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**An Investigation of the Self in Adolescents that Deliberately Self-
Harm**

& Research Portfolio

PART ONE

(Part Two bound Separately)

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*Submitted in partial fulfilment of the requirements for the degree of
Doctorate in Clinical Psychology*

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Chapter 1

Small Scale Service Related Project

An Audit of the Administration of the Strengths and Difficulties Questionnaire and an Exploratory Study of the use of Departmental Handouts as a Waiting List Initiative.

Small Scale Service-Related Project submitted in partial fulfilment of the
requirements for the degree of Doctorate in Clinical Psychology

Prepared in accordance with the requirements for submission to

Clinical Psychology

(See Appendix 1.1 for notes for contributors)

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The Strengths and Difficulties Questionnaire (SDQ: Goodman, 1997) was administered at 75% of initial assessment appointments, however this number varied by city sectors. The use of departmental handouts as a waiting list initiative had no significant effect on parental perceptions of their child's emotional and behavioural difficulties.

Background

The Clinical Psychology Early Intervention Service is an innovative Tier 2 service within Yorkhill Division (NHS Greater Glasgow), offering psychological help to children up to 12 years, living within Greater Glasgow. The service has experienced a steady rise in referrals and in 2001 alone received 825 referrals. This consistent rise in referrals, paired with staff shortages due to long-term sick leave, produced lengthy waiting lists.

The service consistently uses a number of waiting list initiatives including opt-in letters, group work, and the provision of early assessment interviews prior to a minimal wait for intervention (as proposed by Shawe-Taylor, et al, 1994). However, it would be beneficial to investigate the effectiveness of a further waiting list initiative and determine whether the waiting period makes problems more severe.

Research has indicated that waiting lists are perceived as undesirable to the patient waiting for an appointment, and by GPs who cite long waiting lists as the second most important indicator of a poor service (McAuliffe & MacLachlan, 1992). Waiting lists

also impact on treatment effectiveness through treatment delay, non-attendance, and problems becoming more entrenched over time (Herilhey, et al, 1998). Consequently, waiting lists are also perceived as undesirable by therapists (Hickman, 1994). However, these studies are all based on an adult population.

In child and adolescent mental health services, non-attendance rates are typically between 14 and 35%, although higher rates have been reported (Kournay, et al, 1990; Munjal, et al, 1994). A long delay between referral and contact with the service is an important reason for non-attendance (Gerber, et al, 1990; Kournay, et al, 1990; Munjal, et al, 1994). However, no studies have investigated the consequences of a waiting list on a child's psychological difficulties. This audit will investigate parents perceptions of their child's emotional and behavioural difficulties before and after the waiting period in order to determine whether the wait makes problems more severe. The Clinical Psychology Early Intervention Service routinely administers the Strengths and Difficulties Questionnaire (SDQ: Goodman, et al, 1997) (for more details on this measure see Methods Section) at initial assessment appointments. The SDQ provides a measure of parental perceptions of their child's emotional and behavioural problems, enabling such difficulties to be assessed over the waiting period.

To date four meta-analyses on the use of self help materials have been completed (Scogin, et al, 1990; Gould & Clum, 1993; Marrs, 1995; Cuijpers, 1997), all of which found these approaches to be effective. Whitfield, Williams and Shapiro (2001) found that self-help could assist patients and alleviate difficulties while waiting for an appointment with a Clinical Psychology Service. Hobday & Dickson (2003) used

“information surgeries” to give parents some guidelines, including written information, on helping their children while waiting for a clinical psychology appointment. Despite being only 15-20 minutes long, the parents who opted to attend all agreed that their main concerns were addressed during the session and that the advice and information sheets given were useful. Furthermore, half of these parents claimed it helped them to deal with their time on the waiting list and that there had been an improvement since attending the surgery. Therefore, this study will also investigate whether departmental handouts, relevant to parental concerns, will alleviate emotional and behavioural difficulties in children while they wait for an initial assessment appointment.

The primary aim of this audit is to:

- 1) Determine whether the SDQ is routinely administered at initial assessment appointments.

Further aims are to:

- 2) Investigate whether SDQ Total Scores obtained before and after the waiting period significantly differ.
- 3) Investigate whether there is a significant difference between the SDQ Total Scores following the waiting period in those families that did and did not receive departmental handouts.

These audit questions will be analysed to determine whether there is a relationship between any results found and children’s age, sex, length of waiting period and DEPCAT ratings. Finally, the clinical relevance of any results will be discussed and placed into the clinical context.

Method

Participants

Participants consisted of the parents or guardians of all children referred and accepted to the Clinical Psychology Early Intervention Service between 22/10/02 and 25/02/03. A total of 229 children were accepted to the service during this period. Sixteen of these children were under 3 years of age and were omitted from the study as the SDQ only assesses children aged 3-16 years. A further 24 children were also omitted as they had previously attended the service. Therefore, 189 families were sent the SDQ of which 2 were urgently appointed before completion and 3 were returned to sender with unknown forwarding addresses. A further nine families returned incomplete SDQs or questionnaires that had been completed by persons other than the parent/guardian. Therefore, a total of 175 families participated in this study

Measures

The Strengths and Difficulties Questionnaire (SDQ) is a brief behavioural screening questionnaire that takes approximately five minutes to complete and provides balanced coverage of children's behaviour, emotions and relationships. It can be used for screening, part of a clinical assessment, as a treatment outcome measure, and as a research tool (Garraalda, et al., 2000; Goodman et al, 1998). Within the Early Intervention Service it is used to aid clinical assessment and to evaluate treatment outcome. It contains 25 items and five clinical scales: hyperactivity/inattention, emotional symptoms, conduct problems, peer relationships and prosocial behaviour. For each clinical scale, the score can range from 0 to 10. Summing the scores from all scales, except the prosocial scale, generates a Total Difficulties Score. The

resultant score can range from 0 to 40. A child can then be categorised as having “high needs”, “some needs” or “low needs”. Scoring ranges for these categories can be found in Appendix 1.2.

The SDQ has adequate discriminant and predictive validity (Goodman, 1997; Goodman & Scott, 1999). SDQ scores above the 90th percentile predict a substantially raised probability of independently diagnosed psychiatric disorders (Goodman, 2001). It functions at least as well as the longer established questionnaires (e.g. the Child Behaviour Checklist, Achenbach, 1991) and Rutter Questionnaire (Elander & Rutter, 1996), correlating highly with both (Goodman & Scott, 1999; Klasen, et al., 2000; Koskelainen, et al., 2000). Reliability has been shown to be generally satisfactory, whether judged by internal consistency (mean Cronbach [alpha]: 0.73), cross informant correlation (mean: 0.34) or retest stability (mean: 0.62) (Goodman, 2001).

Design

Data were available from 2002/2003 when the service conducted an audit of their waiting list using the following methodology. These data had never been audited or analysed in relation to the questions investigated in this study. Participants had been assigned to two groups, those that received departmental handouts (n=97, 58%) or the control group (n=78, 42%), according to the sector of the city they lived in. These sectors were thought to be roughly matched for deprivation and population levels. The handout group comprised of participants living in the South and East sectors of

the city, and the control group comprised of those living in the West and North of Greater Glasgow.

At the point of referral all participants were sent an SDQ with a standard letter informing the family they had been placed on a waiting list. This was accompanied by a stamped addressed envelope and participants were asked to complete and return the questionnaire. The handout group also received a tick box questionnaire asking about their current concerns regarding their child's difficulties (Appendix 1.3). This information was then used to distribute departmental handouts to families, relevant to parental concerns

The departmental handouts were developed by Clinical Psychologists working within the Early Intervention Service. They are routinely used to provide families with information and strategies to assist their child with specific difficulties. These handouts cover a range of emotional and behavioural difficulties (Appendix 1.4). A sample handout is provided in Appendix 1.5.

Analysis

Analysis consisted of descriptive statistics, between group t-tests and Chi Square tests to analyse demographic characteristics, number of SDQs returned, length of the waiting period and whether the SDQ was routinely administered at the point of assessment. The SDQ uses a 3-point Likert scale on all 25 items to determine parental perceptions of their children's difficulties indicating the use of non-parametric tests. However, total SDQ scores are obtained by summing the subsection ordinal scales

together. This assumes some degree of linearity, therefore parametric tests are appropriate providing a normal distribution is found.

Results

Are SDQs administered routinely at initial assessment appointments?

The mean age of the participants was 6.01 years (SD=2.1, range = 3-11 years). 115 (66%) of the participants were male and 60 (34%) were females. These distributions are consistent with the service's previous referral profile. The majority of participants (61%) lived in deprivation categories 6 and 7, and 39% were from deprivation categories 1 to 5. A total of 103 (59%) children and families attended an initial assessment appointment with a further 72 (41%) either failing to attend or failing to opt in to an appointment. Of the 103 children and families that attended an initial assessment appointment, the SDQ was administered to 77 families (75%) and was not administered to 26 (25%). Table 1 shows the numbers of SDQ's administered at the initial assessment appointment by different sectors of the city and Figure 1 shows these data in proportions.

[Insert Table 1 here]

[Insert Figure 1 here]

Do SDQ total scores obtained before and after the waiting period significantly differ and do departmental handouts effect SDQ total scores following the waiting period?

No significant difference was found between control and handout groups on child's gender ($\chi^2 = 1.09$, $df = 1$, $p=0.3$). The age of participants was not normally distributed and a positive skew was found in the data. However, no significant difference was found between control and handout groups for the number of children aged under 5 years and between 5 and 11 years ($\chi^2 = 0.96$, $df = 2$, $p = 0.33$). A significant between group difference was found in DEPCAT ratings ($\chi^2 = 4.36$, $df = 2$, $p<0.05$) with the handout group comprising more participants within high deprivation areas (Figure 2).

[Insert Figure 2 here]

A total of 104 (59%) of the SDQs administered during the waiting period were completed and returned to the department. Return rates for the handout and control groups were 57% and 63% respectively. There were no significant differences in return rates between these groups ($\chi^2 = 0.67$, $df = 1$, $p=0.41$). Return rates were not significantly affected by a participant's sex, gender or DEPCAT ratings.

The average waiting time for an initial assessment appointment by the service was 246 days (SD= 102.01, range = 15-490 days). There were no significant differences in waiting times between the control and handout group ($t = 0.75$, $df=127$, $p = 0.45$). No significant difference was found between attendance and waiting times ($t = 1.57$, $df=127$, $p = 0.12$) however a significant difference was found between attendance

and returning the SDQ ($\chi^2 = 4.51$, $df = 1$, $p < 0.05$). Table 2 shows that those who returned the questionnaire at the point of referral were more likely to attend an initial assessment appointment (65% of those who returned a questionnaire attended an appointment).

[Insert Table 2 here]

A significant positive correlation was found between post waiting period SDQ Total scores and the waiting period ($r = 0.277$, $n = 77$, $p < 0.05$). Figure 3 shows that post waiting period SDQ totals increased as the waiting period increased.

[Insert Figure 3 here]

A total of 26 families within the control group (33%) and 24 families within the handout group (25%) completed SDQ's both before and after the waiting period. Demographic characteristics of these participants were consistent with the overall between group distribution with the exception that no significant differences were found in the DEPCAT ratings. Prior to formal analysis, data were checked to ensure that they met the assumptions for parametric statistical analysis. The Kolmogorov-Smirnov test found both before and after SDQ Total scores to be normally distributed ($p = 0.64$, $p = 0.21$, respectively) therefore parametric tests were used. Mean Total SDQ scores before and after the waiting period, and standard deviations can be found in Table 3. Using Goodman's (1997) normative SDQ data, it can be seen that all of these mean SDQ Total Scores lie within the "high needs" range; with the exception of the control groups mean SDQ Total Score after the waiting period, which is classified

as “some needs”. (See Appendix A for scoring criteria). It can be seen in Table 3 that mean SDQ Total scores slightly increased in the handout condition and decreased within the waiting list control condition.

[Insert Table 3 here]

The above data show only a minimal change in Total SDQ Scores and the number of participants in each condition is small. Therefore, to determine the clinical relevance of any changes, the percentage of participants in each condition who experienced improvements in SDQ Total Scores of at least one standard deviation (pooled variance of 7.19) were calculated. More participants in the control group experienced an improvement in SDQ Total Scores of at least one standard deviation than in the handout group (Table 4).

[Insert Table 4 here]

The children that improved by at least one standard deviation did not significantly differ from those that did not by age ($\chi^2 = 0.22$, $df = 1$, $p = 0.64$), gender ($\chi^2 = 2.38$, $df = 1$, $p = 0.12$) DEPCAT ratings ($\chi^2 = 2.28$, $df = 1$, $p = 0.13$), or waiting period ($t = 0.75$, $df = 48$, $p = 0.45$).

The percentage of participants in each condition who experienced deterioration in SDQ Total Scores of at least one standard deviation (pooled variance of 7.19) was also calculated. More participants in the handout group experienced deterioration in

SDQ Total Scores of at least one standard deviation than in the control group (Table 5).

[Insert Table 5 here]

The children that deteriorated by at least one standard deviation did not significantly differ from those that did not by age ($\chi^2 = 0.00$, $df = 1$, $p=1.00$), gender ($\chi^2 = 2.92$, $df = 1$, $p=0.87$), DEPCAT ratings ($\chi^2 = 0.95$, $df = 1$, $p=0.33$), or waiting period ($t = 0.22$, $df = 48$, $p = 0.83$).

Discussion

The primary aim of this audit was to determine whether the SDQ is routinely administered at initial assessment appointments. Further aims involved investigating the effects of the waiting list on SDQ Total Scores and whether the use of departmental handouts is an effective waiting list initiative.

Referral Profile

More boys (66%) than girls (34%) were referred to the service and the average age of referral was 6 years of age. However, 16 children were excluded from the sample as they were under 3 years therefore the mean age of children accepted to the service will be lower. The majority of participants (61%) were living in areas of high social deprivation.

Waiting Period

The average wait for an initial appointment was 246 days (roughly 8.5 months). The Clinical Psychology Early Intervention Service aims to have a waiting period of 3-6 months therefore the average wait found in this report is longer than would be hoped for. However, the data for this audit were collected at a time of staff shortages due to long-term sick leave. Since then, new staff have been appointed doubling previous staffing levels.

A small but significant correlation was found between the waiting period and SDQ Total Scores completed at the assessment appointment. As the waiting period increased, parents perceived an increase in their child's emotional and behavioural difficulties. This is consistent with the adult literature (Herilhey, et al., 1998). However, this significant correlation was small and at roughly 0.3 this means that the waiting period accounted for only 9% of variance in the SDQ Total Scores. Further investigation of other factors that may produce deterioration in SDQ Total Scores is warranted. This would enable the service to determine which families needs to be prioritised to stop any further deterioration in a child's difficulties.

Administration of SDQs

The SDQ was administered to 75% of families attending an initial assessment appointment. At the time of data collection the SDQ was not available to the service in non-English languages, which may account for a small percentage of questionnaires that were not administered. Non-English SDQs have now been introduced to the service. A follow up audit may be beneficial to determine whether this has increased administration rates. It must also be acknowledged that although

the service aims to routinely administer SDQs at every assessment appointment this may not always be possible due to situational barriers e.g. parent being unable to read. However, the differential administration rates by different city sectors indicate clinician variance that would be important to monitor and if possible modify.

Effectiveness of Departmental Handouts as a Waiting List Initiative

Although differences between the post-waiting period SDQ Total scores were minimal, the trend for the control group to improve over the waiting period and for the handout group to deteriorate was surprising. It would have been beneficial to have qualitative feedback from families on their perceptions of the waiting list initiative to gain a greater understanding of these findings. For example, families within the handout group may have tried some of the strategies recommended but were unsuccessful and as a result “gave up”; whereas the control group continued to develop their own coping strategies. However, these results highlight the importance of a thorough assessment process and the provision of an individualised formulation accompanying any information leaflets or handouts.

Although there was no significant difference in DEPCAT ratings of the subgroup in questions 2 and 3, the initial finding that participants in the handout group were living within areas of higher deprivation than the control group may still have had a confounding effect on the results. We are also unaware of the resources that may have been available to the control group. For example, the Riverside LHCC Child Health Project is a health visitor led project within the West sector of the city that focuses on early intervention and parenting and to which the Early Intervention

Service has a consultancy role. Participants within the control group may have received assistance from resources such as this, which would have affected the results.

Limitations and Future Directions

A major limitation of this study is the small group of participants who completed both pre and post waiting period questionnaires (n=50). If this study were to be replicated in the future it would be beneficial to do so on a greater scale e.g. by including all accepted referrals to the service over 1 year. A further limitation is that the control and handout group were not randomly assigned. Furthermore, participants within the handout group all received individual combinations of departmental handouts dependent upon perceptions of their child's difficulties. Therefore the group did not all receive equivalent levels of information and it may be that some of these handouts were more effective than others. A follow up audit could determine if this was the case. Future audits may also want to investigate the effects of a waiting list on the subcomponents of the SDQ and it would be interesting to determine whether parental perceptions of their child's difficulties matched Clinical Psychologists' formulations at the initial assessment.

Recommendations

- The SDQ is currently administered at 75% of assessment appointments and administration varies by city sectors. If the service wishes to routinely administer the SDQ to evaluate treatment outcome these discrepancies in administration should be addressed. It may be beneficial to introduce prompts to encourage administration and

the results of this audit could be used as a baseline measurement for such interventions.

- There are no obvious benefits of distributing departmental handouts as a waiting list initiative without an accompanying consultation. However, a short consultation may be appropriate during the waiting period, and written information could be distributed if felt appropriate by the clinician, as advocated by Hobday & Dickson (2003). It is unclear why departmental handouts alone provided no beneficial effects. It would therefore be beneficial to gain qualitative feedback from participants regarding this intervention and any improvements that could be made.

- Effective waiting list initiatives should continue to be promoted within the service as an extended waiting period has detrimental effects on parental perceptions of their child's emotional and behavioural difficulties. However, the positive correlation between the waiting period and SDQ Total scores was small. Other factors that may impact on children's emotional and behavioural difficulties should be investigated so that children can be prioritised to prevent difficulties becoming more entrenched.

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Table 1: Number of SDQs Administered, Not Administered and Attendance

Numbers at the Initial Assessment Appointment across City Sectors.

