<th>Diagnostic Category</th>
<th>Case Sample Group</th>
<th>Psychiatric Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median</td>
<td>Interquartile Range</td>
</tr>
<tr>
<td>BPD</td>
<td>2.50</td>
<td>0.50</td>
</tr>
<tr>
<td>non-BPD</td>
<td>2.50</td>
<td>1.00</td>
</tr>
<tr>
<td>BPD &amp; non-BPD</td>
<td>2.50</td>
<td>1.00</td>
</tr>
</tbody>
</table>
Figure 22: Histogram of Case Sample Group Participants’ (BPD and non-BPD) Scores for KAPP Frustration Tolerance

Figure 23: Histogram of Psychiatric Control Group Participants’ (BPD and non-BPD) Scores for KAPP Frustration Tolerance
Figure 24: Histogram of Case Sample Group Participants’ (BPD) Scores for KAPP Frustration Tolerance

Figure 25: Histogram of Psychiatric Control Group Participants’ (BPD) Scores for KAPP Frustration Tolerance
Figure 26: Histogram of Case Sample Group Participants' (non-BPD) Scores for KAPP Frustration Tolerance

![Histogram of Case Sample Group Participants' Scores](image)

Figure 27: Histogram of Psychiatric Control Group Participants' (non-BPD) Scores for KAPP Frustration Tolerance

![Histogram of Psychiatric Control Group Participants' Scores](image)
KAPP dependency and separation

The descriptive data displayed in Table 22 suggest that case sample group participants (BPD and non-BPD) showed a marginally increased dysfunction in terms of interpersonal dependency and separation than psychiatric control group participants (BPD and non-BPD). Although the case sample group (BPD) and the psychiatric control group (BPD) have the same relatively high median value of 2.5 and the size of the interquartile ranges are the same, Figures 30 and 31 demonstrate that in contrast to BPD controls the dispersion of scores for BPD self-harmers is highly negatively skewed. Indeed, almost 70% of case sample group participants (BPD) were allocated either the highest or second highest score for dysfunction in terms of their capacities for establishing and maintaining interpersonal dependency and working through loss and separation. This tendency was not observed for the case sample group (non-BPD) where less than 30% of participants were allocated either of these two highest scores (see Figure 32).

Table 22: KAPP Dependency and Separation Scores for Case Sample Group Participants and Psychiatric Control Group Participants - Median Values and Interquartile Ranges

<table>
<thead>
<tr>
<th>Diagnostic Category</th>
<th>Case Sample Group</th>
<th>Psychiatric Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median</td>
<td>Interquartile Range</td>
</tr>
<tr>
<td>BPD</td>
<td>2.50</td>
<td>1.00</td>
</tr>
<tr>
<td>non-BPD</td>
<td>2.00</td>
<td>1.00</td>
</tr>
<tr>
<td>BPD &amp; non-BPD</td>
<td>2.00</td>
<td>0.50</td>
</tr>
</tbody>
</table>
Figure 28: Histogram of Case Sample Group Participants’ (BPD and non-BPD) Scores for KAPP Dependency and Separation

Figure 29: Histogram of Psychiatric Control Group Participants’ (BPD and non-BPD) Scores for KAPP Dependency and Separation
Figure 30: Histogram of Case Sample Group Participants’ (BPD) Scores for KAPP Dependency and Separation

![Histogram of Case Sample Group Participants’ (BPD) Scores for KAPP Dependency and Separation](image)

Figure 31: Histogram of Psychiatric Control Group Participants’ (BPD) Scores for KAPP Dependency and Separation

![Histogram of Psychiatric Control Group Participants’ (BPD) Scores for KAPP Dependency and Separation](image)
Figure 32: Histogram of Case Sample Group Participants’ (non-BPD) Scores for KAPP Dependency and Separation

Figure 33: Histogram of Psychiatric Control Group Participants’ (non-BPD) Scores for KAPP Dependency and Separation
PART 3

Statistical analyses

The results obtained for each of the 10 principal hypotheses and 12 secondary hypotheses are set out below.

**Hypothesis 1:** There is no significant difference between the total number of male patients and the total number of female patients with histories of DSH referred to the researcher.

The 516 patients with histories of DSH who were referred to and interviewed by the researcher prior to either their inclusion in the case sample group or their exclusion from it on grounds of reported experiences of potentially traumatic events comprised 266 males and 250 females.

A Binomial one sample test of proportion was used to test whether the proportion of males in the sample of 516 patients was significantly different from 0.5 (50%). It was found that the number of males in this sample was not significantly different from 0.5. The sample estimate and 95% confidence interval for the proportion of males were 0.52 (0.47 to 0.56), p=0.51.
Hypothesis 2: There is no significant difference between the total number of case sample group participants diagnosed with BPD and the total number of case sample group participants not diagnosed with BPD.

The case sample group (BPD and non-BPD) comprised 36 participants with a principal diagnosis of BPD and 45 participants without BPD as a principal diagnosis. A Binomial one sample test of proportion was used to test whether the proportion of participants in the case sample group with the BPD diagnosis was significantly different from 0.5 (50%). It was found that the number of BPD participants in this sample was not significantly different from 0.5. The sample estimate and 95% confidence interval for the proportion of males were 0.44 (0.33 to 0.56), p=0.37.
Hypothesis 3: Case sample group participants (BPD and non-BPD) will record significantly higher scores than psychiatric control group participants (BPD and non-BPD) for recalled maternal overprotection and recalled paternal overprotection.

Mann-Whitney U tests (two-tailed) were used to test Hypothesis 3. Details regarding sample sizes, Mann-Whitney U-statistics and p-values are presented in Table 23 below.

Table 23: Mann-Whitney U Test: FBI Overprotection (Mother) Scores and FBI Overprotection (Father) Scores for Case Sample Group Participants (BPD and non-BPD) and Psychiatric Control Group Participants (BPD and non-BPD) - Sample Sizes, Mann-Whitney U-statistics and P-values

<table>
<thead>
<tr>
<th>PBI Overprotection</th>
<th>N</th>
<th>U</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recalled Overprotection (Mother)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (BPD &amp; non-BPD)</td>
<td>81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatric Control Group* (BPD &amp; non-BPD)</td>
<td>61</td>
<td>1649</td>
<td>0.001</td>
</tr>
<tr>
<td>Total</td>
<td>142</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Recalled Overprotection (Father)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group** (BPD &amp; non-BPD)</td>
<td>77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatric Control Group (BPD &amp; non-BPD)</td>
<td>62</td>
<td>2016.50</td>
<td>0.09</td>
</tr>
<tr>
<td>Total</td>
<td>139</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* 1 member of the psychiatric control group grew up without a mother.
** 4 members of the case sample group grew up without fathers.

Results of the Mann-Whitney U tests demonstrate that case sample group participants (BPD & non-BPD) recorded significantly higher scores than psychiatric control group participants (BPD & non-BPD) for overprotection with regard to mothers (p=0.001). However, no significant difference was detected for overprotection with regard to fathers (p=0.09) between these two samples.
**Hypothesis 4:** Case sample group participants (BPD) will record significantly higher scores than psychiatric control group participants (BPD) for recalled maternal overprotection and recalled paternal overprotection.

Mann-Whitney U tests (two-tailed) were used to test Hypothesis 4. Details regarding sample sizes, Mann-Whitney U-statistics and p-values are presented in Table 24 below.

Table 24: Mann-Whitney U Test: PBI Overprotection (Mother) Scores and PBI Overprotection (Father) Scores for Case Sample Group Participants (BPD) and Psychiatric Control Group Participants (BPD) - Sample Sizes, Mann-Whitney U-statistics and P-values

<table>
<thead>
<tr>
<th>PBI Overprotection</th>
<th>N</th>
<th>U</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recalled Overprotection (Mother)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (BPD)</td>
<td>36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatric Control Group (BPD)</td>
<td>17</td>
<td>267.50</td>
<td>0.462</td>
</tr>
<tr>
<td>Total</td>
<td>53</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Recalled Overprotection (Father)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (BPD)*</td>
<td>35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatric Control Group (BPD)</td>
<td>17</td>
<td>259.50</td>
<td>0.458</td>
</tr>
<tr>
<td>Total</td>
<td>52</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* 1 member of the case sample group (BPD) group grew up without a father.

Results of the Mann-Whitney U tests support the null hypothesis since they failed to detect significant differences for either maternal overprotection (p=0.462) or paternal overprotection (p=0.458) between these two samples.
**Hypothesis 5:** Case sample group participants (non-BPD) will record significantly higher scores than psychiatric control group participants (non-BPD) for recalled maternal overprotection and recalled paternal overprotection.

Mann-Whitney U tests (two-tailed) were used to test Hypothesis 5. Details regarding sample sizes, Mann-Whitney U-statistics and p-values are presented in Table 25 below.

**Table 25: Mann-Whitney U Test: PBI Overprotection (Mother) Scores and PBI Overprotection (Father) Scores for Case Sample Group Participants (non-BPD) and Psychiatric Control Group Participants (non-BPD) - Sample Sizes, Mann-Whitney U-statistics and P-values**

<table>
<thead>
<tr>
<th>PBI Overprotection</th>
<th>N</th>
<th>U</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recalled Overprotection (Mother)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (non-BPD)</td>
<td>45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatric Control Group (non-BPD)*</td>
<td>44</td>
<td>487.50</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>89</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Recalled Overprotection (Father)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (non-BPD)**</td>
<td>42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatric Control Group (non-BPD)</td>
<td>45</td>
<td>641.00</td>
<td>0.01</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>87</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* 1 member of the psychiatric control group (non-BPD) grew up without a mother.
** 3 members of case sample group (non-BPD) grew up without a father.

Results of the Mann-Whitney U tests demonstrate that case sample group participants (non-BPD) recorded significantly higher scores than psychiatric control group participants (non-BPD) for overprotection with regard to mothers (p<0.001) and fathers (p=0.01).
**Hypothesis 6:** There are no significant differences in terms of subjects' scores for recalled maternal overprotection or recalled paternal overprotection between case sample group participants (BPD) and case sample group participants (non-BPD).

Mann-Whitney U tests (two-tailed) were used to test Hypothesis 6. Details regarding sample sizes, Mann-Whitney U-statistics and p-values are presented in Table 26 below.

**Table 26: Mann-Whitney U Test: PBI Overprotection (Mother) Scores and PBI Overprotection (Father) Scores for Case Sample Group Participants (BPD) and Case Sample Group Participants (non-BPD) - Sample Sizes, Mann-Whitney U-statistics and P-values**

<table>
<thead>
<tr>
<th>PBI Overprotection</th>
<th>N</th>
<th>U</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recalled Overprotection (Mother)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (BPD)</td>
<td>36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (non-BPD)</td>
<td>45</td>
<td>461</td>
<td>0.001</td>
</tr>
<tr>
<td>Total</td>
<td>81</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Recalled Overprotection (Father)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (BPD)</td>
<td>35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (non-BPD)</td>
<td>42</td>
<td>624</td>
<td>0.255</td>
</tr>
<tr>
<td>Total</td>
<td>77</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results of the Mann-Whitney U tests demonstrate that no significant difference was detected for overprotection with regard to fathers (p=0.255) between these two samples. However, case sample group participants (non-BPD) recorded significantly higher scores than case sample group participants (BPD) for overprotection with regard to mothers (p=0.001).
Hypothesis 7: Case sample group participants (BPD and non-BPD) will record significantly lower scores than psychiatric control group participants (BPD and non-BPD) for recalled maternal care and recalled paternal care.

Mann-Whitney U tests (two-tailed) were used to test Hypothesis 7. Details regarding sample sizes, Mann-Whitney U-statistics and p-values are presented in Table 27 below.

Table 27: Mann-Whitney U Test: PBI Care (Mother) Scores and PBI Care (Father) Scores for Case Sample Group Participants (BPD and non-BPD) and Psychiatric Control Group Participants (BPD and non-BPD) - Sample Sizes, Mann-Whitney U-statistics and P-values

<table>
<thead>
<tr>
<th>PBI Care</th>
<th>N</th>
<th>U</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recalled Care (Mother)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (BPD &amp; non-BPD)</td>
<td>81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatric Control Group (BPD &amp; non-BPD)</td>
<td>61</td>
<td>1785.00</td>
<td>0.005</td>
</tr>
<tr>
<td>Total</td>
<td>142</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Recalled Care (Father)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (BPD &amp; non-BPD)</td>
<td>77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatric Control Group (BPD &amp; non-BPD)</td>
<td>62</td>
<td>2016.50</td>
<td>0.116</td>
</tr>
<tr>
<td>Total</td>
<td>139</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results of the Mann-Whitney U tests demonstrate that case sample group participants (BPD & non-BPD) recorded significantly lower scores than psychiatric control group participants (BPD & non-BPD) for recalled care with regard to mothers (p=0.005). However, no significant difference was detected for care with regard to fathers (p=0.116) between these two samples.
Hypothesis 8: Case sample group participants (BPD) will record significantly lower scores than psychiatric control group participants (BPD) for recalled maternal care and recalled paternal care.

Mann-Whitney U tests (two-tailed) were used to test Hypothesis 8. Details regarding sample sizes, Mann-Whitney U-statistics and p-values are presented in Table 28 below.

Table 28: Mann-Whitney U Test: PBI Care (Mother) Scores and PBI Care (Father) Scores for Case Sample Group Participants (BPD) and Psychiatric Control Group Participants (BPD) - Sample Sizes, Mann-Whitney U-statistics and P-values

<table>
<thead>
<tr>
<th>PBI Care</th>
<th>N</th>
<th>U</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recalled Care (Mother)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (BPD)</td>
<td>36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatric Control Group (BPD)</td>
<td>17</td>
<td>297.00</td>
<td>0.864</td>
</tr>
<tr>
<td>Total</td>
<td>53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recalled Care (Father)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (BPD)</td>
<td>35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatric Control Group (BPD)</td>
<td>17</td>
<td>273.00</td>
<td>0.632</td>
</tr>
<tr>
<td>Total</td>
<td>52</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results of the Mann-Whitney U tests support the null hypothesis since they failed to detect significant differences for either maternal care (p=0.864) or paternal care (p=0.632) between these two samples.
Hypothesis 9: Case sample group participants (non-BPD) will record significantly lower scores than psychiatric control group participants (non-BPD) for recalled maternal care and recalled paternal care.

Mann-Whitney U tests (two-tailed) were used to test Hypothesis 9. Details regarding sample sizes, Mann-Whitney U-statistics and p-values are presented in Table 29 below.

Table 29: Mann-Whitney U Tests: PBI Care (Mother) Scores and PBI Care (Father) Scores for Case Sample Group Participants (non-BPD) and Psychiatric Control Group Participants (non-BPD) - Sample Sizes, Mann-Whitney U-statistics and P-values

<table>
<thead>
<tr>
<th>PBI Care</th>
<th>N</th>
<th>U</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recalled Care (Mother)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (non-BPD)</td>
<td>45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatric Control Group (non-BPD)</td>
<td>44</td>
<td>567.00</td>
<td>0.001</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>89</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Recalled Care (Father)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (non-BPD)</td>
<td>42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatric Control Group (non-BPD)</td>
<td>45</td>
<td>777.00</td>
<td>0.153</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>87</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results of the Mann-Whitney U tests demonstrate that case sample group participants (non-BPD) recorded significantly lower scores than psychiatric control group participants (non-BPD) for care with regard to mothers (p=0.001). However, no significant difference was detected for care with regard to fathers (p=0.153) between these two samples.
Hypothesis 10: There are no significant differences in terms of participants' scores for recalled maternal care or recalled paternal care between case sample group participants (BPD) and case sample group participants (non-BPD).

Mann-Whitney U tests (two-tailed) were used to test Hypothesis 10. Details regarding sample sizes, Mann-Whitney U-statistics and p-values are presented in Table 30 below.

Table 30: Mann-Whitney U Test: PBI Care (Mother) Scores and PBI Care (Father) Scores for Case Sample Group Participants (BPD) and Case Sample Group Participants (non-BPD) - Sample sizes, Mann-Whitney U-statistics and P-values

<table>
<thead>
<tr>
<th>PBI Care</th>
<th>N</th>
<th>U</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recalled Care (Mother)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (BPD)</td>
<td>36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (non-BPD)</td>
<td>45</td>
<td>712.50</td>
<td>0.354</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>81</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Recalled Care (Father)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (BPD)</td>
<td>35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (non-BPD)</td>
<td>42</td>
<td>696.50</td>
<td>0.693</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>77</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results of the Mann-Whitney U tests support the null hypothesis since they failed to detect significant differences for either recalled maternal care (p=0.354) or paternal care (p=0.693) between these two samples.
Hypothesis 11: There are no significant differences in terms of participants’ scores for I7 impulsiveness and KAPP impulse control between case sample group participants (BPD and non-BPD) and psychiatric control group participants (BPD and non-BPD).

Mann-Whitney U tests (two-tailed) were used to test Hypothesis 11. Details regarding sample sizes, Mann-Whitney U-statistics and p-values are presented in Table 31 below.

Table 31: Mann-Whitney U Test: I7 Impulsiveness Scores and KAPP Impulse Control Scores for Case Sample Group Participants (BPD and non-BPD) and Psychiatric Control Group Participants (BPD and non-BPD) - Sample Sizes, Mann-Whitney U-statistics and P-values

<table>
<thead>
<tr>
<th>I7 Impulsiveness and KAPP Impulse Control</th>
<th>N</th>
<th>U</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I7 Impulsiveness</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (BPD &amp; non-BPD)</td>
<td>81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatric Control Group (BPD &amp; non-BPD)</td>
<td>62</td>
<td>2222.50</td>
<td>0.239</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>143</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>KAPP Impulse Control</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (BPD &amp; non-BPD)</td>
<td>81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatric Control Group (BPD &amp; non-BPD)</td>
<td>62</td>
<td>2224.50</td>
<td>0.231</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>143</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results of the Mann-Whitney U tests support the null hypothesis since they failed to detect significant differences for I7 impulsiveness (p=0.239) or KAPP impulse control (p=0.231) between these two samples.
Hypothesis 12: There are no significant differences in terms of participants' scores for I7 impulsiveness and KAPP impulse control between case sample group participants (BPD) and psychiatric control group participants (BPD).

Mann-Whitney U tests (two-tailed) were used to test Hypothesis 12. Details regarding sample sizes, Mann-Whitney U-statistics and p-values are presented in Table 32 below.

Table 32: Mann-Whitney U Test: I7 Impulsiveness Scores and KAPP Impulse Control Scores for Case Sample Group Participants (BPD) and Psychiatric Control Group Participants (BPD) - Sample Sizes, Mann-Whitney U-statistics and P-values

<table>
<thead>
<tr>
<th>I7 Impulsiveness and KAPP Impulse Control</th>
<th>N</th>
<th>U</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>I7 Impulsiveness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (BPD)</td>
<td>36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatric Control Group (BPD)</td>
<td>17</td>
<td>272.50</td>
<td>0.522</td>
</tr>
<tr>
<td>Total</td>
<td>53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KAPP Impulse Control</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (BPD)</td>
<td>36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatric Control Group (BPD)</td>
<td>17</td>
<td>259.50</td>
<td>0.360</td>
</tr>
<tr>
<td>Total</td>
<td>53</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results of the Mann-Whitney U tests support the null hypothesis since they failed to detect significant differences for I7 impulsiveness (p=0.522) or KAPP impulse control (p=0.360) between these two samples.
Hypothesis 13: There are no significant differences in terms of participants' scores for I7 impulsiveness and KAPP impulse control between case sample group participants (non-BPD) and psychiatric control group participants (non-BPD).

Mann-Whitney U tests (two-tailed) were used to test Hypothesis 13. Details regarding sample sizes, Mann-Whitney U-statistics and p-values are presented in Table 33 below.

Table 33: Mann-Whitney U Test: I7 Impulsiveness Scores and KAPP Impulse Control Scores for Case Sample Group Participants (non-BPD) and Psychiatric Control Group Participants (non-BPD) - Sample Sizes, Mann-Whitney U-statistics and P-values

<table>
<thead>
<tr>
<th>I7 Impulsiveness and KAPP Impulse Control</th>
<th>N</th>
<th>U</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>I7 Impulsiveness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (non-BPD)</td>
<td>45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatric Control Group (non-BPD)</td>
<td>45</td>
<td>790.50</td>
<td>0.072</td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KAPP Impulse Control</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (non-BPD)</td>
<td>45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatric Control Group (non-BPD)</td>
<td>45</td>
<td>803.50</td>
<td>0.083</td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results of the Mann-Whitney U tests support the null hypothesis since they failed to detect significant differences for I7 impulsiveness (p=0.072) or KAPP impulse control (p=0.083) between these two samples.
Hypothesis 14: There is a significant positive association between the experience of ambivalence towards the prospect of engaging in DSH and the tendency to delay or postpone DSH among case sample group participants (BPD and non-BPD).

A Fisher's Exact test (two-tailed) with one degree of freedom was used to test hypothesis 14. Observed and expected frequencies are presented in the contingency below (Table 34).

Table 34: Fisher's Exact Test: Contingency Table of Observed and Expected Frequencies for the Experience of Ambivalence Towards the Prospect of Engaging in DSH and the Ability to Delay or Postpone DSH for Case Sample Group Participants (BPD & non-BPD)

<table>
<thead>
<tr>
<th>Ambivalence experienced towards DSH</th>
<th>Able to delay/postpone DSH</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>Observed Frequency</td>
<td>30</td>
<td>8</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>Expected Frequency</td>
<td>14.5</td>
<td>23.5</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>Observed Frequency</td>
<td>1</td>
<td>42</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td>Expected Frequency</td>
<td>16.5</td>
<td>26.5</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>50</td>
<td>81</td>
<td></td>
</tr>
</tbody>
</table>

Results of the Fisher's Exact test demonstrate that there was a significant positive association ($\chi^2 = 50.13$, $p<0.001$) between the experience of ambivalence towards the prospect of engaging in DSH and the tendency to delay or postpone acts of DSH.
Hypothesis 15: Case sample group participants (BPD and non-BPD) will record significantly higher scores than psychiatric control group participants (BPD and non-BPD) with regard to average units of alcohol consumed per week.

A Mann-Whitney U test (two-tailed) was used to test hypothesis 15. Details regarding sample sizes, the Mann-Whitney U-statistic and the p-value are presented in Table 35 below.

Table 35: Mann-Whitney U Test: Average Units of Alcohol Consumed per Week for Case Sample Group Participants (BPD and non-BPD) and Psychiatric Control Group Participants (BPD and non-BPD) - Sample Sizes, Mann-Whitney U-statistic and P-value

<table>
<thead>
<tr>
<th>Units of Alcohol Consumed/Week</th>
<th>N</th>
<th>U</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case Sample Group (BPD &amp; non-BPD)</td>
<td>81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatric Control Group (BPD &amp; non-BPD)</td>
<td>62</td>
<td>2064</td>
<td>0.067</td>
</tr>
<tr>
<td>Total</td>
<td>143</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The result of the Mann-Whitney U test supports the null hypothesis since it failed to detect a significant difference for average weekly units of alcohol consumed per week (p=0.067) between these two samples.
Hypothesis 16: There is no significant difference with regard to average units of alcohol consumed per week between case sample group participants (BPD) and case sample group participants (non-BPD).

A Mann-Whitney U test (two-tailed) was use to test hypothesis 16. Details regarding sample sizes, the Mann-Whitney U-statistic and the p-value are presented in Table 36 below.

Table 36: Mann-Whitney U Test: Average Units of Alcohol Consumed per Week for Case Sample Group Participants (BPD) and Case Sample Group Participants (non-BPD) - Sample Sizes, Mann-Whitney U-statistic and P-value

<table>
<thead>
<tr>
<th>Units of Alcohol Consumed/Week</th>
<th>N</th>
<th>U</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case Sample Group (BPD)</td>
<td>36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (non-BPD)</td>
<td>45</td>
<td>604.5</td>
<td>0.049</td>
</tr>
<tr>
<td>Total</td>
<td>81</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The result of the Mann-Whitney U test demonstrate that case sample group participants (BPD) recorded significantly higher scores than case sample group participants (non-BPD) with regard to average weekly units of alcohol consumed (p=0.049).
Hypothesis 17: There is no significant difference in terms of the frequency with which participants engage in DSH whilst intoxicated with alcohol between case sample group participants (BPD) and case sample group participants (non-BPD).

A Mann-Whitney test was use to test hypothesis 17. Details regarding sample sizes, the Mann-Whitney U-statistic and the p-value are presented in Table 37 below.

Table 37: Mann-Whitney U Test: Frequency with which DSH Occurred whilst Intoxicated with Alcohol for Case Sample Group Participants (BPD) and Case Sample Group Participants (non-BPD) - Sample Sizes, Mann-Whitney U-statistic and P-value

<table>
<thead>
<tr>
<th>Frequency of DSH Whilst Intoxicated</th>
<th>N</th>
<th>U</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case Sample Group (BPD)</td>
<td>36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (non-BPD)</td>
<td>45</td>
<td>591</td>
<td>0.029</td>
</tr>
<tr>
<td>Total</td>
<td>81</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results of the Mann-Whitney U tests demonstrate that case sample group participants (BPD) recorded significantly higher scores than case sample group participants (non-BPD) with regard the frequency with which DSH occurred whilst intoxicated with alcohol (p=0.029).
Hypothesis 18: Among case sample group participants (BPD and non-BPD) who typically or always engage in DSH whilst intoxicated with alcohol there is no significant difference between the number who are aware of the need to engage in DSH prior to intoxication and the number who are not aware of the need to engage in DSH prior to intoxication.

37 participants (BPD and non-BPD) stated that they typically or always engage in DSH whilst intoxicated with alcohol. 26 of these participants stated that on each occasion when they engage in DSH they are not aware of the need to do so before they had started to drink alcohol.

A Binomial one sample test of proportion was used to test whether the proportion of self-harmers who stated that on each occasion when they had engaged in DSH they are aware of the need to do so before they had started to drink alcohol was significantly different from 0.5 (50%). It was found that this proportion of self-harmers in this sample was significantly different from 0.5. The sample estimate and 95% confidence interval for the proportion of males were 0.70 (0.53 to 0.84), p=0.020.
Hypothesis 19: Case sample group participants (BPD and non-BPD) will record significantly higher scores than psychiatric control group participants (BPD and non-BPD) with regard to Karolinska Psychodynamic Profile (KAPP) subscales for alexithymic traits, frustration tolerance and dependency and separation.