	Area			
	South	East	North	West
Administered	34	9	12	22
Not Administered	8	6	3	9
Total Attendance	42	15	15	31

Figure 1. Proportion of SDQ's Administered at Initial Assessment by City

Sectors

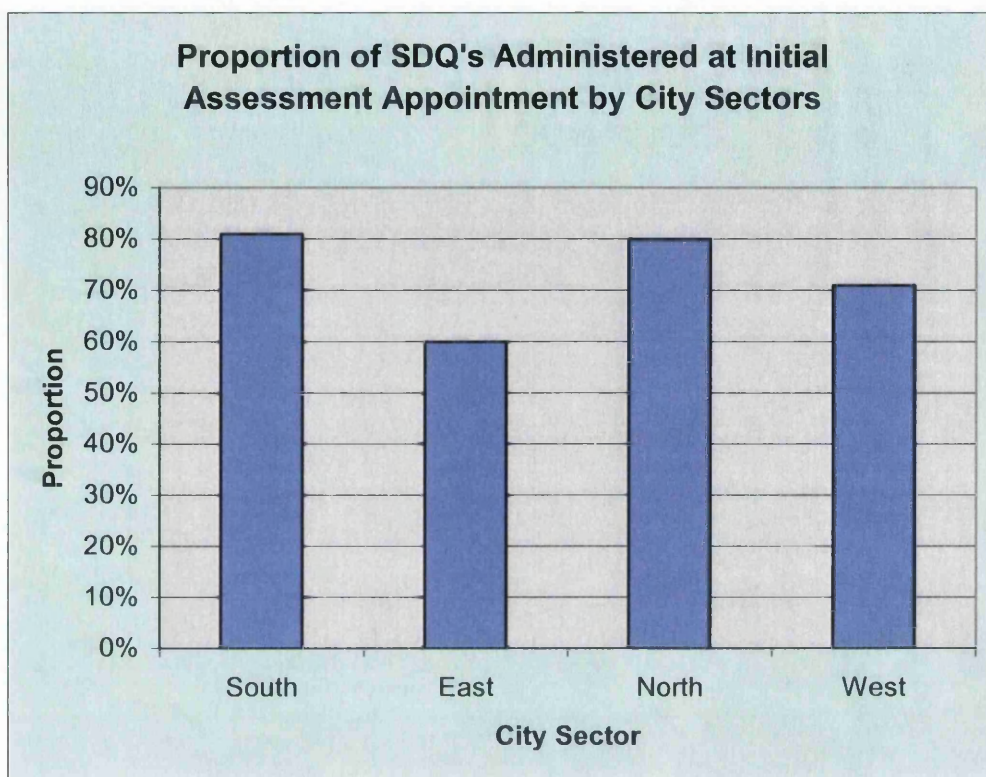


Figure 2: Number of Participants Living in Specific Deprivation Categories for Control and Handout Groups

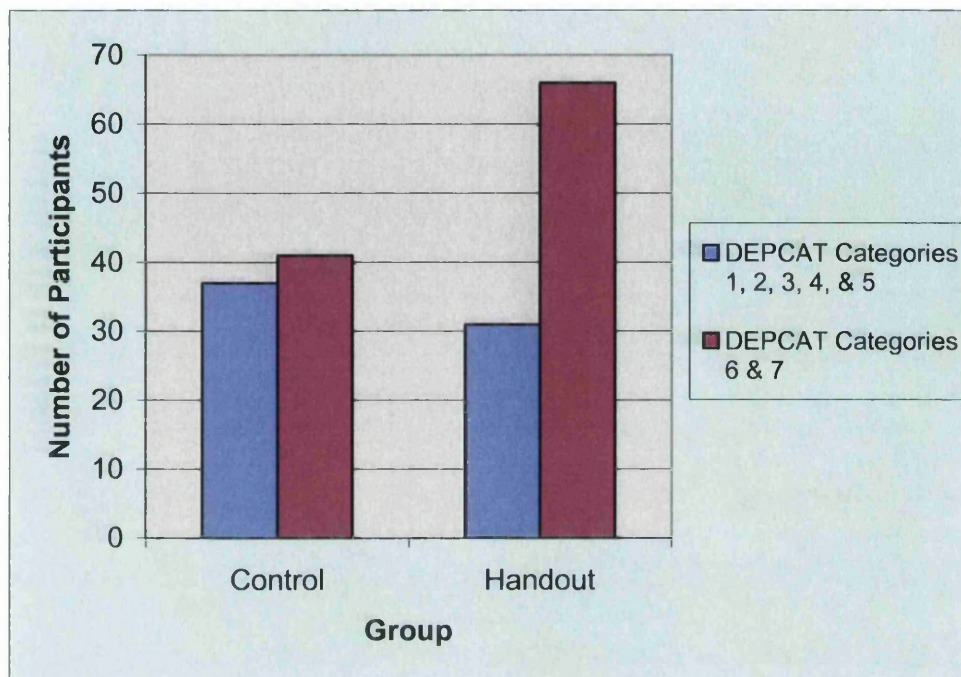
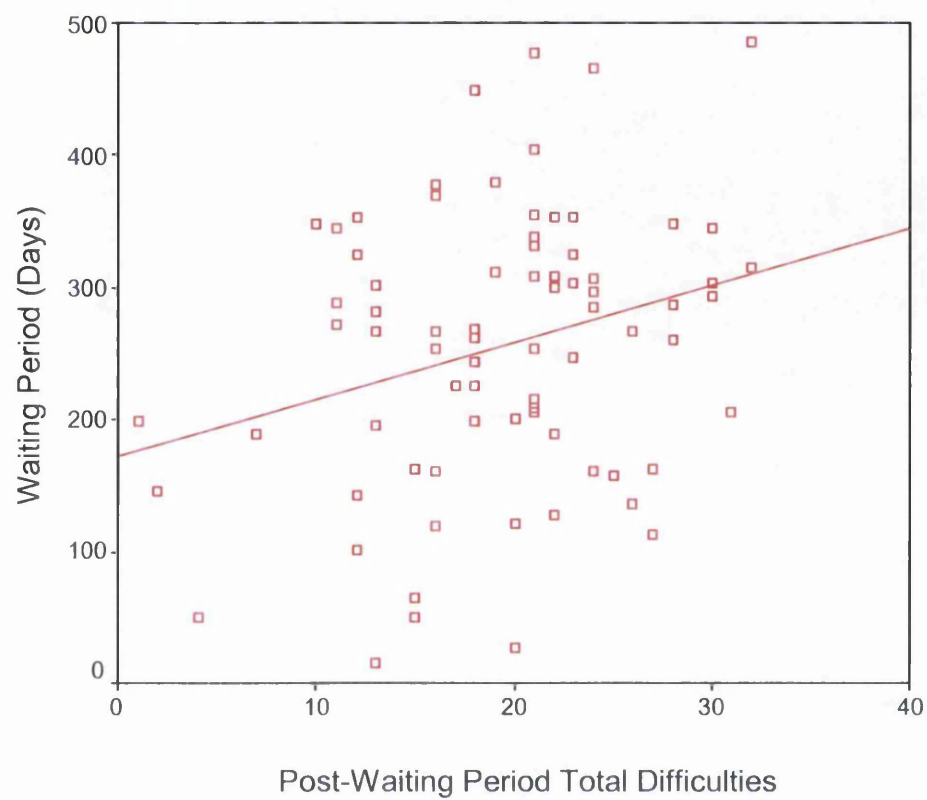


Table 2 Number of participants who returned the SDQ and Attendance rates at initial assessment appointments

	Did not Attend	Attended
Did not return	36	35
Returned	36	68

Figure 3: Post Waiting Period SDQ Total Scores by Waiting Period



**Table 3: Means and Standard Deviations on SDQ Total Scores Before and After
a Waiting Period for the Handout (n=26) and Control (n=24) Groups**

	Before		After	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Handout Group	20.17	5.6	21.17	5.87
Control	20.77	8.5	18.46	7.78

Table 4. Percentage of Participants in Handout (n = 26) and Control Groups (n = 24) who Experienced Improvements in SDQ Total Scores by at Least One Standard Deviation (SD=7.19)

	Handout Group	Control
Improvement	0% (n=0)	21% (n=5)
No Improvement	100% (n=26)	79% (n=19)

Table 5. Percentage of Participants in Handout (n = 26) and Control Groups (n = 24) who Experienced Deterioration in SDQ Total Scores by at Least One Standard Deviation (SD=7.19)

	Handout Group	Control
Deterioration	19% (n=5)	4% (n=1)
No Deterioration	81% (n=21)	96% (n=23)

Chapter 2

Systematic Literature Review

Family Functioning's Association with, and Ability to Predict, Adolescent Deliberate Self-Harm and Attempted Suicide

Systematic Literature Review submitted in partial fulfilment of the requirements for
the degree of Doctorate in Clinical Psychology

Prepared in accordance with the requirements for submission to
Journal of the American Academy of Child and Adolescent Psychiatry
(See Appendix 2.1 for notes for contributors)

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Abstract

Rates of deliberate self-harm (DSH) and attempted suicide are increasing in young people, leading numerous researchers to investigate associated risk factors for such behaviours. Family functioning has been frequently highlighted as being associated with adolescent DSH and attempted suicide, however many studies have suffered from methodological problems, most noticeably a failure to use standardised measures of family functioning. The purpose of this paper is to review whether family functioning, assessed using standardised self-report measures, is significantly associated with adolescent DSH and attempted suicide and, if so, whether family functioning is predictive of these behaviours when other variables, such as depression, are present or controlled for.

A systematic search of the literature using electronic databases and a hand search of reference lists and relevant journals identified 17 studies that satisfied inclusion and exclusion criteria. Papers were critically reviewed using a checklist of methodological quality and were summarised. Collective findings indicated that adolescents who had self-harmed and/or attempted suicide rated their families as significantly more dysfunctional than community controls. However, methodologically sound studies reported that family functioning failed to differentiate adolescents who self-harmed/attempted suicide and psychiatric controls.

Furthermore, the majority of studies showed that family functioning was unable to predict these behaviours when other variables were present or controlled for. Due to high levels of correlation between family functioning and depression, a mediational model is proposed whereby family dysfunction is associated with impaired individual functioning, particularly depression, which has a direct effect on DSH and attempted

suicide. Methodological problems associated with the literature are highlighted and suggestions for future research are made.

Keywords: systematic review, family functioning, adolescent, deliberate self harm, attempted suicide.

1. INTRODUCTION

1.1 Prevalence of Adolescent DSH and Attempted Suicide

In recent years there has been growing concern regarding the increase in rates of DSH and attempted suicide amongst young people. It has been estimated that approximately 25, 000 adolescents present to hospitals in England and Wales each year following non-fatal self-harm (Hawton, et al., 2000). Furthermore, general population epidemiological surveys of adolescents indicate that such acts occur more frequently than hospital statistics would suggest (e.g. Choquet & Ledoux, 1994; Hawton, et al., 2002). Increasing prevalence of DSH and attempted suicide has led to a development in the investigation of associated psychosocial factors in order to assist in the recognition of those at risk, develop theoretical models and design prevention programmes.

1.2 Methodological Problems in the Literature

Studies of adolescent DSH and attempted suicide have suffered from a number of methodological problems. A common problem is the lack of clear consensus regarding behaviour definitions. A number of different terms have been proposed and are frequently used in the literature including self-injurious behaviour, deliberate self-harm, attempted suicide and parasuicide. The term 'attempted suicide' has been criticised as it is commonly used in the literature when the majority of participants are not attempting to kill themselves. Similar criticism has been directed towards the term 'parasuicide' as it implies suicidal intent, when this may not be present (Hawton & Catalan, 1987). The literature is complicated further by many studies including suicidal ideation, gestures and attempts under an all-inclusive term of 'suicidal

behaviours' (e.g. Brent, et al., 1990; King, et al., 1993). Others have lacked any clear definition of the behaviour considered (Stivers, 1988). For the purpose of this review DSH will be defined as "any act that is deliberate and resulting in potential or actual tissue damage" (Davidson, et al., 2006). In this review DSH will be considered to be distinct from attempted suicide which is deemed to be "deliberate i.e. the act could not be construed as an accident, there was planning involved and the subject claims ownership of the act; life threatening, and resulted in medical intervention or medical intervention would have been warranted" (Davidson, et al., 2006). However, because many authors do not state definitions of the behaviours they investigate, papers will be considered to have investigated attempted suicide if a young person has answered positively to the question "have you attempted suicide/tried to kill yourself", or if suicidal intent, assessed using a standardised measure, is within the significant range.

Further methodological problems within the literature include the range of ages investigated. Some papers have grouped adolescents with children (e.g. King, et al., 2001; Kashani, et al., 1998), while others have grouped adolescents with young adults (e.g. Payne, et al, 1995). This makes it difficult to draw comparisons across the literature due to the diverse developmental stages of participants. This review has only included papers where the majority of participants were aged between 12 and 20 years.

1.3 Family Factors Associated with Adolescent DSH and Attempted Suicide

Family factors are frequently identified in the adolescent literature as a psychosocial variable associated with DSH and attempted suicide. Investigated family factors have

included family structure (Garfinkel, et al., 1982; Kosky, 1983), family-related stressful events (Pronovost, et al., 1990; Tishler, et al., 1981), and ongoing deviations from normal family functioning. Unlike family structure, ongoing family functioning is amenable to change given appropriate therapeutic interventions. Research indicates that when family processes are disturbed, there is an increased risk of adolescent suicide attempt (Pfeffer, 1989) and suicide attempters are more likely than non-attempters to come from chaotic families (Paluszny, 1991). In psychiatric inpatient populations, adolescents who have attempted suicide perceive their families as more poorly adjusted (Topol & Reznikoff, 1982) and the seriousness of suicidal intent is related to the degree of family dysfunction (Brent, et al., 1990; Miller, et al., 1992). However, the vast majority of studies have failed to use validated measures of family functioning. Instead, studies have assessed family functioning through the use of questionnaires developed by the authors, which differ according to each study's methodology. This paper addresses this methodological problem by limiting reviewed studies to those that have used standardised self-report measures of family functioning. For the selection of instruments in this review, family functioning was defined as a set of basic attributes about the family system that characterise and explain how a family system typically appraises, operates, and/or behaves (McCubbin, 1987, 1991). For example instruments that measured attributes such as family problem solving, hardiness, adaptability, individuation, and cohesion fit this criterion. Instruments that focused only on individual functioning, dyadic relationships, parent/child interaction, family stress, specific coping strategies, and social support were not reviewed.

1.4 Depression and Adolescent DSH/Attempted Suicide

Depression is the most common psychiatric diagnoses in adolescents who self-harm and attempt suicide. 67% of adolescents who self-poison have a diagnosis of major depression (Kerfoot, et al., 1996). Depression is related to the various psychological characteristics that also correlate with DSH and attempted suicide e.g. with self-esteem (Yanish & Battle, 1985) and hopelessness (Cole, 1989). The inter-correlations between depression, DSH/attempted suicide and other psychological characteristics have led investigators to question whether family functioning is a predictor of DSH and attempted suicide when depression, and other relevant variables, are present and controlled for. This paper aims to answer this question by systematically reviewing the literature.

1.5 Aims

The aims of this paper are to systematically review the evidence that addresses whether family functioning, assessed using standardised self-report measures, is:

1. Significantly associated with DSH and attempted suicide in adolescents.
2. Predictive of DSH and attempted suicide in adolescents when other psychosocial variables, particularly depression, are present or controlled for.

2. METHOD

2.1 Search Strategy

A literature search was carried out using the following electronic bibliographic databases:

- PsychINFO, 1990-April 2006.
- MEDLINE (R), 1990-April 2006.
- CINAHL, 1990-April 2006.
- EMBASE, 1990-April 2006.
- All Evidence Based Medicine (EBM) Reviews – Cochrane DSR, ACP Journal Club, DARE and CCTR, 1990-April 2006.
- AMED, 1990-April 2006.
- BNI, 1990-April 2006.

The search terminology was as follows (*indicates truncation): (suicid* or parasuicid* or overdos* or self harm* or self-poison* or self injur* or self destructive behavio* or self cut*) and (youth or young person or young people or adolescen* or school or teen* or child*) and (survey or questionnaire or interview).

It was anticipated that this combination of search terminology would generate a large quantity of articles. However, a number of studies incorporate standardised measures of family functioning into batteries of tests assessing psychosocial variables. In these studies family functioning is rarely identified in the title or as a keyword. Increasing the specificity of the search terminology would erroneously exclude these studies.

To ensure all relevant articles were identified the reference sections of selected articles were hand searched and details of studies meeting inclusion criteria were entered in the 'Web of Science' citation database to identify further papers. Any journals that had published two or more of the papers considered for inclusion were also searched for any further relevant studies i.e. *Acta Psychiatrica Scandinavica* (1990-2006) and the *Journal of the American Academy of Child and Adolescent Psychiatry* (1990-2006).

2.2 Inclusion and Exclusion Criteria

Selected studies met the following inclusion criteria.

- a) The majority (90% or over) of participants were aged between 12 and 20 years (inclusive).
- b) A standardised measure of family functioning was used.
- c) The study investigated DSH and/or attempted suicide.
- d) The prevalence of DSH/attempted suicide was reported.
- e) The study displayed descriptive and inferential statistics on the relationship between family functioning and DSH/attempted suicide.
- f) The study was published from 1990 onwards.

Exclusion criteria comprised of the following:

- a) The study examined suicidal ideation only.
- b) The study examined psychological factors post-suicide.
- c) The study investigated an adolescent forensic or learning disabled population.

- d) The study adopted qualitative, case study or narrative review methodologies or was an unpublished dissertation.
- e) The study was unavailable in English.

2.3 Assessment of the Quality of the Studies

Data was extracted from all selected studies and compiled in a summary table (Table 1). A rating scale was developed to evaluate the methodological quality of each study (Appendix 2.2). The scale included relevant items from the Critical Appraisal Skills Programme (CASP, 2004) and the Scottish Intercollegiate Guidelines Network (SIGN, 2000) that were modified for the purpose of this review. Items were also informed by methodological issues raised in recent generic reviews of adolescent DSH/attempted suicide (Anderson, et al., 1999; Evans, et al., 2004). The final checklist of methodological quality included a total of 28 items.

[Insert Table 1 here]

The author developed a scoring system whereby, for each item, two points were awarded if the study met criteria, one if it was not possible to tell whether criteria were met or if they were only partly met, and zero points if the study did not meet criteria. This yielded possible quality scores of 0-64. A pro-rated quality rating was applied to each study reflecting the percentage of quality criteria met. A description of each quality rating is provided below:

A	> or equal to 75%	High Quality
B	60-74%	Moderate Quality
C	50-59%	Low Quality
D	< or equal to 49%	Poor Quality

To assess reliability, an independent second reviewer quality rated 100% of the papers. Overall agreement was high ($r=0.9$, $p=0.01$) and, following discussion, disagreement on individual criteria was resolved and overall agreement rose to 100%.

3. RESULTS

3.1 Searches

After removing any duplicates and articles not in English, the computerised searches identified 3489 papers. 2624 irrelevant papers were immediately excluded by title alone. 588 papers were excluded after reading the abstract and a further 264 papers were excluded after reading the full text. Reasons for these exclusions are detailed in Diagram 1.

[Insert Diagram 1 here]

A further three papers were identified by hand searching reference lists. Searching key journals provided one further paper. Seventeen papers were included in the systematic review, six of which were based on three different studies (two papers per study), identified in Table 1.

3.2 Methodological Quality

Quality ratings ranged from 43% to 82%, with a mean rating of 62%. Two studies were deemed to be of high quality (A), eight of moderate quality (B), five of low quality (C) and two of poor quality (D). The median quality rating was B. Table 2 shows the breakdown of quality ratings for each study.

[Insert Table 2 here]

The most consistent methodological problems identified were a lack of clear hypotheses, failure to report a power calculation, no definition of DSH/attempted suicide, and an absence of explicit inclusion and exclusion criteria. A number of studies also included participants that had self-harmed or attempted suicide in the past year. It is likely that, within this time period, psychological characteristics will have differed from those present at the time of the suicidal/self-harming act. One would therefore expect these studies to underestimate the true extent of the association between such characteristics and DSH/attempted suicide.

3.3 Measures of Family Functioning

The McMaster Family Assessment Device (FAD: Epstien, et al., 1983) was used in eight studies. This is a 60-item self-report questionnaire consisting of a General Functioning scale, that can be used independently from the other scales as an overall measure, and six further subscales: Problem Solving, Communication, Roles, Affective Involvement, Affective Responsiveness and Behaviour Control. One study

administered all subscales (Martin, et al., 1995); three papers used the General Functioning subscale only (Chitsabesan, et al., 2003; Guertin, et al., 2001; King, et al., 1995); one study did not identify which subscales it used (Harrington, et al., 2006), and the remaining three papers used the General Functioning scale and a combination of two (Boergers, et al., 1998; Spirito, et al., 2003) or five (Kerfoot, et al., 1996) further subscales. Psychometric properties of the FAD are presented in Appendix 2.3.

The Family Adaptability and Cohesion Scales were used in four studies. Three papers (Garrison, et al., 1991; McKeown, et al., 1998, Rubenstein, et al., 1998) used the second version (FACES II: Olson, et al., 1982), and one (Kaplan, et al., 1997) used the third version (FACES III: Olson, et al., 1985). FACES II consists of 30 items and FACES III consists of 20 items assessing Cohesion (the emotional bonding in a family) and Adaptability (the ability of a family to alter its role relationships, power structure, and relationship rules in response to stress). McKeown, et al., (1998) and Rubenstein, et al., (1998) used the Cohesion subscale only. All other papers used both subscales. Psychometric properties of FACES II and III are presented in Appendix 2.3.

The Family Assessment Measure (FAM: Skinner, et al., 1983) was used in three studies (Adams, et al., 1994; Brinkman-Sull, et al., 2000; Seguin, et al., 2004). The General Scale of the FAM consists of 50 items designed to assess the health/pathology of the family as a whole. Other FAM subscales, involving dyadic relationships and self-perceptions, will not be analysed in this review. Psychometric properties of the FAM are presented in Appendix 2.3.

The Family Environment Scale (FES: Moos & Moos, 1981) was included in two studies (Kienhorst, et al., 1992; De Wilde, et al., 1993). This is a 90-item self-report questionnaire, which has 10 subscales: Cohesion, Expressiveness, Conflict, Independence, Achievement Orientation, Intellectual-Cultural Orientation, Active Recreational Orientation, Moral-Religious Emphasis, Organisation and Control. However, both studies use the Dutch version of the FES (De gezinkli-maatschaal [GKS]) (De Coole & Jansma, 1983), which only includes nine subscales, each comprising of 11 items. Reliability and validity data for the FES are presented in Appendix 2.3.

All studies investigated adolescent's perceptions of family functioning using the above measures, however two studies (Chitsabesan, et al., 2002; Kerfoot, et al., 1996) also administered these questionnaires to parents.

3.4 Studies Investigating Family Functioning's Association with DSH and/or Attempted Suicide in Adolescents.

All seventeen studies performed univariate statistics to investigate family functioning's association with DSH and/or attempted suicide in adolescents. Nine of these studies clearly analysed attempted suicide and/or DSH. Four studies investigated a combination of DSH and attempted suicide, and in four studies it was unclear whether they assessed DSH, attempted suicide or a combination of both.

3.4.1 Studies Analysing DSH or Attempted Suicide (n=9)

Garrison, et al., (1991) investigated psychosocial factors associated with suicide attempts in a community based sample. The Adaptability subscale of FACES II was a significant predictor of suicide attempts in a simple logistic regression analysis, adjusted for race and sex. The observed associations between Adaptability and suicide attempts indicated that although the perception of a rigid family was associated with suicide attempts, the perception of the opposite extreme (chaos) was not. The Cohesion subscale was not a significant predictor of attempted suicide. However, this study did not provide a power calculation or inferential statistics regarding refusal rates. Furthermore, the authors did not specify the average length of time since an attempt had occurred.

McKeown, et al., (1998) used the same sample group and analysed depression and attempted suicide at follow up. Univariate logistic regression found that family Cohesion (FACES-II) was a significant predictor of attempted suicide in the following year, where increased cohesion was protective for suicide attempts. In contrast with Garrison, et al., (1991), this paper failed to analyse the Adaptability scale of FACES-II and gave no explanation for its exclusion, despite the subscales ability to significantly predict attempted suicide in the previous paper.

Martin, et al., (1995) investigated the relationship between DSH, suicide attempts and family functioning in a community-based sample. The authors found that adolescents who had attempted suicide in the past six months scored their families as significantly more dysfunctional on all FAD subscales than non-attempters. Adolescents who had self-harmed scored their families as significantly more dysfunctional on the Affective

Responsiveness, Affective Involvement, and General Functioning subscales. The adolescents who had self-harmed and those that had attempted suicide were not exclusive groups. Adolescents with comorbid DSH and suicide attempts(s) rated their families as more dysfunctional on all FAD subscales (except Affective Involvement), than attempters denying DSH, but these differences were not significant. FAD subscales did not discriminate suicidal from non-suicidal depressed adolescents. However, with the exception of family functioning and depression severity, no other standardised measures were used to investigate other factors, including psychiatric diagnoses and suicidal intent.

Seguin, et al., (2004) investigated family functioning in adolescents who had attempted suicide, suicidal ideators, and non-suicidal adolescents. No significant differences were found between attempters and ideators on the General Scale of the FAM. However, both attempters and ideators scored their families as being significantly more dysfunctional than the non-suicidal group. This paper was rated as being of moderate quality but it did not report a power calculation or refusal rates.

Adams, et al., (1994) investigated family functioning in adolescent psychiatric inpatients who had recently attempted suicide, non-suicidal psychiatric inpatients, non-suicidal high school students and student suicide ideators. Suicide attempters reported greater family dysfunction on the FAM General Scale than non-suicidal students and reported more problems on several FAM subscales including Task Accomplishment, Communication, Affective Involvement and Control. No differences were found between suicide attempters and non-suicidal psychiatric patients or between suicide attempters and ideators on any subscale. This study was

rated as being of low quality as it did not report refusal rates and, because the suicidal sample was recruited from a psychiatric inpatient unit, its results cannot confidently be generalised to a community population, as the authors have attempted.

Kaplan, et al., (1997) investigated the association between family functioning and suicide attempts in physically abused adolescents. Suicide attempters perceived their families to be significantly less Cohesive on the FACES III than non-attempters. No significant differences were found on the Adaptability subscale. However, because of the specificity of this sample it is unclear how well these findings generalise to a non-abused sample. Furthermore, it should be noted that the FACES III has been criticised for its poor reliability in comparison to FACES II (see Appendix 2.3). Finally, the paper failed to report a power calculation and, as the number of attempters is relatively small ($n=8$), the reliability of these results is questionable.

Brinkman-Sull, et al., (2000) investigated potential predictors of attempted suicide in adolescent psychiatric inpatients during an 18-month follow up period. Univariate logistic regression analyses suggested that dysfunction in the FAM subscales of Role Performance, Communication and Control predicted follow up suicide attempts. The General scale ($p<.07$), Affective Expression subscale ($p<.08$) and Values and Norms subscale ($p<.07$) narrowly missed significance. Subjects demonstrated significant improvement in the FAM General Scale during the follow up period however univariate logistic regression found that perceived improvements in family functioning did not serve as a protective factor against future suicide attempts. It is important to note that no power calculation was reported and the follow up response rate was low (59%). Statistical analysis was based on nine adolescents who had

attempted suicide therefore it is questionable whether this study has sufficient numbers to make reliable conclusions. It should also be noted that data was provided by self-report. This may have resulted in a reporting bias as the adolescents in this study could have been motivated to present themselves in a more positive manner at follow up to prevent re-hospitalisation.

Spirito, et al., (2003) identified 58 adolescents who had attempted suicide at baseline evaluation and analysed psychosocial factors associated with a reattempt at three month follow up. Adolescents who reattempted suicide described their families as having poorer FAD General Functioning and Communication Skills at baseline than those who did not reattempt. Methodological problems highlighted in the quality rating procedure included a lack of clear inclusion and exclusion criteria for the study and an absence of standardised assessment of psychiatric diagnoses. Furthermore, as the authors did not report the results of a power calculation it is unclear whether a study with such a small sample size (reattempters: $n = 7$) is adequate to base any firm conclusions regarding association of family functioning and suicide reattempts.

Guertin, et al., (2001) investigated psychological factors associated with DSH (the authors used the term “self-mutilative behaviour”) over and above engaging in a suicidal act alone. Using an ANCOVA (preliminary analysis showed a significant between group difference on age and race) the authors found no significant difference between adolescents who both self-harmed and attempted suicide and those who had attempted suicide but did not DSH on the FAD General Functioning subscale. This study was rated as of the highest quality of all 17 studies however it did not report a power calculation.

In summary of section 3.4.1, six studies found that adolescents who had attempted suicide rated their families as significantly more dysfunctional than community controls. Spirito, et al., 2003, found that family functioning significantly predicted re-attempt amongst adolescent who had previously attempted suicide and Martin, et al., (1995) found that adolescents who had self-harmed rated their families as significantly more dysfunctional than community controls. Only one study (Brinkman-Sull, et al., 2000) found significantly higher levels of family dysfunction in psychiatric inpatients that had attempted suicide than in psychiatric inpatients that had not, however this study suffered from methodological problems. Three further studies did not find any significant differences in family functioning between suicide attempters and depressed adolescents, psychiatric patients and suicide ideators. Two studies found no significant differences in levels of family functioning between adolescents who presented with co-morbid attempted suicide and DSH and suicide attempters who did not self-harm

3.4.2. Studies Investigating Combined DSH and Attempted Suicide (n=4)

Kerfoot, et al., (1996) investigated factors associated with adolescent self-poisoning by comparing self poisoning cases with a non-suicidal psychiatric control group, and non-suicidal community controls. The authors reported that 13 overdose cases (32%) were judged to have at least some intent to die, however, for most intent was low. The overdose group reported significantly higher levels of family dysfunction compared to the community control group on the Communication, Roles, Affective Responsiveness, Affective Involvement, Behaviour Control, and General Functioning

subscales of the FAD. In comparison to the psychiatric control group, the overdose group reported significantly higher levels of family dysfunction on the subscales of Communication, Roles, Affective Responsiveness and General Functioning. The authors concluded that family dysfunction is particularly prevalent in adolescents who have self-poisoned when compared to psychiatric control groups. Despite this study being one of the few that reported a power calculation, it did not use Bonferroni corrections to account for the multiple comparisons that were undertaken, increasing the possibility of a Type 1 error. Furthermore, due to its poor internal consistency (Appendix 2.3) the positive association with the Roles subscale should be interpreted with caution

Rubenstein, et al., (1998) found a significant difference between high school students who admitted attempting to hurt or kill themselves in the past year, and those who did not, on the Cohesion subscale of the FACES II. However, this study was quality rated as poor (Grade D) because its procedures were poorly described, it did not report a power calculation and it used the term “attempted suicide”, despite the inclusion of adolescents who stated that they had not been trying to kill themselves.

Boergers, et al., (1998) examined the reasons for ‘suicide attempts’ and the psychosocial factors associated with these reasons. The authors considered any intentional self-injury (regardless of lethality) as a suicide attempt if the adolescent indicated that his or her actions had a self-destructive intent. Using this reviews classification system, this study assessed a combination of suicide attempts and DSH. This is supported by the fact that only 28% of the sample endorsed a “wish to die” as their primary reason for their ‘attempt’ and 56% endorsed a “wish to die” as one of

the reasons for their 'attempt'. Those adolescents who endorsed a "wish to die" and those who endorsed it as their primary motivation failed to report significantly different levels of family dysfunction, as assessed by the FAD, than those adolescents who endorsed other reasons for their 'attempt'. Therefore, using this reviews classification system, no significant differences were found in family functioning between adolescents who had attempted suicide and adolescents who had self-harmed. This study was rated as being of moderate quality however it failed to report or assess psychiatric diagnoses.

King, et al., (1995) investigated psychological factors associated with 'suicidal behaviour' following psychiatric hospitalisation. 'Suicidal behaviour' was defined to include incidents of wrist cutting and mildly harmful ingestion (e.g. 10 aspirin) in addition to more seriously suicidal acts. Adolescents who engaged in this behaviour post-hospitalisation reported significantly greater negative perceptions of family functioning during their hospitalisation. These analyses were repeated for the subsample of adolescents with diagnoses of affective disorders and although the direction of group differences remained the same, these analyses revealed no significant differences. However, the main aim of the paper was to identify predictors of suicidal behaviour following discharge from an inpatient unit, yet no regression analysis was performed on the data therefore the statistical analysis was inappropriate for the study aims. Furthermore, there was no information stating that the participants had consented to being re-contacted for follow up or regarding ethical approval for the study.

In summary of section 3.4.2, two studies reported greater levels of family dysfunction in adolescents who had attempted suicide and/or self-harmed than in community controls. Boergers, et al., (1998) found that family functioning failed to differentiate adolescents who had self-harmed than those who had attempted suicide and, following psychiatric hospitalisation, King, et al., (1995) reported that family dysfunction predicted suicide attempts and self-harming behaviour. Finally Kerfoot, et al., (1996) found a significant difference in family functioning between adolescents who had overdosed and a psychiatric control group however, as stated earlier, the probability of a Type 1 error is increased in this study.

3.4.3 Studies Unclear Whether Investigating Attempted Suicide or DSH (n=4)

De Wilde, et al., (1993) investigated psychosocial factors that differentiated ‘suicide attempters’, depressed, and non-depressed adolescents, who had never attempted suicide. ‘Suicide attempters’ rated their families as significantly more dysfunctional on the FES Cohesion and Conflict subscales than non-depressed controls. No significant differences were found between ‘suicide attempters’ and depressed adolescents on any subscale of the FES. Despite the authors use of the term ‘attempted suicide’ it is unclear whether the acts investigated were suicidal as the paper does not report whether participants were directly asked if they intended to kill themselves. Mean score on the Beck Suicidal Intent Scale (Beck, et al., 1974) was 6.8, indicative of a “moderate” suicidal intent. Furthermore, the mean risk score on the Risk-Rescue Rating (Weisman & Worden, 1972) was 8.1, indicative of a “moderately low risk”, and the mean rescue score (reflecting the possibility of intervention) was 11.6, indicative of a “moderately high” rescue level. Finally,

participants were classified as ‘suicide attempters’ if they had ‘attempted’ in the past year. Adolescents who attempted suicide/DSH a year ago may have significantly different psychological characteristics than those present at the time of the attempt/self-harming episode.

Kienhorst, et al., (1992) reported the same findings as de Wilde, et al., (1993). Both studies used the same sample however the Kienhorst, et al., (1992) paper was rated as poorer methodologically (see Table 1) and only included analysis of the depressed and ‘suicide attempters’ groups, finding no significant between group differences on measures of family functioning.

Chitsabesan, et al., (2003) investigated whether family functioning predicted repetition of ‘DSH’ at a six-month follow up of adolescents who had previously taken an overdose. Adolescents who had repeat incidence ‘DSH’, and their parents, rated their families as more dysfunctional on the FAD than non-repeaters. However, when Bonferroni corrections were made to account for the multiple comparisons, this difference did not remain significant. One of the major methodological problems with this study is the interchangeable use of the terms ‘suicide attempt’ and ‘DSH’ throughout the paper. It is unclear what behaviour this study was investigating. Suicidal intent was assessed using a non-standardised instrument marked out of six where the authors report that higher scores are indicative of stronger suicidal intent. At baseline, adolescents who went on to repeat ‘DSH’ scored a median of three out of 6 and adolescents who did not go on to repeat ‘DSH’ scored a median of two out of six. These figures do not appear indicative of “strong” suicidal intent and question whether the initial overdoses were all suicidal acts. Furthermore, it is unclear whether

the repeat 'DSH' investigated at follow up refers to a further overdose or is inclusive of other acts. No reference was made to any assessment of the suicidal intent of repeated acts of 'DSH'.

Harrington, et al., (2006) used the same sample as Chitsabesan, et al., (2003) but reported repetition of 'DSH' at six year follow up and included a control group of adults who had not deliberately poisoned themselves as adolescents. Proportional hazards survival models showed that the risk of deliberate self poisoning in adulthood had no bivariate association with total FAD score at baseline. The relative risk was increased for those who, at the time of the index episode, had higher hopelessness scores, had experienced more childhood adversities and had major depression. However, it was not reported whether these were suicidal acts or DSH and no assessment of suicidal intent was made at follow up.

In summary of section 3.4.3, one study (de Wilde, et al., 1993) found a significant difference in family functioning between "suicide attempters" and controls and two studies, repeating the same data, found that family functioning did not differentiate depressed adolescents and "suicide attempters". Two studies did not find a significant difference in family functioning between adolescents who repeated an act of self-poisoning at a 6 month and 6 year follow up and non-repeaters. However, it should be noted that, with the exception of Harrington, et al., (2006) these studies had significant methodological flaws.

3.5 Studies Investigating whether Family Functioning is Predictive of DSH and/or Attempted Suicide when Other Variables are Present or Controlled for.

Ten studies investigated whether family functioning was predictive of DSH and/or attempted suicide in adolescents when other variables were controlled for. The methodological problems of these studies have been reported previously in section 3.4.

3.5.1 Studies Investigating Clearly Defined Attempted Suicide and/ or DSH (n=6)

Garrison, et al., (1991) entered all psychosocial variables that provided a significant association with suicide attempts at a univariate level, including the Adaptability subscale of FACES II, into a stepwise logistic regression. Only major depression and undesirable life events maintained significant effects. Family functioning failed to predict attempted suicide when other factors were present.

Using the same sample group as Garrison, et al., (1991), but analysing factors associated with suicide attempts over a one year follow up period, McKeown, et al., (1998) found that family Cohesion (FACES II) was a significant predictor when entered into a multivariate logistic regression analysis. Increasing baseline family Cohesion score was a significant protective factor for suicide attempts.

When all 24 available psychosocial variables associated with attempted suicide were entered into stepwise regression, Martin, et al., (1995) found that none of the FAD subscales made an independent contribution to attempted suicide. Three of 7 residual variables contributed 46.2% to the overall variance of an attempt including depression

(accounting for the majority), history of sexual abuse, and a friend attempting suicide. In stepwise regression with DSH as the criterion, none of the FAD subscales made an independent contribution, with history of sexual abuse, depression and parental marital status contributing 21% to the variance. The FAD General Functioning subscale contributed more to the variance of depression than it did independently to suicide attempts or DSH. It was concluded that this could be supportive of a model whereby family dysfunction leads to depression, which, in turn, contributes to DSH and suicide attempts. However family dysfunction, as measured by the FAD was not found to contribute directly or independently to attempted suicide or DSH.

Adams, et al., (1994) used discriminate analyses to classify adolescents in to the four originally defined groups: psychiatric inpatients who had attempted suicide, non-suicidal inpatients, community ideators and non-suicidal community participants. A 25% correct classification would be expected by chance. Depression, hopelessness and self-esteem yielded a 40.2% correct classification of the adolescents, increasing classification accuracy by 16%. Adding the FAM General subscale yielded a 44.6% correct classification of the adolescents increasing classification accuracy by 20%. When all FAM subscales were added to the measures of individual functioning as predictor variables, classification accuracy was 51.5% therefore it improved the classification accuracy obtained with the measures of depression, hopelessness and self-esteem.

Following the finding that individual FAM subscales, assessed at initial assessment, predicted suicide attempts at 18 month follow up, Brinkman-Sull, et al., (2000) entered these variables in to a multivariate forward stepwise regression analyses.

When presented in a 12 variables model, family functioning did not contribute to the predictive ability of hopelessness or depression. *Post hoc* Pearson correlations found that hopelessness at intake was highly correlated with the FAM General score, Role Performance, Communication and Control subscales. Change in depression between intake and follow up was strongly correlated with a change in the Affective Involvement, Communication, and General Score subscales. Therefore, when tested alongside levels of hopelessness, depression, and self-esteem, or when entered into a model after the individual functioning variables, family functioning did not contribute unique variance to the prediction of suicidality. It was concluded that, given the significant correlations between family functioning variables and individual functioning variables, a mediational model for predicting attempted suicide should be considered whereby the impact of problems in the family system on suicidality may be mediated by the impact of these family problems on individual functioning. In turn these individual functioning variables have strong impact on suicidal behaviour.

After finding significant associations between family functioning and suicide reattempt in a 3 month follow up study, Spirito, et al., (2003) performed partial correlations to assess the relation between family functioning and continued suicidal behaviour, when controlling for depressive symptoms. The correlations between reattempt status and FAD General Functioning and FAD Communication were no longer significant when controlling for depression. When controlling for the FAD variables, partial correlations between depression and follow-up suicidal behaviour remained significant or marginally significant. The authors concluded that, after controlling for depressive symptoms, the relation between suicide reattempts and family functioning was reduced. Thus, although both depressive symptoms and

family functioning seem to play a role in the maintenance of suicidal behaviour, and family functioning can in turn affect mood state, the severity of depressive symptoms appears to be the better predictor of suicide reattempt.

In summary of section 3.5.1, only one study (McKeown, et al., 1998) found that family functioning was a significant predictor for suicide attempts. Adams, et al., 1994, also reported that family functioning was able to increase classification accuracy in discriminate analysis used to classify suicide attempters, ideators psychiatric and community controls but only as an additive effect to the main three variables of depression, hopelessness and self esteem. Four further studies reported that family functioning failed to predict attempted suicide or DSH. Instead individual functioning (most commonly levels of depression and hopelessness) were found to be the strongest predictors of DSH and attempted suicide. Three studies highlighted family functioning's high levels of correlation with, and ability to predict, depression and proposed the possibility of a mediational model where family dysfunction produces depression and impairment in individual functioning which, in turn, contribute to attempted suicide and DSH.

3.5.2. Studies Investigating Combined DSH and Attempted Suicide (n=2)

In a model of protective factors for combined DSH and attempted suicide, Rubenstein, et al., (1998), found that the variable of Total Stress was significant with family Cohesion (FACES II) controlled however, family Cohesion had no overall protective effect with Total Stress controlled for. When separate logistic regressions for intact and non-intact families were performed, Total Stress was found to be an

independent risk factor in all families, whereas the protection offered by family Cohesion depended on whether the family was intact. In non-intact families, family Cohesion appeared to provide significant protection against suicidality, offsetting the effects of stress and in fact lowering the risk almost five times. In intact families, family Cohesion did not provide further protection against the effects of stress.