Mann-Whitney U tests (two-tailed) were used to test Hypothesis 19. Details regarding sample sizes, Mann-Whitney U-statistics and p-values are presented in Table 38 below.

Table 38: Mann-Whitney U Test: KAPP Alexithymic Traits, KAPP Frustration Tolerance and KAPP Dependency and Separation for Case Sample Group Participants (BPD & non-BPD) and Psychiatric Control Group Participants (BPD & non-BPD) - Sample Sizes, Mann-Whitney U-statistics and P-values

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>U</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>KAPP Alexithymic Traits</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>KAPP Frustration Tolerance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>KAPP Dependency and Separation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (BPD &amp; non-BPD)</td>
<td>81</td>
<td>1136</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Psychiatric Control Group (BPD &amp; non-BPD)</td>
<td>62</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>143</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>KAPP Frustration Tolerance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (BPD &amp; non-BPD)</td>
<td>81</td>
<td>829.50</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Psychiatric Control Group (BPD &amp; non-BPD)</td>
<td>62</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>143</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>KAPP Dependency and Separation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (BPD &amp; non-BPD)</td>
<td>81</td>
<td>1225.50</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Psychiatric Control Group (BPD &amp; non-BPD)</td>
<td>62</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>143</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results of the Mann-Whitney U tests demonstrate that case sample group participants (BPD and non-BPD) recorded significantly higher scores than psychiatric control
group participants with regard to KAPP alexithymic traits (p<0.001), KAPP frustration tolerance (p<0.001), and KAPP dependency and separation (p<0.001).
**Hypothesis 20:** Case sample group participants (BPD) will record significantly higher scores than psychiatric control group participants (BPD) with regard to KAPP subscales for alexithymic traits, frustration tolerance and dependency and separation.

Mann-Whitney U tests (two-tailed) were used to test Hypothesis 20. Details regarding sample sizes, Mann-Whitney U-statistics and p-values are presented in Table 39 below.

| Table 39: Mann-Whitney U Test: KAPP Alexithymic Traits, KAPP Frustration Tolerance and KAPP Dependency and Separation for Case Sample Group Participants (BPD) and Psychiatric Control Group Participants (BPD) - Sample Sizes, Mann-Whitney U-statistics and P-values |
|---------------------------------|---|---|---|
| **KAPP Alexithymic Traits**    | N  | U  | P  |
| **KAPP Frustration Tolerance** |    |    |    |
| **KAPP Dependency and Separation** |    |    |    |
| Case Sample Group (BPD)        | 36 |    |    |
| Psychiatric Control Group (BPD)| 17 | 171.50 | 0.008 |
| Total                          | 53 |    |    |
| **KAPP Frustration Tolerance** |    |    |    |
| Case Sample Group (BPD)        | 36 | 115.5 | <0.001 |
| Psychiatric Control Group (BPD)| 17 |    |    |
| Total                          | 53 |    |    |
| **KAPP Dependency and Separation** |    |    |    |
| Case Sample Group (BPD)        | 36 | 196  | 0.029 |
| Psychiatric Control Group (BPD)| 17 |    |    |
| Total                          | 53 |    |    |

Results of the Mann-Whitney U tests demonstrate that case sample group participants (BPD) recorded significantly higher scores than psychiatric control group participants (BPD).
(BPD) with regard to KAPP alexithymic traits (p=0.008), KAPP frustration tolerance (p<0.001), and KAPP dependency and separation (p = 0.029).
**Hypothesis 21:** Case sample group participants (non-BPD) will record significantly higher scores than psychiatric control group participants (non-BPD) with regard to KAPP subscales for alexithymic traits, frustration tolerance and dependency and separation.

Mann-Whitney U tests (two-tailed) were used to test Hypothesis 21. Details regarding sample sizes, Mann-Whitney U-statistics and p-values are presented in Table 40 below.

<table>
<thead>
<tr>
<th></th>
<th>KAPP Alexithymic Traits</th>
<th>KAPP Frustration Tolerance</th>
<th>KAPP Dependency and Separation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>U</td>
<td>P</td>
</tr>
<tr>
<td>KAPP Alexithymic Traits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (non-BPD)</td>
<td>45</td>
<td>415.50</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Psychiatric Control Group (non-BPD)</td>
<td>45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KAPP Frustration Tolerance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (non-BPD)</td>
<td>45</td>
<td>337.50</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Psychiatric Control Group (non-BPD)</td>
<td>45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KAPP Dependency and Separation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (non-BPD)</td>
<td>45</td>
<td>442.50</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Psychiatric Control Group (non-BPD)</td>
<td>45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results of the Mann-Whitney U tests demonstrated that case sample group participants (non-BPD) recorded significantly higher scores than psychiatric control
group participants (non-BPD) with regard to KAPP alexithymic traits (p<0.001),
KAPP frustration tolerance (p<0.001), and KAPP dependency and separation
(p<0.001).
Hypothesis 22: There are no significant differences with regard to participants' scores for KAPP subscales for alexithymic traits, frustration tolerance and dependency and separation between case sample group participants (BPD) and case sample group participants (non-BPD).

Mann-Whitney U tests (two-tailed) were used to test Hypothesis 22. Details regarding sample sizes, Mann-Whitney U-statistics and p-values are presented in Table 41 below.

Table 41: Mann-Whitney U Test: KAPP Alexithymic Traits, KAPP Frustration Tolerance and KAPP Dependency and Separation for Case Sample Group Participants (BPD) and Case Sample Group Participants (non-BPD) - Sample Sizes, Mann-Whitney U-statistics and P-values

<table>
<thead>
<tr>
<th>KAPP Alexithymic Traits</th>
<th>N</th>
<th>U</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>KAPP Frustration Tolerance</td>
<td>N</td>
<td>U</td>
<td>P</td>
</tr>
<tr>
<td>KAPP Dependency and Separation</td>
<td>N</td>
<td>U</td>
<td>P</td>
</tr>
<tr>
<td>Case Sample Group (BPD)</td>
<td>36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (non-BPD)</td>
<td>45</td>
<td>806</td>
<td>0.969</td>
</tr>
<tr>
<td>Total</td>
<td>81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KAPP Frustration Tolerance</td>
<td>N</td>
<td>U</td>
<td>P</td>
</tr>
<tr>
<td>Case Sample Group (BPD)</td>
<td>36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (non-BPD)</td>
<td>45</td>
<td>564</td>
<td>0.013</td>
</tr>
<tr>
<td>Total</td>
<td>81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KAPP Dependency and Separation</td>
<td>N</td>
<td>U</td>
<td>P</td>
</tr>
<tr>
<td>Case Sample Group (BPD)</td>
<td>36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Sample Group (non-BPD)</td>
<td>45</td>
<td>462.50</td>
<td>0.001</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Results of the Mann-Whitney U tests demonstrated that case sample group participants (BPD) recorded significantly higher scores than case sample group participants (non-BPD).
participants (non-BPD) with regard to KAPP frustration tolerance (p=0.013) and KAPP dependency and separation (p=0.001). No significant difference was detected between these samples for KAPP alexithymic traits (p=0.969).
SECTION 2: CASE HISTORIES

PART 1: The five case histories

The following five case history vignettes are presented here in order that repeated superficial cutting and/or burning behaviours might be set in concise biographic contexts that allow for an appreciation of the significance that such behaviours attain for a selection of case sample group participants. These contexts include pertinent aspects of participants’ current social circumstances as well as their psychiatric, personal and family histories. In addition, comments and disclosures made by participants during their interviews with the researcher are presented verbatim within parentheses where it is considered that such disclosures assist towards an understanding of the significance of events that led up to acts of DSH and how their first experiences of cutting and/or burning themselves might have developed into chronic behavioural patterns. These verbatim reports were recorded by the researcher in shorthand during the course of interviews with participants.

In order that these case histories are on the whole representative of the larger membership of the case sample group (BPD and non-BPD), case histories of those participants whose behaviours, social circumstances and personal histories might be considered to be relatively extreme and farthest away from those more frequently encountered within the case sample group are not presented here. Furthermore, since the majority of self-harmers who comprised the case sample group were women who did not have a diagnosis of BPD, these observed tendencies regarding gender and psychiatric diagnosis are reflected among these case histories.

In order to protect the confidentiality of patients’ information participants are referred to by pseudonyms.
Case History 1 – Mary

Demographic details:

Age: 36  Ethnic status: White British  Gender: Female

Employment status: Unemployed

Mary self-presented to the A&E department following an overdose of her prescribed antidepressant medication and over-the-counter painkillers. She had also lacerated her left arm, abdomen and both legs after having consumed half of a bottle of vodka. Several of these cuts required suturing. According to the notes made by the triage nurse who had spoken to Mary on her arrival in A&E, Mary had stated that she had taken the overdose in order to kill herself. Once sober, this patient was referred to the researcher after she had been medically cleared by A&E staff and prior to her referral to the liaison psychiatry team. This was the eighth out of a total of 16 psychiatric and/or medical presentations made by this patient to this A&E department during the data-gathering exercise of this study. All presentations that required medical intervention were due to DSH, deliberate overdoses, or alcohol or drug abuse.

Mary’s psychiatric history was well documented. She had never been offered a psychiatric admission. However, at the time of this presentation to the A&E department Mary was engaged with several mental health services including an alcohol advisory service (her average weekly consumption of alcohol was 105 units), the psychiatric outpatients department based within University College Hospital, her local ‘Crisis Resolution Team’ that offered psychiatric support in the community and a women-only residential mental health crisis facility that is designed to offer respite care as an alternative to psychiatric admission. Recent entries made in her notes by health-care professionals who were involved in her care indicated that she was of high
ongoing risk of self-harm but was considered to be unwilling to engage in treatment aimed at addressing both her substance abuse and her history of self-harm (both DSH and deliberate overdoses). At the time of the interview with the researcher she had a psychiatric diagnosis of BPD, alcohol abuse and Opioid abuse. A review of more recent entries that were made in this patient’s notes several months after her involvement in this research revealed that the diagnosis of alcohol abuse had been changed to that of alcohol dependence.

During the initial stage of the interview with the researcher, Mary described her mood as “empty” and “painful”. She complained of feeling depressed and that she would rather be dead. Contrary to her earlier statement to the triage nurse, she now said that she had no current intent or plans to complete suicide since she did not have “...the courage to do it”. Asked why she had previously mentioned that she had taken the overdose to kill herself she became annoyed and asked why it was that people did not believe how “low and dead inside” she felt.

Describing her life as a child at home, Mary recalled that her parents had a poor relationship with each other and argued frequently. These arguments between her parents never involved actual or threatened violence. Her father was often away from home, occasionally for several weeks at a time because of his work commitments. Her mother occasionally complained to her of her loneliness and how she felt ignored by her husband and often sought comfort and support from Mary. On more than one occasion during her childhood her mother had sought Mary’s reassurances that her daughter would “...always be there for her and not leave her on her own”. Mary referred to her experience of her relationship with her mother as one in which she felt controlled by her and made to feel guilty if she did not make herself available to her as a source of comfort and support (the PBI overprotection score for Mary’s mother
was in the third quartile of scores recorded for case sample group participants (BPD)). She recalled how her attempts to spend more time with her father had been frustrated by her mother’s repeated efforts to keep them apart – “It’s like I had to make a choice between my mum who wouldn’t leave me alone and who thought that if I wasn’t there for her it was as if I was rejecting her and my dad.” Although Mary emphasised that neither her mother nor her father had ever behaved towards her in ways that might be considered to be abusive or grossly neglectful, she nevertheless stated that “...sometimes I wonder why my mum and dad ever had children. My parents will never love me the way I want them to.”

Mary had a brother and a sister, neither of whom had a psychiatric history. She recounted that her mother’s controlling and invasive behaviours were directed to a considerably lesser extent towards these two siblings during their childhood. Born six years after Mary, her brother was referred to by this patient as “the apple of my mother’s eye” and was doted upon by both parents. Mary recalled that although a great deal of her mother’s attention had been taken up by her brother during his early childhood, this attention was significantly more moderate in terms of intrusive and interfering caregiving. Academically successful during his earlier school years, this brother was awarded a scholarship to a private school and subsequently left the family home after he gained a place at a prestigious university. With regard to her sister, Mary claimed to have “hated” her when they were growing up together at home. Asked by the researcher on two occasions why she had felt this animosity towards her sister, Mary declined to elaborate other than to mention that her sister, who was five years older than her, had enjoyed a closer relationship with her father than she had done.
Mary recalled that her mother’s behaviour towards her was highly critical and that she felt her needs were “invisible” to her both as a child and now as an adult. Asked how this critical attitude became manifest in her mother’s behaviour Mary referred to her frequently expressed disappointment with her relatively poor scholastic achievements in comparison to those of her brother and sister and her failure to apply for a place to study at university. In this respect Mary stated how she thought that her mother was deeply hypocritical. Here she reported how she had been privately discouraged by her mother from applying for a place at university since this would result in her leaving home.

Mary also complained of both her parents’ openly disapproving attitude towards her choice of friends and boyfriends and how she was frequently prevented by her mother from leaving the family home in order to meet with them. Unlike Mary, both her brother and sister were married with young children. A review of this patient’s numerous psychiatric notes that had been documented during her previous attendances to the A&E department revealed an enduring absence of mature, intimate, adolescent and adult relationships. During the interview with the researcher it became apparent that the features that characterised this patient’s relationships were those of instability, intensity and brevity.

The nature and extent of the antagonism that Mary claimed to experience towards her parents differed according to whether it was in relation to her mother or to her father. Although she stated that she was very fond of her father she referred to his frequent absences from the family home, absences that she believed left her vulnerable to her mother’s domineering and overwhelming behaviour towards her. She also portrayed him as weak for not standing up to his wife. The negative emotion that she most often experienced towards her father was less that of anger than disappointment in him. In
contrast, Mary’s attitude to her mother appeared to be much less moderate. She referred to the “rage” that was targeted at the all powerful, controlling and suffocating aspects of her mother’s behaviour that she believed had prevented her from making friends, having boyfriends and going to university, where, away from her mother, she might have been able to begin to value herself as someone who was “...good enough to have mates”.

Turning now to her history of self-harm and substance abuse/dependence, Mary stated that she had first cut herself when she was 24 years of age but was unable to recall any precipitating factor. Prior to this she had started to abuse alcohol from the age of 18 years and she recalled how her first deliberate overdose occurred soon after her 21st birthday when she heard that the first of her school friends who had progressed into higher education had graduated from university. Mary emphasised that at the time she had first started to cut herself she was unaware that any one else engaged in this behaviour. When asked whether she could identify any particular experiences or events in her life that may be related to her need to engage in DSH (see Appendix V, page 361) Mary appeared to become frustrated and angry – “You’re asking me whether I’ve been abused aren’t you? No. I have not. This is why I can’t understand why I cut myself. If I had a friend who was doing what I’m doing I would be so worried.”

The interview was briefly interrupted at this point by a nurse who informed Mary that her mother had arrived in the A&E department. Mary’s behaviour changed markedly. Visibly angered by this news she told the nurse that she did not want to see her mother and that she wanted her to leave her alone. After the nurse had left the interview room Mary asked if she could immediately discharge herself from the hospital. Upon being informed that this was not possible until after she had been assessed by a
member of the liaison psychiatry team she began to interfere with her recently sutured
wounds and started to cry. She stated: “I can’t deal with my feelings, I just bury
them. I’m so used to deadening my feelings that when they do crop up I can’t deal
with the emotional pain so I drink. The only way to take away the pain in my head
and how low I feel is to drink.” Asked whether she was able to soothe or calm herself
by means other than using alcohol she stated that she had used to take relatively large
amounts of Valium. However, her general practitioner refused to continue giving her
repeat prescriptions when he began to suspect that she was abusing this drug. Mary
angrily stated that she felt that this action was a gross interference and intrusion on her
doctor’s part and that he had had no right to prevent her from coping with the way she
felt.

Mary disclosed that when she cut herself she had often been unaware of the need to
do so until after she had been drinking alcohol. On those occasions when she had
engaged in DSH whilst sober she recalled how there had been periods of several hours
between her becoming aware of the need to cut herself and eventually doing so.
During these intervening periods she recalled how she had always struggled with her
experience of ambivalence towards the prospect of harming herself. She also reported
that on several occasions this experience of ambivalence had been so intense that up
to three days had passed between her recognising her need to cut herself and
eventually self-harming. Mary stated that she was disappointed and angry with
herself for drinking. Indeed, she recalled how the relief from dysphoric affect that she
experienced after cutting herself was lessened by this disappointment and lasted for a
significantly shorter time than the relief that she experienced whenever she self-
harmed whilst sober.
Nine months prior to her taking part in this research, Mary stopped living at her parents' house and moved into a private rented bedsit to live on her own. Mary continued to drink heavily. Asked why she needed to continue to drink to excess if she was away from home and her mother in particular, Mary replied that she did not necessarily abuse alcohol because of her antagonistic relationship with her mother. Rather, she saw her use of alcohol as a means by which she could immediately moderate her awareness of how sad, hopeless and lonely she felt. She commented upon how she considered her low mood to be partly a result of lost opportunities (in particular, her failure to go to university), her lack of friends and her sense of worthlessness.

Mary differentiated between the factors that she believed contributed to her abuse of alcohol and that which precipitated her use of DSH. Here she was able to recall how angry she always felt before cutting herself particularly if she had been drinking. The episode of DSH that led to this presentation apparently arose in the context of her mother's unsolicited visit to her home. Mary compared her experience of this visit to her mother's unwelcome arrival in the A&E department. Both were considered to be highly intrusive and domineering actions on behalf of her mother over which Mary was unable to exert control. Asked whether she believed she had any control over her use of alcohol Mary admitted that she did not and that this also led her to become angry and frustrated – "I'm angry with myself over my drinking and with her (Mary's mother). I can concentrate on the physical pain and seeing it bleed is like a relief. It's really weird."

After this interview Mary was seen by the duty psychiatrist who recommended that she maintain contact with those agencies that were already involved in her care. She was then discharged from the A&E department.
Case History 2 – Sarah

Demographic details:

Age: 57      Ethnic status: White British      Gender: Female

Employment status: Carer

Sarah was accompanied by police officers when she was taken by ambulance to the A&E department after having lacerated her left hand and her left wrist with a knife. Earlier that day, Sarah had taken her 26 year-old son to the neurology department of another hospital where he was receiving outpatient treatment. She stated that this episode of DSH occurred immediately after staff had told her that they were not able to reimburse her travel expenses. The police had been called because in addition to harming herself Sarah had also threatened members of staff. On her arrival in the A&E department Sarah told the triage nurse that she wanted to kill herself. She had not been drinking alcohol. Several of the cuts to Sarah’s hand required suturing.

This was Sarah’s first presentation to the A&E department at University College Hospital. She had only been in contact with mental health services some 26 years earlier when she received an informal psychiatric admission for three weeks. At that time she had been diagnosed with post-partum depression after the birth of her son who was her eldest child. Since Sarah had not been in recent contact with psychiatric services no third party information regarding her psychiatric history was available at the time of her presentation. This patient was interviewed in the A&E department by both the senior house officer and the consultant in liaison psychiatry. Although on this occasion Sarah was not offered a psychiatric admission, she did attend the psychiatry outpatients department for several follow-up appointments. The local Community Mental Health Team was also subsequently engaged in her care. Details
obtained from these sources revealed that she had now been diagnosed with Dysthymic Disorder and Chronic Adjustment Disorder.

Sarah’s history of harming herself began at 15 years of age when she started to bite her arms. At 27 years of age she cut her arms for the first time and took an overdose of her prescribed medication. She was unable to identify any predisposing factors that might have contributed either to her self-harming behaviour during childhood or to her first episode of DSH. This first episode of DSH occurred four years before the birth of her first child, a son who had been diagnosed with tuberous sclerosis. Her four younger children were all healthy females. Since this first episode of DSH, Sarah had taken numerous deliberate overdoses and had cut herself frequently. She claimed to have never sought medical or psychiatric help for her self-cutting behaviour although she had twice attended A&E departments as a result of overdosing on her prescribed medication. She did not see a mental health professional on either of these two occasions. Sarah commented that her use of superficial DSH had increased in frequency during the previous four months after she had discovered that her grandson had recently been diagnosed with tuberous sclerosis. In addition, for the first time since she was a teenager, she had started to bite herself again.

Sarah claimed to have an extremely inadequate network of intimate relationships. Living alone with her adult son who was prone to epileptic seizures and who also displayed behavioural difficulties, much of her time was spent at home caring for him. She stated that she had no close friends and considered that there was nobody to whom she could turn for emotional support. Sarah’s three younger sisters were married and lived outside of London. She had not been in contact with three of her daughters for several years subsequent to arguments arising between them on account of her self-harming behaviours. Sarah stated that she had been able to maintain a
more positive relationship with one daughter until relatively recently. However, she disclosed that the husband of this woman had received police cautions against domestic violence and was also suspected by several family members of engaging in the sexual and physical abuse of Sarah’s grandson who had a diagnosis of tuberous sclerosis. Her son-in-law did not allow his wife to keep in contact with Sarah.

Subsequent to divorcing her husband on grounds of his adultery, Sarah had been in a relationship with a man for the past 12 years. She did not live with this partner who was described by her as sexually inadequate, weak, and of little comfort or support to her. She did not feel able to confide in him because she feared that he would consider her to be a burden on him and end their relationship. When asked why she remained in this relationship she replied that “...it was better than nothing”.

Both of Sarah’s parents were dead. She emphasised that had they still been alive she would not have found them to be a source of comfort to her. Her memories of her mother were unremarkable. She portrayed her as having been a relatively meek and ineffectual woman who was highly subservient to her husband. This description of her mother stood in sharp contrast to her recollection of her father who she portrayed as having dominated the family environment. His authoritarian manner to his children and in particular to Sarah (his eldest child) would appear to have become manifest in the significantly raised paternal PBI overprotection score that she generated for him. This score was located in the top quartile of scores for this variable among case sample group participants (non-BPD).

As a young child and adolescent, Sarah was not encouraged by her parents to discuss her problems with them. For example, with regard to her recollections of her scholastic failures whilst at school, she referred to her inability to talk openly to her mother about her academic problems since she feared that her confidences would be
betrayed to her father. She left school without formal qualifications at fifteen years of age to work in a local factory.

The expression of negative affect within the family home was met with rebuke by her father and unease and trepidation by her mother lest such expression might displease her husband. Although neither Sarah nor her sisters were victims of parental physical violence they were nevertheless often timid in the presence of their father who was considered by them to be an unemotional and austere parental figure whose intolerance of the articulation of negative affect was commensurate with his marked discomfort with expressions of intimacy. Here, Sarah remarked upon her father’s invariable inability both to initiate and to respond to intimate behaviours. It is perhaps of some relevance that Sarah obtained the maximum score for the alexithymic traits subscale of the PBI denoting significant dysfunction with regard to experiencing, differentiating and articulating emotional states.

Sarah denied having ever engaged in DSH whilst intoxicated with alcohol. Indeed, she stated that since alcohol helped her to feel relaxed there was no need for her to engage in DSH when she had been drinking. Although she always felt regret after having cut herself, she recalled that she was not able to delay or postpone acts of DSH and that whenever she felt the need to cut herself she did so immediately and without any antecedent experience of ambivalence.

On several occasions during the interview she alluded to her significantly reduced capacity to adaptively work through experiences of heightened frustration. Examples given by Sarah of events that recently had caused her to become frustrated (the temporary loss of her reading glasses, her failure to successfully record an episode of her favourite television series and an argument with her neighbours) appeared in themselves to be relatively insignificant. Nevertheless, she stated how she would
typically react with inwardly or outwardly directed aggression (Sarah had several convictions for assault and criminal damage) during such experiences and that episodes of DSH were always prompted by anger and frustration. Sarah recorded the maximum score for KAPP frustration tolerance indicating significant dysfunction with respect to this area of mental functioning.

This patient considered that her use of DSH had arisen in the context of her son’s illness. When reminded by the investigator that she had earlier stated how she had started to cut herself when she was 27 years of age some four years before the birth of this child, she reasoned that although this event might not have instigated her cutting behaviour it nevertheless maintained it. Although Sarah was clearly aware that her inability to tolerate dysphoric experiences of frustration was related to her cutting behaviour she was nevertheless unable to understand why she might have developed such a severe intolerance.

Sarah emphasised that in contrast to those previous occasions when she had cut herself “…this time it’s different. I wanted to kill myself. I should be left alone to die. I don’t want to waste your time. You can’t help me with what’s wrong.” She also asked the researcher if he could give her some pills so that she could kill herself. When asked why she had decided to cut the upper aspect of her hand if she had wanted to end her life and whether she thought it was realistic to make a request for pills to kill herself whilst she was in the A&E department Sarah stated that she had in fact not intended to kill herself and did not want to die. Rather, she had wanted to let others know how socially isolated she has become, how much guilt she experiences with regard to her son’s and grandson’s illnesses (Sarah was aware that tuberous sclerosis is a genetic disorder), and how angry and powerless she feels since she is unable to change her circumstances or to lessen their suffering.
During the interview with the researcher Sarah had emphasised that this was the first time she had cut herself whilst in public and that she considered her use of DSH to be a private matter that did not warrant concern from others. The fact that this patient had not previously sought help from medical or mental health professionals with regard to her cutting behaviour would certainly appear to substantiate this claim. Asked why it was that on this occasion she lacerated herself in front of other people Sarah complained that her experience both of her inability to help improve her own interpersonal situation and her son’s deteriorating health had become overwhelming. She admitted “...the travel costs weren’t important. I bunked the fare anyway. That’s not what this is about. It was like I wanted to show them how bad it’s all become and how my life is spiralling out of control. It’s just got too much. I suppose I was asking for help.”
Case History 3 – Jane

Demographic details:

Age: 16          Ethnic status: British South Asian          Gender: Female

Employment status: School pupil

Jane arrived in the A&E department late on a Saturday evening accompanied by both of her parents. This was the first of two presentations by this participant to University College Hospital during this study. She had taken a substantial overdose of Aspirin some 24 hours earlier. On this occasion she had not engaged in DSH. Due to the severity of this overdose Jane was admitted to a paediatric medical ward for extended medical care after staff in the A&E department had been able to stabilise her condition. The researcher was contacted by an A&E nurse who had noticed several superficial scars that were secondary to DSH on this patient's arms, legs and breasts. The researcher conducted the interview with Jane on the inpatient ward the following morning after an emergency psychiatric risk assessment had been conducted but before a referral was made to the child and adolescent psychiatric team. The psychiatrist who had conducted this risk assessment had obtained faxed information that gave details of Jane’s psychiatric diagnoses from another hospital’s psychiatric outpatients’ department. These were Major Depressive Disorder and Bulimia Nervosa.