Boergers, et al, (1998) conducted discriminate function analyses to determine which of the demographic and psychological variables (including family functioning) made an independent contribution to the prediction of a 'wish to die' as a reason for a 'suicide attempt'. Family functioning did not make an independent contribution to the endorsement of, or primary motivation of, 'wish to die' in a forward stepwise regression. Only depression and anger expression met criteria to enter the model predicting the endorsement of 'wish to die'; and depression and socially prescribed perfectionism met criteria to enter the model predicting death as the primary motivation for the suicide attempts. The authors concluded that family functioning does not play an important role in differentiating those who wish to die in a 'suicide attempt' and those who do not. Using this reviews criteria it can be concluded that this study found that levels of family functioning did not differentiate suicide attempters and adolescents who DSH when other variables were present.

3.5.3 Studies Unclear whether Investigating Attempted Suicide or DSH (n=2)

Chitsabesan, et al., (2003) conducted a logistic regression analyses with all baseline variables that were significantly related to further 'self-harm' before Bonferroni corrections. Significant variables had strong positive and negative predictive values

for repeat 'DSH', however family functioning was not found to be one of the most important variables when the other five variables were accounted for: parental mental health, suicidal ideation, depression, previous attempts and suicidal intent.

Using the same sample at six year follow up, Harrington, et al., (2006) found that when all risk factors were considered jointly in a proportional hazard survival model predicting repeat deliberate self poisoning, only the factors of childhood adversity, and major depression at the time of the initial overdose remained individually significant. Family functioning at the time of the index episode was not individually significant.

4. DISCUSSION

4.1 Association between Family Functioning and Attempted Suicide/DSH

All ten studies that compared levels of family functioning in adolescents who had attempted suicide and/or self-harmed and community controls found that adolescents who attempted suicide and/or self-harmed reported significantly higher levels of family dysfunction than their peers. In the studies that specifically assessed DSH, adolescents who self-harmed rated their families as more dysfunctional than community controls (Martin, et al., 1995) however, no differences were found between adolescents who self-harmed and adolescents who had attempted suicide (Boergers, et al., 1998), or between adolescents who had attempted suicide and those who presented with co-morbid DSH and suicide attempt(s) (Guertin, et al., 2001; Martin, et al., 1995). Nine studies clearly assessed suicide attempts. Family

functioning was not able to differentiate suicide attempters and non-suicidal depressed adolescents (Martin, et al., 1995) psychiatric patients (Adams, et al., 1994) or suicide ideators (Adams, et al., 1994; Seguin, et al., 2004). Brinkman-Sull, et al., (2000) found that specific subscales of the FAM predicted attempted suicide amongst psychiatric inpatients at 18 months follow up and Spirito, et al., (2003) found that impaired family functioning predicted reattempt of suicide at 3 month follow up, however both these studies did not report a power calculation and their small sample sizes raise concerns regarding the reliability of their conclusions.

A further eight studies assessed family functioning's association with either a combination of both suicide attempts and DSH, or it is unclear which behaviours they were investigating. De Wilde, et al., (1993) and Kienhorst, et al., (1992) both reported no significant differences in family functioning between adolescents who had attempted suicide and/or self-harmed and depressed adolescents, however both these studies used the same sample. Chitsabesan, et al., (2003) and Harrington, et al., (2006) also found that family functioning failed to differentiate adolescents who repeated self-poisoning from those who did not repeat this behaviour over a 3 month and 6 year follow up. King, et al., (1995) reported that adolescents who engaged in suicide attempts and/or DSH following discharge from a psychiatric inpatient unit rated their family as more dysfunctional during hospitalisation however, when these analyses were repeated with a sub sample of adolescents with diagnoses of affective disorders no significant differences were found. Finally, Kerfoot, et al., (1996) found that adolescents who had self-poisoned rated their families as significantly more dysfunctional than a psychiatric control group however, as stated earlier, this study

had flaws in its data analysis which would have increased the possibility of a Type 1 error.

It can therefore be concluded that adolescents who self-harmed and/or attempted suicide rate their families as more dysfunctional than community controls however, family functioning failed to differentiate these adolescents from psychiatric controls in the majority of studies reviewed. The small number of studies that found significantly higher levels of family dysfunction in adolescents who have attempted suicide/DSH than in psychiatric controls had methodologically flaws. It is difficult to specify areas of family functioning of significant importance to DSH and attempted suicide due to the variety of measures used, different subscales administered and varying populations. However, the FAM subscales of Communication and Control, the FAD subscales of Affective Responsiveness, Affective Involvement and Communication, and the Cohesion subscale of FACES have all been highlighted in more than one study. Therefore it appears that the emotional bonding of a family and its member's ability to communicate and share appropriate emotions is specifically associated with DSH and attempted suicide.

4.2 Ability of Family Functioning to Predict DSH/Attempted Suicide

Ten studies investigated whether family functioning was predictive of DSH and/or attempted suicide when other variables were controlled for. Four studies reported that family functioning was unable to predict adolescent suicide attempts when other variables were present. However, Adams, et al., (1994) found that family functioning increased the classification accuracy of the variables of depression, hopelessness and

self esteem in discriminating adolescents who had attempted suicide, non-suicidal inpatients, community ideators and non-suicidal community controls. Furthermore, McKeown, et al., (1998) reported that family functioning was a significant predictor of suicide attempts at one year follow up with increasing baseline cohesion being a significant protective factor for suicide attempts. Only two studies specifically investigated DSH, Martin, et al., (1995) found that family functioning was not predictive of DSH when other variables were present and Boergers, et al., (1998) found that family functioning was unable to predict which adolescents would DSH and which adolescents would attempt suicide. Both Chitsabesan, et al., (2003) and Harrington, et al., (1996) found that, when all risk factors were considered, family functioning at the time of the index episode failed to predict repeat self poisoning at 3 month and 6 year follow up. Finally, Rubenstien, et al., (1998) investigated a combination of DSH and attempted suicide and found that family functioning failed to predict these behaviours when other variables were present, however, when separate logistic regression analysis were performed for intact and non-intact families, family functioning provided significant protection against suicidal behaviours but not in intact families.

Depression was the most consistent significant predictor of attempted suicide and DSH. Therefore, although family functioning appears to play a role in the incidence of suicidal and self-harming behaviours, the severity of depressive symptoms appears to be the better predictor. Due to the high correlations between family functioning and depression it could be hypothesised that family functioning plays a mediational role whereby family dysfunction impacts on individual functioning, including depression, which has a strong impact on attempted suicide and DSH.

4.3 Future Recommendations.

One of the most significant factors impacting upon the current literature is the lack of standardised definitions for DSH and attempted suicide. Future work should focus on promoting clear definitions within the academic community that will enable comparisons to be made across research findings. It is important that such definitions should clearly address suicidal intention, as promoted within this review. A number of clinicians and researchers have indicated support for this distinction between DSH and suicide attempts; with some proposing that DSH (or self injurious behaviour) exists as its own clinical syndrome (Favazza, 1996; Favazza & Rosenthal, 1993; Kahan & Pattison, 1984; Pattison & Kahan, 1983). It is the authors belief that DSH and attempted suicide are likely to represent different points on a continuum of suicidal phenomenon, but that differentiating them within a research capacity would allow a more thorough investigation of discrete risk factors and reduce confusion within the literature.

Future work should focus on analysing the presence of a mediational model whereby family functioning impacts upon individual functioning, including depressive symptoms, which are predictive of DSH and attempted suicide. In particular, taking into account the presence of cognitive distortions within depression, it would be important for future work to focus on using a combination of self-report measures and standardised observations of family functioning. This would enable investigators to determine whether correlations between depression and family functioning are a mediational process involving family dysfunction promoting depressive symptoms, or a process whereby depressive symptoms promote a negative perception of family functioning. It would also be of value to design longitudinal studies that assess

family and individual factors prior to DSH and attempted suicide. This would aid in our understanding of the factors that precede DSH and suicide attempts. Finally, taking into account the increasing rates of DSH/attempted suicide and the finding that these adolescents are at greater risk of completed suicide (Sellar, et al., 1990), it is highly important to follow up such young people within a research capacity to assist in the provision of evidence based preventative clinical work.

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Table 1: Summary Table of Sample Characteristics, Measures, Analysis, Findings and Limitations of Selected Studies

Study and Quality Rating	Sample Characteristics	Measures	Analysis	Findings	Limitations
<p>Adams, Overholser & Lehnert (1994)</p> <p>Quality Rating: C</p>	<p>Source: Psychiatric Inpatients (n=64) and community high school students (n=70). No information regarding refusal rates.</p> <p>Age range: 13-18 years, Mean: 15.4 years, SD: 1.3 years</p> <p>Gender: 41% male (n=50) and 59% female (n=73).</p> <p>93% white, 5% black, and 2% other racial groups</p> <p>Psychiatric Inpatients: Predominantly middle class. All fathers were employed and the majority (68%) held positions as skilled or semi-skilled workers. 73% of mothers were employed, with the majority (63%) holding positions as semi-skilled workers. No specific SES data for community controls</p>	<p>Family Functioning: Family Assessment Measure (FAM)</p> <p>Subscales: - FAM General Scale (inclusive of)</p> <p>- Task Accomplishment, Role Performance, Communication, Affective Expression, Affective Involvement, Control, Values and Norms</p> <p>Other Measures: - Children's Depression Inventory</p> <p>- Hopelessness Scale for Children</p> <p>- Rosenberg Self Esteem Scale</p>	<p>ANOVA's and Tukey's <i>post hoc</i> comparison test. Attempters and ideators reported greater FAM General Scores than non-suicidal students. No difference between attempters and ideators, or either ideators or attempters and non-suicidal inpatients. (Across all groups: <i>F</i> value, 3.33, <i>p</i><.05)</p> <p>FAM subscales were compared across groups using a MANOVA. Several dimensions of family functioning differed significantly across groups, <i>p</i><.01.</p> <p>Univariate ANOVAs and <i>post hoc</i> Tukey comparisons on subscales. No differences between ideators and attempters. Attempters reported more problems than nonsuicidal students on several dimensions of family functioning. Family functioning subscales improved classification accuracy obtained with the measures of depression, hopelessness and self-esteem. FAM general subscales were moderately correlated with depression, hopelessness and self-esteem.</p>	<p>Family functioning is an important variable to consider in the study and treatment of adolescent suicide behaviour. Compared with non-suicidal high school students, the suicide ideators and attempters reported more dysfunction in the four dimensions of perceived family functioning.</p>	<ul style="list-style-type: none"> - No clear hypotheses. - SES data is not provided for the control group - Gender breakdown does not reflect total sample size - No information on refusal rates - No power calculation - No standardised assessment of suicidal intent or suicidal ideation. - No diagnostic instrument for depression. - No specific definition of attempted suicide or when the attempt occurred - No clear statement about ethical approval.
<p>Boergers, Spirito & Donaldson (1998)</p> <p>Quality Rating: B</p>	<p>Source: A&E following 'suicide attempt' (n = 120). No information regarding refusal rates.</p> <p>Age range: 12-17 years, Mean: 15.1 years, Median: 15 years, SD: 1.4 years</p> <p>98 female, 22 male</p> <p>62% white, 16% Hispanic, 13%</p>	<p>Family Functioning: McMaster Family Assessment Device (FAD)</p> <p>Subscales: - General Functioning, Communication, Problem Solving.</p> <p>Other Measures: - The Reasons for Overdose</p>	<p>Descriptive stats, t-tests and Bonferroni correction of adolescents who endorsed "wish to die" as reason for 'attempt' vs those who did not. No significant difference on Communication, Problem Solving or General Functioning subscales of the FAD</p> <p>No significant differences in family functioning subscales for those whose primary motivation was to die and those who endorsed another primary motivation.</p>	<p>Family functioning does not play an important role in differentiating those who wished to die in a 'suicide attempt' and those who did not.</p>	<ul style="list-style-type: none"> - No information regarding refusal rates. - Clear definition of a suicide attempt but no other inclusion or exclusion criteria were stated - No power calculation - 14% of sample's SES unable to be determined - No diagnostic instrument used and no formal

	<p>African-American. 24% at poverty level, 15% were of low SES, 42% middle SES, 5% high SES. 12 (10%) could not be classified as resided out of state, 5 (4%) could not be classified because they were temporarily living in an out-of home placement.</p>	<p>Scale</p> <ul style="list-style-type: none"> - The Hopelessness Scale for Children - The Revised UCLA Loneliness Scale - The Center for Epidemiological Studies Depression Scale - The State-Trait Anger Expression Inventory - The Child and Adolescent Perfectionism Scale 	<p>Discriminate function analyses. Family functioning did not make an independent contribution to the endorsement, or primary motivation of wish to die in a forward stepwise procedure.</p>		<p>assessment of suicidal intent.</p>
Author and Year	Sample Characteristics	Measures	Analysis	Findings	Limitations
<p>Brinkman-Sull, Overholser & Silverman (2000). Quality Rating: B</p>	<p>Source: Psychiatric Inpatients (private hospital) n = 102 60 agreed to follow up (59% participation rate) Age: (initial assessment). Range: 12-18 years, Mean: 15.46 years, SD: 1.2 years Demographics: 33 female, 27 male 27% Caucasian, 10% African-American, 3% Hispanic. No information on SES</p>	<p>Family Functioning: Family Assessment Measure (FAM) Subscales: - General Scale (inclusive of) - Task Accomplishment, Role Performance, Communication, Affective Expression, Control, Values and Norms Other Measures: - Children's Depression Rating Scale-Revised - Children's Depression Inventory - The Hopelessness Scale for Children - The Rosenberg Self Esteem scale</p>	<p>Univariate logistic regression analysis predicting suicide attempt based on family functioning measures at intake: Sig. (or nearly sig.) family functioning variables: General Scale: $p < .07$, ns; Role Performance: Sig. $p < .03$; Communication: Sig. $p < .05$; Affective Expression: ns, $p < .08$; FAM Control: Sig. $p < .03$; FAM Values and Norms: ns, $p < .07$ In forward stepwise regression family functioning variables did not contribute to the predictive ability of hopelessness or depression. Univariate Logistic Regression Predicting Suicide Attempts based on measures taken at follow up: All family functioning variables were found to be non-sig. They were therefore not entered into the final Change Model. <i>Post hoc</i> Pearson correlations were performed. Hopelessness at intake was highly correlated with the General Score, $p < .001$; Role Performance Subscale, $p < .001$; Communication Subscale, $p < .001$; and Control subscale, $p < .001$. Change in depression was strongly correlated with a change in the Affective Involvement Subscale, $p < .001$; the Communication Subscale, $p < .001$ and the General Score, $p < .001$.</p>	<p>Perceived improvements in family functioning during follow up did not serve as a protective factor against future suicide attempts. Family functioning measured at intake was predictive of attempted suicide when tested alone but when tested alongside levels of hopelessness, depression, and self esteem, or when entered into a model after the individual functioning variables, family functioning did not contribute unique variance to the prediction of suicidality. It is possible that the impact of problems in the family system on repetitive suicidal behaviour may be mediated by the impact of these family problems on individual functioning. In turn these individual functioning variables have strong impact on suicidal behaviour.</p>	<ul style="list-style-type: none"> - No clear hypotheses - No clear definition of suicide attempt - No information on refusal rate/ inclusion and exclusion criteria at initial assessment. - Low follow up response rate - No power calculation. - Questionable whether n is a big enough sample to produce a predictive model. - No SES reported - No diagnostic instrument used - Adolescents may have been eager to present themselves positively to prevent re-hospitalisation. - No statement about ethical approval

Author and Year	Sample Characteristics	Measures	Analysis	Findings	Limitations
<p>Chitsabesan, Harrington & Tomenson (2003)*</p> <p>Quality Rating: C</p>	<p>Source: Referrals to CAMHS. (n = 162). Excluded: non-deliberate overdoses (38), social situation precluded family intervention (61) and psychiatric contra-indications (48). 109 refused and contact was lost with 17. 92% (n=149) followed up at 2 and 6 months.</p> <p>Age (of follow up group at point of overdose): Range: 11-16 years, Mean: 14.5 years, SD: 1.2 years</p> <p>Demographics: (follow up) 16 males and 133 females. 47: social class I, II or III non manual, 87 were social class III manual, IV or V. 15 subjects were either unknown or unclassified. No info re: ethnic origin</p>	<p>Family Functioning McMaster Family Assessment Device (FAD)</p> <p>Subscales: General Functioning</p> <p>Other Measures: - Suicidal Ideation Questionnaire - Hopelessness Questionnaire - Social Problem Solving Inventory - Schedule for Affective Disorders and Schizophrenia for School Age Children - Deliberate Self Harm Interview Schedule - General Health Questionnaire</p>	<p>Sig. difference between repeat 'self-harmers' and non-repeaters ($p=0.024$). Following Bonferroni corrections, family functioning was not significant.</p> <p>All significant variables (before Bonferroni) were entered into a logistic regression analysis and correctly predicted 6/7 children who would repeat an act of 'self-harm' (positive predictive value of 86%), while 124/140 children were correctly predicted not to (negative predictive value of 89%). But the majority of children who did go on to repeat were incorrectly classed as low risk by the model, therefore producing a low sensitivity of only 27% (6/22). Family functioning was not found to be one of the most important variables when the other five variables were accounted for.</p>	<p>Family functioning was found to be significantly associated with a repeat episode of 'DSH'. However, when Bonferroni corrections were made this factor was no longer significant.</p> <p>Significant variables (including family functioning) correctly predicted and had a strong positive and negative predictive value. However, the sensitivity of the predictive model was low and family functioning was not found to be one of the most important variables when the other five variables were accounted for.</p>	<ul style="list-style-type: none"> - No clear hypotheses - Originally a treatment study – is not representative of those who declined treatment. - No statistics regarding refusal rates. - No power calculation - No information regarding ethnic origin of sample - No standardised measure of depression severity or suicidal intent - No clear statement regarding ethical approval for this study, only the original intervention study
<p>De Wilde, Kienhorst, Diekstra & Wolters, (1993)*</p> <p>Quality Rating: C</p>	<p>Source: Institutions for mental health care and a screening of 9393 secondary students. n = 157. Suicide attempters = 48, depressed = 66, control = 43.</p> <p>Age: 'Suicide Attempters': Mean: 17.5 years, SD: 1.5 years. Depressed: Mean: 17.9 years, SD: 1.6 years. 'Normal': Mean: 17.5 years, SD: 1.3 years. No significant difference between groups for age ($p=0.24$)</p> <p>Demographics: Gender: 'Suicide Attempters': Boys: 7 (14.6%), Girls: 41 (85.4%). Depressed: Boys: 14 (21.2%), Girls:</p>	<p>Family Functioning: Dutch Family Environment Scale (FES)</p> <p>Subscales: Cohesion, Expressiveness, Ethics and Values, Organisation, Control, Conflict, Social Commitments, Recreation, Achievement-directedness.</p> <p>Other Measures: - Self-rating Depression Scale - Depression Adjective Check list - Attitude Towards Suicide List - Self esteem Scale - Dutch Personality</p>	<p>Cohesion Subscale: Sig. difference between groups ($p<0.01$). Tukey HSD: sig. difference between 'suicide attempters' and controls (means: 6.53 and 7.92) and depressed adolescents and controls (mean: 6.29 and 7.92). No sig. difference between 'suicide attempters' and depressed adolescents.</p> <p>Conflict Subscale: Sig. difference between groups ($p<0.001$). Tukey HSD: sig. difference between 'suicide attempters' and controls (means: 6.87 and 4.56) and depressed adolescents and controls (mean: 6.44 and 4.56). No sig. difference between 'suicide attempters' and depressed adolescents.</p> <p>Recreation Subscale. Sig. difference between groups ($p<0.05$). Tukeys HSD: sig. difference between depressed adolescents and controls</p>	<p>Three subscales of family functioning could differentiate 'suicide attempters' or depressed adolescents and "normal" controls. However the FES failed to differentiate depressed and 'suicidal' adolescents.</p> <p>A further 6 subscales failed to differentiate any groups questioning whether these variables are specific for either depression or 'suicide'.</p>	<ul style="list-style-type: none"> - 'Suicide attempt' occurred up to one year prior to assessment. - No clear definition of 'attempted suicide', unclear whether investigating attempted suicide or DSH - No power calculation - No statement regarding refusal rate - No information regarding ethnic origin - No diagnostic instrument - No statement regarding ethical approval

<p>52 (78.8%). 'Normal': Boys: 12 (27.9%), Girls: 31 (72.1%) No significant difference between groups for gender ($p=.3$)</p>	<p>Questionnaire - Locus of Control Scale - Hopelessness Scale - Psy Scale from the Dutch shortened MMPO - State Trait Anxiety Inventory - Life History Interview</p>	<p>(mean: 7.94 and 8.55). No sig. difference between 'suicide attempters' and depressed adolescents or controls. No further sig. differences between groups on any other FES subscales. Discriminate multivariate analysis involving all sig. variables clearly delineated the control group but failed to differentiate the depressed and 'suicidal' group.</p>	<p>Findings Family functioning variables were significant in models controlling for race and sex, but not in the more comprehensive multivariable models. It is possible that these variables exert their effects indirectly through a series of undesirable life events to which the affected adolescents are exposed. Conversely a clustering of undesirable life events could affect the genesis of suicidal behaviours through alterations in family functioning. The cross sectional nature of the data precludes conclusions regarding temporal relations. The observed associations between adaptability and suicide attempts indicated that although the perception of a rigid family was associated with suicide attempts, the perception of the opposite extreme (chaos) was not.</p>	<p>Limitations - No clear hypotheses - No definition of attempted suicide - No power calculation - No inferential statistics regarding refusal rates - No age range or mean only age groups. - No information regarding SES or income, only fathers educational level. - Suicidal intent and suicidal ideation was assessed using a non-standardised instrument - No discussion of generalisability - No statement about ethical approval</p>
<p>Author and Year Garrison, Jackson, Addy, McKeown & Waller (1991)* Quality Rating: C</p>	<p>Sample Characteristics Source: 4 public middle schools Phase 1 (school screening). $n = 1536$. 98% of eligible sample. Phase 2 ($n=315$) - follow up research interviews for: Subjects with the highest ($n=154$) or missing ($n=15$) CES-D scores. Subjects without a high CES-D score but meeting classification for probable depression ($n=27$), and a 12% random sample ($n = 119$). 73% ($n=229$) completed interviews. Age - Phase 1: < or equal 12 years: 36% ($n = 550$); 13 years: 47% ($n=726$); 14 years: 14% ($n=217$); > or equal to 15 years: 3% ($n=49$). Phase 2: < or equal 12 yrs: 35% ($n=80$); 13 yrs: 46% ($n=103$); 14 yrs: 16% ($n=35$); > or equal to 15 yrs: 4% ($n=8$). Demographics - Phase 1: 84% white, 15% black, 1% Asian American. Males: 50% ($n=766$), Females: 51% ($n= 776$) Phase 2: 76% white, 23% African American, 1% Asian American. Males: 45% ($n = 100$), Females: 55% ($n = 126$)</p>	<p>Measures Family Functioning: Family Adaptability and Cohesion Evaluation Scales (FACES-II) Other Measures: Phase 1: - Center for Epidemiological Studies Depression Scale (plus three suicide items) - Coddington Life Event Schedule for Adolescents (modified) Phase 2 - Schedule for Affective Disorders and Schizophrenia in School Aged Children</p>	<p>Analysis Weighted logistic regression analyses. Descriptive statistics for phase 2 students: Adaptability subscale: mean: 40.84, SD: 11.95 Cohesion Subscale: mean: 51.96, SD: 13.88 Simple logistic analyses which accounted for race and sex: Adaptability subscale was found to be a significant predictor of a suicide attempt: odds ratio: .95, (95% confidence interval .92-.99). Cohesion subscale was not found to be a significant predictor. Adaptability did not maintain significance following a more comprehensive multivariate model. Only major depressive disorder and undesirable life events maintained significant effects.</p>	

Author and Year	Sample Characteristics	Measures	Analysis	Findings	Limitations
<p>Guertin, Lloyd-Richardson, Spirito, Donaldson & Boergers (2001)</p> <p>Quality Rating: A</p>	<p>Source: A&E departments or paediatrics after a suicide attempt n = 95</p> <p>52 of which also reported self-mutilative behaviours 43 did not. N=3 refused to participate.</p> <p>Age: Range: 12-18 years Mean: 15.1 years Median: 15 years SD: 1.5 years</p> <p>Demographics: 84% female 71% white No information on SES</p>	<p>Family Functioning McMaster Family Assessment Device (FAD) Subscales: - General Functioning</p> <p>Other Measures - Functional Assessment of Self-Mutilation - Diagnostic Interview Schedule for Children - Suicide Intent Scale - Center for Epidemiologic Studies Depression Scale - Hopelessness Scale for Children - Revised UCLA Loneliness Scale - State-Trait Anger Expression Inventory - Adolescent Risk Taking Scale - Reckless Behaviour Questionnaire - Adolescent Drinking Index</p>	<p>ANCOVA's (including age and race as they were significantly different between groups) were used with Bonferroni corrections.</p> <p>No significant difference was found between 'SMB' and non-'SMB' group.</p> <p>Family functioning was therefore not included in the hierarchical logistic regression analysis.</p>	<p>Family functioning did not significantly differ between 'SMB' and non-'SMB' groups. Perhaps family dysfunction is equally problematic in both types of attempters.</p>	<p>- No power calculation reported - No information on SES of participants or ethnic origin of minorities</p>
<p>Harrington, Pickles, Aglan, Harrington, Burroughs & Kerfoot (2006)*</p> <p>Quality Rating: B</p>	<p>Source: Referrals to CAMHS. Control: patient list of primary care physicians (n=49)</p> <p>Initial study: n = 158/162. No data on exclusion/drop out rates of original study. 4 excluded because index episodes did not occur between 11 and 16 years</p> <p>Follow up – 6 years later. 2 left UK, 3 died (2 natural, 1 suicide), 13 refused, 6 failed to contact. Follow up n=132</p> <p>Age: DSP group (follow up): mean: 20.8</p>	<p>Family Functioning: McMaster Family Assessment Device (FAD)</p> <p>Other Measures (Baseline): - Suicidal Ideation Questionnaire - Hopelessness Questionnaire - Social Problem Solving Inventory - Schedule for Affective Disorders and Schizophrenia for School Age Children - Deliberate Self Harm Interview Schedule - General Health Questionnaire</p>	<p>Power: The study was designed to have better than 80% power to detect a risk of 'DSH' in adulthood of 5% in controls and 20% in cases at p<.05 using survival (log rank) methods.</p> <p>39 DSP group had repeated 'self harm' in adulthood. 4 in control group.</p> <p>Proportional hazards survival models showed that the risk of DSP in adulthood had no bivariate association (p<.1) with the total FAD Score.</p>	<p>Perceived levels of family functioning in adolescents who deliberately self-poisoned had no association with repeated incidences of 'self harm' (or depression) in adulthood (mean age 20 years).</p>	<p>- No information on refusal rates for the control group. - Originally a treatment study – sample is not representative of those who declined treatment. - Unclear whether study was investigating suicide attempts or DSH</p>

	<p>years, SD: 1.1 years. Control: Mean: 20.9 years, SD: 1.0 years</p> <p>Demographics</p> <p>DSP group (follow up): Female: 92%. Control Group: Female: 94%. DSP group (follow up): Black: 1%, Asian: 2%, Control Group: Black: 2%, Asian, 2%. DSP group (follow up): nonmanual (non professional) social class: 27%. Control group: nonmanual (non professional) social class: 33%</p>	<p>Follow up:</p> <ul style="list-style-type: none"> - Adult Life Phase Interview - Structured Clinical Interview for DSM-IV 			
<p>Author and Year</p> <p>Kaplan, Pelcovitz, Salzinger, Mandel & Weiner (1997)</p> <p><u>Quality Rating:</u></p> <p>B</p>	<p>Sample Characteristics</p> <p>Source:</p> <p>Entries on the New York State Central Register for Child Abuse and communities using random digit dialling. n = 198 (99 of which were controls). No information regarding refusal rates.</p> <p>Age (controls and experimental) Range: 12-18 years (+ or - 6 months) Mean: 15 years</p> <p>Demographics</p> <p>Half female, half male.</p> <p>White, middle class suburban populations</p>	<p>Measures</p> <p>Family Functioning: FACES III</p> <p>Other Measures</p> <ul style="list-style-type: none"> - Parental Bonding Instrument - Youth Self-Report - Adolescent Social Network Questionnaire - Schedule for Affective Disorders and Schizophrenia for School-Age children-Epidemiologic Version. - Suicide Probability Scale - Suicide Attempt Interview - Beck Depression Inventory 	<p>Analysis</p> <p>Univariate statistical comparison made between the 8 abused attempters and the 91 abused non-attempters.</p> <p>Abused suicide attempters perceived their families to be significantly less cohesive (median = 29) than did abused non-attempters (median = 28) ($p = .003$).</p> <p>No significant difference on measures of Family Adaptability between abused attempters (median = 24; IQR = 19.0-25.5) and abused non-attempters (Median = 22; IQR = 10-26)</p>	<p>Findings</p> <p>Within the group of physically abused adolescents, perceiving their families as noncohesive distinguished those who attempted suicide and those who did not.</p>	<p>Limitations</p> <ul style="list-style-type: none"> - Only physically abused adolescents therefore poor generalisability of findings - No power calculation - Small number of attempters - No information on refusal rates or whether taking part in the research was compulsory for families on the protection register. - No specific information on ethnic origin of participants or SES
<p>Author and Year</p> <p>Kerfoot, Dyer, Harrington, Woodham & Harrington (1996)</p> <p><u>Quality Rating:</u></p> <p>B</p>	<p>Sample Characteristics</p> <p>Source:</p> <ol style="list-style-type: none"> 1) A&E following self-poisoning 2) Attenders at psychiatric service who had not attempted suicide 3) Pupils randomly selected from the rolls of local schools <p>Controls matched by age and sex</p> <p>Number:</p> <ol style="list-style-type: none"> 1) n = 40/57, 2) and 3): n=40 each. 	<p>Measures</p> <p>Family Functioning: McMaster Family Assessment Device (FAD)</p> <p>Subscales: 6/7</p> <ul style="list-style-type: none"> - General Functioning - Communication - Roles - Affective Responsiveness - Affective Involvement - Behaviour Control 	<p>Analysis</p> <p>A priori power calculations showed that the study had better than 80% priori to establish the main study hypothesis.</p> <p>Communication: Sig. difference between overdose and psychiatric group ($p < .05$); and overdose and community control group ($p < .01$).</p> <p>Roles: The difference between overdose and the psychiatric group narrowly missed significance ($p = .05$). Sig. difference was found between the overdose and community control group ($p < .05$).</p>	<p>Findings</p> <p>Family dysfunction is a robust correlate of deliberate self-poisoning in adolescents.</p> <p>Family work is likely to be particularly important in aftercare services.</p>	<p>Limitations</p> <ul style="list-style-type: none"> - No clear hypotheses - Procedures were not clear regarding which measures were used at follow up. - No inferential statistics used to assess differences between those who refused and those who participated - No information on ethnic origin or SES - No standardised measure

<p>Author and Year Kienhorst, de Wilde, Diekstra & Wolters (1992)*</p> <p>Quality Rating: D</p>	<p>Sample Characteristics Source: Half recruited through institutions of mental health care and the other half by screening 9393 students of secondary education Attempted Suicide: n = 48. Depressed group: n = 66. No information regarding refusal rates. Age: 'Attempted suicide': Range: 14-21 years, Mean: 17 years, SD: 1 year Depressed: Range: 12-21 years, Mean: 17 years, SD: 1 year Demographics: 'Attempters': 41 female, 7 male.</p>	<p>Measures Family Functioning Dutch Family Environment Scale (FES) Other Measures: - Life History Interview - Depression Symptom List - Process Interview - Contact with Suicidal Behaviour List - Attitude Towards Suicide - The Utrecht Coping List - Self-rating Depression Scale - Self-esteem Scale - The Dutch Personality Questionnaire - Locus of Control Scale</p>	<p>Analysis No significant differences on FES between depressed adolescents and adolescents who have 'attempted suicide'. No information regarding descriptive statistics.</p>	<p>Findings Most of the characteristics differentiating between 'attempters' and non-attempters do not have discriminative power when comparing suicide attempters with depressed adolescents, which makes the following conclusion tentative: differences between suicide attempters and non-attempters as reported in the literature can possibly be attributed to an affective disorder that is present in most of the suicide attempters.</p>	<p>Limitations - No clear hypotheses - 'Attempted suicide' up to one year prior to assessment - Unclear whether investigating attempted suicide or DSH - No description of school screening procedure - No power calculation - No refusal rates - No reports of SES or ethnic origin - No diagnostic instrument for depression - Non-significant variables and descriptive statistics</p>	<p>of depression - Use of repetitive t-tests instead of ANOVAs - No Bonferroni correction, despite multiple comparisons.</p>
<p>Follow up: The first 25 overdose subjects (27 approached, 2 refusals) on average 35 days (range: 23-77 days) after the first assessment. The first 25 psychiatric controls (28 were approached and 3 refused) on average 35 days (range: 21-77 days) after the first assessment. Age: 1) Range: 11-16 years, Mean: 14.9 years, SD: 1.5 years 2) mean: 14.9 years 3) mean: 15.0 years Demographics: 34 female, 6 male No info on race or deprivation levels.</p>	<p>Other Measures - Schedule for Affective Disorders and Schizophrenia: Child Version. - Deliberate Self Harm Interview Schedule - Hopelessness Scale for Children - Suicidal Ideation Questionnaire - The Generation of Alternative Solutions Subscale for the Social-Problem Solving Inventory - Westminster Substance Abuse Questionnaire</p>	<p>Affective Responsiveness: Sig. difference between overdose and psychiatric group ($p < .05$); and overdose and community control group ($p < .05$). Affective Involvement: No sig. difference between overdose and psychiatric group, but sig. difference between overdose and community control ($p < .05$). Behaviour Control: No sig. difference between overdose and psychiatric group, but a sig. difference between overdose and community control ($p < .05$). General Functioning: Sig. difference between overdose and psychiatric group ($p < .05$); and overdose and community control group ($p < .001$). Total: Sig. difference between overdose and psychiatric group ($p < .05$); and overdose and community control group ($p < .001$). At follow up, FAD unhealthy functioning total scores were sig. reduced ($p < .05$) in overdose group from a T1 to T2. FAD total scores in the psychiatric group did not sig. decline between T1 and T2.</p>	<p>Analysis No significant differences on FES between depressed adolescents and adolescents who have 'attempted suicide'. No information regarding descriptive statistics.</p>	<p>Findings Most of the characteristics differentiating between 'attempters' and non-attempters do not have discriminative power when comparing suicide attempters with depressed adolescents, which makes the following conclusion tentative: differences between suicide attempters and non-attempters as reported in the literature can possibly be attributed to an affective disorder that is present in most of the suicide attempters.</p>	<p>Limitations - No clear hypotheses - 'Attempted suicide' up to one year prior to assessment - Unclear whether investigating attempted suicide or DSH - No description of school screening procedure - No power calculation - No refusal rates - No reports of SES or ethnic origin - No diagnostic instrument for depression - Non-significant variables and descriptive statistics</p>	<p>of depression - Use of repetitive t-tests instead of ANOVAs - No Bonferroni correction, despite multiple comparisons.</p>

Author and Year	Sample Characteristics	Measures	Analysis	Findings	Limitations
King, Segal, Kaminski, Naylor, Ghaziuddin & Radpour (1995) Quality Rating: B	Depressed: 52 female, 14 male No information on ethnic origin/levels of social deprivation Source: Psychiatric Inpatients n = 100/148 (67.5%) who were located and agreed to follow up. Age: Mean: 15.1 years SD: 1.4 years Demographics: 59 female, 41 male 87% Caucasian. Socio-economic status: I (11%), II (14%), III (20%), IV (34%), and V (20%).	- The Hopelessness Scale - The Psychopathology Scale - State-Trait Anxiety Inventory Family Functioning: McMaster Family Assessment Device (FAD) - General Functioning Other Measures: - Schedule for Affective Disorders and Schizophrenia for School-Age Children - Spectrum of Suicidal Behaviour Scale - Suicidal Ideation Questionnaire- Junior - Reynolds Adolescent Depression Scale - Hamilton Rating Scale for Depression	Adolescents who were 'suicidal' post-hospitalisation reported sig. more negative perceptions of family functioning during their hospitalisation, $p<.02$. When these analyses were repeated for the sub-sample of adolescents with diagnoses of affective disorders to determine whether initial self reported family dysfunction retained its significant of 'suicidal behaviour' in a particularly "high risk" sub-sample, no significant differences were found although the direction remained the same.	Adolescent's perceptions of family dysfunction, assessed during hospitalisation, differentiated adolescents who were and were not 'suicidal' post-hospitalisation. Adolescent's perceptions of family dysfunction did not predict 'suicidal behaviour' within the sub-sample of adolescents with affective disorders. This is consistent with previous studies revealing moderately strong associations between perceived family dysfunction and severity of depression.	were not reported. - No statement regarding ethical approval - Aims were to identify predictors of 'suicide attempts', yet no regression analysis was used - No information on consent follow up - No power calculation - Inpatients only - No information on ethnic origin of all participants - No statement regarding ethical approval - Used the term 'suicidal behaviour' but was inclusive of DSH
Author and Year	Sample Characteristics	Measures	Analysis	Findings	Limitations
Martin, Rozanes, Pearce & Allison (1995) Quality Rating: B	Source: Secondary School Number: n = 352 (84%) 64 (16%) incomplete or distorted responses. No significant differences between them and the study group. Age: Mean: 15.2 years No age range of sample Demographics: 151 female, 201 male No info on ethnic minority of SES of sample	Family Functioning: McMaster Family Assessment Device (FAD) Subscales: Problem Solving (FAS-PS), Communication (FAD-Comm), Roles (FAD-R) Affective Responsiveness (FAD-AR), Affective Involvement (FAD-AI), Behaviour Control (FAD-BC), General Functioning (FAD-GF) Other Measures: Beck Depression Inventory	Attempted Suicide. Attempters scored their families as sig. less healthy than non-suicidal adolescents on all FAD subscales. Differences for FAD-R ($p<.0001$), FAD-AR ($p<.0001$) and FAD-GF ($p<.0001$) were highly sig. Only FAD-GF (adjusted $R^2 0.07$, F-test 22.1) entered into the FAD subscales stepwise regression. But when all 24 available variables were examined further in regression with attempters as the criterion, none of the FAD subscales made an independent contribution to the variance. DSH: No sig. difference between adolescents who DSH and those who did not on FAD-R and FAD-BC. FAD-AR ($p<.01$), FAD-AI ($p<.01$) and FAD-GF ($p<.0001$) reached significance. The 15 attempters also claiming DSH scored their families as more dysfunctional than 15 denying DSH on all FAD subscales except FAD-AI, but	In univariate analysis adolescents with DSH and suicide attempt(s) scored most FAD subscales higher. FAD-R and FAD-AR are both associated with attempts. Dysfunctional FAD-AI and FAD-AR are associated with DSH. One intervening variable appears to be depression, which contributed directly to the variance of DSH and attempts. In turn FAD-GF contributes more to the variance of depression (an independent 19.2%) than it does independently to DSH or suicide	- No definition of attempted suicide/DSH - No power calculation - No information on age range, SES or ethnic origin of sample - No diagnostic instrument - No standardised measure of suicidal intent - No other standardised instruments used

				no sig. difference. No other differences distinguished self-harmers from attempters. In stepwise regression only FAD-GF contributed to the DSH variance (adjusted R ² 0.04, F-test 17.0), but in the full 21-factor multiple regression none of the FAD subscales made an independent contribution. No FAD subscales discriminated suicidal from nonsuicidal depressives though FAD-R, FAD-AR and FAD-GF all showed clear if nonsig. differences in the expected direction	attempt. If these relationships are replicated, there may be some support for a model, a measurable pathway – family dysfunction leads to depression, which, in turn, contributes to DSH, and suicide attempts. Family dysfunction as measured by the FAD does not contribute directly or independently to suicidal behaviours.	
Author and Year	Sample Characteristics	Measures	Analysis	Findings	Limitations	
McKeown, Garrison, Cuffe, Waller, Jackson & Addy (1998) * Quality Rating: C	Source: 4 public middle schools Phase 1 (school screening). n = 1556. 98% of eligible sample. Phase 2 (n=247/359 observations) - follow up research interviews for: Subjects with the highest or missing CES-D scores. Subjects without a high CES-D score but meeting classification for probable depression, subjects with a high suicide screening score, and a random sample of the remaining students Age: Phase 1: < or equal 12 years: 36% (n = 550); 13 years: 47% (n=726); 14 years: 14% (n=217); > or equal to 15 years: 3% (n=49). Phase 2: baseline characteristic of 359 observations. < or equal 12 yrs: 28.6% (n=107); 13 yrs: 37.8% (n=142); 14 yrs: 28.6% (n=97); > or equal to 15 yrs: 5% (n=19). Demographics: Phase 1. 84% white, 15% black, 1% Asian American. Males: 50% (n=766). Females: 51% (n= 776)	Family Functioning: Family Adaptability and Cohesion Evaluation Scales (FACES-II) Subscales: Cohesion Other Measures: Phase 1. - Center for Epidemiological Studies Depression Scale (plus three suicide items) - Coddington Life Event Schedule for Adolescents (modified) Phase 2 - Schedule for Affective Disorders and Schizophrenia in School Aged Children	Simple models of regression found that family Cohesion, as an independent variable was inversely associated with suicide attempts (OR: 0.90, 95% CI: 0.85-0.95). Increasing baseline family Cohesion score was a significant protective factor for suicide attempts in a multivariable regression model (OR: 0.90, 95% CI: 0.86-0.95). Cohesion scores were lower for those who moved from the referent group to suicidal behaviours at follow-up compared with those who remained in the referent group.	Findings suggest that decreasing perceived Cohesion (perhaps indicating increasing dysfunction) is associated with risk for more severe forms of suicidal behaviour. Not living with both parents was not associated with any suicidal behaviours, suggesting family structure is less important than the relationships in the family.	- No definition of attempted suicide - No power calculation - No inferential statistics on those who refused/dropped out of study - No age mean, range or standard deviation - No standardised measure of suicidal intent - No statement regarding ethical approval	