During the psychiatric risk assessment Jane had disclosed that she awoke at home on Saturday morning feeling nauseous after having taken more than 100 tablets of Aspirin the night before. At the time of the overdose she was alone at home and apparently did not expect her parents to return from visiting friends until after she had gone to bed. Upon their return they noticed that their daughter had been vomiting but
had put this down to her frequent purging behaviour. Later during Saturday evening Jane told her parents that she had in fact taken an overdose.

On the paediatric ward this patient presented as a young, tired, pale-faced female who was lying in bed connected to several intravenous drips. She was very thin. She was not tearful but was smiling at the start of the interview with the researcher. Jane recounted how she had been planning this overdose during the past four weeks and that it was a motivated attempt to kill herself. She had not written a suicide note. Although she initially stated that she was unhappy to have survived this attempt she later revealed that she was ambivalent about still being alive. She had no current plans to take another overdose. Jane could not identify any external factors that might have prompted her to take the overdose and could only refer to her chronic feelings of emptiness, her recurrent suicidal ideation and low self-esteem.

Jane described how she had been struggling with bulimic tendencies for almost one year but did not know why she had developed these tendencies. She claimed that she was now causing herself to vomit on a daily basis. She had never had a psychiatric admission although she had been receiving weekly outpatient treatment from an eating disorders service during the past three months. She admitted that she had been less than candid with her psychiatrist during these appointments with regard to the frequency with which she was binge eating and purging. However, a review of her outpatient case notes indicated that members of her care team had become aware of her worsening condition.

Although Jane claimed that she did not know why she had started to binge eat and cause herself to vomit she stated that she had found this pattern of behaviour to be useful to her: "One good thing about it though is that it gives me an excuse not to have to socialise with others and to avoid being in social situations. You can’t go out
if you’re at home being ill.” Despite having a small number of school friends, Jane stated that she strenuously avoided any social interaction with them outside of school activities. However, this perceived vicarious ‘gain’ that she associated with her eating disorder was recognised by her to be entirely disproportionate to the amount of shame and self-loathing that her bingeing and purging behaviours caused her to suffer.

This was Jane’s first overdose although she had started to cut herself approximately six months earlier. She was both alarmed and surprised that hospital staff were aware of her history of superficially cutting herself and she was insistent that her parents were not to be informed about this behaviour. Asked why she did not want them to know about her use of DSH if they were already aware of her eating disorder and this overdose Jane said simply – “It’s my secret. I don’t want to hurt and worry them any more than I have done already.”

Although Jane had briefly increased the frequency with which she cut herself (at one point she was engaging in DSH on at least three occasions every week) this frequency had recently diminished. Even though the extent of her cutting was always superficial and had never warranted suturing Jane nevertheless described how she had been able to achieve a release of tension through her experience of pain and the sight of blood. She also described how cutting herself was a method by which she could punish herself for having developed an eating disorder over which she was increasingly less able to exert control and which was the cause of so much concern to her mother and father. However, she complained that this discharge of tension afforded by DSH had recently become increasingly transient and that the intensity of her experience of this discharge was diminishing. Apparently DSH was becoming an increasingly less effective means by which she was able to regulate her mood.
Jane recalled that whenever she engaged in DSH she had always brooded about doing so for several hours before cutting herself. During these intervening periods she always experienced ambivalence towards the prospect of harming herself. She described two antagonistic features of this ambivalent experience. The gratifying feature involved tension release and the anticipation of relief from those negative feelings that she experienced towards herself with regard to her eating disorder. The other involved her experience of guilt with regard to her perception of herself as having caused suffering to her parents by engaging in yet another dysfunctional behaviour.

Jane portrayed both her mother and her father as unintrusive, caring, loving and supportive parents. PBI scores generated for recalled parental care and overprotection were consistent with this portrayal. Furthermore, she described her relationship with them as one in which she had felt reasonably comfortable discussing some of her problems. Indeed, it became increasingly apparent during the interview with Jane that her use of DSH had most likely not arisen as a result of experiences of dysfunctional caregiving or at least not as a result of those experiences relating to the dynamic of selective parental care and intrusive attachment.

A review of this participant’s low scores for PBI overprotection and significantly raised scores for 17 Impulsivity, KAPP frustration tolerance and KAPP dependency and separation indicated that they were substantially more representative of those self-harming participants who were diagnosed with BPD than those who had other psychiatric diagnoses. However, although case notes obtained from the eating disorders unit attended by Jane referred to her significant problems with interpersonal relationships, the likely presence of “characterological deficits” and suggested that she may have some problems with regard to her sexual identity there was no reference to
any severe personality dysfunction that might have suggested a diagnosis of BPD since she was only sixteen years old. Indeed, DSMIV makes explicit that adolescents may "...transiently display behaviours that misleadingly give the impression of Borderline Personality Disorder. Such situations are characterized by emotional instability, 'existential' dilemmas, uncertainty, anxiety-provoking choices (and) conflicts about sexual orientation..." (p.652).

As mentioned at the beginning of this case history, Jane was to present a second time to the A&E department at University College Hospital during the data gathering exercise. She was almost 18 years of age when she presented with her second overdose. A review of the psychiatric notes made by the duty psychiatrist revealed that once again no trigger factors were identified by Jane for this overdose although her bulimic symptoms had worsened since her last presentation. After she had been assessed by the duty psychiatrist, the researcher spoke to Jane in order to ascertain whether her use of DSH had materially altered either in frequency and/or severity.

Jane stated during this second interview with the researcher that she had not engaged in DSH during the previous nine months. She disclosed how cutting herself was now not of any use to her since it was no longer an effective means by which she could achieve relief either from her sense of loss of control over her bingeing and purging behaviours or the debilitating guilt that such behaviours provoked in her. In light of this disclosure by Jane it would appear to be reasonable to suggest that her cutting behaviour might have arisen only in response to her eating disorder as opposed to deriving from the experience of any parental dysfunction.
Case History 4 – John

Demographic details:
Age: 40's Ethnic status: White Irish Gender: Male
Employment status: Unemployed

Under the influence of alcohol, John presented to the A&E department after having taken an intentional overdose of his prescribed medication. He was a very tall and muscular middle-aged man whose arms, knuckles and neck were emblazoned with tattoos. This patient was very well known to several A&E departments in and around London. This was the sixth time in two days that this patient had self-presented to this department under the influence of alcohol and requesting to see a psychiatrist. On all five of his visits within the previous two days John had either left before treatment or had been escorted off the premises by security guards after making threats to staff. Detailed records of ‘frequent attenders’ held at University College Hospital revealed that this was John’s 57th attendance within the past two years. Reasons given by him for these attendances typically fell within three categories – psychiatric presentations (including one episode of relatively severe DSH, overdosing, depression and suicidal ideation), seizures secondary to alcohol withdrawal and chest pain. The majority of these attendances resulted either in John being removed by the police or security from the department or his failure to wait to be assessed by nursing or medical staff. A ‘Patient Management Protocol’ that had been designed specifically for John emphasised that unless his presentation required life-saving medical and/or emergency psychiatric intervention he was not to be offered admission. However, on this occasion John was admitted overnight to a medical ward since the nature of this
overdose required him to be monitored for 24 hours. After his review by the liaison psychiatry team he was discharged the following day.

During the interview with the researcher the patient disclosed that whilst intoxicated with alcohol he had taken this overdose as a result of an argument with his probation officer regarding his homelessness. It was a condition of his early release from prison the previous week that he secured permanent accommodation - John had found it difficult to comply with this condition since he could not find affordable housing. He had had to give up his council flat when he was sent to prison for three months for receiving stolen goods. He had taken the overdose whilst drinking alcohol at a friend’s house. Earlier that day he had told this friend of his intention to take an overdose and had informed him of what he had done immediately after swallowing the pills. John now stated that it was an impulsive reaction to bad news whilst intoxicated with alcohol and denied any current suicidal ideation.

A substantial amount of documented information regarding John’s psychiatric history was available to the researcher. John had had several psychiatric admissions, the most recent was approximately one year prior to this presentation when he had been detained under the Mental Health Act on account of an alcohol-induced psychotic disorder with hallucinations. This was the only occasion during which he had experienced psychotic phenomena. His long-standing psychiatric diagnoses were BPD and alcohol dependence. Although John had not engaged in DSH on this occasion he had an extensive past history of cutting himself and infrequently burning himself with cigarettes. He claimed to have first engaged in DSH at 17 years of age. His left arm, neck and upper torso had a significant number of scars that resulted from self-inflicted cuts with knives and razor blades. Several of these cuts had required suturing.
John stated that he had only one friend and that this person was also an alcoholic. This man (to whom John had disclosed the overdose that had immediately preceded his most recent presentation to the A&E department) had occasionally allowed him to sleep on the floor of his flat since his release from prison. Their relationship was described by John as one in which he did not feel comfortable discussing aspects of his personal life, and in particular, his repetitive cutting behaviours. His justification for such reticence with regard to DSH was his belief that although this friend might understand why a person might be motivated to take an overdose in order to complete suicide, he would find chronic and occasionally severe skin-cutting to be an appalling and unjustifiable behaviour. Other than this one friend, John only had what he referred to as “drinking buddies”. He described his relationships with these people as void of any intimacy, trust or respect.

John’s recollection of his childhood gave no indication that his experience of either of his parents was significantly detrimental to his development. John’s mother had died several years prior to this presentation but after he had engaged in DSH for the first time. He remembered her to have been a kind and charitable person who had endeavoured to maintain a stable and supportive family environment for her three children (John had a younger brother and sister) despite her and her husband’s meagre financial resources. John felt that he had never had the kind of relationship with his father that would have allowed him to feel at ease when discussing his needs, hopes or problems. Although he did recall his father to have been more overprotective and less caring than his mother his description of his father was that of a strict and occasionally distant parent as opposed to an unkind and intrusive one. He stated that as a child he would have been too embarrassed to approach his father for guidance
relating to personal problems and emotional issues and would have turned to his mother for advice instead.

Asked by the researcher whether he could remember any aspect of his childhood that might have caused him to first cut himself when he was 17 years old, John answered that he could not. Although at that time he had recently been dismissed from his job as a labourer on a building site he stated that this period of unemployment had been deliberately engineered by him since he had believed that he could make more money by claiming social security benefits instead.

John stated that other than when he was a teenager he had never engaged in DSH whilst sober. However, given that John was an alcoholic this statement is perhaps not remarkable. He also recalled that he had most often been unaware of the need to cut himself until after he became intoxicated. On those occasions when he had been aware of the need to self-harm prior to drinking alcohol he recollected how this need became much more urgent once he started drinking. He disclosed that prior to his recent prison sentence he had been binge-drinking approximately 160 units of alcohol per week although this had fallen to less than 100 units during the week since his release due to his reduced tolerance to alcohol.

John maintained that he always experienced ambivalence towards the prospect of engaging in DSH and that he was sometimes able to avoid cutting himself when he had felt the need to do so. However, his ability to refrain from engaging in DSH once he had became aware of the need to do so occurred relatively infrequently since the intensity of anger and frustration that he experienced prior to cutting himself was often so overwhelming. Although episodes of DSH were able to briefly modify such dysphoric experience, on each occasion after having engaged in DSH John referred to the powerful sense of disappointment and shame he endured when he looked at the
fresh cuts he had made to his skin. Unless he considered that his wounds were severe enough to require suturing he would not seek medical help since he did not want other people to know what he had done to himself.

In contrast to these particular experiences surrounding DSH he volunteered that he had never experienced ambivalence prior to taking an overdose or had afterwards felt any regret that extended beyond merely feeling embarrassed. He mentioned that he could not remember having taken one of his many overdoses because he was suicidal and had never believed that he would die from having taken them. When asked by the researcher why he took the trouble to take superficial overdoses and then to subsequently attend A&E departments he rationalised that this behaviour was an effective way of eliciting help from the environment. Here, he reasoned that if he had simply presented to A&E and had asked to speak to a psychiatrist he would probably have had to wait for several hours in the waiting room before being briefly assessed and then discharged. In contrast, he believed that by mentioning on arrival in A&E that he had taken an overdose he would elicit an immediate and a far more caring response from staff.

During the interview with John it was possible to distinguish between those factors that appeared to provoke episodes of DSH and those that had preceded overdoses. The latter tended to be precipitated by unfavourable external events in his environment, most recently the argument with his probation officer with regard to his homelessness. As noted above, John reasoned that by overdosing he was able to secure a caring response from external resources, in this case the A&E department. His motivation for this type of 'self-harm' did not appear to be self-punitive. In contrast, episodes of DSH seemed not to be triggered by the occurrence of adverse external events in his social environment. Rather, it appeared that he typically cut
himself as a reaction to the intensity of the anger he experienced towards himself, his 
self-contempt and his sense of hopelessness for his future.

It became apparent that for this patient, DSH offered a dramatic and immediate means 
by which he was repeatedly able to temporarily expiate his sense of failure. Examples 
given by John of relatively recent events that had contributed to this sense of failure 
included his failed marriage and loss of access to his two children. He believed that 
his alcohol dependence had significantly contributed to both of these events. These 
debilitating experiences were compounded by an almost total absence of proleptic 
affect. For example, when asked by the researcher whether he could identify any 
feature of his current circumstances that he would change in order to improve the 
quality of his life John answered that he most wanted to be given access to his 
children. However, he also stated that he could not envisage this need ever being 
realised because he was an unemployed and homeless alcoholic with a criminal record 
and a psychiatric history.

In light of John’s currently severely restricted access to interpersonal support and 
sustenance it is perhaps not surprising that he initiated behaviours that were designed 
to elicit caring responses from those who were obliged to respond (that is to say, staff 
in the A&E department). In comparison to his use of minor overdoses however, it 
appeared unlikely that by cutting and occasionally burning himself John was trying to 
better his social circumstances and improve the quality of his life.

The last time the researcher encountered this patient in the A&E department was after 
John had taken a relatively moderate overdose of paracetamol. He had not attended 
hospital immediately after the overdose because he continued drinking alcohol and 
then lost consciousness. He awoke the following day and did not remember the
overdose until he began to experience abdominal pain. In hospital John again stated that he had not intended to kill himself. He died of acute liver failure two days later.
**Case History 5 – Peter**

Demographic details:

Age: 18  
Ethnic status: White British  
Gender: Male  
Employment status: Unemployed

Peter’s general practitioner arranged for him to attend the A&E department so that the duty psychiatrist could assess him. The general practitioner had become increasingly concerned about his patient’s worsening low mood and suicidal ideation during the preceding three months. Peter did not require any medical treatment and was seen directly by the duty psychiatrist. This patient gave his consent to the researcher being present during his psychiatric assessment. The research interview was conducted once this assessment had been completed and after the psychiatrist had left the interview room.

Peter had previously received inpatient treatment in a private psychiatric hospital on two occasions. On one of these occasions he was detained against his will as an involuntary patient. Discharge summaries that were obtained from this hospital referred to a diagnosis of Minor Depressive Disorder, an history of DSH from fourteen years of age and one attempt at suicide by hanging when he was seventeen years old. His detention under the Mental Health Act occurred as a result of this suicide attempt.

During his psychiatric assessment Peter revealed that his affect had become increasingly labile during recent weeks since his girlfriend had finished their relationship. He complained of poor sleep, memory and concentration. He also complained of chronic suicidal ideation since the separation from his ex-girlfriend although he was inconsistent with regard to whether he had made any plans to kill
himself. Unexpectedly, Peter stated that he had never actually cared for this ex­girlfriend but that she was extremely useful to him whilst they were in a relationship. He refused to expand upon this statement. He also stated that he had poor relationships with his mother and his elder brother and that these were contributing to his low mood. Peter declined to elaborate upon the nature of these poor relationships other than to say that his mother is “...a bitch ... she’s always in my face and won’t get off my back. My brother’s always standing up for her”.

At the end of this assessment the duty psychiatrist considered that Peter posed a moderate risk of suicide and was offered psychiatric admission which he refused. Since there were no grounds for an involuntary psychiatric detention Peter was asked to wait in the A&E department until his mother and brother arrived so that they could take him home. Peter reacted aggressively to this request and became verbally abusive to both the psychiatrist and the researcher. He stated that if his mother was to come anywhere near him he would kill her. At this point Peter reconsidered the options available to him and accepted an informal admission.

During the interview with the researcher Peter stated that he experienced his mother as invasive and overwhelming. The extent of this poor relationship with his mother was revealed in a letter sent by his psychiatrist to his general practitioner three months prior to this presentation whilst Peter was still with his girlfriend. A copy of this letter had been sent to the duty psychiatrist. Peter was unaware of the existence of this letter. It described how he

“...is having great difficulties continuing to live at home and feels very frustrated by the fact that he does not have his own room and that his mother is very intrusive. At times he felt so angry he has visualised thoughts of murdering his family. He described how he would like to cut his brother’s and
his mother's abdomen open and suck up the contents with a vacuum! ... He is spending large amount of the time at home (sic). The only time that he is out of the home is when he is with his girlfriend.”

Peter confirmed that his earlier reference to this ex-girlfriend as “useful” was in relation to his ability to avoid his mother when he was with her. A second and more recent letter sent by this psychiatrist to the general practitioner again drew attention to this young patient’s anger: “Peter continues to be a source of concern. He has quite vivid images of hurting people, killing people and decapitating people at times. Sometimes these thoughts turn into thoughts of harming himself.”

There was no evidence that Peter was suffering from a psychotic disorder that might have accounted for these reported fantasies. Indeed his discharge summaries and the notes made by the duty psychiatrist excluded the presence of a formal thought disorder or impaired cognition. Other than his occasional use of cannabis he also claimed to have never taken any hallucinogenic drugs. When the researcher asked Peter whether he had ever thought about harming other people he answered that he had done so on several occasions when angry and frustrated although he had never acted on these thoughts. According to Peter’s mother who spoke to the researcher when she arrived in the department later that day her son did not have a history of violence or cruelty to others although he had on occasion made threats of violence towards her.

Since Peter presented to the A&E department on this one occasion only it is not possible to state with any degree of confidence what significance ought to be attached to his threats of violence and his claim to have visualised scenes in which he was hurting others. However, it is possible that since he had apparently never behaved in a physically violent manner to others the usefulness to Peter of these threats and
supposed fantasies of violence lay in the fact that he communicated them to others. That is to say, regardless of whether he had or had not actually visualised being violent, his communication of such extreme descriptions of rage as referred to above would serve to vividly convey to others how angry and frustrated he was, particularly with regard to his mother.

According to the scores generated for recalled parental overprotection and care, this patient had rated his mother as moderately uncaring but exceptionally overprotective and intrusive. Indeed, the value obtained for maternal overprotection was in the higher end of the fourth quartile of scores whilst the value obtained for maternal care was in the second quartile of scores generated for case sample group participants (non-BPD). Corresponding values obtained for paternal care and overprotection were unremarkable and approximated the median values for these variables for this sample of participants.

With regard to his cutting behaviour, Peter stated that he had never engaged in DSH whilst intoxicated with alcohol. He reported that he consumed less than five units of alcohol per week. Although he referred to his occasional use of cannabis when he felt anxious or unhappy he denied that he had ever cut himself whilst under the influence of this drug. In terms of his ability to delay or postpone acts of DSH he reported that he cut himself as soon as he felt the need to do so and that he experienced no ambivalence prior to the act — “No, I don’t wait. At the point of desperation I need to cut myself. There’s a thousand negative thoughts in my head and I have to stop them there and then.”

Peter’s recalled the quality of his affective experience prior to acts of DSH. He described how he would become agitated in response to some environmental trigger that in retrospect he often recognised to have been relatively minor (for example, a
trivial argument with his girlfriend or a member of his family). Nevertheless, this agitation rapidly developed into anxiety. At this point Peter would decide to be on his own. Invariably his experience of anxiety changed into anger and it was at this point that he would become aware of the target of this anger – his mother. Without delay he would superficially but repeatedly cut himself and then stare at the blood from his arms whilst sitting in silence. Asked by the researcher whether he had ever fantasised that he was cutting someone else whilst he engaged in DSH Peter was quite clear that this had never been the case.

Peter emphasised that he had never shown his bleeding arms to other people after he had cut himself and that he had not sought medical or psychiatric help as a result of his cutting behaviour. There certainly was no evidence to suggest that his use of DSH was in any way designed to elicit a response from the environment. Rather, it appeared that cutting himself had become a reliable means by which he was able to abruptly bring to an end his intolerable experience of anger.
PART 2: Summary of themes arising from case histories

These vignettes of five case histories give some indication of the wide range of demographic characteristics (see pages 147-149) and the variety of psychiatric diagnoses (see pages 154-156) that were features of the case sample group. For example, these case histories included a white, 57 year-old grandmother and a South Asian, 16 year-old child. One individual was homeless whilst two others lived with their parents. Three participants were unemployed, one was still at school, and another was a full-time carer for her disabled son. In addition to BPD, psychiatric diagnoses featuring among these case histories included Major Depressive Disorder, Minor Depressive Disorder, Dysthymic Disorder, Chronic Adjustment Disorder, Bulimia Nervosa and Alcohol Dependence Disorder. In terms of these heterogeneous characteristics it is difficult to identify any notion of a typical self-harmer.

In terms of these participants’ motivations to engage in DSH none included suicide. Although Sarah had initially stated on her arrival in the A&E department that she had cut herself because she wanted to die she later retracted this statement when questioned further by the researcher. It is almost certain that these participants were motivated to cut themselves in order to reduce the intensity of dysphoric affect. However, this is a significant oversimplification. All five participants made explicit references to the intense levels of anger and aggression they experienced prior to cutting themselves. Mary referred to the hostility she experienced to her mother’s unwelcome and intrusive visit to her home. Sarah’s reduced capacity to tolerate heightened frustration engendered inwardly- and/or outwardly-directed aggression. Jane described how her anger was entirely self-directed on account of the worry she caused her parents with regard to her eating disorder. Similarly, John’s cutting and burning behaviours arose in the context of the disappointment he experienced towards
himself. The immediate triggers for Peter’s anger were often minor environmental cues although it was clear that the source and target of his aggression was his mother. As stated above (see page 247), there was no indication that Jane’s history of DSH was associated with dysfunctional parental bonding. Although none of the other four participants stated that experiences of parental overprotection and selective care were directly associated with their histories of DSH they were nevertheless able to recognise that such experiences had contributed towards their feelings of anger and frustration and that such feelings tended to arise prior to acts of DSH. For example, Mary recalled that it was her mother’s unwelcome visit to her home that had caused her to become angry. Indeed, she also equated her aggressive reaction to this unsolicited event to her reaction to her mother’s later arrival in the A&E department. Similarly, Peter conveyed how his experience of his mother’s exceptionally intrusive attitude towards him was the principal cause of his rage. Mary, Sarah and Peter all referred to intrusive parental caregiving styles whilst they were children and generated PBI scores for one or both of their parents that indicated raised caregiver overprotection and their experience of contingent parental care.

These brief case histories also illustrate the relationship that might exist between the experience of ambivalence towards DSH and the ability to delay or avoid DSH. Although this suggested relationship will be explored in detail when the result of the analysis relating to hypothesis 14 is discussed (see pages 298-300) it is worthwhile mentioning here that with the exception of Peter, the other four participants disclosed that they always experienced ambivalence towards the prospect of engaging in DSH and that they were able to delay self-harming. Indeed, Mary’s ambivalent struggle over whether to cut herself was on occasions so intense that this period of delay extended for several days.
Two potential associations between DSH and the consumption of alcohol also emerged from these case histories. Sarah, Jane and Peter all stated that they had never engaged in DSH whilst under the influence of alcohol. However this was not the case for Mary and John. Both of these subjects had psychiatric diagnoses that included BPD and they recalled that they were most often unaware of any need to engage in DSH unless they were intoxicated. As will be seen later (see pages 303-308) when the results for hypotheses 17 and 18 are discussed in detail, case sample group participants (BPD) were significantly more likely than case sample group participants (non-BPD) to engage in DSH whilst intoxicated and a significant majority of those case sample group participants (BPD and non-BPD) who typically or always engaged in DSH whilst intoxicated with alcohol claimed only to have become aware of the need to cut and/or burn themselves after they had been drinking alcohol.

These case histories reveal that all subjects apart from Peter had a current or past history of overdosing. Indeed, Mary, Jane and John all presented to the A&E department after having taken deliberate overdoses. It would therefore appear likely that individuals who take overdoses or engage in DSH do not constitute mutually exclusive groups. However, this is not to imply that DSH and overdoses are comparable behaviours either with regard to individuals’ motivations to engage in them or in terms of the extent to which they result in presentations to hospital.

The reasons given by these participants for their motivations to engage in DSH have already been discussed. Apropos attendances at hospitals or GP’s surgeries, Sarah, Jane and Peter stated that they had not sought medical or psychiatric input after acts of moderate or superficial DSH. Although Sarah had cut herself on this occasion, her attendance at UCH arose only as a result of staff in the outpatients’ department of her son’s hospital contacting the police and ambulance service. There was no evidence
that this outcome had been engineered by Sarah. Although John had engaged in DSH 
on numerous occasions over many years he had attended the A&E department on 
account of DSH on one occasion only when he had inadvertently lacerated tendons in 
his left wrist. In light of these observations it would appear that these individuals did 
not make use of DSH as a means by which they were able to elicit caring responses 
from clinical environments. Rather, it is probable that the immediate needs of these 
participants that led them to engage in DSH were most often discharged 
autonomously thereby making any external input redundant and unwelcome. 
Although it is not the intention of this research to consider why people with histories 
of chronic DSH might also take overdoses, it became clear during the interview with 
John that at least for this patient, his frequent, non-suicidal and superficial overdosing 
behaviours were a vehicle by which he was able to guarantee some level of input, 
albeit at a limited level, from emergency medical services.
CHAPTER 6: DISCUSSION

Introduction

The primary objectives of this research were to test the extent to which DSH is an impulsive and predominantly female behaviour that occurs most often among those individuals diagnosed with BPD. Furthermore, distinct from the significant majority of existing, published research that has examined suggested links between self-harmers' reported experiences of singularly, potentially catastrophic events during childhood and DSH, this research sought to examine whether childhood experiences of caregiver overprotection and selective/contingent care might be significant for the development of DSH among those individuals for whom such experiences have not been reported.

Primary objectives of this study also included an examination of whether dysfunction with regard to frustration tolerance, alexithymia, and the capacities for establishing mature interpersonal dependency and for enduring and adaptively working through losses might be associated with DSH. In addition, self-harmers' ambivalence towards engaging in DSH and associations between alcohol consumption and DSH were also investigated.

The results of the analyses will be discussed with reference to these objectives as well to the specific hypotheses of this research. These results will also be reviewed in the context of the study’s methodological limitations.
PART 1: Summary of findings

The experience of potentially traumatic events and DSH

A substantial majority (84%) of the 516 patients who attended the A&E department with histories of DSH and who were interviewed by the researcher disclosed experiences of gross trauma prior to having engaged in DSH for the first time (see Table 1, page 142).

Consistent with the literature that has considered the significance of traumatic experience within an aetiological model for DSH (for example, Grunebaum and Klerman, 1967; Rosenthal et al. 1972; Walsh and Rosen 1988; van der Kolk et al. 1991; Favazza 1996; Low et al 2000), recalled experiences of abuse and loss were in the majority. Here sexual abuse and/or physical abuse during childhood figured most frequently among exclusions relating to trauma and accounted for 66% of all such reported experiences. Interpersonal loss, that is, the death of a family member or a close friend; separation or divorce (whether one’s own or that of one’s parents); and, placement in the care of Social Services (thereby necessitating removal from the family home) accounted for a further 27% of reported traumatic experience and was the second most frequent reason for exclusion from participation in the case sample group on grounds of trauma.

It is not an intention of this research to consider how, or indeed whether, such reported experiences might have some aetiological significance in any traumatic pathway that may lead towards the development of DSH. However, the size of such a population of excluded patients can be taken to offer some degree of support to those studies that have identified experiences of abuse or loss as antecedent to DSH.

Experiences of singularly, potentially traumatic events that were reported by patients were recorded solely for the purposes of excluding patients from participating in the
case sample group. It was neither considered to be feasible with regard to the limited financial and personnel resources available to the researcher nor to be justifiable in terms of ethical considerations to attempt to verify the accuracy of these excluded patients' reports of traumatic experiences.

In contrast to the exhaustive measures that were adopted to ensure that membership of the case sample group was restricted to patients who had not experienced gross trauma, there is necessarily a risk that patients may either have been excluded inappropriately or assigned to the wrong exclusion category on the grounds of inaccurate information. For example, as noted within the Results section (see page 146), four patients who had disclosed experiences of sexual abuse had been found to be giving false information. The reclassification of these individuals as inconsistent and unreliable historians was only coincidental to accurate information being given to the researcher at the time by members of these patients Community Mental Health Teams who had come to the A&E department to take these patients back to their homes. As such, it is probable that the number of patients excluded on grounds of trauma is overstated.

It is in the context of this likely overstatement of the proportion of patients who were excluded on grounds of gross trauma that the relative residual size of the case sample group ought to be considered. Here, the case sample group accounted for approximately 16% of all patients with histories of DSH who were referred to the researcher. This percentage value therefore represents a subpopulation of self-harmers who have not experienced trauma that is likely to be located towards the lower end of a conservative estimate of the true proportion of the total referrals that might have been recruited into the case sample group.
Gender of self-harmers (hypothesis 1)

The tendency to recognise DSH as a behaviour that occurs predominantly among females is well established within the literature. Such a tendency has survived from the publication of those early studies that referred to the 'typical cutter' as a young, unmarried and physically attractive woman (Graff and Mallin 1967; Grunebaum and Klerman 1967) until more recent studies (for example, Hawton et al. 2002).

Generally, this trend has remained apparent regardless of the clinical orientation of the study. Psychoanalytically-oriented studies that have either relied upon inferences drawn from an individual patient, for example, Kafka's (1969) psychoanalytic interpretations of a teenage girl's history of 'self-mutilation' or those based upon clinical vignettes abstracted from a succession of interviews with several patients, for example, Asch's (1971) appreciation of DSH specifically as a symptom of anhedonic girls, have established notions of an almost archetypal model of the self-harmer as female. Such a model has served to inform subsequent psychodynamic interpretations that have conceptualised DSH as a female symptom of disturbed mental health (for example, Gardner 2001).

Outside of this psychoanalytic orientation, several controlled research designs that have been used with relatively large samples of psychiatric inpatients have often examined DSH among female subjects only (for example, Rosenthal et al. 1972; Gardner and Gardner 1975; Zlotnick et al. 1996).

Data generated from epidemiological studies and cross-sectional surveys relating to gender differences for DSH have led to conflicting conclusions being drawn. For example, in a cross-sectional survey involving 6020 pupils aged 15 and 16 years, Hawton et al. (2002) concluded that among adolescent subjects, acts of self harm that included DSH were significantly more common among females. Atypically, Briere and Gil's (1998) re-analysis of existing data regarding self-harm (see page 25) found
DSH to be equally prevalent among male and female adults within both general population samples and psychiatric samples. However, in that part of the study where the authors had advertised for individuals with histories of DSH to participate in their research, 96% of respondents were female. This highly skewed response rate for females replicated a similar trend that was observed in Favazza and Conterio's (1989) study (see page 26) where 94% of the self-harmers who had responded to a televised discussion about self-harm and subsequently participated in the research were female.

The most recently published epidemiological study (Horrocks et al. 2003) stands almost in isolation in so far as it was unable to detect significant gender differences among patients attending accident and emergency departments with presentations that included DSH.

It is against this general perception of DSH as a predominantly female behaviour that hypothesis 1 challenges the assumption that more females than males have histories of DSH. The result relating to this hypothesis is discussed below.

In support of hypothesis 1 that no significant difference would be detected in terms of the sex of patients with histories of DSH who were referred to the researcher, results from the analysis of the 516 patients who attended the A&E department and participated in interviews demonstrated no significant difference between the total number of male and female patients. However, a Binomial one sample test of proportion that was used to test whether the proportion represented by males in the case sample group (BPD and non-BPD) was significantly different from 50% demonstrated a significantly larger number of females. Here, the sample estimate and 95% confidence interval for the proportion of males were 0.37 (0.26 to 0.48), p=0.026. In order to understand why such apparently contradictory results were obtained for the group of 516 A&E attendees and the smaller case sample group, it is
first necessary to appreciate how the system of exclusion criteria that was applied to the former group of patients in order to generate the case sample group operated dissimilarly with respect to males and females.

Table 1 displays separately for the 516 male and female patients exclusions on grounds of potentially gross trauma that can be subdivided into three summary categories. The summary exclusion category comprising the fewest number of subjects (n = 28) included adult experiences of rape, torture, abortions on medical grounds, travelling on a tube train that was involved in the 1987 fire at Kings Cross underground station, and witnessing a violent murder. An additional four subjects reported childhood experiences of persistent bullying whilst at school. There was only a marginal difference between the number of males (n = 16) and females (n = 12) within this group and hence this broad exclusion category is unable to account for the significant gender difference observed for the case sample group.

The largest summary category of potentially traumatic exclusions relates to abuse and/or neglect during childhood. Here, among the total number of exclusions (n = 291) relating to abuse and/or neglect, there were approximately equal proportions of males (48%) and females (52%). Although 46% more females (n = 124) than males (n = 85) reported experiences of childhood sexual abuse alone or a combination of childhood sexual abuse and physical abuse this predominance was substantially offset by approximately twice as many males (n = 55) as females (n = 27) reporting experiences of physical abuse alone or gross neglect. Therefore, in terms of abuse and/or neglect during childhood, it would appear that exclusions on grounds of this broad category of early experience are unable to explain the dissimilar gender ratios observed for the group of 516 A&E attendees and the case sample group.
Before turning to the final summary exclusion category, it is important to consider whether any significance ought to be attached to the higher number of females disclosing experiences of childhood sexual abuse and the higher number of males reporting experiences of childhood physical abuse.

In a comprehensive literature review of the sexual abuse of male children, Holmes and Slap (1998) report that the childhood sexual abuse of females has frequently been studied in detail whilst the relative paucity of reliable research that exists with respect to the sexual abuse of male children has sponsored the false but nevertheless relatively widely-held assumption that the problem is uncommon. The authors observe that such a problem is in some measure a result of the greater underreporting of childhood sexual abuse by males due perhaps to their fears of retribution and the stigma attached to homosexual activity. In the present study, although all patients were asked directly by the researcher whether they had experienced sexual abuse, it is nevertheless not unlikely that the apparent underreporting of sexual abuse by males was at least partly a function of the likely greater tendency by males not to disclose recollections of sexual abuse.

In terms of the apparently fewer number of female patients interviewed who claimed to have been subject to physical abuse as children, this would most likely appear to be a function of the structure of the exclusion criterion relating to childhood sexual abuse. As described in the results section (see page 141), where a patient disclosed experiences of both childhood sexual abuse and childhood physical abuse, it was the former criterion according to which the patient was excluded. Since there was a majority of female patients who were excluded under the sexual abuse criterion, it is possible that within this majority there were several patients who had also experienced physical abuse.
The final broad category of exclusion, interpersonal loss during childhood or adulthood, accounted for the second highest number of exclusions (n = 116). Within this category, males (n = 80) were more than twice as likely to be excluded from the case sample group than females (n = 36). Here, the experience of the death of a family member or a close friend accounted for 70% of the difference between the number of males and females excluded. Obviously, this observation cannot be taken as evidence to suggest that in general population samples males are more likely to have experienced interpersonal loss than women or that interpersonal loss functions as a significantly more powerful risk factor for DSH among men than it is among women. Rather, in the limited context of these 116 patients who were interviewed for the purposes of this research, more males than females who had not experienced abuse or neglect reported experiences of loss.

It is clear, therefore, that the greater number of females in the case sample group is a result of the application of exclusion criteria upon the larger group of 516 A&E attendees with histories of DSH within which no significant difference with regard to gender was detected. As such, any inference drawn with regard to gender differences between self-harmers ought to be based on the larger and more representative sample of individuals who engage in DSH who were interviewed by the researcher prior to their inclusion in the case sample group or exclusion from it on grounds of their reported experiences of trauma.

In order to account for the divergence between the lack of a significant gender difference found in this larger group of self-harmers and the consistent tendency of published studies to report the occurrence of DSH predominantly among females, the possible effects of collecting data for this present study within an A&E department and medical wards will now be discussed.
Repeated reference has been made throughout the preceding sections of this study to the high frequency with which published studies examining DSH have investigated this behaviour among psychiatric inpatients. The influence of certain selection criteria for admission of patients to psychiatric wards that might discriminate against males (for example, the criterion that would not favour the greater tendency to interpersonal violence among men) has already been referred to. Reference has also been made, for example, to the significantly large number of female patients diagnosed with BPD resident in the specialist Crisis Recovery Unit for self-harmers at the Bethlem Royal Hospital. The appropriateness of using the BPD diagnosis with individuals who engage in DSH notwithstanding, it was emphasised that this substantial predominance of female inpatients on the unit might be understood at least partly in terms of the idiosyncratic feature of the DSMIV diagnosis of BPD that results in its differential gender prevalence rate. However, since this research was only conducted with patients either in the A&E department or on medical wards, the influence of such discriminatory factors that might otherwise have contributed to a greater proportion of female self-harmers having been interviewed had this research been conducted on psychiatric wards was negated.

This more inclusive and representative data gathering environment would also appear to have avoided the distorting effect of the significantly increased tendency for female self-harmers to actively seek opportunities to discuss their histories of DSH with others (Favazza and Conterio 1989; Briere and Gil 1998). It would not appear to be an unreasonable extension of this reported tendency to suggest therefore that male self-harmers are less likely than their female counterparts to attend hospitals in order to seek help from mental health staff with regard to episodes of relatively superficial DSH. Approximately 12% (n = 10) of the case sample group did not attend the A&E
department with psychiatric presentations. These individuals presented with medical complaints only, none of which were related to their self-harming behaviour. Only two of these medical patients had had previous contact with mental health services. Their inclusion in the case sample group was made possible by the researcher or A&E staff members noticing scars on these patients arms and legs that were a result of past episodes of DSH and then approaching them with regard to seeking their consent to participate in the research. Six of these patients were male and therefore this group of patients included a significantly greater proportion of males with histories of DSH than has typically been otherwise reported.

In summary, it would appear likely that the significantly greater number of females in the case sample group was a product of the application of exclusion criteria to the substantially larger and more representative population of 516 patients with histories of DSH. The disparity between the lack of a statistically significant difference between the number of males and females within this larger population of self-harmers and the consistent reporting in most published studies of DSH occurring more often among females appears to have been influenced by several factors. Such factors include the collection of data in most of these studies from patients on psychiatric wards; the use of relatively small sample sizes; the significantly greater tendency for females to respond to recruitment advertisements for subjects to participate into research regarding DSH; and, the frequent examination of DSH among female subjects only. In contrast, the collection of data for this research from a large population of males and females with current or past histories of DSH who attended the A&E department with psychiatric and/or medical presentations has avoided the potential distortions that such factors might otherwise have caused.
To conclude this discussion of gender and DSH it is important to refer to the observation that 10 members of the case sample group were Asian, nine of whom were female. The ethnicity of these female subjects were Bangladeshi (n=3), Japanese (n=3), Indian (n=2) and Pakistani (n=1). The age range of these participants was 16 years to 23 years.

Although this study was not designed to explore potential relationships that might exist between DSH and ethnicity, that approximately 18% of the female membership of the case sample group (BPD and non-BPD) were represented by Asian females is perhaps an unexpected finding. Babiker and Arnold (1997) have drawn attention both to the apparently high incidence of self-harming behaviours that include DSH among young Asian women but also to their reported under-utilisation of mental health services (Beliappa 1991). This current study certainly offers some support for the first of these two observations. However, with regard to the suggested failure of Asian females to access mental health services, six of these participants self-presented to the A&E department at UCH requesting to speak to a psychiatrist and seven had had previous contact with community mental health teams. Obviously there is a need for caution when attempting to draw conclusions from so small a sample size. However, that the majority of Asian case sample group members self-presented to the A&E department then this would appear to suggest that the disinclination among younger Asian women to seek out mental health services might not be as frequent as has been suggested.
Psychiatric diagnoses of case sample group participants (hypothesis 2)

References to reported associations between DSH and the BPD diagnosis have appeared frequently throughout the literature review (for example, Grunebaum and Klerman 1967; Schaffer et al. 1982; van der Kolk et al. 1991). Those other studies that have questioned the validity of such purported associations have either tended to conceptualise DSH as a distinct syndrome (for example, Tantam and Whittaker 1992; Favazza 1996) or have emphasised the heterogeneity of disorders for which DSH might manifest as a symptom (for example, Zlotnick et al. 1996; Crowe 1997).

In this literature review two important issues connected to the validity of any diagnosis associated with DSH were identified. First, the type of treatment interventions made available to individuals who engage in DSH are likely, at least in part, to be informed by those diagnostic classifications associated with DSH. Second, as emphasised by Tantam and Whittaker (1992), any erroneous attribution of DSH only to personality disorder might blunt otherwise caring responses from health care professionals who may be reluctant to understand the reasons why an individual might have adopted this form of self-harm.

Hypothesis 2 challenges assumptions that DSH occurs more often among individuals with a diagnosis of BPD. Results from the analysis of the case sample group demonstrated that no significant difference was detected in terms of the total number of participants who had a principal diagnosis of BPD and those who did not have a principal diagnosis of BPD. Although BPD was the most frequently recorded principal diagnosis (n = 36) within the case sample group, 54% of case sample group participants either had other principal psychiatric diagnoses (n = 44) or did not have a psychiatric diagnosis (n = 1).
In terms of the validity of diagnoses (see pages 151 and 152 of the Results section), third party documentary evidence was available from outside of the A&E department with regard to the psychiatric diagnoses of 64% of case sample group participants and took the form of inpatient discharge summaries for 46 participants whilst details received from a number of psychiatric outpatients’ departments were available for 6 participants. Although such independent corroborative information was not available for the remaining 29 participants, both details obtained from the Electronic Patients Records System and second opinions given by the consultant in liaison psychiatry or the senior registrar in liaison psychiatry supplemented the psychiatric assessments made by senior house officers in psychiatry for all but three of the remaining participants. The availability of this variety of supplementary information materially reduced the risk of inappropriately assigning participants to the case sample group (BPD) or the case sample group (non-BPD).

This risk of recording inappropriate psychiatric diagnoses was necessarily highest for those three participants who had no previous contact with mental health services and who presented to A&E with medical complaints only. Although notes made by the researcher during interviews with these patients were reviewed by the senior registrar or consultant in liaison psychiatry for the purposes of this research, none of these patients was seen by a member of the psychiatry team. Two of these patients were assigned to the case sample group (non-BPD). Should these two patients have been more appropriately assigned to the case sample group (BPD), the result of the analyses would not have been materially affected.

The possible significance of the regularity with which certain primary and secondary diagnoses were observed within the case sample group (non-BPD) will now be discussed.
As illustrated by Table 4 (see page 154), mood disorders (as defined by DSM-IV) were the most frequently occurring principal diagnoses among case sample group participants (non-BPD). Here, 23 participants either had diagnoses of major depressive disorder, dysthymic disorder or bipolar affective disorder. In addition, 10 participants were recorded with diagnoses of minor depressive disorder. Minor depressive disorder is not included within the mood disorders in DSM-IV but rather is a proposed diagnostic disorder. Nevertheless, since depressive symptoms are a principal feature of this proposed diagnostic classification it would appear reasonable, in the context of this research, to account for it among those mood disorders mentioned above. As such, disorders for which depressive symptomatology constitute part of the diagnostic criteria accounted for a total of approximately 74% of principal diagnoses among the membership of the case sample group (non-BPD).

Numerous studies referred to in the literature review reported upon the frequency with which features of depression are observed among individuals who engage in DSH (for example, Gardner and Gardner 1975; Crowe 1997). Others emphasised the regularity with which symptoms of depression are subjectively reported by self-harmers (for example, Rosenthal et al. 1972) or, more specifically, how individuals might engage in DSH in an effort to achieve temporary relief from depressed affect (Favazza and Conterio 1989). In line with Gardner and Gardner's study (1975), this research has identified that after BPD, disorders that involve depressive features occurred most frequently among case sample group participants (BPD and non-BPD).

All six participants diagnosed with either bipolar I disorder (n=2) or bipolar II disorder (n=4) stated that they had engaged in DSH whilst depressed. The diagnoses of all six of these participants were obtained from discharge summaries. None of these summaries made reference to associated features of BPD. Furthermore, both
according to information relating to these individuals ‘past psychiatric history’ contained within these discharge summaries and their own recollections of episodes of DSH, none had cut and/or burned themselves during manic, mixed or hypomanic episodes nor had any episode of DSH occurred during or as a result of psychotic disturbance.

Published references to the co-existence of DSH and bipolar disorders are scarce. Typically, studies have restricted themselves to examining risks of attempted or completed suicide in bipolar disorders (for example, Goldring and Fieve 1984; Rihmer and Pestality 1999). Favazza (1996) and Walsh and Rosen (1988) report only upon gross forms of self-mutilation by manic-depressives that had occurred during psychotic episodes. Elsewhere, 44 of the participants in van der Kolk et al.’s study (1991) met the criteria for bipolar II disorder (DSM-III), several of whom had more than one diagnosis. The authors state that this disorder was not significantly associated with any of the ‘self-destructive’ behaviours (including DSH) that were under investigation.

Evidently, the representation of approximately 7% of the case sample group (BPD and non-BPD) by individuals with bipolar disorders appears to be markedly discrepant from the findings of published studies. This discrepancy is noteworthy not just in terms of the relative size of this diagnostic subpopulation within the case sample group (BPD and non-BPD) but also with regard to the total absence of reported incidences of self-mutilation (that is to say, gross forms of cutting behaviour) among these participants.

Eating disorders recorded either as principal diagnoses (n=1) or as secondary diagnoses (n=6) included four cases of anorexia nervosa and three cases of bulimia nervosa. Participants with an eating disorder as a secondary diagnosis all had
different principal diagnoses. This observed coexistence of eating disorders among individuals who engage in DSH would appear to be consistent with the published literature (for example, Asch 1971; Rosenthal et al. 1972; Favazza and Conterio 1989; Favazza 1996; Paul et al. 2002). However, the repeated observation within this body of literature of the large proportion of self-harmers with eating disorders who also report experiences of childhood trauma that include sexual and/or physical abuse (for example, Rosenthal et al. 1972; Favazza and Conterio 1989) is one that is necessarily not replicated within the case sample group. Favazza (1996) considers that both DSH (or a ‘repetitive self-mutilation syndrome’ as he refers to it) and eating disorders might be most appropriately conceptualised in terms of the high degree of impulsiveness he assumes to be associated with these behaviours. The extent to which it might be valid to consider DSH as a discrete DSM diagnosis, the principal defining feature of which is a dysfunction of impulse control, will be discussed later (see page 298).

Four case sample group participants had principal diagnoses of adjustment disorders. Two further participants had secondary diagnoses of adjustment disorders. It is important to emphasise that with regard to these six individuals, histories of DSH had begun before the occurrence of those psychosocial stressor(s) to which the diagnoses of adjustment disorders relate. Hence, although the cutting and/or burning behaviours of some of these participants may have been prolonged or exacerbated by these stressors such stressors did not instigate these behaviours. All principal diagnoses of adjustment disorders were of the depressed mood subtype. With regard to the two participants with secondary diagnoses of adjustment disorders, principal diagnoses were minor depressive disorder in both cases.
Obsessive compulsive disorder accounted for three principal diagnoses and one secondary diagnosis within the case sample group. Certain studies have differed with regard to the degree to which behaviours immediately surrounding acts of DSH can be interpreted as obsessional. For example, Pao (1969) interpreted his client’s experience of ambivalence towards the prospect of cutting herself as an obsessional device in the service of denial or repression. Gardner and Gardner (1975) hypothesised that despite the apparent infrequency of self-harmers’ ambivalent struggle to resist cutting themselves, obsessionality was at least a factor in DSH. Alternatively, Simiopoulos (1974) has commented upon the ego-dystonic quality of experience associated with the compulsive behaviour of an obsessive-compulsive that contrasts to the ego-syntonic experience towards DSH of the self-harmer. DSM-IV refers to the obsessional aspects of obsessive-compulsive disorder in terms of their experience as intrusive and inappropriate and their propensity to result in heightened distress and anxiety. In so far as the compulsive criteria for this diagnosis, DSM-IV refers to repetitive behaviours that an individual feels compelled to carry out in order to prevent or reduce distress despite the inappropriate and excessive nature of these behaviours.

All case sample group participants stated that they cut and/or burned themselves in order to reduce distress and that they experienced a sense of temporary relief from this distress both during the act of DSH and immediately afterwards. However, although they recognised their use of DSH to be maladaptive and often experienced ambivalence towards the prospect of engaging in DSH, they did not consider their self-harming behaviour to be excessive nor did they experience their awareness of the need to self-harm as intrusive. Participants were specifically asked by the researcher whether they were able to delay or postpone acts of DSH and whether they
experienced ambivalence towards the prospect of cutting and/or burning themselves. Although participants' responses to these questions will be considered more fully when the results relating to hypothesis 14 are discussed, it is worthwhile pointing out that over 60% of participants stated that they were able to postpone engaging in DSH and that more than half typically or always experienced ambivalence towards the prospect of engaging in DSH.

Two individuals with alcohol dependence disorder and one with generalised anxiety disorder accounted for the three remaining participants who did not have a diagnosis of BPD. As mentioned above, BPD was observed to be the most frequently occurring principal diagnosis within the case sample group. Nevertheless, that the majority of participants did not have a diagnosis of BPD indicates the need for caution against any tendency to conflate DSH and BPD. Indeed, the high frequency with which depressed mood occurred among members of the case sample group is suggestive of the likely significance of this characteristic as one of the most consistent diagnostic features among self-harmers.
Parental overprotection (hypotheses 3 to 6)

Studies that have used the Parental Bonding Instrument (Parker et al. 1979) in order to examine the possible significance of parental overprotection for the later presentation of DSH have failed to identify this parental characteristic as a risk factor (Zweig-Frank et al. 1994a; Zweig-Frank et al. 1994b). However, both of these studies conducted research only among subjects diagnosed with BPD. Although Zweig-Frank and Paris (1991) used this instrument to test for recalled parental overprotection among subjects diagnosed with BPD and reported significant recalled maternal and paternal overprotection scores, such a finding should be appreciated with caution in light of the foregoing qualifications regarding the conflation of DSH and BPD.

Hypothesis 3 compared recalled overprotection for self-harmers (BPD and non-BPD) against controls (BPD and non-BPD). Recalled maternal overprotection was shown to be significantly higher among the case sample group members (p=0.001). Recalled paternal overprotection failed to significantly differentiate between the two samples (p=0.09). Further analyses were conducted to ascertain the relative contributions made to these two results in terms of the diagnostic category (that is, BPD or non-BPD) of case sample group members and control group members (hypotheses 4 and 5). The results of analyses with regard to hypothesis 4 showed that self-harmers diagnosed with BPD did not generate significantly higher scores than control group members diagnosed with BPD for either maternal overprotection (p=0.462) or paternal overprotection (p=0.458). This result would appear to be consistent with those of the two studies mentioned above that tested for overprotection among female participants diagnosed with BPD who engaged in DSH (Zweig-Frank et al. 1994a) and among male participants diagnosed with BPD who
engaged in DSH (Zweig-Frank et al. 1994b). In contrast to this lack of significantly higher overprotection scores for BPD self-harmers, testing of hypothesis 5 demonstrated that case sample group participants (non-BPD) produced significantly higher scores than control group participants (non-BPD) for both maternal overprotection (p<0.001) and paternal overprotection (p=0.01).