<p>Author and Year Rubenstein, Halton, Kasten, Rubin & Stechler (1998)</p> <p>Quality Rating: D</p>	<p>Sample Characteristics Source: Public High School. n = 272 (68%) Age: 70% in grade 10, 30% in grade 11. Demographics: 157 female, 115 male. The students were largely white and middle class: 59% of mothers and 69% of fathers had completed at least some college, 44% of the mothers and 57% of the fathers were college graduates; 23% of the fathers had graduate degrees.</p>	<p>Measures Family Functioning: Family Adaptability and Cohesion Evaluation Scales (FACES-II) Subscales: Cohesion. Other Measures: - The Beck Depression Inventory - The Adolescent Stress Scale - The Adolescent Friendship Inventory</p>	<p>Analysis Variables were initially explored by means of point-biserial correlations. Measures that were significantly related to 'suicidality' were further analysed via logistic regression. Point biserial correlations revealed that Family Cohesion was significantly related to 'suicidality' ($r = -.18, p < .01$). When entered into a logistic regression analysis, Total Stress was significant with family Cohesion controlled ($\chi^2 = 15.55, p < 0.001$); however, Family Cohesion had no overall protective effect with Total Stress controlled ($\chi^2 = .48, NS$).</p>	<p>Findings Family Cohesion was a protective factor against 'suicidality'. For adolescents in non-intact families, family cohesion significantly offsets the effects of stress, lowering five fold the probability of 'attempted suicide'. For adolescents in intact families, family Cohesion provides no further protection in buffering stress.</p>	<p>Limitations - No inclusion or exclusion criteria or power calculation - No inferential statistics on refusers - No reports of age, SES or ethnic origins of sample - No diagnostic instruments or assessment of suicidal intent - Assessment of other relevant variables did not use standardised measures - No statement regarding ethical approval</p>
<p>Author and Year Seguin, Lynch, Labelle & Gagnon (2004)</p> <p>Quality Rating B</p>	<p>Sample Characteristics Source: Variety of locations (n=124). No information regarding refusal rates. Age: Range: 14-25 years, Mean: 17.73 years, SD: 2.77 years Demographics: 85 female, 39 male No ethnic origin data No significant differences between groups on socio-demographic data but no descriptive stats</p>	<p>Measures Family Functioning: Family Assessment Measure (FAM) - General Scale Other Measures: - Lethality of Suicide Attempt Rating Scale - Scale for Suicide Ideation - Early Loss and Family Mental Health History - Irrational Beliefs Test - Reasons for Living - The Beck Depression Inventory - Parental Bonding Instrument</p>	<p>Analysis The three groups were compared using ANOVAs and <i>post hoc</i> Student-Newman-Keuls tests. No significant differences were found between attempters and ideators on General Scale of the FAM. Scores on the General Scale of the FAM were significantly different for the SA and the SI groups compared to the NS group ($p < .001$).</p>	<p>Findings Greater family dysfunction was more prominent in both suicidal groups compared to the non-suicidal group. However, it failed to differentiate ideators and attempters.</p>	<p>Limitations - No power calculation - No refusal rate reported - SES or ethnic origin of sample was not reported - No diagnostic instrument - No statement regarding ethical approval</p>

Author and Year	Sample Characteristics	Measures	Analysis	Findings	Limitations
<p>Spirito, Valeri, Boegers & Donaldson (2003)</p> <p>Quality Rating</p> <p>A</p>	<p>Source: A&E or paediatric ward following suicide attempt n = 58 / 76 (13 lost at follow up) 93% agreed to participate</p> <p>Age: Range: 12-18 years, Mean: 14.9 years</p> <p>Demographics: 53 female, 5 male 73% white, 12.7% Hispanic, 11.1% African-American, 3.2% another background. 28.6% at poverty level, 21.4% were of low SES, 50% middle or high SES.</p>	<p>Family Functioning: McMaster Family Assessment Device (FAD) Subscales: - General Functioning, Communication, Problem Solving</p> <p>Other Measures: - Suicidal Intent Scale - CES-D - Regulation of Affect and Impulses - Hopelessness Scale for Children - State-Trait Anger Expression Inventory - Reckless Behaviour Questionnaire - Adolescent Drinking Questionnaire</p>	<p>Compared to adolescents who did not reattempt suicide, those adolescents who did reattempt reported their families as having poorer General Functioning ($p < .05$) and Communication skills ($p < .05$) as measured by the FAD. No sig. differences were found on the FAD Problem Solving scale.</p> <p>Partial correlations between FAD general functioning ($r = .12$), FAD communication ($r = .15$) and reattempt status were no longer sig. when controlling for CES-D scores. When controlling for the FAD variables, partial correlations between CES-D scores and follow up suicidal behaviour remained significant or marginally significant.</p>	<p>The observed relation between continued suicidal behaviour and family dysfunction is consistent with other research findings. However, results from partial correlations indicate that after controlling for depressive symptoms, the relation between continued suicidal behaviour and family functioning was reduced. Thus, although both depressive symptoms and family functioning seem to play a role in the maintenance of suicidal behaviour, and family functioning can in turn affect mood state, the severity of depressive symptoms appears to be the better predictor of continued self harm.</p>	<p>- No power calculation</p> <p>- No standardised diagnostic instrument used</p> <p>- No inferential statistics on refusals</p> <p>- Psychiatric diagnoses not taken into account in analyses</p> <p>- No inclusion / exclusion criteria</p>

* Papers report the findings of the same initial sample group:

- Chitsabesan, Harrington, Harrington, & Tomenson, (2003) and Harrington, Pickles, Aglan, Harrington, Burroughs & Kerfoot (2006)
- Garrison, Jackson, Addy, McCown, & Waller (1991) and McCown, Garrison, Cuffie, Waller, Jackson & Addy (1998)
- Kienhorst, De Wilde, Diekstra & Wolters (1992) and De Wilde, Kienhorst, Diekstra, Wolters, (1993)

Diagram 1: Flow Chart of Exclusion of Articles

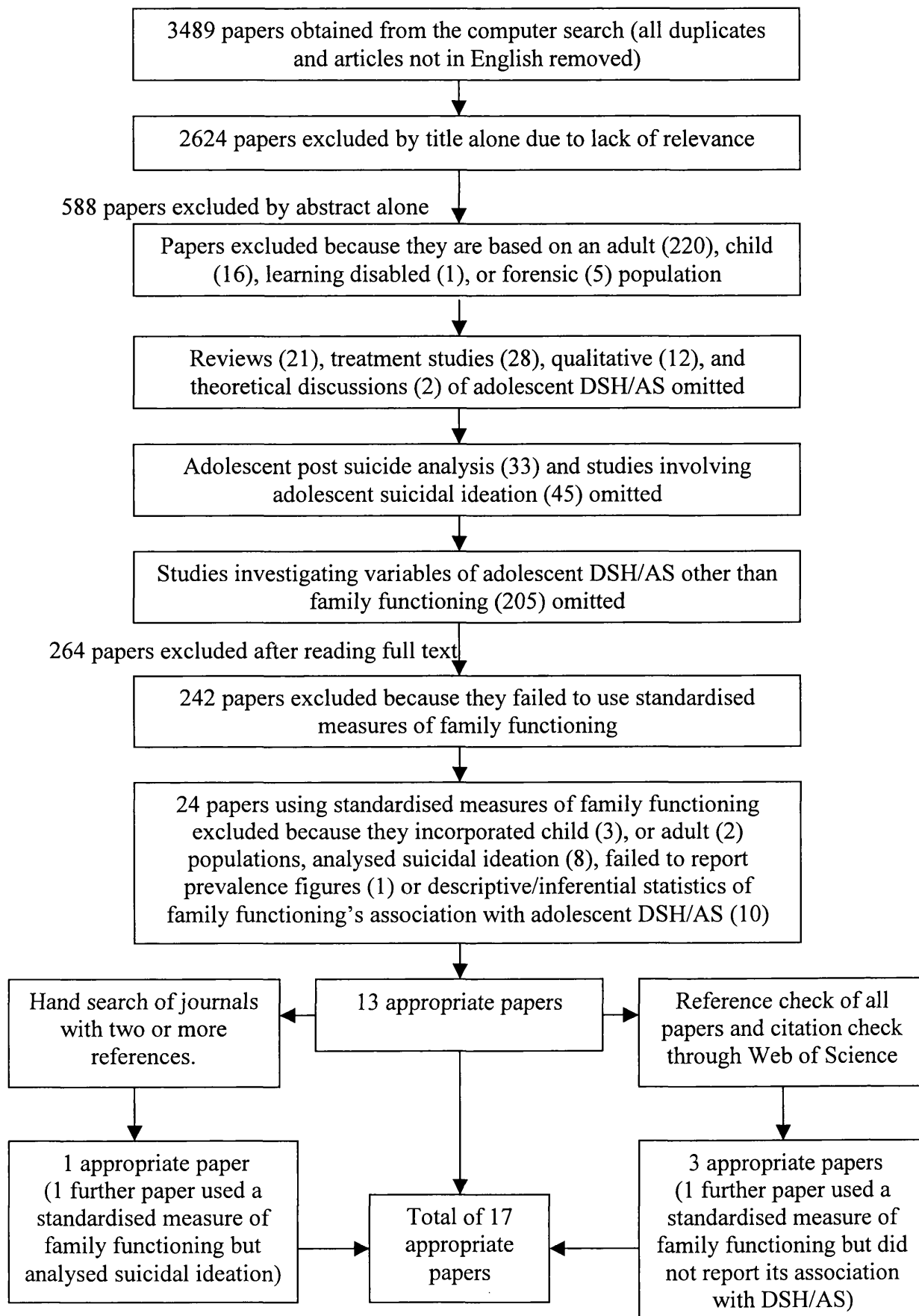


Table 2: Rating Percentages of each Subsection of the Quality Rating Checklist

Studies	Methodology	Sample	Measures	Results	Ethics	Total Percentage
Adams, Overholser & Lehnert (1994)	50%	67%	64%	50%	0%	55% (C)
Boergers, Spirito & Donaldson (1998)	57%	71%	71%	50%	50%	66% (B)
Brinkman-Sull, Overholser & Silverman (2000)	75%	71%	64%	63%	0%	67% (B)
Chitsabesan, Harrington, Harrington & Tomenson (2003)	25%	71%	64%	75%	50%	53% (C)
De Wilde, Kienhorst, Diekstra & Wolters (1993)	40%	50%	69%	63%	0%	50% (C)
Garrison, Jackson, Addy, McKeown, & Waller (1991)	75%	43%	64%	13%	0%	53% (C)
Guertin, Lloyd-Richardson, Spirito, Donaldson & Boergers (2001)	86%	57%	94%	100%	50%	82% (A)
Harrington, Pickles, Aglan, Harrington, Burroughs & Kerfoot (2006)	59%	93%	57%	88%	100%	72% (B)
Kaplan, Pelcovitz, Salzinger, Mandel & Weiner (1997)	55%	43%	94%	88%	0%	67% (B)
Kerfoot, Dyer, Harrington, Woodham & Harrington (1996)	82%	57%	64%	37%	0%	65% (B)
Kienhorst, de Wilde, Diekstra & Wolters (1992)	30%	50%	69%	25%	0%	43% (D)
King, Segal, Kaminski, Naylor, Ghaziuddin & Radpour (1995)	60%	86%	75%	75%	0%	70% (B)
Martin, Rozanes, Pearce & Allison (1995)	70%	57%	42%	89%	100%	64% (B)
McKeown, Garrison, Cuffe, Waller, Jackson & Addy (1998)	65%	57%	64%	63%	0%	59% (C)
Rubenstein, Halton, Kasten, Rubin & Stechler (1998)	55%	29%	12%	63%	0%	45% (D)
Seguin, Lynch, Labelle & Gagnon (2004)	60%	43%	63%	88%	0%	60% (B)
Spirito, Valeri, Boergers & Donaldson (2003)	65%	100%	69%	75%	50%	75% (A)

Chapter 3
Major Research Proposal

An Investigation of the Self in Adolescents that Deliberately Self-Harm

Major Research Proposal submitted in partial fulfilment of the requirements for the degree of
Doctorate in Clinical Psychology

Prepared in accordance with the requirements stated in the
Doctorate of Clinical Psychology Course Handbook (Appendix 3.1)

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Summary of Project

This study will investigate the self-representations of adolescents that deliberately self-harm (DSH) and contrast them to the self-representations of adolescents with a depressive disorder, and an adolescent control group. Specifically, it will assess their level of self-complexity and the extent of self-discrepancy between various domains of their self-descriptions. This study is an extension of Orbach, et al.'s (1998) study of self-representation of suicidal adolescents.

1. Introduction

Over the past 20 years the number of people admitted to Scottish Hospitals after an episode of DSH has increased and now constitutes approximately 10,000 of the annual hospital admissions (National Framework for the Prevention of Suicide and Deliberate Self-Harm in Scotland, 2001).

Nonfatal DSH is most common in young people, especially young females (Schmidtke, et al., 1996). This is particularly true in the UK, where adolescents and young adults are involved in more hospital presentations for DSH than any other age group (Hawton, et al., 1996).

Furthermore, it has become increasingly clear that a significant amount of DSH occurs in the community but does not result in a hospital presentation. On the basis of a large school based study, Hawton, et al., (2002) demonstrated that 6.9% of adolescents had deliberately self-harmed, yet only 12.6% of these episodes had resulted in hospital presentation.

Orbach, et al., (1998) investigated Baumister's theory of "Suicide as an Escape from Self" (1990) by assessing the self-representations of suicidal adolescents. Baumiester (1990) hypothesised that failure to attain either self or socially imposed unrealistic standards stimulates a series of steps of self blame, negative self awareness, negative affect, and a desire to escape this painful self awareness. This leads to disinhibition of the constraints of social behaviour, which renders suicide more acceptable and likely. He therefore proposed that suicide emerges as an escalation

of a person's wish to escape from awareness of current life problems and their implications about the self.

Baumeister's theory incorporates Higgins' self-discrepancy theory (1987). Higgins emphasised the importance of comparing the self against salient standards, and stated that negative affect will follow an awareness of self as falling short of these standards. Higgins proposed that two types of negative self-discrepancies are associated with two broad classes of negative affect.

Specifically, seeing oneself as falling short of one's ideals (actual-ideal discrepancy) produces dejection-related affect such as depressed mood, whereas seeing oneself falling short of one's duties, obligations and moral standards (actual-ought discrepancy) produces agitation-related emotions such as guilt and anxiety.

The investigation of self-discrepancies in adolescents is clearly important when placed within a developmental context. The cognitive capacity for what Piaget termed "formal operations" begins to develop around 11 years but is probably not fully capable of realisation until the ages of 14 to 16 years. (Inhelder & Piaget, 1958). At this time, thought becomes more abstract and less tied to concrete reality. Adolescents become more aware of their role in the world and can imagine or fantasise the future consequences of different ideas, attitudes and courses of action, without having to live them out and experience them in concrete reality. It is at this point that adolescents become more aware of the "self" and any discrepancies between their actual, ideal and ought-self will become apparent. Any distress that these discrepancies may cause will be exacerbated further as the adolescent distances himself from adult relationships, depriving himself of a source of emotional support at times of crisis. Therefore, the developmental stage of adolescence promotes introspection that could lead to the initial steps of negative self-awareness; negative affect and a desire to escape that were highlighted in Baumeister's (1990) theory.

Orbach, et al., (1998) assessed self-discrepancies in suicidal adolescents and found that, in comparison to a control group, suicidal participants showed relatively high discrepancies between the actual and ideal, as well as between the actual and ought aspects of the self, but found no significant differences between the non-suicidal psychiatric group and the suicidal group. This is in contrast to Baumiseters (1990) theory that would hypothesise that suicidal adolescents would have significantly larger discrepancies as they report more depressive symptomatology and trait anxiety than non-suicidal youths (Goldston, et al., 1996). However, in order to investigate these discrepancies Orbach, et al. (1998) used the “Selves Questionnaire” (Higgins, 1987). This is a free response measure designed to measure the intensity and quality of self-discrepancies. This measure has been criticised for its low reliability and methodological problems (Key, et al, 2000). Its lack of standardisation requires that assessors use their own discretion at times in the scoring of the questionnaire. This study will repeat Orbach, et al.’s (1998) assessment of self-discrepancies in suicidal adolescents using a more standardised assessment measure: Repertory Grids.

The Repertory Grid Technique is an interview technique designed to document the “personal constructs” of the interviewees. Personal construct theory (Kelly, 1955) proposes that in order to make sense of our world, ourselves and the particular situations we encounter, we all create, and re-create, or own theoretical framework. This framework can be used to make interpretations or discriminations that are termed personal constructs. Kelly proposed that personal constructs are bipolar by arguing that we never affirm anything without simultaneously denying something. E.g. by saying that Mary is *honest*, we are not saying that she is *honest* but is not a *battleship* or the *square root minus one*. Instead we are saying that Mary is *honest* but she is not a *crook* or *evasive*, or whatever your opposite personal construct may be. Often the opposite end of the pole

gives us a clear meaning of the construct. Through a system of these personal constructs an individual strives to predict and control his world and Kelly sees anticipation as the dominant motivational force. How a person construes himself will determine how he behaves psychologically, physically and emotionally. His self-construct system will affect his manner of anticipating and coping with both the normal and abnormal stresses of life and therefore is a critical variable in depression, anxiety and deliberate self-harm.