Hypothesis 6 was designed to identify whether the two groups of self-harmers could be differentiated in terms of parental overprotection. The results illustrate that scores were significantly higher for case sample group participants (non-BPD) in terms of recalled maternal overprotection only (p=0.001). No such degree of significance was noted for paternal overprotection between these groups (p=0.255).

A degree of caution is needed with regard to the interpretation of the result relating to the lack of significant differences between BPD self-harmers and BPD controls for recalled parental overprotection (hypothesis 4). There were only 17 participants within the latter group. The reason why such a relatively small sample size was used was because of the lack of availability of BPD patients who did not disclose the experience of singularly, potentially traumatic events and who did not have histories of DSH. As such it is not possible to conclude with confidence whether it was the relatively small sample size of the control group or alternatively the lack of a difference for recalled overprotection between the BPD self-harming group and the BPD control group that led to this result. However, an examination of the median overprotection values does allow for a greater degree of confidence in terms of appraising the usefulness of this variable for discriminating between these two BPD groups.

Median scores for paternal overprotection (see Table 9, page 168) are identical for case sample group participants (BPD) and control group participants (BPD) and hence
this measure of central tendency cannot be used to distinguish between BPD participants who engage in DSH from those who do not. Furthermore, the maternal overprotection median value for BPD self-harmers is only two points in excess of that for BPD controls (see Table 8, page 168). This difference represents approximately only 5% of the range of the PBI scale for overprotection and accounts for only one quarter of the equivalent difference observed between the median values obtained for case sample group participants (non-BPD) and control group participants (non-BPD).

As listed in Appendix IX(g) (see page 379), the distribution of scores recorded for maternal overprotection and paternal overprotection for case sample group participants (BPD) did not differ significantly from the normal distribution. An examination of normal Q-Q plots for maternal and paternal overprotection scores demonstrated the tendency of these scores to lie along a straight line with no unusual outlying values. In light of these observations and in order to allow for additional interpretations of the overprotection scores of BPD self-harmers it is worthwhile briefly adopting the mean values for both maternal and paternal overprotection scores so that they might be compared to the equivalent normative values obtained by Parker et al. (1979) that was published in mean form only.

Mean overprotection scores generated by case sample group participants (BPD) are 15.29 for mothers and 13.74 for fathers. The equivalent mean values derived from normative data for parental overprotection matched according to the age and sex of these participants are 13.76 for mothers and 12.80 for fathers. The relatively small differences between these two sets of mean values can be appreciated in the context of the range of scores (0 to 39) that can be achieved for the overprotection component of the PBI. Here, the extent to which the means for observed scores exceed the means for normative scores represent only 3.9% and 2.4% of the range of the PBI scale for
maternal and paternal overprotection respectively. These small differences would appear to suggest that parental overprotection might not function as a valid discriminatory factor between BPD self-harmers and individuals drawn from a general population.

Despite the limitation that the relatively small size of the psychiatric control group (BPD) has for the validity of any interpretations drawn with regard to the possible influence of parental overprotection for the later presentation of DSH, the combination of the failure to reject the null hypothesis (hypothesis 4), the proximity of the median values for case sample group participants' (BPD) scores and psychiatric control group participants’ (BPD) scores and the small differences noted between observed scores and normative data are at least suggestive of the lack of predictive value of this variable for the later presentation of DSH among individuals who are diagnosed with BPD.

This lack of significant differences between overprotection scores generated by case sample group participants (BPD) and the psychiatric control group participants (BPD) stands in contrast to those differences observed between case sample group participants (non-BPD) and psychiatric control group participants (non-BPD). Although the significance level relating to maternal overprotection (p<0.001) is higher than that for paternal overprotection (p=0.01), that case sample group participants (non-BPD) recalled both mothers and fathers as significantly more overprotective than matched controls would suggest biparental failure in terms of allowance of autonomy and independence. It is not possible to compare the overprotection scores of case sample group participants (non-BPD) with normative data. Paternal overprotection scores were not normally distributed and although scores for maternal overprotection did not generate a significant Kolmogorov-
Smirnov p-value an inspection of a normal Q-Q plot demonstrated a tendency for scores not to lie along a straight line.

Parker et al. (1979) referred to parental failure that was defined by high overprotection as one that involved "... control, overprotection, intrusion, excessive contact, infantilization and prevention of independent behaviour" (p.8). It is reasonable to infer that since both the mothers and fathers of case sample group participants (non-BPD) were remembered by their children to have been overprotective, defensive strategies were not available to them that might otherwise have afforded some degree of insulation against the negative experiences of overprotection with one parent by having recourse to experiences with the other parent who was not experienced as controlling and overprotective. These non-borderline participants' experiences of chronic, biparental, overprotective and intrusive caregiving during their first sixteen years can be interpreted against the background of the preceding review of Fonagy et al.'s (1994) conceptualisation of resilience against dysfunctional caregiving where internal working models of relationships with either parent might be maintained separately thereby allowing for a defensive insulation of the benign, internalised model against the pathogenic influence of the other. In terms of protection against intrusive and overprotective caregiving, any such defensive manoeuvre was unlikely to have been available to case sample group participants (non-BPD).

In light of the description of overprotection that was noted in the above paragraph to involve dynamics including intrusion and a threat to the individual's autonomy, it is perhaps worthwhile briefly considering the extent to which the data-gathering procedures involved in this current research might have served to reinforce such dynamics. It is conceivable that patients with a history of DSH who attended the
A&E department at UCH and who were approached by the investigator (often in the context of having been detained against their will either under common law or under the Mental Health Act) may have interpreted this procedure as unwelcome and intrusive. Aware of the existence of this potential threat to participants, the researcher was clear to point out that participation in the research was entirely voluntary. In addition to the investigator’s adherence to all ethical requirements relating to the recruitment of participants and the collection of data (see Chapter 4: Research Method) the investigator was sensitive to the need to enable participants to feel empowered to the extent that their opinions regarding issues surrounding self-harm were valued, respected and sought by those who wished to achieve a greater understanding of this behaviour by conducting research. Indeed, it is likely that such an experience of empowerment was especially valued by those patients who had been subjected to overprotective and invasive caregiving.

The potential role that parental overprotection might have for the development of DSH will be returned to again in this discussion after the results relating to participants’ scores on the care component of the PBI have been reviewed. This is because it is important to consider how a combination of overprotection and selective/contingent care might be involved in the development of DSH.
Parental care (hypotheses 7 to 10)

Those same studies that failed to identify overprotection as a risk factor for DSH among BPD subjects also failed to find a mediating role for parental care (Zweig-Frank et al. 1994a; Zweig-Frank et al. 1994b). Although Zweig-Frank and Paris (1991) reported significantly lower recalled parental care scores in their study of parental bonding in borderline patients, the qualification that was noted above with regard to drawing upon their findings for the overprotection component of the PBI also applies to the care component.

Hypothesis 7 was used to compare recalled parental care scores between case sample group participants (BPD and non-BPD) and psychiatric control group participants (BPD and non-BPD). A significant difference was observed only in respect of recalled maternal care (p=0.005) between these two groups. Here, case sample group participants (BPD and non-BPD) recalled significantly lower maternal care than psychiatric control group participants (BPD and non-BPD). The relative contribution to this result in terms of whether case sample group participants were diagnosed with BPD or had other psychiatric diagnoses will now be considered.

According to the results relating to hypothesis 8, case sample group participants (BPD) failed to be differentiated from control group participants (BPD) with respect to either recalled maternal care (p=0.864) or recalled paternal care (p=0.632). Again, there is need for caution in interpreting these statistics due to the small sample size (n=17) of the psychiatric control group (BPD). Nevertheless, the degree to which these measures of parental care failed to reach significance suggests that they are perhaps more likely to have been influenced by a lack of significant differences between the two samples than they were by the limited number of participants. In contrast to this lack of significant differences for parental care scores between BPD
self-harmers and BPD controls, case sample group participants (non-BPD) generated significantly lower care scores than control group participants (non-BPD) with regard to their mothers (p=0.001). This result was not repeated for recalled paternal care scores (p=0.153). An examination of the median value for recalled maternal care (see Table 10, page 172) for case sample group participants (non-BPD) reveals that it was five points lower than that of the psychiatric control group (non-BPD), a difference representing some 14% of the possible range of scores obtainable for the PBI care scale. With regard to the comparison of recalled parental care scores for the two self-harming samples (hypothesis 10), neither recalled maternal care (p=0.354) nor recalled paternal care (p=0.693) were able to significantly differentiate between these two samples.

The Kolmogorov-Smirnov tests that were used to compare observed parental care scores against theoretical normal distributions (see Appendices IX(g), page 379 and IX(h), page 380) suggested that neither recalled maternal care scores nor recalled paternal care scores for either the case sample group (BPD) or the case sample group (non-BPD) deviated significantly from these theoretical distributions. This would appear to suggest that comparisons between the mean values obtained for parental care and normative mean values are valid. However, an examination of normal Q-Q plots demonstrates that recalled paternal care scores generated by the case sample group (BPD) tend not to lie upon a straight line. It is therefore not valid to compare the recalled paternal care scores that were observed for BPD self-harmers against normative values. The mean values obtained for recalled maternal care scores are 19.43 for the case sample group (BPD) and 18.60 for the case sample group (non-BPD). These values compare to normative mean values matched according to the sex and age of participants of 26.96 and 27.13 for the case sample group (BPD) and the
case sample group (non-BPD) respectively. Clearly, in comparison to this non-psychiatric normative sample data both groups of self-harming participants rated their mothers as markedly less caring.

Before interpreting the combination of results obtained for parental care and overprotection it is important to emphasise that care scores obtained for all case sample group and control group participants were not indicative of gross parental neglect since the PBI care scale does not specifically refer to singularly gross and potentially traumatic forms of neglect. As has been mentioned within preceding sections of this study, any type of experience disclosed by participants that could be interpreted as singularly potentially traumatic was taken as grounds for exclusion. Patients who were excluded from this research because they reported this type of experience had disclosed neglect that was characterised most often by varying degrees of parental behaviours that approximated abandonment; for example, physical and emotional neglect that required intervention by Social Services' child welfare units.

The type of lack of care that this research has suggested might be implicated in the development of DSH is akin to Masterson and Rinsley’s (1975) conceptualisation of selective maternal care. Here it was suggested that the mother’s provision of care for her child was contingent upon that child’s avoidance of attempts at individuation. As noted in the literature review, these authors had considered this type of maternal care with respect to the aetiology of BPD and did not refer to DSH. It is the principal contention of this current research that such a caregiving dynamic that encourages dependent behaviour and actively discourages autonomy is a possible risk factor for DSH regardless of psychiatric diagnosis. This type of caregiving dynamic most closely approximates that which was referred to as ‘affectionless control’ by Parker et al. (1979) and involved high overprotection and low care. It is one of four possible
parental bonding possibilities that can be measured using the PBI. The other three conceptualised possibilities are ‘affectionate constraint’ (high overprotection and high care), ‘absent or weak bonding’ (low overprotection and low care), and ‘optimal bonding’ (low overprotection and high care).

Selective/contingent parental care suggests that caregivers’ provision of care is less a function of the needs of the child than it is of the parents’ needs to discourage their child’s development beyond a symbiotic and dependent relationship with them. Several items within the PBI care scale (see Appendix VII) can be seen to measure the degree to which the provision of care is determined by the requirements of the child as opposed to those of the caregiver. For example, depictions of maternal care listed in the care scale such as ‘Did not seem to understand what I needed or wanted’, ‘Appeared to understand my problems and worries’, ‘Could make me feel better when I was upset’, and ‘Enjoyed talking things over with me’ would appear to assess how participants remember their mothers’ caregiving behaviours with respect to their own developmental needs during childhood. As such, participants’ responses that recorded lower care scores indicate that they recall a lack of maternal sensitivity and attunement to their own care needs whilst they were children.

Since this study has suggested that in contrast to an absence of parental care that would suggest neglect it is the provision of care that is conditional on the child’s satisfaction of parental needs and desires that might contribute towards the development of DSH one would not have anticipated that the majority of care scores recorded for case sample group participants would congregate within the lower extremes of the care scale. Indeed, only 16% of all case sample group participants recorded scores for mean parental care that fell within the lowest quartile of the possible range of scores obtainable for the PBI. Rather, as stated above, it is the
particular feature of selective care within the context of high parental overprotection that this study has considered a risk factor for psychic disturbance that might become manifest in DSH. This discussion of the results generated for the PBI will conclude by examining the extent to which such a feature of dysfunctional parental bonding was apparent for both case sample groups.

Neither parental care nor overprotection featured as significant discriminating factors between those BPD participants who engaged in DSH and those who did not. This lack of significance was apparent with regard to both the mothers and the fathers of these participants and offers support for the results of the two studies conducted by Zweig-Frank et al. (1994a; 1994b). Selective care and high overprotection however were able to discriminate to a significant extent between those case sample group participants without a diagnosis of BPD who engaged in DSH and those who did not in terms of both mothers and fathers with regard to overprotection and mothers only with regard to care.

The implication of the failure to detect a significant difference between the case sample group (non-BPD) and the psychiatric control group (non-BPD) for recalled paternal care can perhaps be considered from the perspective of early childhood and adolescent resilience against dysfunctional caregiving that was briefly referred to in this section and earlier in the literature review (see pages 109-115). Here it was suggested that a pre-pubertal child's defensive manoeuvres to maintain separate representations of both primary caregivers in order that the benign representation is protected against any pathogenic influence of the other become frustrated during adolescence when these internalised representations might combine. With respect to case sample group participants (non-BPD) it is possible that the level of any protection that such distinct internalised object-relations might have afforded the
younger child against the experience of dysfunctional maternal care could diminish during adolescence.

To summarise this discussion of the significance of disturbed parental bonding for repetitive skin-cutting, this research has suggested that a combination of parental overprotection and contingent care sponsors disturbances in the child and adolescent's awareness of the distinctiveness of his own self-representation and his physical and emotional separateness from others. It has also been suggested that this parenting style gives rise to a lack of internalised reparative structures that might otherwise have been available to this individual to draw upon during periods of heightened distress. This failure to adequately differentiate between the self and object-representation combined with a diminished sense of control over, ability to tolerate and adaptively communicate negative affect leaves the individual liable to resort to externalised self-soothing behaviour. It is a suggestion of this research that in an effort to achieve temporary relief from intense negative affect and to reinforce an awareness of physical and emotional separateness from the object-representation, the cutting of the skin brings into sharp focus for the self-harmer a vivid and unambiguous representation of the separateness and vitality of the limiting boundary that distinguishes between the self and other. Although highly speculative, this suggestion does not rely upon the destabilising effects of experiences of early and severe trauma to account for the self-harmer's suggested lack of a cohesive self-representation, decreased capacity for affect regulation and compromised capacities to self-soothe and self-care.
Impulsiveness, ambivalence and DSH (hypotheses 11 to 14)

The depiction of DSH as an impulsive behaviour has been noted throughout the literature review. Regardless of whether DSH has been considered as an associated feature of mental disturbance (for example, as one of DSM-IV's diagnostic criteria for BPD) or as a distinct syndrome in its own right (for example, Favazza's 1996 conceptualisation of a 'repetitive self-mutilation syndrome'), this emphasis upon impulsiveness has been taken as perhaps the principal feature of this behaviour. Set against this consistent perception, hypotheses 11 to 13 seek to examine levels of impulsiveness by comparing participants' scores obtained for the 17 Impulsiveness Questionnaire and the impulse control subscale of the Karolinska Psychodynamic Profile (KAPP).

Hypothesis 11 compared scores obtained for 17 impulsiveness and KAPP impulse control between case sample group participants (BPD and non-BPD) and psychiatric control group participants (BPD and non-BPD). No significant difference was found with regard to either 17 impulsiveness (p=0.239) or KAPP impulse control (p=0.231). The extent to which this lack of significant difference was due to the diagnostic category of case sample group participants is explored within hypotheses 12 and 13.

Results of the analysis for hypothesis 12 which compared impulsiveness scores between case sample group participants (BPD) and matched BPD controls demonstrate a failure to discriminate between the two samples in terms of scores generated for either 17 impulsiveness (p=0.522) or KAPP impulse control (p=0.360). In line with comparisons between these two groups for differences regarding recalled parental care and overprotection, interpretation of the lack of significant differences for impulsiveness is complicated by the small number of psychiatric control group participants (BPD). Despite this qualification, a limited interpretation of the extent of
differences between the two samples is enabled by considering the median values for both variables. The median value for case sample group participants' (BPD) scores for the 17 impulsiveness questionnaire is 13.50 and is a half point lower than the equivalent value for the BPD control group (see Table 12, page 175). This small difference between the median values obtained for these two groups accounts for less than 3% of the possible range of scores (0 to 19) obtainable for this measure of impulsiveness.

The case sample group (BPD) and the psychiatric control group (BPD) share the same median value of 2.5 for the impulsiveness component of the KAPP. According to Weinryb and Rossel (1991), a score of 2.5 for impulse control would suggest a level of psychopathology located at some point between where "...urgent affects, wishes and needs are handled through a non-adaptive balance between wishes and needs on the one hand and the possibilities and limitations of reality on the other..." (p.16) and where there is "...manifest difficulty in postponing the satisfaction of urgent wishes and needs and in controlling the affects they may give rise to" (p.16). Such a score is certainly indicative of a substantially reduced capacity for impulse control – a defining characteristic of BPD. Indeed, it would have been surprising if the presence of this characteristic had not been detected among the two samples of BPD participants. However, since the median values for KAPP impulse control are the same for BPD self-harmers and BPD non self-harmers, then at least in terms of this measure of central tendency, the former group cannot be considered to be any more impulsive (at least in terms of KAPP measurement) by virtue of the fact that they engage in DSH.

Clearly, the lack of significant differences between BPD self-harmers and BPD controls for both measures of impulsiveness certainly does not allow one to reject the
null hypothesis. In addition, the very similar median values observed for case sample group participants' (BPD) and for their matched controls with regard to I7 impulsiveness scores and the equality of median values for KAPP impulse control does not suggest that a significant divergence exists between these two samples with respect to impulsiveness.

The failure of these two measures of impulsiveness to detect significant differences between the two BPD samples was repeated for comparisons between the case sample group (non-BPD) and the psychiatric control group (non-BPD). The lack of significance obtained for I7 impulsiveness (p=0.072) and for KAPP impulse control (p=0.083) would suggest that impulsiveness is not a behaviour that distinguishes case sample group participants (non-BPD) and psychiatric control group participants (non-BPD). The degree of qualification regarding the possible influence of control group sample size noted above for the BPD group is not relevant here since there were 45 participants in the psychiatric control group (non-BPD). The median value of 11 obtained for case sample group participants (non-BPD) for I7 impulsiveness was only one point greater than that for the psychiatric control group (non-BPD) and represented approximately only 5% of the possible range of scores obtainable for this measure of impulsiveness.

The median value of 2.0 obtained for KAPP impulse control (see Table 20, page 192) for case sample group participants (non-BPD) was a third higher than the median value for the control group (non-BPD). Examples of behaviours that Weinryb and Rossel (1991) suggest might become manifest among individuals who achieve this higher score for impulsiveness include those that are acted out whilst under the influence of alcohol and/or during a crisis. The degree to which alcohol use was found to be implicated in DSH for both case sample group participants (BPD) and
case sample group participants (non-BPD) will be discussed later. However, with regard to this one-third higher median value for KAPP impulse control scores for case sample group participants (non-BPD), it is important to point out that it represents the smallest difference between scores that can be obtained on a five-point scale (that is, 1, 1.5, 2, 2.5 and 3) and is therefore not suggestive of substantial difference with regard to impulsiveness between the two samples.

The failure of both I7 impulsiveness and KAPP impulse control to discriminate between the two case sample groups and their respective control groups offers no evidence in support of Favazza’s contention (1996 & 1998) that repetitive skin-cutting ought to be established as a separate DSM Axis I disorder (a ‘repetitive self-mutilation syndrome in Favazza’s terminology) by virtue of the high level of impulsiveness he purports to be associated with it. Indeed, the occurrence of this failure within the context of the diversity of psychiatric diagnoses that has been recorded for case sample group participants (see the discussion of the results relating to hypothesis 2) does not allow one to conclude that DSH can be recognised in terms of any single Axis I or Axis II diagnosis. Rather, on the basis of the results of this current research, it would appear more reasonable to infer that DSH is a behaviour that serves to reduce the short term experience of heightened distress (see page 281) among a diagnostically heterogeneous group of individuals who cannot be distinguished from their non self-harming controls by virtue of measures of impulsiveness.

It was mentioned within the ‘aims and hypotheses’ section of this study that there has been a lack of research into whether any impulsiveness associated with acts of DSH might also be associated with the experience of ambivalence towards the prospect of engaging in DSH. Walsh and Rosen’s (1988) suggested that in contrast to a suicide
attempter’s experience of ambivalence towards the prospect of completing suicide the
self-harmer rarely experiences ambivalence when contemplating engaging in DSH.
This proposal stands in contrast to Pao’s (1969) earlier reference to a female
analysand’s ambivalent struggle towards the prospect of cutting herself.

Table 13 (see page 177) shows that a small majority (n=43) of case sample group
participants (BPD and non-BPD) did report the experience of ambivalence towards
the prospect of engaging in DSH. In terms of the ability to delay or postpone acts of
DSH, results displayed within Table 14 (see page 178) show that a greater majority
(n=50) of case sample group participants (BPD and non-BPD) were typically able to
defer cutting and/or burning themselves. Hypothesis 14 was used to test for the
existence of an association between case sample group participants’ experience of
ambivalence towards cutting and/or burning themselves and the delay or
postponement of DSH. The purpose of this hypothesis is that it allows one to
investigate whether impulsiveness associated with acts of DSH (that is, the ability to
delay or postpone an act of self-harm) might be influenced by the presence or absence
of ambivalence experienced towards this behaviour.

Reference to Table 34 (see page 217) shows that among the 43 case sample group
participants (BPD and non-BPD) who reported that they experience ambivalence
when they feel the need to cut and/or burn themselves, 42 were typically able to delay
engaging in self-harm. Conversely, among the 38 case sample group participants
(BPD and non-BPD) who reported that they do not experience ambivalence, the
substantial majority (n=30 or 79%) stated that they typically do not delay or postpone
self-injury. The degree of association between ambivalence and delay as tested with
the use of a Fisher’s Exact test was shown to be highly statistically significant
(p<0.001). These results would appear to be contradict the suggestion made by Walsh
and Rosen (1988) that self-harmers do not experience ambivalence towards the prospect of engaging in DSH. Furthermore, they are also suggestive of a robust association between ambivalence and impulsiveness with respect to DSH.

A comparison of 17 impulsiveness scores using Mann-Whitney U tests between those self-harmers who stated that they are able to delay self-harm and those who stated that they are not indicates that there were no significant differences between these two groups either in terms of 17 impulsiveness ($U=653.0$, $p=0.235$) or KAPP impulse control ($U=616.0$, $p=0.111$). In context of the above discussion concerning tendencies to delay or postpone DSH, this result demonstrates that although these two groups were distinct from each other in terms of impulsiveness specifically with regard to acts of DSH, they did not have significantly different general impulsiveness scores. As such, it is possible that although participants can be seen to display patterns of impulsiveness with respect to a variety of behaviours, such patterns do not necessarily translate into raised levels of impulsiveness being associated with DSH itself.

To conclude this discussion of impulsiveness and DSH, it is apparent from the results obtained for hypotheses 12 to 15 that no evidence has been detected that would have allowed one to suggest that DSH is an impulsive behaviour. Where marked impulsiveness was detected among case sample group participants (BPD) it was suggested that this observation was consistent with the occurrence of heightened impulsiveness as a principal feature of the BPD diagnosis. There would also appear to be evidence suggestive of a distinction between what might be considered to be impulsiveness as a trait of self-harmers and impulsiveness specifically with regard to acts of DSH.
Use of alcohol and DSH (hypotheses 15 to 18)

There have been very few studies that have investigated the potential contributions of alcohol use for DSH. Indeed, certain studies (for example, Gardner and Gardner 1975) deliberately excluded those individuals from participating who had engaged in DSH whilst intoxicated with alcohol. As noted in the literature review (see pages 69-72), most published references to alcohol use in the context of DSH have only noted that the two behaviours tend to co-exist without suggesting reasons why this might be so. Favazza (1996) appears to relegate the significance of alcohol abuse for acts of DSH to the level of co-existent ‘other impulsive behaviours’. Although it has been suggested that both DSH and the use of alcohol might be methods used to reduce the experience of tension (for example, Walsh and Rosen 1988), such notions have not sought to examine whether there might be a more contributory relationship between alcohol use and DSH. One study (Frankel et al. 1976) that was referred to in the literature review did emphasise that a contributory role for alcohol use prior to acts of DSH was likely. However these authors were unable to identify the nature of any potential contribution.

Hypothesis 15 which compared weekly alcohol consumption measured in units between case sample group participants (BPD and non-BPD) and psychiatric control group participants (BPD and non-BPD) failed to detect a significant difference between these two samples (p=0.067). However, several individuals within these two samples were teetotal. Since one is concerned less with whether participants did or did not drink alcohol than one is with the extent to which there might be differences between levels of alcohol consumption for self-harmers who do drink alcohol and controls who also drink alcohol, both samples can be adjusted so that all 19 teetotallers are temporarily removed from the data for the case sample group (BPD
and non-BPD) and 12 teetotallers are similarly removed from the psychiatric control group (BPD and non-BPD). The Mann-Whitney U test used to compare average levels of weekly alcohol consumption between these two adjusted samples demonstrates that the self-harmers drank significantly more alcohol than non-self-harmers (U=923, p=0.001). Median values for these two samples are 44 units of alcohol per week for self-harmers and 20 units of alcohol per week for non self-harmers.

The Department of Health’s (1995) recommendations for maximum weekly consumption of alcohol (weighted according to the ratio of male to females in both the case sample and control groups) are approximately 16.6 units per week for the case sample group (BPD and non-BPD) and 16.7 units per week for the psychiatric control group (BPD and non-BPD). Clearly, among both those self-harming and control group populations who do drink alcohol levels of consumption are in excess of the Department of Health’s recommended maximum levels. However, the extent of this excess is most significantly marked for the case sample group (BPD and non-BPD).

Although a suggested contributory relationship between alcohol use and DSH will be discussed shortly when the results relating to hypotheses 17 and 18 are examined, it is useful to first review the result for hypothesis 16 which tested for a significant difference between levels of alcohol consumption between case sample group participants (BPD) and case sample group participants (non-BPD). The Mann-Whitney U test that was used to determine the significance of any difference between these two groups of self-harmers demonstrated that case sample group participants (BPD) drank significantly more alcohol (p=0.049). It is inappropriate to compare levels of alcohol consumption between non-teetotal case sample populations because
the number of participants in these two groups would become relatively small and hence the power to detect any significant difference would be compromised.

It is clear that many of the case sample group participants used in this study have harmful relationships with alcohol. This observation is certainly consistent with those details recorded within the results section of this study (see pages 154 and 155) that showed that 37 self-harming participants had a primary or secondary diagnosis of alcohol abuse or alcohol dependence. In order to understand whether and how the use of alcohol might contribute to acts of DSH, the results generated for hypotheses 17 and 18 will now be reviewed.

Case sample group participants were interviewed with regard to whether they cut and/or burned themselves whilst under the influence of alcohol (hypothesis 17). The Mann-Whitney U test demonstrated that case sample group participants (BPD) were significantly more likely than case sample group participants (non-BPD) to engage in DSH whilst they were intoxicated with alcohol (p=0.029). Here, 58% of case sample group participants (BPD) typically or always engaged in DSH whilst intoxicated with alcohol. This percentage increased to over 72% when teetotal BPD self-harmers were excluded from calculations. These figures were substantially in excess of those for the case sample group (non-BPD) where 36% of participants (including those who were teetotal) typically or always engaged in DSH whilst intoxicated with alcohol whilst only a minority (48%) of non-teetotal participants typically or always cut and/or burned themselves after drinking alcohol.

These results indicate that not only do self-harming participants use alcohol in excessive amounts but also that their self-harm frequently arises in the context of their use of alcohol prior to cutting and/or burning themselves. This latter observation was particularly pronounced for case sample group participants diagnosed with BPD.
These observations regarding the frequency with which participants engage in DSH after they had been drinking alcohol appear to be substantially different from those recorded by Favazza and Conterio (1989) who reported that only 3% of subjects in their study claimed to self-harm only whilst under the influence of alcohol or drugs and that the majority (59%) had never self harmed whilst intoxicated. As noted in the literature review (see pages 58-59), although several different forms of self-harm were referred to in their study, 72% of women had histories of cutting themselves and therefore it is unlikely that substantial differences exist between Favazza and Conterio’s (1989) study and this research in terms of the types of self-harming behaviours under investigation. However, all subjects in their study were women. The possible significance of this factor for the dissimilarity of results between these two studies with regard to the frequency with which subjects engage in DSH whilst intoxicated will now be considered.

Within the case sample group (BPD and non-BPD), 20 (or exactly two thirds) of the thirty male participants typically or always engaged in DSH whilst intoxicated with alcohol. However, within the larger sample of 51 female self-harmers, only 17 (or exactly one third) of these females typically or always engaged in DSH whilst intoxicated with alcohol. These gender differences become even more pronounced when one contrasts the 33% of males against the 4% of females who stated that they had only ever self-harmed when intoxicated with alcohol. This latter percentage is remarkably similar to the 3% of female subjects reported by Favazza and Conterio (1989) who claimed to self-harm only whilst under the influence of alcohol.

The use of a Fishers Exact test demonstrated a highly significant association between the gender of case sample group participants (BPD and non-BPD) and the frequency with which DSH arose whilst participants were typically or always intoxicated with
alcohol (p=0.005). That is to say, male participants appear to engage in DSH whilst intoxicated much more often than female participants. An examination of the gender of the 37 case sample group participants (BPD and non-BPD) who had primary or secondary diagnoses of alcohol use disorders revealed that nineteen males and eighteen females had such diagnoses. As such, the significant association between self-harmers’ gender and the frequency with which they engaged in DSH whilst intoxicated cannot be taken to be a function of diagnoses of alcohol abuse or alcohol dependence since the incidence of such diagnoses among males and females was almost identical. Although the one-third of case sample group participants who typically or always engage in DSH whilst intoxicated with alcohol is still in excess of the proportion reported by Favazza and Conterio (1989), what is of importance here is the finding that women appear to be significantly less likely than men to cut and/or burn themselves when they have been drinking alcohol. In light of these results relating to hypotheses 16 and 17, it would appear that should the prior consumption of alcohol contribute to subsequent acts of DSH, then the effect of this contribution is most pronounced for male self-harmers and for those individuals diagnosed with BPD.

Hypothesis 18 was designed to explore whether case sample group participants (BPD and non-BPD) who report that they typically or always engage in DSH whilst intoxicated with alcohol are aware of the impulse to cut and/or burn themselves prior to intoxication. As mentioned above, 37 case sample group participants (BPD and non-BPD) either typically or always engage in DSH after drinking alcohol. Results of the binomial one sample test of proportion demonstrated that significantly more than half of these self-harmers (that is, 26 participants) stated that they do not recognise the need to engage in DSH until after they start to drink alcohol (p=0.02).
One might be inclined to attempt to account for this observation simply by locating it within the context of the purportedly high degree of impulsiveness associated with acts of DSH that has been referred to throughout this study. Indeed, that 37 participants typically or only self-harm whilst intoxicated with alcohol (among whom 26 participants only become aware of the need to cut and/or burn themselves after they had started to drink alcohol) appears to suggest that alcohol consumption might increase the probability of the occurrence of certain behaviours that are considered by some to be impulsive. Here however, this suggestion is not supported with regard to DSH. A review of these participants’ responses to the question regarding their ability to delay or postpone DSH demonstrates that within both the former group of 37 participants and the latter group of 26 participants most individuals were able to delay or postpone harming themselves. Here, 24 out of the 37 participants (65%) within the former group and 14 out of the 26 participants (54%) within the latter group were able to delay or postpone acts of DSH whilst intoxicated with alcohol.

An alternative suggestion for a mediating role for the consumption of alcohol prior to DSH might consider how self-harmers may use alcohol to alleviate the uncomfortable experience of ambivalence they might have towards the prospect of engaging in DSH. The significance of suggested associations between the experience of ambivalence and DSH has been frequently referred to within the literature review and within the discussion of the results relating to hypothesis 14. However, this suggested mediating role for alcohol is unlikely to be of any explanatory value here since 26 out of the 37 participants who typically or always engage in DSH whilst intoxicated stated that they were unaware of the need to self-harm until after they had started to drink. Clearly, these participants could not have used alcohol to temper ambivalence towards DSH since their experience of ambivalence would only have occurred after they had
become aware of the need to harm themselves which in turn, had only arisen after they had started to drink alcohol.

In order to suggest a mediating role between the prior consumption of alcohol and DSH, it is perhaps worthwhile returning to Khantzian and Mack's (1983) conceptualisation of the capacities for self-soothing and self-care. These authors propose that in contrast to self-care functions, an individual's capacity to self-soothe “...may grow out of earlier more somatically based experience” (p.229). These authors suggest how alcohol abuse might reflect a maladaptive form of externalised self-soothing behaviour. Certainly, the subjective experience associated with relatively moderate alcohol consumption can be one of a relatively rapid if transient relief from tension. Such relief and the relative immediacy of its attainment would most probably not be unwelcome to many individuals who have chronic difficulties regulating dysphoric affect. Presumably, those 37 participants who typically or always self-harm after drinking alcohol do not use alcohol prior to self-harm at such extreme levels of consumption that it becomes debilitating since they would then be physically incapable of engaging in DSH. However, their relatively high levels of alcohol consumption (a mean of 88 units per week) are suggestive of these individuals' reliance upon externalised self-soothing behaviours.

It was suggested that in response to environmental stressors (for example, real or imagined loss or rejection), self-harmers might be inclined to rely upon somatic experiences associated with externalised self-soothing behaviours in order to achieve relief from dysphoric affect. It is suggested here that it is both the transience of relief from dysphoric affect and the quality of this relief that might arise secondarily to alcohol use that alludes to the nature of the possible association between the prior use of alcohol and DSH. The subjective experience of alcohol intoxication is not static
and its initially soothing characteristic fades relatively rapidly. Furthermore, intoxication is more likely to achieve a blurring or dulling of affective experience as opposed to a qualitative change in affect. A possible corollary of this obscuring of the vitality of affect is the individual’s reduced capacity to tolerate and differentiate between ambiguous affects. As such, the self-harmer might be motivated to seek the somatic and dramatically abrupt experience associated with immediate relief from escalating tension and threatening affective and structural regression. Perhaps it is at this point that the individual now becomes aware of the need to engage in DSH.
Alexithymic traits (hypotheses 19 to 22)

An understanding of the construct of alexithymia in terms of its possible emergence as a consequence of dysfunctional attachment and bonding during childhood and its potential contributory role for the development of DSH was referred to within the literature review (see pages 97-101). The study by Zlotnick et al. (1996) that examined the role of alexithymia in ‘self-mutilative behaviour’ concluded that alexithymic disturbance was independently related to this type of behaviour. However, since this study was conducted only with female psychiatric inpatients of whom 79% had reported histories of childhood sexual abuse, generalisations drawn from its findings are of limited heuristic value with regard to their application to the results obtained from the samples of participants used in this research.

Hypothesis 19 tested for differences for scores on the KAPP scale for alexithymic traits between case sample group participants (BPD and non-BPD) and psychiatric control group participants (BPD and non-BPD). The result relating to this hypothesis demonstrated that the former group’s scores for alexithymic disturbance were significantly in excess of those for matched controls (p<0.001). A review of the distribution of scores generated by both samples (see Figures 10 and 11, page 189) demonstrates the considerable dissimilarity between self-harmers and non self-harmers with regard to this variable. In terms of observed frequencies for the lowest and highest scores that can be attained on this KAPP subscale, only 5% of case sample group participants (BPD and non-BPD) compared to 27% of psychiatric control group participants (BPD and non-BPD) were allocated the lowest score of one which corresponds to the lowest level of pathology whilst 26% of participants within the former group compared to 3% of participants within the latter group were
allocated the highest score of three which corresponds to the highest level of alexithymic disturbance.

The median value for alexithymic traits for the case sample group (BPD and non-BPD) of 2.5 (see Table 19, page 188) was some two thirds higher than the control group median. Weinryb and Rossel (1991) suggest the extent of pathology indicated by a score of 2.5 is located between a deficiency for differentiating between the subtleties of affects and a profoundly dysfunctional capacity for experiencing, identifying and articulating affective states. Examples provided the authors of how such a pathology might manifest in behaviour include those where the individual has significant difficulty "...in distinguishing amongst different emotional states such as feeling angry, sad, hungry or cold. Instead the individual experiences and describes global, vague expressions of feelings – e.g., 'everything is hopeless; all is shit', or feelings of malaise. Emotional descriptions are characterized by lifelessness. Feelings and emotions are conveyed primarily non-verbally through body language or acting out behaviour" (p.17). In addition to cutting and burning themselves, those other externalised self-soothing behaviours (for example, the abuse of alcohol and drugs) observed for case sample group participants are certainly consistent with such descriptions.

Additional Mann-Whitney U tests that were used to test hypotheses 20 and 21 demonstrated that KAPP alexithymic trait scores were significantly higher for both the case sample group (BPD) in comparison to the psychiatric control group (BPD) (p=0.008) and for the case sample group (non-BPD) in comparison to the psychiatric control group (non-BPD) (p<0.001). In light of these results it would appear that alexithymia is a relatively stable characteristic of these self-harming samples regardless of psychiatric diagnoses. Indeed, this conclusion is supported by the
degree to which the result of the Mann-Whitney U test that was used to compare KAPP alexithymic trait scores between the two samples of self harmers (hypothesis 22) failed to reach significance (p=0.969).
**Frustration tolerance (hypotheses 19 to 22)**

The suggestion that individuals who engage in DSH are particularly vulnerable to experiences of frustration was frequently noted within the literature review (for example, Walsh and Rosen 1988; Jones and Daniels 1996). Suggested developmental antecedents of such a susceptibility were considered both in terms of chronic caregiver failure to allow for the child’s’ satisfaction of needs outside of the caregiver-child dyad (for example, Burnham and Giovacchini 1969) and the failure to provide for the child’s experience of tolerable levels of frustration and delay (Rubinfine 1962; Khan 1963) and experiences of ambiguous phenomena (Kafka 1971).

The result of the Mann Whitney U test (hypothesis 19) that was used to determine the significance of any difference for KAPP frustration tolerance scores between case sample group participants (BPD and non-BPD) and psychiatric control group participants (BPD and non-BPD) demonstrated that members within the former sample generated significantly higher scores (p<0.001). These higher scores indicate marked dysfunction in terms of self-harmers’ capacities for adaptively working through experiences of heightened frustration.

Within the case sample group (BPD and non-BPD) one third of participants (that is to say, 27 individuals) were allocated the highest score for dysfunctional frustration tolerance (see Figure 22, page 197). This contrasts to only one participant within the psychiatric control group (BPD and non-BPD) who realised this maximum score (see Figure 23, page 197). Conversely, there were no participants within the former, self-harming sample (as opposed to approximately 26% of the latter, control sample) who were allocated the lowest score for this variable – a score indicative of an ability to tolerate and adaptively work through emotional reactions to frustration.
The median value for KAPP frustration tolerance scores for case sample group participants (BPD and non-BPD) is 2.5 (see Table 21, page 196). According to Weinryb and Rossel (1991) such a score is suggestive of levels of mental functioning that range between enduring regressive reactions and depressive or aggressive reactions to experiences of frustration. These authors suggest that the degree of pathology indicated by such a score is exemplified by behaviours that might tend toward "...strong emotional reactions in the face of setbacks, disappointments and frustration. These reactions are often of a global and infantile character, with a pervasive effect on the individual's experience of his existence. The individual's mood can suddenly change without any previous working through of the frustration. Reactions may, for example, take the form of impotent rage or of bottomless despair and be coupled to destructive or self-destructive thoughts." (p.15)

These results indicate substantial differences between the case sample group (BPD and non-BPD) and the psychiatric control group (BPD and non-BPD) in terms of how participants are able to tolerate experiences of frustration. Instances recalled by members of the former sample of those circumstances that typically provoke such experiences most often included those that arose within the context of a wide variety of interpersonal relationships. Although the results generated with regard to dynamics involved in dependency and separation are discussed later, it is worthwhile noting at this point the consistency with which such dynamics provoked self-harmers' powerful emotional reactions to experiences of frustration. Examples given of such situations included rejection by friends or partners; unwanted changes to their medication made by their general practitioners or psychiatrists (see the case history vignette for Mary, page 236); their discharge from psychiatric wards; decisions made by the liaison psychiatry team not to offer them psychiatric admission; alterations made to their
Social Security benefits; and personnel changes within their Community Mental Health Teams that involved changes to their key workers.

Self-harmers routinely portrayed their perception of their roles within such situations as ones within which they had little or no ability to influence or control outcomes that have a bearing upon the satisfaction of their needs. It is suggested that it is this sense of relative powerlessness that engenders the self-harmer’s maladaptive response to experiences of frustrated wish fulfilment. It is also suggested that such experiences are perhaps powerfully reminiscent of earlier experiences of being controlled by another during childhood and adolescence. In light of these considerations, the above reference made by Weinryb and Rossel (1991) to the ‘impotent rage’ of individuals who demonstrate significantly disturbed capacities for frustration tolerance appears to be strikingly similar to the preceding descriptions detailed throughout this study of the regressive symptomatology that might culminate in DSH.

Further analyses were conducted to ascertain the relative contributions to the above result in terms of the diagnostic category (that is, BPD or non-BPD) of case sample group members and control group members (hypotheses 20 and 21). Both case sample group participants (BPD) and case sample group participants (non-BPD) generated significantly higher scores for KAPP frustration tolerance than their matched controls (p<0.001 with regard to both subsidiary hypotheses).

Although both samples of self-harmers certainly appear to demonstrate substantial dysfunction with respect to this measure of tolerance of frustration, the extent of this dysfunction would appear to be most marked for members of the case sample group (BPD). Here (hypothesis 22), case sample group participants (BPD) recorded significantly higher scores (p=0.013) than case sample group participants (non-BPD). That these two samples differ to a significant extent with regard to this variable is
perhaps not unexpected. Those examples of behaviours that were suggested by Weinryb and Rossel (1991) to be symptomatic of significantly dysfunctional frustration tolerance (for example, the individual’s ‘impotent rage’ and the lability of the individual’s ‘experience of his existence’) are comparable to certain diagnostic criteria (DSMIV) for BPD (for example, ‘intense anger’ and ‘identity disturbance’).
Dependency and separation (hypotheses 19 to 22)

Individuals who repeatedly cut and/or burn themselves have frequently been portrayed as having significant difficulties both with establishing and maintaining mature dependent relationships and working through loss. The majority of published studies that have sought to investigate the potential significance of such dynamics for acts of DSH have tended to draw conclusions from data derived from clinical work with individuals in psychotherapy or psychoanalysis (for example, Kafka 1969; Pao 1969; Burnham and Giovacchini 1969; Friedman et al. 1972; Woodruff 1999; Gardner 2001). Alternatively, those other studies that have used controlled experimental designs have tended to recruit self-harming subjects who have met the diagnostic criteria for BPD and/or who have reported experiences of child abuse (for example, Schaffer et al. 1982; Fowler and Hilsenroth 1999).

Hypothesis 19 compared scores obtained for the KAPP dependency and separation subscale between case sample group participants (BPD and non-BPD) and psychiatric control group participants (BPD and non-BPD). The result of the Mann-Whitney U test demonstrated that the former group’s scores for disturbance in terms of the dynamics involved in dependency relationships were significantly in excess of those for matched controls (p<0.001).

The median value of two for this KAPP subscale (see Table 22, page 200) for case sample group participants (BPD and non-BPD) reveals that it is only half of one point in excess of the median value for matched controls – the smallest difference obtainable for this variable. This observation would appear to have been substantially influenced by the sizeable dissimilarity in scores between the two case sample subgroups (that is, those with and those without a BPD diagnosis). Here, approximately half (53%) of all case sample group participants (BPD and non-BPD)
obtained a score of two or less (see Figure 28, page 201). However, an analysis of scores according to the diagnostic category of these participants reveals that whereas in excess of two-thirds (71%) of case sample group participants’ (non-BPD) scores were equal to or lower than two (see Figure 32, page 203), approximately the same proportion (69%) of scores for case sample group participants (BPD) were in excess of this value (see Figure 30, page 202). Indeed, the result of the Mann-Whitney U-test that was used to test for any difference in terms of scores for KAPP dependency and separation between these two diagnostic groups of self-harmers (hypothesis 22) demonstrates that participants’ scores within the case sample group (BPD) were significantly higher (p=0.001) than those of participants within the case sample group (non-BPD). Due to this “cancelling out” effect between these two samples of self-harmers, it is important that interpretations of differences for KAPP dependency and separation scores are based separately on observed differences between each case sample group and their matched control group.

The result of the Mann-Whitney U-test (hypothesis 20) demonstrated that scores for dependency and separation were able to differentiate (p=0.029) between participants within the case sample group (BPD) and participants within the psychiatric control group (BPD). That significantly higher scores were detected among case sample group participants (BPD) is perhaps an unexpected finding. This is because difficulties with interpersonal relationships comprise two of the nine diagnostic criteria within DSMIV for BPD, that is to say “...frantic efforts to avoid real or imagined abandonment (and) a pattern of unstable intense interpersonal relationships...” (p.654). As such, one might have anticipated that both groups of BPD participants would have demonstrated approximately equivalent levels of disturbance in terms of dependency and separation.
Identical median values (2.5) for KAPP dependency and separation for both samples of BPD participants (see Table 22, page 200) would initially suggest that at least in terms of this measurement of central tendency, the two BPD samples are drawn from a relatively homogeneous population. According to Weinryb and Rossel (1991) this score of 2.5 is indicative of substantial incapacity to form mature dependency relationships where considerable separation anxiety, pathological grieving (melancholia), denial of the need for intimacy, and a denial of loss that may not be subject to reality testing are the principal features. A review of the frequency of scores within both samples (see Figures 30 and 31, page 202) reveals that only one member (approximately 6%) of the psychiatric control group (BPD) obtained the maximum score of three points for KAPP dependency and separation. In contrast, not only was a KAPP dependency and separation score of three points recorded for 13 members (approximately 36%) of the case sample group (BPD) but this highest score was also the most frequently occurring score within this self-harming sample. Although these results clearly suggest that both the case sample group (BPD) and the psychiatric control group (BPD) exhibit pathology in terms of interpersonal dependency and separation, the level of this pathology appears to be most pronounced among individuals with a BPD diagnosis who also cut and/or burn themselves.

Among those participants who do not have a diagnosis of BPD, a comparison of KAPP dependency and separation scores (hypothesis 21) between case sample group participants (non-BPD) and psychiatric control group participants (non-BPD) revealed significantly higher scores (p<0.001) within the former sample. Approximately 73% of participants within the psychiatric control group (non-BPD) were allocated scores of 1 or 1.5 (see Figure 33, page 203) – the two lowest scores obtainable for this variable and ones that indicate a relative absence of pathology in terms of
establishing, maintaining and relinquishing dependent relationships. This observation for psychiatric control group participants (non-BPD) is not unexpected since pronounced and enduring dysfunctions in terms of establishing and maintaining mature dependency relationships are not among the diagnostic criteria for any of the diagnoses recorded for participants who do not have BPD. In contrast, approximately seventy-one percent of the scores obtained for case sample group participants (non-BPD) exceeded 1.5 (see Figure 32, page 203). The median score of 2 that was recorded for this sample of self-harmers suggests that interpersonal relationships are a stable source of serious problems for them. Weinryb and Rossel (1991) propose that such a score is suggestive of an ability to establish dependent relationships but only with considerable separation anxiety.

Comparisons of KAPP dependency and separation scores between the case sample group (BPD) and the psychiatric control group (BPD) and between the case sample group (non-BPD) and the psychiatric control group (non-BPD) have shown that both samples of self-harmers appear to experience considerably raised anxiety when confronted with dynamics associated with significant relationships. It was noted that the degree of this disturbance was particularly acute among self-harmers diagnosed with BPD. Two understandings of how a self-harmer’s suggested difficulties with dependency and separation might provoke acts of DSH were noted in the literature review (Burnham and Giovacchini 1969) and are of direct relevance to this research. According to these authors, acts of DSH appear to arise in response to the self-punitive attitude of the self-harmer for having developed dependency needs that become frustrated. In addition, this aggressive attitude is also directed toward the source of this frustration. These authors suggest how the self-harmer “...was not only the victim of punishment but also the proud, superior, independent punisher.” (p.226).
PART 2: Limitations of the study

There are a number of methodological limitations to this study. These limitations relate to sample size, the accuracy of participants’ psychiatric diagnoses, the validity of retrospectively reported data obtained for the PBI, the validity and reliability of KAPP scores allocated to participants, the use of the I7 self-report measure for assessing impulsiveness and the nature of the clinical environment within which the data gathering exercise was conducted. These limitations are discussed in turn below.

1. Sample size

The psychiatric control group (BPD) comprised 17 participants. The small size of this sample, although producing adequate power with a large effect size, did not generate sufficient power when the effect size was more moderate. It is therefore possible that statistical analyses that included this sample may have had an increased risk of giving rise to type II errors – failing to reject the null hypothesis when it is false and the experimental hypothesis is true. As stated above (see page 284), the small size of this sample occurred as a result of the lack of availability of individuals with a diagnosis of BPD who had no history of DSH and who did not report experiences of gross trauma.

2. The accuracy of psychiatric diagnoses

The psychiatric diagnoses of almost all case sample group and control group participants were either substantiated by the use of a variety of documentary evidence including psychiatric discharge summaries, information obtained from psychiatric outpatients’ departments and the Electronic Patients’ Records System in the A&E department or were obtained from psychiatrists involved in the assessment of these
participants at the time of their attendance in the A&E department. However, third-party information was not available for 3 case sample group participants who presented to the A&E department with medical complaints only. Although the information that was recorded by the researcher during the interviews with these patients and that was used to allocate working psychiatric diagnoses to two of these participants was reviewed by senior members of the liaison psychiatry team, there is an increased risk that these diagnoses were not valid and that these participants were assigned to the wrong case sample group. Here, the risk that inappropriate psychiatric diagnoses may have been recorded for self-harming participants and control group participants could have been reduced by incorporating diagnostic tools such as the Diagnostic Interview for Borderlines (Gunderson et al. 1981) for example within the research design.

3. The PBI as retrospectively reported data

Although Parker and Lipscombe (1981) claimed that the PBI measured actual and not just perceived parental care and overprotection, it is important to recognise that the validity of retrospectively reported data, particularly with respect to that obtained from those participants with diagnoses of BPD, might be subject to distortion. Zweig-Frank and Paris (1991) who used the PBI with male and female borderline patients consider that the "...question of falsification must be considered in interpreting any study that uses a retrospective design. This is especially true for borderline patients, who tend to distort features of their interpersonal relationships." (p.650). That this risk of obtaining distorted data for the PBI was realised for participants in this study is not particularly evident. Were distorted data generated, then it presumably would have become most noticeable within the case sample group (BPD) and psychiatric
control group (BPD). However, the PBI scores obtained for these participants did not suggest uniformly negative experiences that might otherwise have indicated misrepresentative data. In addition, the normally distributed scores for maternal and paternal overprotection for these BPD participants did not materially differ from matched normative data (see page 285). There was, however, a marked tendency for case sample group participants (BPD) to generate recalled maternal care scores that were markedly lower than matched normative data although this tendency was also apparent for case sample group participants (non-BPD). As such, if PBI scores had been subject to distortion then this tendency would appear to have been limited to recalled maternal care and was not a function of personality disorder.