The Repertory Grid Technique was designed as a means of exploring others construct systems and formalises this process by assigning mathematical values to the relationships between a person's constructs. It enables us to focus on particular subsystems of construing and to note what is individual and surprising about the structure and content of an individual's outlook on the world (Fransella, et al, 2004). Previous research using the Repertory Grid Technique has found a significant discrepancy between actual and ideal self states amongst depressed patients, in comparison to controls, that reduced following drug therapy (Sheehan, 1981). However, to my knowledge, the method has never been used with adolescents that deliberately self-harm. The Repertory Grid Technique lends itself well to the assessment of adolescents. Adolescence is a time when identity formation is still in process, therefore a secure knowledge of one's future self does not yet exist. Instead adolescents have to rely on other indicators of accomplishment at times of stress such as academic performance, popularity and athleticism. Adolescents will therefore have a significantly different construct system and outlook on the world than their fully developed adult equivalents. This proves problematic when attempting to psychometrically assess adolescents using adult based measures as such measures may fail to identify an area of great significance and distress for an adolescent. However, the Repertory Grid Technique allows an adolescent to identify those constructs that are pertinent and individual to them, and formalises this process by assigning mathematical values to the relationships between constructs.

Orbach, et al., (1998) also investigated self-complexity. The Self-Complexity Model (Linville, 1987) refers to the number of self-aspects (e.g. myself as a student, a daughter etc.) that a person uses for organising information and the degree to which he or she tends to distinguish between different aspects of the self and analyses information using different perspectives. Those high in self-complexity will have more self-aspects and maintain greater distinctions among those self-aspects. Greater distinction between self-aspects protects from the “spillover process” (Linville, 1987) whereby a negative event activates a self-aspect and then activation spreads to other associated self-aspects. Furthermore, if a person has many different self-aspects the proportion of aspects left unaffected by a negative event may serve to moderate the impact of the negative event. The model also proposes the “self complexity-affective extremity hypothesis” whereby people lower in self-complexity will experience greater mood swings in affect and self-appraisal in response to life events (Linville, 1985). Orbach, et al., (1998) related these self-concepts to the “intense negative feelings of suicidal youngsters and the rapid shift in dysphoric moods that they experience” and found that suicidal individuals had lower self-complexity levels than psychiatric controls. There is also mounting evidence that many DSH patients demonstrate specific deficits in the ability to problem solve (e.g. Linehan, et al. 1987; McLeavey et al, 1987; Schotte & Clum, 1987; Williams & Pollock, 2000). It could be stated that a reduced number of self-aspects, and therefore a reduced self-complexity, will produce a one-dimensional approach to problem solving and a difficulty in seeing a situation from an alternative perspective. Therefore it could be hypothesised that adolescents who deliberately self-harm will have significantly lower levels of self-complexity than controls and depressed adolescents. (Although depressed adolescents may also experience poor problem solving abilities they do not present with the same rapid mood swings as adolescents that deliberately self-harm).

Finally, the majority of studies of DSH have been based in Accident and Emergency Departments where a high proportion of participants have taken an overdose. Therefore, within the research there has been an under representation of people who deliberately self-harm using methods other than an overdose, and an over-representation of those with strong suicidal intent. In a questionnaire based study of over 6000 school children Rodham, et al, (2003) reported that out of 306 children that admitted participating in DSH only 36% reported that their motive for this action was that they wanted to die. This study aims to recruit participants from Child and Adolescent Mental Health Services, which accept adolescents who have and have not presented at Accident and Emergency as a consequence of their DSH.

2. Aims and Research Questions

2.1 Aims

The aim of this study is to compare the self-representations of adolescents who deliberately self-harm to the self-representations of adolescents with a depressive disorder and an adolescent control group. Specifically, it will assess participant's level of self-complexity and the degree of self-discrepancy between various domains of their self-descriptions. As adolescents that participate in self-harming behaviours have reported more depressive symptomatology and trait anxiety than non suicidal youths (Orbach, 1997) this study will aim to investigate whether adolescents who deliberately self-harm have significantly larger self-discrepancies than adolescents who are depressed and an adolescent control group. Furthermore, taking into account the rapid shifts in dysphoric mood that adolescents who deliberately self-harm experience and the mounting evidence to suggest DSH patients have specific problem solving deficits, adolescents that deliberately self-harm should have significantly lower levels of self-complexity than both the control group and the adolescent depressed group.

This study aims to extend Orbach, et al.'s, (1998) study of self-representation of suicidal adolescents by using more standardised measures to assess the self-representations of adolescents that deliberately self-harm. In order to reduce the over-representation of subjects who have high suicidal intent, present in previous research, this study will recruit from community services.

2.2 Hypotheses

Hypothesis 1:

Adolescents that deliberately self-harm will have significantly larger self-discrepancies than all other groups.

Hypothesis 2:

Adolescents that deliberately self-harm will have significantly lower levels of self-complexity than all other groups.

3. PLAN OF INVESTIGATION

3.1 Participants

Participants will consist of 3 groups of 18 male and female adolescents (age range 12-17 years).

Participants in Group A will be adolescents that have engaged in recent (within the last month) DSH. Group B will consist of adolescents suffering from a depressive disorder (as defined by DSM-IV) and Group C will be a control group.

3.2 Recruitment.

Participants in Group A will be recruited from Child and Adolescent Mental Health Services (CAMHS). Referrals to the CAMHS teams include adolescents that have deliberately self-harmed but may or may not have required hospitalisation.

Group B (adolescents with a depressive disorder, as defined by DSM-IV) will also be recruited from the CAMHS teams. Permission has been granted to recruit participants from these services. Susan Anne Baird (Clinical Psychologist, Adolescent Psychology Directorate) has agreed to supervise me in these clinical settings.

The control group will be recruited from a local youth group (yet to be confirmed) and will be matched for age, level of education and gender.

3.4 Measures

The following measures will be used as part of a test battery with participants. It is estimated that this battery will take approximately 1 hour, however timing will largely depend upon the individual involved. Taking into account fatigue and poor concentration levels, particularly amongst adolescents that are depressed, two sessions may be required to complete all of the following assessment materials.

Measure of Self-Discrepancies.

Self-discrepancies will be measured using the Repertory Grid Technique (Kelly, 1955). In order to establish a general comparability the following persons (elements) will be presented to the participant: self, ideal self, ought-self, mother (or female caregiver), father (or male caregiver), male friend, female friend, someone I like, someone I dislike, boss/teacher and a further two

elements that the participant can choose. Constructs will then be elicited using the standard triadic procedure (Bannister & Fransella, 1980). This will involve selecting three of the elements and asking in which way two of the three are alike and different from the third. The bipolar constructs are formed using the “alike” and “different” characteristics. Finally, participants will be asked to rate the elements on a 7-point Likert scale using the supplied constructs.

Measure of Self-Complexity

Self-complexity will be measured by a trait-sort task following Linville's (1987) procedure. In this task participants receive a packet of randomly ordered cards, each containing the name of a trait. Participants will be given standardised instructions asking them to think about themselves and to “sort those traits that are descriptive of you into groups according to which traits you think belong together”. Participants will be told that traits can be sorted on any meaningful basis and that each group might represent a different aspect of the self. They will also be informed that they can form as many or as few groups as they find meaningful, that a trait can be placed in more than one group, and that they do not have to use every trait. On completing the card sorting task, participants will then be asked to rate the extent to which each pair of self-relevant groups are similar on a bipolar scale ranging from 1 (not at all) to 6 (very much). Four self-complexity scores can be computed a) the number of traits a participant chooses as self-descriptive; b) the number of self-aspects (categories) that participants differentiate in describing themselves; c) the degree of redundancy of the above self-aspects – the mean number of attributes that are sorted on more than one self-aspect divided by the total number of attributes sorted and d) the averaged perceived similarity between the self-relevant categories.

Diagnosis of Depression

The depression component of the SCID interview (Spitzer, et al, 1998) will be used to confirm that participants in the depressed group (Group B) meet criteria for a DSM-IV diagnosis (American Psychiatric Association, 1994). It will also be used for clinical information with participants in the DSH group and to confirm that participants in the control group do not meet these criteria. Training requirements will be met as recommended by the SCID manual.

Measure of Depression and Anxiety Levels

The Hospital Anxiety and Depression Scale (HADS) is a screening instrument for clinically relevant anxiety and depressive states (Zigmond and Snaith, 1983). The HADS has adequate test-retest reliability and factor structure, and discriminates between adolescents diagnosed with depressive or anxiety disorders and those without these diagnoses (White, et al, 1999).

Measure of Suicidal Intent

The Beck Suicide Intent Scale (Beck, et al., 1974) will provide a means of assessing the “intent” or purpose of the self-harming behaviour. This will also serve as a screening measure so that relevant services can be informed immediately if an adolescent expresses high suicidal intent.

Measure of Deliberate Self-Harm

The Acts of Deliberate Self-Harm Inventory (Davidson, et al, 2006) is designed to ensure accurate collection of data about attempted acts of suicide and incidents of DSH. This measure will be used to determine if an act of DSH was intentional and to confirm that adolescents in the control and depressed group have not participated in any DSH in the past 12 months.

3.5 Design and Procedures

This is a between subject design where the dependent variables are measures of self-complexity and self-discrepancy and independent variables are the three independent participant groups.

Professionals within both the DSH team and the CAMHS teams will be asked to assist with recruitment. If an adolescent meets the following criteria they (and their family if the adolescent is younger than 16) will be provided with an information sheet and asked if they would be willing to participate in a research study:

1. Between the ages of 12 and 17 years
2. Either a) has deliberately self-harmed in the past month or
b) meets the DSM-IV criteria for a depressive disorder but has had no previous episodes of DSH.

If an adolescent meets the above criteria and informally agrees to participate in the research, they will be asked consent for their contact details to be passed on. An appointment will be made to meet with the adolescent within a CAMHS team base to discuss the research further and obtain informed consent prior to starting any research activity. The adolescent will be made aware that they can discontinue at any time. When all measurements have been completed participants will be debriefed and thanked for their co-operation. Although it is perceived that any distress caused by this testing procedure will be minimal, arrangements can be made for the participant to meet with a member of the CAMHS team if they find any component of the testing procedure distressing.

For further clinical information, and with the consent of the adolescent, a psychiatric history of the participant will be obtained from the referring CAMHS clinician and current diagnoses will be confirmed to match DSM-IV criteria.

3.5 Settings and Equipment

All testing will occur within the CAMHS team bases to provide a safe test setting for both the participants and the researcher. This also means that professional staff will be on hand if any adolescent expressed suicidal ideation.

No specialised equipment is required

4. STATISTICS

4.1 Power Calculation

Power calculations were based on Orbach, et al. 's (1998) study. A sample size of 18 was calculated using an alpha score of .05 and a desired power of .8.

4.2 Data Analysis

Data will be processed using the Statistical Package for Social Sciences (SPSS-Version 14).

Descriptive statistics will be used to examine the demographic characteristics of the participants, scores on the SIS, the HADS, responses on the Acts of Deliberate Self-Harm Inventory, and responses on assessments of self-complexity and self-discrepancy. If the data satisfy assumptions for parametric analysis, the difference between the three study groups in the various measures of self-discrepancy will be analysed using univariate ANOVA's followed by planned comparisons. Similar procedures will be followed to analyse the four measures of self-

complexity. Furthermore, the HADS scores will be introduced as covariates for all the measures of self-representations.

5. PRACTICAL APPLICATIONS

This study will have practical applications in the assessment, formulation and treatment of adolescents that deliberately self-harm. It will also aid in the production and assessment of cognitive theories of DSH.

6. TIMESCALE

Target	Proposed Date
Research proposal submitted and passed by ethics committees	Completed by September 2005
Field Testing	Start October 2005 until April 2006
Analysis	May 2006
Write up	To be completed and submitted by July 2006

7. ETHICAL APPROVAL

Ethical approval will have to be granted from Greater Glasgow Primary Care NHS Trust.

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Amendments to Major Research Proposal

An Investigation of the Self in Adolescents that Deliberately Self-Harm

The following amendments were made to the Major Research Proposal.

a) The SCID interview (Spitzer, et al, 1998) was replaced with the Schedule for Affective Disorders and Schizophrenia in School Age Children: Present and Lifetime Version (K-SADS-PL: Kaufman, et al., 1996). Although these are both semi-structured diagnostic interviews designed to assess psychopathology according to DSM IV (APA, 1994), the K-SADS-PL has been specifically designed for use with children and adolescents, therefore was thought to be a more valid instrument for this study.

b) The ‘depressed’ control group was replaced with a general psychiatric control group. During the recruitment of the DSH group, it became apparent that although most DSH participants experienced some depressive symptoms, they did not all meet DSM-IV criteria for an affective disorder, but instead met criteria for other psychiatric disorders. Therefore, a group of depressed adolescents was an inappropriate comparison group and a general psychiatric group was recruited instead.

c) The author noted methodological problems associated with one of Orbach et al’s (1998) calculations of self-complexity. Orbach (1998) stated that the “*degree of redundancy between self-aspects is the mean number of attributes that were sorted in more than one self-aspect*

divided by the total number of attributes sorted". When this equation was replicated the data produced was unrepresentative of the data supplied by Orbach (1998) (data was two decimal points lower). Correspondence with the author highlighted the methodological error in this calculation therefore Linville's (1985) original method of calculating self-complexity, the H statistic, was utilised instead of replicating Orbach's (1998) four measures of self-complexity.

Chapter 4
Major Research Project Paper

An Investigation of the Self in Adolescents that Deliberately Self-Harm

Major Research Project Paper submitted in partial fulfilment of the requirements for the degree of
Doctorate in Clinical Psychology

Prepared in accordance with the requirements for submission to

Journal of Abnormal Psychology

(See Appendix 4.1 for notes for contributors)

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ABSTRACT

The purpose of this study was to investigate levels of self-complexity (Linville, 1987) and self-discrepancy (Higgins, 1987) in adolescents who deliberately self-harm (DSH). It was hypothesised that adolescents who DSH would have significantly larger self-discrepancies and lower levels of self-complexity than psychiatric and community controls. Fifteen adolescents who had self-harmed in the past month, fifteen adolescents with a psychiatric diagnosis and fifteen control participants (both control groups had never self-harmed) completed Repertory Grids to assess discrepancies among self-domains (actual, ideal, ought) and Linville's (1987) card sorting task to assess levels of self-complexity. Adolescents who self-harmed displayed larger discrepancies between the actual-ideal, actual-ought and ideal-ought domains of the self than community controls. Discrepancies in these self-domains did not significantly differ between psychiatric controls and adolescents who self-harmed. However, when levels of depression were entered as a covariate, between group differences became non-significant, with the exception of ideal-ought discrepancies. Levels of self-complexity did not significantly differ between groups. These results are discussed in reference to Baumeister's (1990) theory of suicide and study limitations are highlighted.

Keywords: deliberate self-harm, adolescent, self-complexity, self-discrepancy

1. INTRODUCTION

1.1 Prevalence of Adolescent DSH and Attempted Suicide

Over the past 20 years the number of people admitted to Scottish hospitals after an episode of deliberate self-harm (DSH) or attempted suicide has increased, and now constitutes approximately 10,000 of the annual hospital admissions (National Framework for the Prevention of Suicide and Deliberate Self-Harm in Scotland, 2001). In the UK, adolescents and young adults are involved in more hospital presentations for self-harm/attempted suicide than any other age group (Hawton, et al., 1996). Furthermore, it has become increasingly clear that a significant amount of self-harm occurs in the community but does not result in a hospital presentation (Hawton, et al., 2002).¹

1.2 Suicide as Escape from Self

In his theory “Suicide as an Escape from Self”, Baumeister (1990) hypothesised that failure to attain either self or socially imposed unrealistic standards stimulates a series of steps of self-blame, negative self-awareness, negative affect, and a desire to escape this painful self-awareness. This leads to disinhibition of the constraints of social behaviour, which renders suicide more acceptable and likely. He therefore proposed that suicide emerges as an escalation of a person’s wish to escape from awareness of current life problems and their implications about the self. This theory has been supported by Boergers, et al, (1998) who reported that the most

¹ For the purpose of this paper DSH will be defined as “*any act that is deliberate and resulting in potential or actual tissue damage*” (Davidson, et al., 2006). DSH will be considered to be distinct from attempted suicide, defined as “*an act that the subject claims ownership of, which is deliberate, planned, life threatening, and results in medical intervention or medical intervention would have been warranted*” (Davidson, et al., 2006).

highly endorsed reason for adolescent DSH/suicide attempt was “*to get relief from a terrible state of mind*” (57%), closely followed by “*to die*” (56%) and “*to escape for a while from an impossible situation*” (55%).

1.3 Higgins’ Self-Discrepancy Theory

Baumeister’s theory incorporates Higgins’ self-discrepancy theory (1987). Higgins emphasised the importance of comparing the self against salient standards, and stated that negative affect will follow an awareness of self as falling short of these standards. Specifically, seeing oneself as falling short of one’s ideals (actual-ideal discrepancy) produces dejection-related affect such as disappointment and dissatisfaction, whereas seeing oneself falling short of one’s duties, obligations and moral standards (actual-ought discrepancy) produces agitation-related emotions such as guilt and self-contempt (Higgins, 1987). Research highlighting that the subjective feeling of defeat and failure are common phenomenological characteristics of suicidal individuals has supported Baumeister’s inclusion of Higgins self-discrepancy theory. Feelings of failure distinguished suicide attempters from non-attempters in a population of adult patients with major depression (Bulik, et al., 1990), and in a large adolescent sample, suicidal ideation was found to be strongly related to the discrepancy between desired academic achievement and actual achievement (Duke and Lorch, 1989).

Furthermore, the investigation of self-discrepancies in adolescents is clearly important when placed within a developmental context. Borst, et al., (1991) demonstrated that with increasing ego development, adolescents diagnosed with a conduct and/or an affective disorder became more vulnerable to suicidal behaviours. Suicidal behaviour became more prevalent among adolescents who reached the “postconformist” developmental stage, which is characterised by internal attributions than among adolescents who are “preconformist”, which is characterised by

external attributions. This increased introspection developed during adolescence could lead to the initial steps of negative self-awareness; negative affect and a desire to escape, as highlighted in Baumeister's (1990) theory.

This study will investigate Baumeister's (1990) theory in adolescents who have deliberately self-harmed and who are attending Child and Adolescent Mental Health Services (CAMHS). The majority of research investigating DSH has recruited from Accident and Emergency where most participants will have taken an overdose and/or will be highly suicidal. Therefore, within the research there has been an under representation of people who self-harm using methods other than an overdose, and an over-representation of those with strong suicidal intent. Although DSH and attempted suicide are generally thought to have different underlying functions e.g. DSH as a form of managing distress and suicide attempts as an effort to permanently remove distress, generally both these acts are thought to be on a continuum of suicidal behaviour (it is estimated that approximately 33% to 85% of those who self-harm have a history of at least one suicide attempt [Stanley, et al., 1992]). Muehlenkamp, et al., (2004) found that adolescents with self-harming behaviour reported significantly more depressive symptoms than adolescents who do not self-harm and found no significant differences in depressive symptoms between adolescents who DSH and adolescents who attempt suicide. It can therefore be hypothesised, in accordance with Baumeister's theory of suicide, that young people who DSH will display greater self-discrepancies, than a psychiatric and community control group.

Orbach, et al., (1998) assessed self-discrepancies in suicidal adolescents and reported that, in comparison to a control group, suicidal participants had relatively large discrepancies between the actual and ideal, as well as between the actual and ought aspects of the self but, in contrast to Baumeister's (1990) theory, found no significant differences in self-discrepancies between the

non-suicidal psychiatric group and the suicidal group. However, Orbach, et al. (1998) used the “Selves Questionnaire” (Higgins, 1987) which is a free response measure designed to measure the intensity and quality of self-discrepancies. This measure has been criticised for its low reliability and methodological problems (Key, et al, 2000). Its lack of standardisation requires that assessors use their own discretion at times in the scoring of the questionnaire. This study will therefore partly replicate Orbach, et al.’s, (1998) assessment of adolescent self-discrepancies but using Repertory Grids to assess.

1.4 Repertory Grid Technique

Repertory Grids is an interview technique designed to document the “personal constructs” of the interviewees. Personal construct theory (Kelly, 1955) proposes that in order to make sense of our world, ourselves and the particular situations we encounter, we all create, and re-create, or own theoretical framework. This framework can be used to make interpretations or discriminations that are termed personal constructs. Kelly (1955) proposed that personal constructs are bipolar by arguing that we never affirm anything without simultaneously denying something. Through a system of these personal constructs an individual strives to predict and control his world and Kelly (1955) sees anticipation as the dominant motivational force. How a person construes himself may largely determine how he behaves psychologically, physically and emotionally and his self-construct system will affect his manner of anticipating and coping with both the normal and abnormal stresses of life.