4. The validity of KAPP scores
As stated in Chapter 4 which detailed the research methods used in this study, the KAPP has demonstrated high validity in terms of behavioural characteristics measured, good test-retest reliability and high interrater reliability among interviewers without training in the use of the instrument. However, these tests were conducted with interviewers who had long clinical experience. The researcher’s background was entirely academic. As such, the extent to which the results obtained for the four components of the KAPP that were used in this study are valid and reliable is subject to qualification.

5. The 17 self-report measure
Results obtained for the self-report 17 Questionnaire may have been influenced by the perceived social desirability of certain responses by participants. Positive answers to such items as “do you need to use a lot of self-control to keep out of trouble?” or
“when people shout at you, do you shout back?” or “would you agree that almost everything enjoyable is illegal or immoral?” for example, would most likely be construed by respondents as indicating negative character traits. Despite the inclusion of printed instructions with this test that emphasised that “there are no right or wrong answers” it is possible that this instrument might have encouraged participants to provide answers that were socially desirable. However, since participants were made aware that the researcher was not involved in any decision-making process regarding their treatment and care and that all information provided was confidential and for the purposes of this study only it is perhaps unlikely that the influence of social desirability on participants’ answers was significant.

6. **The nature of the data-gathering environment**

All interviews with participants were conducted in clinical environments within University College Hospitals NHS Trust - the overwhelming majority of which took place in the A&E department. The advantages associated with obtaining data from within these environments have been variously referred to in earlier sections of this current research. However, certain features peculiar to the A&E department may have had a distorting effect on data obtained from participants.

Clearly, a busy A&E department in central London is at times a somewhat eventful and stressful environment within which emergency medical procedures are performed and patients often die. Not infrequently there are violent incidents involving patients and their relatives and/or friends that serve to heighten already manifest tensions. During the evening and early hours of the morning in particular, the increased frequency with which individuals under the influence of alcohol and/or drugs present in an ‘emotionally expressive’ state becomes apparent.
The three psychiatric cubicles within which the researcher conducted interviews with participants are in the centre of the major injuries unit within the A&E department. Although these cubicles afford a high degree of privacy to the extent that people who are outside of them are unable to look in or overhear what is said within them, events occurring outside of the cubicles can be upsetting for participants and add to the high levels of distress that many of them were already experiencing when they arrived at the hospital. In addition, since the department is always open and the researcher was on 24 hour call to interview patients, a number of case sample group participants and control group participants took part in the research late at night or in the early hours of the morning when they and the researcher were tired.

It is not possible to quantify whether or to what extent the above matters may have had an effect on the data generated by participants. It is possible that some participants might have had difficulty concentrating on items in the questionnaires and/or were unable to fully engage with the researcher during the interview and that the researcher failed to record all pertinent information. However, the risk that these issues had a bearing upon this research was minimised by the use of printed interview sheets by the researcher that gave details of all items to be covered and allowed for items to be crossed off as they were covered in turn. In addition, all returned self-report questionnaires (that is, the PBI and the I7) were checked by the researcher before the end of the interview to ensure that there were no missing items. Where missing items were apparent these were highlighted by the researcher and returned to participants for completion.
CHAPTER 7: CONCLUSIONS AND SUGGESTED DIRECTIONS FOR FUTURE RESEARCH

PART 1: Conclusions

Despite methodological limitations, this study has identified that for individuals who do not report experiences of gross trauma the combination of recalled high parental overprotection and selective care is able to significantly differentiate between self-harmers who are not diagnosed with BPD and matched control group participants. Although a substantial number of patients who were excluded from participating in this research did report certain experiences that could be construed as potentially traumatic, it has nevertheless been suggested that DSH ought not to be exclusively identified with such experiences.

Contrary to prevailing, published opinion no evidence was generated that would support the conceptualisation of DSH as an impulsive behaviour that occurs predominantly among females and those diagnosed with BPD. It was suggested that the lack of such evidence was likely to have arisen partly as a result of conducting this study among subjects who attended an A&E department as opposed to recruiting self-harmers from inpatient psychiatric facilities. Furthermore, data generated by this present research has enabled a potential, mediating role for alcohol use among self-harmers to become apparent and has also found evidence that suggests raised pathology in terms of alexithymia, tolerance of frustration and capacities to negotiate dependency and separation dynamics among individuals who cut and/or burn themselves independent of BPD diagnosis.

Should additional, methodologically improved research replicate these findings then it is likely that current interventions that have been informed by existing understandings...
of both the development and maintenance of DSH will require revision. Certain of the more salient aspects of this suggested revision are briefly considered below.

Within psychotherapeutic settings the validity of any tendency to presume the occurrence of gross trauma during childhood or adulthood among non-BPD self-harmers would need to be re-evaluated. Here, the recognition that cumulative trauma might be implicated in the development of DSH among such individuals would guide the direction of the psychotherapeutic encounter towards an examination and understanding of how caregiving styles marked by parental overprotection and selective care might be of aetiological significance for both DSH and certain suggested behavioural correlates of this form of self-harm such as dysregulation of depressive affect, deficient self-care functions and externalised self-soothing behaviours (for example, alcohol abuse). In addition, the recognition of the significance of caregiver overprotection and selective care for self-cutting would suggest that where the self-harming client is a child or adolescent living at home then the potential benefit of involving caregivers in the therapeutic setting should be considered.

The failure of this current research to detect significant differences for levels of impulsiveness between BPD and non-BPD self-harmers and matched controls strongly argues against considering DSH primarily as a markedly impulsive behaviour or reclassifying repetitive self-cutting as a separate DSM Axis I impulse disorder (Favazza 1996). The bearing that this finding might have on both the assessment of self-harmers' suitability for psychotherapy (in particular, those more intensive forms of psychodynamic intervention, namely, psychoanalytic psychotherapy and psychoanalysis) and the conduct of these forms of intervention are clear. With regard to the suitability of psychotherapy, Stone (1996) has referred to the existence of a
general consensus among many therapists that individuals presenting with highly impulsive acting out behaviours are poor candidates for intensive exploratory psychotherapy and are perhaps better served by more structured cognitive-behavioural techniques (Kavoussi and Coccaro 1993). However, since neither of the two measures that were used to measure impulsiveness (17 Impulsiveness and KAPP impulse control) in the current research were able to differentiate self-harmers from non self-harmers it would appear to be unwarranted to argue that DSH is symptomatic of raised impulsiveness and therefore grounds for not considering intensive psychotherapy as a potential preferred treatment option. Of course, this is not to suggest that heightened impulsiveness is not a key feature of BPD. As noted in the preceding sections of this research (see pages 175-176 and pages 295-296), both BPD self-harmers and BPD controls recorded scores that indicated substantially reduced capacities for impulse control. However, this dysfunction was manifest regardless of the presence of cutting behaviours among BPD participants.

Two further results generated by this current research reinforce this need for caution against any indiscriminate presumption that individuals who engage in DSH have reduced capacities to benefit from explorative psychotherapy. The first relates to participants’ ability to delay cutting themselves. It was noted above (see pages 177-178) that the majority of BPD and non-BPD self-harmers were able to avoid engaging in DSH once they had recognised the need to self-harm. Second, among the majority of self-harmers who reported that they experience ambivalence towards the immediate prospect of cutting themselves all bar one stated that they were able to postpone engaging in DSH. That most self-harmers experience and tolerate such ambivalence at least in relation to DSH implies that they may not function at elevated levels of polarised thinking that would otherwise represent a significant challenge to the
psychotherapeutic process. In addition, this potential relationship between ambivalence and DSH suggests that these individuals may be sufficiently able to delay the immediate satisfaction of urgent needs and to endure and work through uncomfortable affective experience without invariably resorting to action.

The finding that approximately 46% of case sample group participants abused or were dependent upon alcohol (see page 303) has identified a considerable obstacle for the successful outcome of treatment for these individuals. However, detailed analyses conducted within this current research indicate that relationships between DSH and the use of alcohol extend beyond diagnostic comorbidity, the simplistic co-existence of two purportedly impulsive behaviours or two means by which the experience of tension might be temporarily reduced. This suggests the need to incorporate a more sophisticated understanding of potential relationships between these two behaviours within successful treatment strategies. For example, it was noted that almost half of case sample group participants typically or always cut themselves whilst intoxicated with alcohol (see page 182) and that this tendency was most pronounced among those diagnosed with BPD. Subsequent analysis of this data revealed that the majority of these self-harmers who typically or always cut themselves whilst intoxicated with alcohol were not aware of the need to cut themselves until after they had become intoxicated (see page 305). This implies the need for service users’ use of alcohol and DSH to be addressed simultaneously during treatment.

These analyses also revealed that women were significantly less likely than men to engage in DSH when they had been drinking alcohol (see pages 304-305). This observation suggests that the success of treatment of those individuals who repeatedly cut themselves needs to be sensitive to the potential contributions of gender difference to DSH that extend beyond the now redundant perception of DSH as a predominantly
female disorder. Certainly for male self-harmers, treatment outcome is likely to be compromised unless treatment assists these individuals to recognise that alcohol use repeatedly precedes their self-cutting and to understand how their use of alcohol might directly contribute to their self-harming behaviour.

Although treatments that are made available to self-harmers are likely to be more successful when the harmful use of alcohol is also addressed, it is doubtful that this success will be enduring for those self-harmers whose disadvantaged social circumstances hinder their recovery from mental ill health. Whilst attempting to obtain matched control group participants, the very high levels of homelessness and unemployment (see pages 148-149) represented by case sample group participants were noted by the researcher to be disproportionately higher in comparison to those of all other mental health attendees at the A&E department during the 25 months of the data gathering exercise and this factor presented a significant challenge to attempts to obtain non self-harming subjects of equivalent accommodation and employment status.

It is outside of the scope of the objectives of this current research to investigate why the social circumstances of such a large proportion of people who repeatedly cut themselves should be so impoverished. Although certain features of the location of the A&E department of University College Hospital that were referred to earlier (see page 125) may have contributed to this observation, this does not account for the disproportionate levels of unemployment and homelessness among case sample group members. Diaz (2000) notes that 10% of homeless people attending the A&E department of a London hospital have mental health problems. This proportion compared with 3% of attenders who were of fixed abode. In addition, the author estimates that up to 50% of homeless individuals misuse alcohol. The widespread
prevalence of DSH among the homeless and in particular among young homeless people has been variously reported (for example, Stephens 2002; Tyler et al. 2003). This observed coexistence of higher levels of alcohol misuse and mental health problems among homeless individuals who engage in DSH presents health care professionals with a considerable challenge. The living conditions of this vulnerable group are likely to frustrate efforts made by mental health professionals to engage and sustain access to services. In addition, the reported failure of services to co-ordinate treatment for patients with dual diagnosis (Drake and Wallach 2000) is likely to be compounded both by these individuals' accommodation status and their unpopularity by virtue of their cutting behaviours among staff in A&E departments and in inpatient psychiatric units (Crowe 1997). It is difficult to see how interventions targeted at combating DSH among this sub-group of self-harmers with multiple interacting mental health problems and social disadvantage could be successful. However, should effective treatment strategies become available then it is likely that their effectiveness will result only from a holistic approach to treatment that incorporates multidisciplinary input from services committed to discharging their responsibilities to this very vulnerable population of self-harmers.
PART 2: Suggested directions for future research

The findings of this study have implications for the direction of future research into the development of DSH among individuals who do not report experiences of gross trauma. Three important points emerge.

First, the results of this study require replication in a larger sample design. One advantage of such a design is that those problems encountered in this study with respect to the size of the psychiatric control group (BPD) would be avoided. The recruitment of a significantly larger number of self-harmers and non self-harmers would also allow for the case sample group (non-BPD) and the psychiatric control group (non-BPD) to be replaced by discrete diagnostic subgroups that would allow for more detailed analyses to be performed and the potential influence of diagnostic variables to be isolated and examined.

Second, there are several reasons why it would be advantageous to arrange for self-harming participants who were originally recruited from an A&E department to be followed up in a different research environment. Retesting participants with the same research instruments would allow for any distorting effects that an A&E environment might have had on data collected from participants (see pages 323 and 324) to become apparent. In addition, more time could be allocated to collecting more detailed information for use in case histories. Finally, any changes in patterns of DSH and associated behaviours (for example, alcohol use) could be monitored and possible reasons for such changes investigated. However, it is likely that a follow-up study of participants who were originally recruited from an A&E department would prove to be problematic not least because of the relatively high proportion of homeless and transient populations that would most likely be involved.
Third, it is important for future research to investigate those factors that might contribute to the development of resilience among individuals who report high levels of recalled parental overprotection and selective care but who do not engage in DSH. Here, the effect of potentially beneficent social influences that are outside of the family environment (for example, school teachers, members of the extended family and close friends) and that may have functioned in some protective capacity for the child ought to be investigated.
REFERENCES


Appendix I: Case sample group participant information sheet
U.C.H. CASE SAMPLE GROUP - PARTICIPANT INFORMATION SHEET

TITLE: Deliberate Self Harm Subsequent to the Experience of Cumulative Trauma

This study is part of a larger investigation into several issues that might be involved in the activity which has most often been referred to as ‘deliberate self-harm’ or ‘cutting’ or ‘burning’. The purpose of this investigation is to enable a greater understanding of this activity that would help to improve those services currently available within NHS provisions.

To do this, interviews need to be carried out and questionnaires completed with people who have self-harmed. These interviews and questionnaires include asking questions about areas of an individual’s present and past life and about some of the issues that might be involved during incidences of self-harm.

We would like you to take part in this study. The information that you give in your answers to the questionnaires and during the interview are for the purpose of this study only and will be treated with strict confidentiality.

The average expected length of time required to complete the questionnaires and the interview is approximately one hour on one occasion only.

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. Your decision whether to take part or not will not affect your care and management in any way.

You can also take breaks during the interview whenever you want.

All proposals for research using human subjects are reviewed by an ethics committee before they can proceed. This proposal was reviewed by the Joint UCL/UCLH Committees on the Ethics of Human Research.

If you have any questions or wish to discuss any aspect of the interview and/or questionnaires, you can telephone or write to:

Mark Marchetto
Investigator
Royal Free and University College Medical School
University College London
Department of Psychiatry and Behavioural Sciences
Research Unit, Room G08
Wolfson Building
48 Riding House Street
London W1N 8AA
Tel: 020 7679 9591 Mobile: 07949 743569

Professor Roland Littlewood
Applicant and Supervisor
Royal Free and University College Medical School
University College London
Department of Psychiatry and Behavioural Sciences
Wolfson Building
48 Riding House Street
London W1N 8AA
Tel: 020 7679 9479
Appendix II: Case sample group participant consent forms
PARTICIPANT CONSENT FORM

(The participant should complete the whole of this sheet herself/himself.)

Please circle as necessary.

Have you read the Information Sheet about this study? YES / NO

Have you had an opportunity to ask questions and to discuss this study? YES / NO

Have you received satisfactory answers to all your questions? YES / NO

Have you received enough information about this study? YES / NO

Who have you spoken to? ........................................................................................................

Do you understand that sections of your medical records may be looked at by the investigator where it is relevant to your taking part in this research? YES / NO

Do you give permission to the investigator to have access to your records? YES / NO

Do you understand that you are free to withdraw from the study:

- at any time
- without having to give a reason for withdrawing
- and without affecting your future medical care YES / NO

Do you agree to take part in this study? YES / NO

Please Turn Over

Copies: 1 for Participant 1 for Investigator 1 to be kept with Hospital Notes

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To be completed by U.C.H. A & E Group Participant

Name (In Capital Letters): ____________________________________________

Signature: __________________________________________________________

Date: __________________________________________________________________

To be completed by Parent/Guardian (where appropriate)

Name (In Capital Letters): ____________________________________________

Relationship to Participant: ____________________________________________

Signature: __________________________________________________________

Date: __________________________________________________________________

To be completed by Investigator

Name (In Capital Letters): MARK MARCHETTO

Signature: __________________________________________________________
Appendix III: Psychiatric control group participant information sheet
U.C.H. CONTROL GROUP - PARTICIPANT INFORMATION SHEET

TITLE: Deliberate Self Harm Subsequent to the Experience of Cumulative Trauma

- This study is part of a larger investigation into several issues that might be involved in the activity which has most often been referred to as 'deliberate self-harm' or 'cutting' or 'burning'. The purpose of this investigation is to enable a greater understanding of this activity that would help to improve those services currently available within NHS provisions.

- To do this, interviews need to be carried out and questionnaires completed with people who have self-harmed.

- In order to evaluate the information obtained from people who self-harm, we need to compare it to information obtained from people who have not engaged in self-harm and who meet with the Liaison Psychiatry team at this hospital. This latter group of patients are referred to as a Control Group. We would like you to take part in this study as a member of the Control Group. The information that you give in your answers to the questionnaires and during the interview are for the purpose of this study only and will be treated with strict confidentiality.

- As recompense for your time taken to complete the interview and questionnaire you will be paid £10.

- The average expected length of time required to complete the questionnaires and the interview is under one hour.

- 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. Your decision whether to take part or not will not affect your care and management in any way.

- You can also take breaks during the interview whenever you want.

- All proposals for research using human subjects are reviewed by an ethics committee before they can proceed. This proposal was reviewed by the Joint UCL/UCLH Committees on the Ethics of Human Research.

If you have any questions or wish to discuss any aspect of the interview or questionnaires, you can telephone or write to:

Mark Marchetto
Investigator
Royal Free & University College Medical School
University College London
Dept of Psychiatry & Behavioural Sciences
Research Unit, Room G08
Wolfson Building
48 Riding House Street
London WIN 8AA
Tel: 02076799591 Mobile: 07947743569

Professor Roland Littlewood
Applicant and Supervisor
Royal Free & University College Medical School
University College London
Dept of Psychiatry & Behavioural Sciences
Wolfson Building
48 Riding House Street
London WIN 8AA
Tel: 02076799479
Appendix IV: Psychiatric control group participant consent forms and payment receipt form
U.C.H. CONTROL GROUP
PARTICIPANT CONSENT FORM

(The participant should complete the whole of this sheet herself/himself.)

Please circle as necessary.

Have you read and understood the Participant Information Sheet?  YES / NO

Have you had an opportunity to ask questions and to discuss this study?  YES / NO

Have you received satisfactory answers to all your questions?  YES / NO

Have you received enough information about this study?  YES / NO

Who have you spoken to?  ...................................................................................

Do you understand that sections of your medical records may be looked at by the investigator where it is relevant to your taking part in this research?  YES / NO

Do you give permission to the investigator to have access to your records?  YES / NO

Do you understand that you are free to withdraw from the study:

• at any time
• without having to give a reason for withdrawing
• and without affecting your future medical care  YES / NO

Do you agree to take part in this study?  YES / NO
U.C.H. CONTROL GROUP
PARTICIPANT CONSENT FORM

To be completed by U.C.H. A & E Control Group Participant

Name (In Capital Letters): __________________________________________

Signature: ________________________________________________________

Date: _____________________________________________________________

To be completed by Parent/Guardian (where appropriate)

Name (In Capital Letters): __________________________________________

Relationship to Participant: _________________________________________

Signature: ________________________________________________________

Date: _____________________________________________________________

To be completed by Investigator

Name (In Capital Letters): MARK MARCHETTO

Signature: ________________________________________________________

Copies: 1 for Participant  1 for Investigator  1 to be kept with Hospital Notes
U.C.H. CONTROL GROUP
PARTICIPANT PAYMENT RECEIPT

Participant’s Reference No: AEPCG________

To be completed by U.C.H. A & E Control Group Participant

I have received the sum of £10.00 from Mark Marchetto for participating in the research: “Deliberate Self Harm Subsequent to the Experience of Cumulative Trauma”

Signature:______________________________

Date : ________________________________

Copies: 1 for Participant 1 for Investigator 1 to be kept with Hospital Notes
Appendix V: Case sample group participant semi-structured interview and Karolinska Psychodynamic Profile.
Participant Details
Name: Date:
Sex: Age: Ethnic Status: Participant’s Ref. no:

U.C.H. Case Sample Group Semi Structured Interview Proforma Checklist

Part 1: Modified ‘Karolinska Psychodynamic Profile.’

Dependency and Separation Subscale
Assessment of the individual’s capacities to establish and maintain mature dependency relations and to tolerate and work through losses.

1. Can establish mature dependency relationships and can grieve and work through loss.
   Is able to become emotionally dependent on things/other people and allow these to become significant.
   Can come to terms with loss.

2. Can establish dependency relationships, but often with pervasive fear of separation. Losses sponsor prolonged periods of mourning.
   Chronic separation anxiety.
   Active abandonment.
   Tries to escape grieving by plunging into new activities.

   Relationship attains an all-embracing significance for the individual’s identity/sense of self.
   Denial of loss/denigration of relationship subsequent to loss persists over an extended period of time.
   Denial of the need for intimacy/dependency.
Frustration Tolerance Subscale
Assessment of the individual’s capacities to endure and come to terms with experiences of frustration and ambiguity.

1. Experiences of frustration and ambiguity are tolerated without lasting regressive reactions.

Brief reactions of frustration and disappointment to not achieving goals that are considered essential.
Can decide to give up an unrealistic goal.
Can tolerate ambiguous situations.

2. Experiences of frustration and ambiguity are not worked through in an adaptive manner, but through lasting regressive reactions.

Shuns hopes and ambitions so as to avoid frustration and disappointment.
High level of anxiety in relation to potential disappointments.
Ambiguity sponsors experience of ambivalence.
Need to over-compartmentalise stimuli, affects, and relationships.
Intolerance of fluid boundaries.

3. Experiences of frustration and ambiguity engender strong emotional reactions of anxiety/depression/aggression.

Anxious/aggressive reactions subsequent to frustration and set-backs.
Such reactions may result in inwardly- or outwardly-directed aggressive thoughts/acts.
Somatisation of anxiety may promote dissociative experiences.
CONFIDENTIAL

Impulse Control Subscale
Assessment of the individual’s capacities to contain urgent affects, wishes and needs, and the way these are expressed in action.

1. Can handle and express urgent affects and needs in an adaptive manner and can balance between being able to assert needs and wishes and refraining from doing so when appropriate.

Is able to experience strong emotions without acting on them.
Is able to delay/inhibit action tendencies when the situation demands it.

2. Urgent affects and needs are not worked through in an adaptive manner. Non-adaptive balance between their realisation on the one hand and the possibilities and limitations of reality on the other.

Exaggerated control of and inhibition expressing emotions and impulses.
Emotions and impulses, when expressed, are displaced to the wrong person/situation and acted out.
When intoxicated or in a regressed state due to a crisis, emotions/impulses are acted out.

3. Chronic difficulty in modulating the intensity of emotions and impulses and their expression.

Generalised impulsive behaviour in speech and action.
Feel that impulses and emotions ‘must’ be acted upon immediately without considering the consequences.
Difficulty with stopping and reflecting before acting out impulses/desires.
Though such behaviour is later regretted this does not stop it from happening again.
CONFIDENTIAL

Alexithymic Traits Subscale
Assessment of the individual’s capacities to identify, distinguish between, and express affects both in oneself and others.

1. Can experience, understand, and convey diverse feelings in a way that makes them understandable to others and easy to empathise with (through gestures, facial expressions etc. even if language is not especially rich).

Is able to differentiate emotions and ambiguous states and articulate them.

2. Can crudely experience and describe affects and affect states, but in a stereotyped manner.

Can be persuaded to express current feelings, but has some difficulty conveying details/subtleties of emotional experience.
Can convey emotions so that other people are able to empathise to some extent.

2. Considerable difficulties in experiencing, differentiating, and articulating emotional states.

Experiences/expresses global feelings (eg. everything is bad) as opposed to distinguishing between emotions such as anxiety, depression, and anger.
Tendency to somatise.
Lifeless emotional descriptions.
Feelings primarily expressed non-verbally through body language or acting out
CONFIDENTIAL

Part 2: Ambivalence and the ability to delay DSH

1. When you become aware of the need to cut or burn yourself do you immediately harm yourself or is there a period of time during which you are able to delay or put off harming yourself?

2. During any such period of time, do you feel ambivalent about the prospect of cutting or burning yourself later on?

Part 3: Use of Alcohol / Drugs

Ascertain patterns of use of alcohol and/or drugs that might co-exist with acting out tendencies.

1. On average, how many units of alcohol do you consume in a week?

2. Do you use or have you used any drug other than alcohol?

3. Have you ever drunk alcohol or taken any other drug before cutting/burning yourself?
   
   Never
   Rarely
   Typically
   Always

4. Have you ever cut/burned yourself without having had a drink?

5. When you begin drinking, are you aware of any need to cut/burn yourself?
CONFIDENTIAL

Part 4: Screening for Singularly, Potentially Traumatic Experiences

Ascertain/screen for experience of catastrophic trauma.

1. What do you think may be some of the reasons that people repeatedly self-harm?

2. Could you identify any particular experiences or events in your life - things maybe that have happened to you - which may be related to your self-harm?

3. Although not everybody who repeatedly self-harms has been abused in childhood, there may be a link between childhood physical and sexual abuse and repeated self-harm. What do you think? Have there been any experiences in your life that you found traumatic? You do not have to tell me anything that you do not feel OK talking about.
Appendix VI: Psychiatric control group participant semi-structured interview and Karolinska Psychodynamic Profile.
Participant Details
Name: Date:
Sex: Age: Ethnic Status: Participant’s Ref. no:

U.C.H. Control Group Semi Structured Interview Proforma Checklist

Part 1: Modified ‘Karolinska Psychodynamic Profile.’

Dependency and Separation Subscale
Assessment of the individual’s capacities to establish and maintain mature dependency relations and to tolerate and work through losses.

1. Can establish mature dependency relationships and can grieve and work through loss.

   Is able to become emotionally dependent on things/other people and allow these to become significant.
   Can come to terms with loss.

2. Can establish dependency relationships, but often with pervasive fear of separation. Losses sponsor prolonged periods of mourning.

   Chronic separation anxiety.
   Active abandonment.
   Tries to escape grieving by plunging into new activities.


   Relationship attains an all-embracing significance for the individual’s identity/sense of self.
   Denial of loss/denigration of relationship subsequent to loss persists over an extended period of time.
   Denial of the need for intimacy/dependency.
**CONFIDENTIAL**

**Frustration Tolerance Subscale**
Assessment of the individual’s capacities to endure and come to terms with experiences of frustration and ambiguity.

1. Experiences of frustration and ambiguity are tolerated without lasting regressive reactions.

Brief reactions of frustration and disappointment to not achieving goals that are considered essential.
Can decide to give up an unrealistic goal.
Can tolerate ambiguous situations.

2. Experiences of frustration and ambiguity are not worked through in an adaptive manner, but through lasting regressive reactions.

Shuns hopes and ambitions so as to avoid frustration and disappointment.
High level of anxiety in relation to potential disappointments.
Ambiguity sponsors experience of ambivalence.
Need to over-compartmentalise stimuli, affects, and relationships.
Intolerance of fluid boundaries.

3. Experiences of frustration and ambiguity engender strong emotional reactions of anxiety/depression/aggression.

Anxious/aggressive reactions subsequent to frustration and set-backs.
Such reactions may result in inwardly- or outwardly-directed aggressive thoughts/acts.
Somatisation of anxiety may promote dissociative experiences.
Confidential

Impulse Control Subscale
Assessment of the individual’s capacities to contain urgent affects, wishes and needs, and the way these are expressed in action.

1. Can handle and express urgent affects and needs in an adaptive manner and can balance between being able to assert needs and wishes and refraining from doing so when appropriate.

- Is able to experience strong emotions without acting on them.
- Is able to delay/inhibit action tendencies when the situation demands it.

2. Urgent affects and needs are not worked through in an adaptive manner. Non-adaptive balance between their realisation on the one hand and the possibilities and limitations of reality on the other.

- Exaggerated control of and inhibition expressing emotions and impulses.
- Emotions and impulses, when expressed, are displaced to the wrong person/situation and acted out.
- When intoxicated or in a regressed state due to a crisis, emotions/impulses are acted out.

3. Chronic difficulty in modulating the intensity of emotions and impulses and their expression.

- Generalised impulsive behaviour in speech and action.
- Feel that impulses and emotions ‘must’ be acted upon immediately without considering the consequences.
- Difficulty with stopping and reflecting before acting out impulses/desires.
- Though such behaviour is later regretted this does not stop it from happening again.
CONFIDENTIAL

**Alexithymic Traits Subscale**
Assessment of the individual’s capacities to identify, distinguish between, and express affects both in oneself and others.

1. Can experience, understand, and convey diverse feelings in a way that makes them understandable to others and easy to empathise with (through gestures, facial expressions etc. even if language is not especially rich).

   Is able to differentiate emotions and ambiguous states and articulate them.

2. Can crudely experience and describe affects and affect states, but in a stereotyped manner.

   Can be persuaded to express current feelings, but has some difficulty conveying details/subtleties of emotional experience.
   Can convey emotions so that other people are able to empathise to some extent.

2. Considerable difficulties in experiencing, differentiating, and articulating emotional states.

   Experiences/expresses global feelings (e.g. everything is bad) as opposed to distinguishing between emotions such as anxiety, depression, and anger.
   Tendency to somatise.
   Lifeless emotional descriptions.
   Feelings primarily expressed non-verbally through body language or acting out
CONFIDENTIAL

Part 2: Use of Alcohol / Drugs

1. On average, how many units of alcohol do you consume in a week?

2. Do you use or have you used any drug other than alcohol?

Part 3: Screening for Singularly, Potentially Traumatic Experiences

Ascertain/screen for experience of catastrophic trauma.

1. What do you think may be some of the reasons that people repeatedly self-harm?

2. Although not everybody who repeatedly self-harms has been abused in childhood, there does appear to be a link between childhood physical and sexual abuse and repeated self-harm. What do you think? Have there been any experiences in your life that you found traumatic? You do not have to tell me anything that you do not feel OK talking about.
Appendix VII: Parental Bonding Instrument
**The Parental Bonding Instrument.**

**Instructions:** This questionnaire lists various attitudes and behaviours of parents. As you remember your Mother in your first 16 years, would you place a tick in the most appropriate brackets next to each question.

<table>
<thead>
<tr>
<th>Question</th>
<th>Very like</th>
<th>Moderately like</th>
<th>Moderately unlike</th>
<th>Very unlike</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Spoke to me in a warm and friendly voice</td>
<td>( )</td>
<td>( )</td>
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</tr>
<tr>
<td>2. Did not help me as much as I needed</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>3. Let me do things I liked doing</td>
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<tr>
<td>4. Seemed emotionally cold to me</td>
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<tr>
<td>5. Appeared to understand my problems and worries</td>
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<td>6. Was affectionate to me</td>
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<td>7. Liked me to make my own decisions</td>
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<td>8. Did not want me to grow up</td>
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<tr>
<td>9. Tried to control everything I did</td>
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<td>10. Invaded my privacy</td>
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<td>12. Frequently smiled at me</td>
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<td>14. Did not seem to understand what I needed or wanted</td>
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<tr>
<td>15. Let me decide things for myself</td>
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<tr>
<td>16. Made me feel I wasn’t wanted</td>
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<td>17. Could make me feel better when I was upset</td>
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<td>18. Did not talk very much with me</td>
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<td>19. Tried to make me dependent on her</td>
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<td>22. Let me go out as often as I pleased</td>
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<td>23. Was overprotective of me</td>
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**Instructions:** This questionnaire lists various attitudes and behaviours of parents. As you remember your Father in your first 16 years, would you place a tick in the most appropriate brackets next to each question.

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<td>25. Let me dressed in any way I pleased</td>
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</table>
Appendix VIII: I7 Impulsiveness Questionnaire
CONFIDENTIAL

Participant’s ref. No:

The I7 Impulsiveness Questionnaire.

Instructions: Please answer each question by putting a circle around the ‘YES’ or the ‘NO’ following the questions. There are no right or wrong answers, and no trick questions. Work quickly and do not think too long about the exact meaning of the question.

1. Do you often buy things on impulse? YES NO
2. Do you generally do and say things without stopping to think? YES NO
3. Do you often get into a jam because you do things without thinking? YES NO
4. Are you an impulsive person? YES NO
5. Do you usually think carefully before doing anything? YES NO
6. Do you often do things on the spur of the moment? YES NO
7. Do you mostly speak before thinking things out? YES NO
8. Do you often get involved in things you later wish you could get out of? YES NO
9. Do you get so ‘carried away’ by new and exciting ideas, that you do not think of possible snags? YES NO
10. Do you need to use a lot of self-control to keep out of trouble? YES NO
11. Would you agree that almost everything enjoyable is illegal or immoral? YES NO
12. Are you often surprised at peoples’ reactions to what you do or say? YES NO
13. Do you think an evening out is more successful if it is unplanned or arranged at the last moment? YES NO
14. Do you usually work quickly, without bothering to check? YES NO
15. Do you often change your interests? YES NO
16. Before making up your mind, do you consider all the advantages and disadvantages? YES NO
17. Do you prefer to ‘sleep on it’ before making decisions? YES NO
18. When people shout at you, do you shout back? YES NO
19. Do you usually make up your mind quickly? YES NO
Appendix IX: Analyses of parametric assumptions – Levene’s test for homogeneity of variance and Kolmogorov-Smirnov test for normal distribution

Appendix IX(a): Homogeneity of Variance (Levene’s Test) between Case Sample Group (BPD and non-BPD) and Psychiatric Control Group (BPD and non-BPD) for PBI, I7. Impulsivity, KAPP, and Units of Alcohol Consumed/Week

<table>
<thead>
<tr>
<th>Variable</th>
<th>F</th>
<th>p-value</th>
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<tbody>
<tr>
<td>PBI Overprotection (mother)</td>
<td>0.650</td>
<td>0.422</td>
</tr>
<tr>
<td>PBI Overprotection (father)</td>
<td>1.470</td>
<td>0.227</td>
</tr>
<tr>
<td>PBI Care (mother)</td>
<td>2.900</td>
<td>0.091</td>
</tr>
<tr>
<td>PBI Care (father)</td>
<td>0.241</td>
<td>0.624</td>
</tr>
<tr>
<td>I7. Impulsiveness</td>
<td>1.163</td>
<td>0.283</td>
</tr>
<tr>
<td>KAPP Alexithymia</td>
<td>2.856</td>
<td>0.093</td>
</tr>
<tr>
<td>KAPP Impulse control</td>
<td>0.60</td>
<td>0.807</td>
</tr>
<tr>
<td>KAPP Dependency and separation</td>
<td>0.007</td>
<td>0.933</td>
</tr>
<tr>
<td>KAPP Frustration tolerance</td>
<td>11.587</td>
<td>0.001</td>
</tr>
<tr>
<td>Units of alcohol consumed/week</td>
<td>9.786</td>
<td>0.002</td>
</tr>
</tbody>
</table>

Figures in bold type denote statistically significant p-values
Appendix IX(b): Homogeneity of Variance (Levene's Test) between Case Sample Group (BPD) and Psychiatric Control Group (BPD) for PBI, I7. Impulsivity, KAPP, and Units of Alcohol Consumed/Week

<table>
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<th>Variable</th>
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<tr>
<td>PBI Overprotection (mother)</td>
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<td>0.709</td>
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<td>PBI Overprotection (father)</td>
<td>1.809</td>
<td>0.185</td>
</tr>
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<td>PBI Care (mother)</td>
<td>0.401</td>
<td>0.530</td>
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<td>PBI Care (father)</td>
<td>3.442</td>
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<td>I7. Impulsiveness</td>
<td>5.666</td>
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<tr>
<td>KAPP Alexithymia</td>
<td>1.561</td>
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<td>KAPP Impulse control</td>
<td>6.797</td>
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<td>KAPP Dependency and separation</td>
<td>0.557</td>
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<td>KAPP Frustration tolerance</td>
<td>2.990</td>
<td>0.090</td>
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<tr>
<td>Units of alcohol consumed/week</td>
<td>15.857</td>
<td>0.001</td>
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</table>

Figures in bold type denote statistically significant p-values
Appendix IX(c): Homogeneity of Variance (Levene's Test) between Case Sample Group (non-BPD) and Psychiatric Control Group (non-BPD) for PBI, Impulsivity, KAPP, and Units of Alcohol Consumed/Week

<table>
<thead>
<tr>
<th>Variable</th>
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<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBI Overprotection (mother)</td>
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<td>PBI Overprotection (father)</td>
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<tr>
<td>PBI Care (mother)</td>
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<tr>
<td>PBI Care (father)</td>
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<tr>
<td>I7. Impulsiveness</td>
<td>0.115</td>
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<tr>
<td>KAPP Alexithymia</td>
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<tr>
<td>KAPP Impulse control</td>
<td>1.045</td>
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<tr>
<td>KAPP Dependency and separation</td>
<td>0.247</td>
<td>0.620</td>
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<tr>
<td>KAPP Frustration tolerance</td>
<td>0.718</td>
<td>0.399</td>
</tr>
<tr>
<td>Units of alcohol consumed/week</td>
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<td>0.782</td>
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</table>

Figures in bold type denote statistically significant p-values
Appendix IX(d): Homogeneity of Variance (Levene’s Test) between Case Sample Group (BPD) and Case Sample Group (non-BPD) for PBI, 17. Impulsivity, KAPP, and Units of Alcohol Consumed/Week

<table>
<thead>
<tr>
<th>Variable</th>
<th>F</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBI Overprotection (mother)</td>
<td>0.819</td>
<td>0.368</td>
</tr>
<tr>
<td>PBI Overprotection (father)</td>
<td>0.268</td>
<td>0.606</td>
</tr>
<tr>
<td>PBI Care (mother)</td>
<td>1.826</td>
<td>0.180</td>
</tr>
<tr>
<td>PBI Care (father)</td>
<td>9.173</td>
<td><strong>0.003</strong></td>
</tr>
<tr>
<td>17. Impulsiveness</td>
<td>8.562</td>
<td><strong>0.004</strong></td>
</tr>
<tr>
<td>KAPP Alexithymia</td>
<td>0.041</td>
<td>0.840</td>
</tr>
<tr>
<td>KAPP Impulse control</td>
<td>2.886</td>
<td>0.093</td>
</tr>
<tr>
<td>KAPP Dependency and separation</td>
<td>0.018</td>
<td>0.893</td>
</tr>
<tr>
<td>KAPP Frustration tolerance</td>
<td>6.482</td>
<td><strong>0.013</strong></td>
</tr>
<tr>
<td>Units of alcohol consumed/week</td>
<td>9.482</td>
<td><strong>0.003</strong></td>
</tr>
<tr>
<td>DSH whilst intoxicated</td>
<td>0.520</td>
<td>0.473</td>
</tr>
</tbody>
</table>

Figures in bold type denote statistically significant p-values
Appendix IX(e): Kolmogorov-Smirnov Test for Normal Distribution for the Case Sample Group (BPD and non-BPD).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Statistic</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBI Overprotection (mother)</td>
<td>0.083</td>
<td>77</td>
<td>0.200*</td>
</tr>
<tr>
<td>PBI Overprotection (father)</td>
<td>0.109</td>
<td>77</td>
<td>0.024</td>
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<tr>
<td>PBI Care (mother)</td>
<td>0.097</td>
<td>77</td>
<td>0.067</td>
</tr>
<tr>
<td>PBI Care (father)</td>
<td>0.070</td>
<td>77</td>
<td>0.200*</td>
</tr>
<tr>
<td>I7. Impulsiveness</td>
<td>0.123</td>
<td>77</td>
<td>0.006</td>
</tr>
<tr>
<td>KAPP Alexithymia</td>
<td>0.183</td>
<td>77</td>
<td>0.001</td>
</tr>
<tr>
<td>KAPP Impulse control</td>
<td>0.201</td>
<td>77</td>
<td>0.001</td>
</tr>
<tr>
<td>KAPP Dependency and separation</td>
<td>0.196</td>
<td>77</td>
<td>0.001</td>
</tr>
<tr>
<td>KAPP Frustration tolerance</td>
<td>0.240</td>
<td>77</td>
<td>0.001</td>
</tr>
<tr>
<td>Units of alcohol consumed/week</td>
<td>0.207</td>
<td>77</td>
<td>0.001</td>
</tr>
<tr>
<td>DSH whilst intoxicated</td>
<td>0.246</td>
<td>81</td>
<td>0.001</td>
</tr>
</tbody>
</table>

* This is the lower bound of the true significance

Figures in bold type denote statistically significant p-values.
Appendix IX(f): Kolmogorov-Smirnov Test for Normal Distribution for the Psychiatric Control Group (BPD and DSH).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Statistic</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBI Overprotection (mother)</td>
<td>0.135</td>
<td>61</td>
<td>0.008</td>
</tr>
<tr>
<td>PBI Overprotection (father)</td>
<td>0.101</td>
<td>61</td>
<td>0.198</td>
</tr>
<tr>
<td>PBI Care (mother)</td>
<td>0.084</td>
<td>61</td>
<td>0.200*</td>
</tr>
<tr>
<td>PBI Care (father)</td>
<td>0.107</td>
<td>61</td>
<td>0.080</td>
</tr>
<tr>
<td>I7. Impulsiveness</td>
<td>0.103</td>
<td>61</td>
<td>0.177</td>
</tr>
<tr>
<td>KAPP Alexithymia</td>
<td>0.245</td>
<td>61</td>
<td>0.001</td>
</tr>
<tr>
<td>KAPP Impulse control</td>
<td>0.167</td>
<td>61</td>
<td>0.001</td>
</tr>
<tr>
<td>KAPP Dependency and separation</td>
<td>0.235</td>
<td>61</td>
<td>0.001</td>
</tr>
<tr>
<td>KAPP Frustration tolerance</td>
<td>0.179</td>
<td>61</td>
<td>0.001</td>
</tr>
<tr>
<td>Units of alcohol consumed/week</td>
<td>0.223</td>
<td>61</td>
<td>0.001</td>
</tr>
</tbody>
</table>

* This is the lower bound of the true significance

Figures in bold type denote statistically significant p-values
Appendix IX(g): Kolmogorov-Smirnov Test for Normal Distribution for the Case Sample Group (BPD).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Statistic</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBI Overprotection (mother)</td>
<td>0.099</td>
<td>35</td>
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</tr>
<tr>
<td>PBI Overprotection (father)</td>
<td>0.101</td>
<td>35</td>
<td>0.200*</td>
</tr>
<tr>
<td>PBI Care (mother)</td>
<td>0.126</td>
<td>35</td>
<td>0.172</td>
</tr>
<tr>
<td>PBI Care (father)</td>
<td>0.145</td>
<td>35</td>
<td>0.060</td>
</tr>
<tr>
<td>I7. Impulsiveness</td>
<td>0.165</td>
<td>35</td>
<td>0.016</td>
</tr>
<tr>
<td>KAPP Alexithymia</td>
<td>0.192</td>
<td>35</td>
<td>0.002</td>
</tr>
<tr>
<td>KAPP Impulse control</td>
<td>0.203</td>
<td>35</td>
<td>0.001</td>
</tr>
<tr>
<td>KAPP Dependency and separation</td>
<td>0.220</td>
<td>35</td>
<td>0.001</td>
</tr>
<tr>
<td>KAPP Frustration tolerance</td>
<td>0.266</td>
<td>35</td>
<td>0.001</td>
</tr>
<tr>
<td>Units of alcohol consumed/week</td>
<td>0.161</td>
<td>35</td>
<td>0.022</td>
</tr>
<tr>
<td>DSH whilst intoxicated</td>
<td>0.245</td>
<td>36</td>
<td>0.001</td>
</tr>
</tbody>
</table>

* This is the lower bound of the true significance

Figures in bold type denote statistically significant p-values
Appendix IX(h): Kolmogorov-Smirnov Test for Normal Distribution for the Case Sample Group (non-BPD).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Statistic</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBI Overprotection (mother)</td>
<td>0.132</td>
<td>42</td>
<td>0.063</td>
</tr>
<tr>
<td>PBI Overprotection (father)</td>
<td>0.139</td>
<td>42</td>
<td><strong>0.039</strong></td>
</tr>
<tr>
<td>PBI Care (mother)</td>
<td>0.103</td>
<td>42</td>
<td>0.200*</td>
</tr>
<tr>
<td>PBI Care (father)</td>
<td>0.119</td>
<td>42</td>
<td>0.144</td>
</tr>
<tr>
<td>I7. Impulsiveness</td>
<td>0.112</td>
<td>42</td>
<td>0.200*</td>
</tr>
<tr>
<td>KAPP Alexithymia</td>
<td>0.174</td>
<td>42</td>
<td><strong>0.003</strong></td>
</tr>
<tr>
<td>KAPP Impulse control</td>
<td>0.202</td>
<td>42</td>
<td><strong>0.001</strong></td>
</tr>
<tr>
<td>KAPP Dependency and separation</td>
<td>0.242</td>
<td>42</td>
<td><strong>0.001</strong></td>
</tr>
<tr>
<td>KAPP Frustration tolerance</td>
<td>0.215</td>
<td>42</td>
<td><strong>0.001</strong></td>
</tr>
<tr>
<td>Units of alcohol consumed/week</td>
<td>0.242</td>
<td>42</td>
<td><strong>0.001</strong></td>
</tr>
<tr>
<td>DSH whilst intoxicated</td>
<td>0.290</td>
<td>45</td>
<td><strong>0.001</strong></td>
</tr>
</tbody>
</table>

* This is the lower bound of the true significance

Figures in bold type denote statistically significant p-values
Appendix IX(i): Kolmogorov-Smirnov Test for Normal Distribution for the Psychiatric Control Group (BPD).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Statistic</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBI Overprotection (mother)</td>
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<td>17</td>
<td>0.123</td>
</tr>
<tr>
<td>PBI Overprotection (father)</td>
<td>0.125</td>
<td>17</td>
<td>0.200*</td>
</tr>
<tr>
<td>PBI Care (mother)</td>
<td>0.139</td>
<td>17</td>
<td>0.200*</td>
</tr>
<tr>
<td>PBI Care (father)</td>
<td>0.177</td>
<td>17</td>
<td>0.162</td>
</tr>
<tr>
<td>I7. Impulsiveness</td>
<td>0.142</td>
<td>17</td>
<td>0.200*</td>
</tr>
<tr>
<td>KAPP Alexithymia</td>
<td>0.309</td>
<td>17</td>
<td>0.001</td>
</tr>
<tr>
<td>KAPP Impulse control</td>
<td>0.257</td>
<td>17</td>
<td>0.004</td>
</tr>
<tr>
<td>KAPP Dependency and separation</td>
<td>0.288</td>
<td>17</td>
<td>0.001</td>
</tr>
<tr>
<td>KAPP Frustration tolerance</td>
<td>0.203</td>
<td>17</td>
<td>0.060</td>
</tr>
<tr>
<td>Units of alcohol consumed/week</td>
<td>0.190</td>
<td>17</td>
<td>0.104</td>
</tr>
</tbody>
</table>

* This is the lower bound of the true significance

Figures in bold type denote statistically significant p-values
Appendix IX(j): Kolmogorov-Smirnov Test for Normal Distribution for the Psychiatric Control Group (non-BPD).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Statistic</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBI Overprotection (mother)</td>
<td>0.120</td>
<td>44</td>
<td>0.115</td>
</tr>
<tr>
<td>PBI Overprotection (father)</td>
<td>0.140</td>
<td>44</td>
<td><strong>0.030</strong></td>
</tr>
<tr>
<td>PBI Care (mother)</td>
<td>0.104</td>
<td>44</td>
<td>0.200*</td>
</tr>
<tr>
<td>PBI Care (father)</td>
<td>0.118</td>
<td>44</td>
<td>0.137</td>
</tr>
<tr>
<td>I7. Impulsiveness</td>
<td>0.100</td>
<td>44</td>
<td>0.200*</td>
</tr>
<tr>
<td>KAPP Alexithymia</td>
<td>0.223</td>
<td>44</td>
<td><strong>0.001</strong></td>
</tr>
<tr>
<td>KAPP Impulse control</td>
<td>0.203</td>
<td>44</td>
<td><strong>0.001</strong></td>
</tr>
<tr>
<td>KAPP Dependency and separation</td>
<td>0.241</td>
<td>44</td>
<td><strong>0.001</strong></td>
</tr>
<tr>
<td>KAPP Frustration tolerance</td>
<td>0.209</td>
<td>44</td>
<td><strong>0.001</strong></td>
</tr>
<tr>
<td>Units of alcohol consumed/week</td>
<td>0.249</td>
<td>44</td>
<td><strong>0.001</strong></td>
</tr>
</tbody>
</table>

* This is the lower bound of the true significance

Figures in bold type denote statistically significant p-values
Appendix X: Ethical Committees’ letters of approval.
Dear Mr Marchetto

Study No: 00/0230 (Please quote in any correspondence)
Title: Deliberate self harm subsequent to the experience of cumulative trauma

Thank you for letting us see the above application which was agreed by Chairman’s Action.

I would be grateful if you could forward a copy of the letter of approval from the Camden & Islington Community Trust Ethics Committee. In the meantime there are no objections from the point of view of ethics and the study can go ahead.

Please note that it is important that you notify the Committee of any adverse events or changes (name of investigator etc) relating to this project. You should also notify the Committee on completion of the project, or indeed if the project is abandoned. Please remember to quote the above number in any correspondence.

Yours sincerely

Dr F D Thompson
Chairman

Cc. Professor E Littlewood
20 November 2000

Professor Roland Littlewood
Department of Psychiatry & Behavioural Sciences
Royal Free & UCL Medical School
Wolfson Building
48 Riding House Street
London
W1N 8AA

Dear Professor Littlewood

LREC Ref: 00/95 (please quote in all further correspondence)
Title: Deliberate self-harm to experience of cumulative trauma

I am pleased to inform you on behalf of the Local Research Ethics Committee that you have ethical approval to proceed with your study. Please would you write and inform Angela Williams of the start date of your project, at the above address.

Please note that the following conditions of approval apply:

- It is the responsibility of the investigators to ensure that all associated staff including nursing staff are informed of research projects and are told that they have the approval of the Ethics Committee.

- If data are to be stored on a computer in such a way as to make it possible to identify individuals then the project must be registered under the Data Protection Act 1998. Please consult your department data protection officer for advice.

- The Committee must receive immediate notification of any adverse or unforeseen circumstances arising out of the project.

- The Committee must receive notification: a) when the study is complete; b) if it fails to start or is abandoned; c) if the investigator/s change and d) if any amendments to the study are made.
The Committee will request details of the progress of the research project periodically (i.e. annually), and require a copy of the report on completion of the project.

Please forward any additional information/amendments regarding your study to contact the Local Research Ethics Committee Administrator or myself at the above address. If you have any queries, please do not hesitate to contact the Ethics Committee Administrator at the Research & Development Unit.

Yours sincerely

[Signature]

Stephanie Ellis
Committee Chair
ETHICAL COMMITTEE (RESEARCH)

21 December 2000

Dr M Crowe
Consultant Psychiatrist
Maudsley

Dear Dr Crowe

Re: Deliberate self-harm subsequent to the experience of cumulative trauma (226/00)

The Ethical Committee (Research) considered and approved the above study at its meeting on 15 December 2000.

Initial approval is given for one year. This will be extended automatically only on completion of annual progress reports on the study when requested by the EC(R). Please note that as Principal Investigator you are responsible for ensuring these reports are sent to us.

Please note that projects which have not commenced within two years of original approval must be re-submitted to the EC(R).

Any serious adverse events which occur in connection with this study should be reported to the Committee using the attached form.

Please quote Study No. 226/00 in all future correspondence.

Yours sincerely,

Margaret M Chambers
Research Ethics Coordinator