The Repertory Grid Technique was designed as a means of exploring others construct systems and formalises this process by assigning mathematical values to the relationships between a person’s constructs. Previous research using the Repertory Grid Technique has found a significant discrepancy between actual and ideal self states amongst adult depressed patients, in

comparison to controls, that reduced following drug therapy (Sheehan, 1981). However, to my knowledge, the method has not yet been used to investigate self-discrepancies in adolescents that DSH. The Repertory Grid Technique lends itself well to the assessment of adolescents. Adolescence is a time when identity formation is still in process, therefore a secure knowledge of one's future self does not yet exist. Instead adolescents have to rely on other indicators of accomplishment at times of stress such as academic performance, popularity and athleticism. Adolescents will therefore have a significantly different construct system than their fully developed adult equivalents. This proves problematic when attempting to psychometrically assess adolescents using adult based measures as such measures may fail to identify an area of great significance and distress for an adolescent. However, the Repertory Grid Technique allows an adolescent to identify those constructs that are pertinent and individual to them, and formalises this process by assigning mathematical values to the relationships between constructs.

1.5 Self-Complexity

Orbach, et al., (1998) also investigated self-complexity in suicidal adolescents. The self-complexity model (Linville, 1987) refers to the number of self-aspects (e.g. myself as a student, a daughter etc.) that a person uses for organising information and the degree to which he or she tends to distinguish between different aspects of the self and analyses information using different perspectives. Those high in self-complexity will have more self-aspects and maintain greater distinctions among those self-aspects. Greater distinction between self-aspects protects from the “spillover process” (Linville, 1987) whereby a negative event activates a self-aspect and then activation spreads to other associated self-aspects. Furthermore, if a person has many different self-aspects the proportion of aspects left unaffected by a negative event may serve to moderate the impact of the negative event. The model also proposes the “self complexity-affective extremity hypothesis” whereby people lower in self-complexity will experience greater mood

swings in affect and self-appraisal in response to life events (Linville, 1985). Orbach, et al., (1998) related this to the “*intense negative feelings of suicidal youngsters and the rapid shift in dysphoric moods that they experience*” and found that suicidal individuals had lower self-complexity levels than psychiatric controls. Adolescent who DSH have been noted to have similar rapid shifts in mood and there is mounting evidence that many DSH patients demonstrate specific deficits in the ability to problem solve (e.g. Linehan, et al., 1987; McLeavey et al, 1987; Schotte & Clum, 1987; Williams & Pollock, 2000). It could be stated that a reduced number of self-aspects, and therefore a reduced self-complexity, will produce a one-dimensional approach to problem solving and a difficulty in seeing a situation from an alternative perspective. Therefore it could be hypothesised that adolescents who deliberately self-harm will have significantly lower levels of self-complexity than psychiatric and community controls.²

1.6 Aims

The aim of this study is to compare the self-representations of adolescents who deliberately self-harm to the self-representations of adolescent psychiatric and community control groups. Specifically, it will assess participants’ levels of self-complexity and the extent of self-discrepancy between various domains of their self-descriptions. It is hypothesised that young people who DSH will display larger self-discrepancies than a psychiatric and community control

² The author noted methodological problems associated with one of Orbach et al’s (1998) calculations of self-complexity. Orbach (1998) stated that the “*degree of redundancy between self aspects is the mean number of attributes that were sorted in more than one self-aspect divided by the total number of attributes sorted*”. When this equation was replicated the data produced was unrepresentative of the data supplied by Orbach (1998) (data was two decimal points lower). Correspondence with the author highlighted the methodological error in this calculation therefore Linville’s (1985) original method of calculating self-complexity, the *H* statistic, was utilised instead of replicating Orbach’s (1998) four measures of self complexity.

group. Furthermore, taking into account the rapid shifts in dysphoric mood that adolescents who deliberately self-harm experience, and the mounting evidence to suggest DSH patients have specific problem solving deficits, adolescents that deliberately self-harm should have significantly lower levels of self-complexity than both the psychiatric and community control group. This study aims to extend Orbach, et al.'s (1998) study of self-representation of suicidal adolescents by using more standardised measures to assess the self-representations of adolescents that deliberately self-harm.

2. METHOD

2.1 Participants

Participants consisted of three groups of adolescents: a DSH group, a psychiatric group and a control group. The DSH and psychiatric groups were recruited from local CAMHSs and the control group was recruited from local youth groups. Eight boys (18%) and 37 girls (82%) took part in the study. The mean age of participants was 15.16 years (SD: 1.31) with ages ranging from 12 to 18 years. All participants were Caucasian and had a mean Carstairs deprivation category of 4.56 (DEPCAT: McLoone, 2004) (SD: 1.66; range: 2-7).

The DSH group consisted of 15 participants who attended CAMHS. Adolescents were included if they were between the ages of 12 and 18 years old and if they had deliberately self-harmed, as defined by Davidson, et al., (2006), in the past month.

The psychiatric group consisted of 15 adolescents who attended CAMHS. They were roughly matched to the DSH group in age, gender, and deprivation levels. Psychiatric disorders were confirmed by CAMHS clinicians and were diagnosed according to criteria from the Diagnostic and Statistical Manual of Mental Disorders, 4th ed. (*DSM-IV*; American Psychiatric Association, 1994). Psychiatric diagnostic categories were found to mainly comprise of a mixture of affective and anxiety based disorders. None of these participants had ever evidenced any suicidal intentions or acts of DSH, as reflected by their answers to the Acts of Deliberate Self-Harm Inventory (Davidson, et al., 2006) and the suicide subsection of the Kiddie-Sads-Present and Lifetime Version (K-SADS; Kaufman, et al., 1996).

The control group comprised of 15 adolescents attending local community youth groups within the vicinity of the CAMHSs who had never self-harmed or attempted suicide. Permission was sought from the leaders of these youth groups and information sheets and focus groups were used to inform the adolescents and their parents about the study prior to participation. The control group was roughly matched to the DSH group in age, gender, and deprivation levels.

The author is aware of nine adolescents that were identified as being appropriate for the study but disengaged in therapy before informed consent could be sought. A further three adolescents were identified as being appropriate by clinicians but were not asked to participate as a consequence of an emerging psychiatric crisis. Fifteen young people refused to participate and five adolescents agreed to participate but failed to attend a research appointment. Due to issues of confidentiality no demographic information was available for these young people.

2.2 Procedures

Ethical approval was gained from the NHS Greater Glasgow Primary Care Division Research Ethics Committee before data collection began (Appendix 4.2). Participants in the DSH and psychiatric groups were identified by clinicians at CAMHSs. Adolescents were excluded from the study if they a) had a Learning Disability b) were actively psychotic at the point of assessment or c) were over 18 or under 12 years of age.

Clinicians provided potential participants with an information sheet about the study (Appendix 4.3) and asked the young person to read it over and discuss with their parent(s)/guardian. Following a period of at least 24 hours, the young person was re-contacted and asked if they would be willing to participate. If consent was gained, the clinician then passed on the young persons details to the researcher who met with the participant within a CAMHS team base to discuss the aims and procedures of the study and obtain written informed consent prior to starting any research activity (Appendix 4.4). For adolescents under 16 years of age, the written consent of both the adolescent and a parent/guardian was obtained. Adolescents and their parent(s)/guardian were made aware that participation was voluntary and that they could withdraw at any time without their medical or legal rights being affected. Immediately following completion of the research materials all participants were debriefed and given the opportunity to talk to a clinician at the CAMHS if required, although no adolescents requested this service.

2.3 Measures

The following measures were administered to all participants:

Repertory Grid Technique (Kelly, 1955).

Self-discrepancies were measured using the Repertory Grid Technique. This is an interview technique to document the personal constructs of the interviewees (Kelly, 1955). In order to establish a general comparability, seven elements were elicited to fit certain role titles: mother (or female caregiver), father (or male caregiver), male friend, female friend, someone I like, someone I dislike and boss/teacher. In this process participants were asked to name specific, personally relevant people that fitted each of these role titles. These names (elements) were written on pieces of card and placed on the desk in front of the young person. Participants were also asked to identify a further two personal elements (two people that they were close to who had not yet been named) and were supplied with a further three elements: self, ideal-self, and ought-self all of which were also written on pieces of card.

Constructs were elicited using the standard triadic procedure (Bannister & Fransella, 1980). This involved randomly selecting three of the elements, e.g. mother, female friend and self, and asking the participants to specify some important way in which two of them were alike and thereby different from the third. If participants offered superficial characteristics e.g. “they both have blue eyes” they were asked to elicit further characteristics that reflected the elements personalities as opposed to their physical features. This process was repeated ten times until ten bipolar constructs had been elicited using the “alike” and “different” characteristics e.g. *selfish – good listener, clever – not bright* etc. Participants were asked to rate the elements of self, ideal-self

and ought-self on a 7-point Likert scale using the 10 elicited bipolar constructs whereby a rating of 1 relates to the construct on the left hand side of the grid and a rating of 7 relates to the pole on the right hand side. For example, if asked to rate the element “self” against the bipolar construct *clever-not bright*, participants were instructed “ if you see yourself as *very clever* you might give yourself a rating of 1, if you see yourself as *clever*, but not absolutely so, then perhaps a 2 or even a 3. On the other hand if you see yourself as totally *not bright* then you would rate yourself as a 7, a rating of a 6 or a 5 would be *not bright* but not quite as extreme as a 7.” Discrepancies between self, ideal- and ought-self were calculated as the mean difference in ratings between these elements.

Self-Complexity Trait Sort Task (Linville, 1987).

Self-complexity was measured by a trait-sort task following Linville’s (1987) procedure. In this task, participants received a packet of 88 randomly ordered cards, each containing the name of a trait (Appendix 4.5). Trait names were adapted from Linville’s (1987) original word list through the use of a thesaurus, to make them more suitable for use with an adolescent population, and from Butlers (2001) survey of adolescent self-descriptions. The trait names comprised of equivalent number of negative and positive traits (as rated by 5 independent judges).

Furthermore, a schoolteacher confirmed they were within the average reading ability of a twelve-year-old. Participants were asked to think about themselves and “to group words together that describe different parts of you”. They were also told that they could form as many or as few groups as they found meaningful, that a trait could be placed in more than one group, and that they did not have to use every trait.

Replicating Linville's (1978) original procedure the H statistic, a measure of nominal scale dispersion used in information theory (Scott 1969), was used to compute levels self-complexity. The measure represents the number of independent attributes implicit in a participant's feature sort. The formula for H (self-complexity) is as follows:

$$\text{Self-complexity } (H) = \log_2 n - (\sum_i n_i \log_2 n_i) / n$$

Where n is the total number of features (here 88), and n_i is the number of features that appear in a particular group combination. Appendix 4.6 shows the self-aspect groups produced by one participant's attribute sort, the attribute clusters implicit in the self-aspect groups, and the calculation of H for that participant. The self-complexity score can be interpreted as the minimum number of independent binary attributes underlying a person's feature sort about the self. The greater the number of self-aspects created and the less redundant the features used in creating these self-aspects, the greater the self-complexity score. Thus, high self-complexity results from having a large number of self-aspects that are non-redundant in terms of the features that describe them. Low self-complexity results either from having few self-aspects or from having many self-aspects that are highly redundant in terms of the features that describe them.

The Acts of Deliberate Self-Harm Inventory (Davidson, et al, 2006) (Appendix 4.7).

The Acts of Deliberate Self-Harm Inventory is designed to ensure accurate collection of data about acts of attempted suicide and incidents of DSH. It clearly differentiates acts of attempted suicide and DSH and investigates methods, frequencies and co-morbid substance abuse associated with such acts.

Schedule for Affective Disorders and Schizophrenia in School Age Children: Present and Lifetime Version (K-SADS-PL: Kaufman, et al., 1996).

K-SADS-PL is a commonly used semi-structured diagnostic interview designed to assess current and past episode of psychopathology in children and adolescents according to DSM-IV (APA, 1994) criteria. The K-SADS-PL was used to assess current depressive symptoms using the Depressive Disorders supplement. Interrater agreement in K-SADS-PL scoring screens and diagnoses have been shown to be high (93%-100%) and test-retest reliability coefficients were in the excellent range for present and/or lifetime diagnoses of major depression (Kaufman, et al., 1997).

The Hospital Anxiety and Depression Scale (HADS: Zigmond and Snaith, 1983).

The HADS is a screening instrument for clinically relevant anxiety and depressive states that is quick and easy to administer and simple to score and interpret. The HADS has adequate test-retest reliability and factor structure with adolescents and discriminates between adolescents diagnosed with depressive or anxiety disorders and those without these diagnoses (White, et al., 1999).

Suicide Intent Scale (SIS: Beck, et al., 1974)

The SIS is a 15-item interviewer rating scale that assesses the degree of suicidal intent.

Participants were asked to complete the SIS in reference to their last episode of DSH. Total scores range from 0 to 30. The SIS has strong overall inter-rater reliability (.95 and .82; Beck, et al., 1974) and adequate inter-rater reliability for the subscales (.74 and .90; Mieczkowski, et al.,

1993). Internal consistency ($\alpha = .85$) has been demonstrated with adolescents (Spirito, et al., 1996).

3. RESULTS

3.1 Power Calculation

Power calculations were based on Orbach, et al. 's (1998) study. A sample size of eighteen per group was calculated using an alpha score of .05 and a desired power of .8.

3.2 Planned Data Analyses

Data was processed using the Statistical Package for Social Science (SPSS-Version 14). Prior to formal data analyses, data were checked for normality and homogeneity of variance using visual inspections of distributions and the Kolmogorov-Smirnov and Levene tests. Data were found to meet parametric assumptions. Univariate ANOVAs were used to analyse between group differences. Planned contrasts were conducted with Bonferroni correction ($p < .017$) to control the familywise error rate.

3.3 Demographic and Clinical Information

The demographic information of each group is shown in Table 1. The groups did not differ significantly in age ($F(2,44)=2.68$, *ns*) or levels of socio-economic deprivation ($\chi^2(2)=2.84$, *ns*). Furthermore, the DSH and psychiatric group had similar numbers and types of DSM-IV diagnosis.

[Insert Table 1 here]

Methods of DSH identified by participants in the DSH group included cutting (87%), self-inflicted punching (27%), scratching (27%), burning (20%), and overdose (6%). Total percentages are higher than 100% as six participants (40%) used more than one method. The mean number of days since the last DSH act was 12.60 days (SD: 10.69 days). Seven adolescents (47%) had also attempted suicide in the past year (M: 43.27 days, SD: 93.45 days). Adolescents who had self-harmed and attempted suicide scored significantly higher on the SIS than adolescents who had self-harmed only ($t(13)=-2.37, p<.05$).

A significant between group difference was found on the HADS measures of anxiety ($F(2,44)=14.94, p<.001$) and depression ($F(2,44)=13.95, p<.001$). *Post-hoc* comparisons revealed that the control group had significantly lower levels of depression and anxiety than both the psychiatric ($p<.005, p<.001$ respectively) and DSH group ($p<.001, p<.001$ respectively), but no significant differences were present between the psychiatric and DSH group on both measures (see Table 2 for means and standard deviations).

[Insert Table 2 here]

3.4 Self-Discrepancies

Univariate ANOVAs revealed significant between group differences in the three assessed self-discrepancies (Table 3). Planned independent t-tests with Bonferroni corrections ($p<.017$) revealed that adolescents who self-harmed had significantly larger discrepancies between their actual and ideal-self than community controls ($t(28)=-3.53, p<.005$) but no significant differences

in actual-ideal discrepancies were found between adolescents who self-harmed and the psychiatric control group ($t(28)=-.082, p=.94$). Furthermore, the psychiatric group had significantly larger discrepancies between their actual and ideal-self than community controls ($t(28)=3.42, p<.005$).

[Insert Table 3 here]

Planned independent t-tests for actual-ought discrepancies revealed similar findings, with adolescents who self-harmed presenting with significantly larger discrepancies between their actual and ought-self than community controls ($t(28)=-2.80, p<.01$), but not psychiatric controls ($t(28)=0.57, p=.96$). Similarly psychiatric controls showed significantly larger discrepancies between their actual and ought-self than community controls ($t(28) = 2.64, p<.017$).

Planned between group comparisons for ought-ideal discrepancies revealed that adolescents who self-harmed had significantly larger ought-ideal discrepancies than community controls ($t(28)=3.25, p<.005$) but not the psychiatric control group ($t(28)=0.79, p=.59$). Although the psychiatric group had larger ought-ideal discrepancies than community controls, these differences were not significant following Bonferroni correction ($t(28)=2.06, p=.049$).

The HADS depression and anxiety scores were entered as a covariant in the ANOVAs for all self-representation aspects. The covariate of HADS depression score was significantly related to actual-ideal discrepancies $F(1,40)=5.43, p<.05$, but HADS anxiety scores were not significantly related ($p=.86$). After controlling for HADS anxiety and depression scores the experimental group was no longer significant ($p=.17$). Similar results were found when HADS scores were entered as a covariate for the actual-ought discrepancies. The covariate of HADS depression

score was significantly related to actual-ought discrepancies $F(1, 40)=6.54, p<.05$, but HADS anxiety scores were not significantly related ($p=.36$). After controlling for HADS anxiety and depression scores the experimental group was no longer significant ($p=.35$). However, when the HADS scores were entered as covariates for the ideal-ought discrepancies the experimental group maintained its significant effect after controlling for these scores $F(1,40)=10.15, p<.001$. The covariate of HADS depression scores was also significantly related to ideal-ought discrepancies $F(1,40) = 8.46, p<.05$, but HADS anxiety scores were not ($p=.4$). *Post-hoc* analysis revealed that the DSH and psychiatric groups had significantly larger ideal-ought discrepancies than community controls ($p<.001$ and $p<.005$ respectively) but no significant differences were found between the adolescents that self-harmed and psychiatric controls.

3.5 Self-Complexities

Univariate ANOVAs revealed no significant between group differences in the cognitive complexity (H) score, $F(1,40)=1.20, p=.31$. Table 4 presents between group descriptive statistics.

[Insert Table 4 here]

4. DISCUSSION

In comparison to community controls, the adolescents that self-harmed and the psychiatric control group displayed larger discrepancies between the actual and ideal, as well as between the actual and ought aspects of the self. Adolescents that self-harmed also showed high discrepancies between the ideal and ought aspects of self. Although the psychiatric groups ideal-

ought discrepancies were not significantly different from the discrepancies found in adolescents who self-harmed, they were also not significantly different from community controls. The descriptive statistics displayed in Table 3 highlight that the psychiatric groups mean ideal-ought discrepancy is somewhere between the large discrepancies found in the DSH group and the smaller discrepancies of the community control group. These findings are similar to those found by Orbach, et al, (1998) when investigating suicidal adolescents. The authors concluded that the conflict between the actual-self and the two “self-guides” (ideal and ought-self) could be more detrimental to self-destructive behaviour. Although discrepancies between the actual and ought/ideal-self respectively have been hypothesised to produce agitation and dejection related emotions (Higgins, 1987), Orbach, et al, (1998) highlighted that such discrepancies provide clear pathways and goals, although perhaps unrealistic. However, a discrepancy between ideal and ought-self could create confusion and ambivalence regarding the direction one should take to manage inner tension. Orbach, et al, (1998) stated that such confusion could lead to the “inner emotional turmoil associated with suicidal behaviour”.

The finding that HADS depression scores were significantly related to actual-ideal discrepancies was expected as this discrepancy represents the general psychological situation of the absence of positive outcomes (i.e. nonobtainment of own hopes and desires), and thus the person is predicted to be vulnerable to dejection related emotions such as disappointment and dissatisfaction (Higgins, 1987). HADS anxiety scores were not significantly associated with ideal-ought discrepancies. This is of some surprise as previous research (e.g. Higgins, 1985; Scott & O’Hara, 1993) has reported a strong association between anxiety and actual-ought discrepancies. Instead HADS depression scores were also significantly associated with this discrepancy. Other studies replicating Higgins (1985) procedure have also failed to find unique

relationships between specific types of discrepancy (ideal or ought) and specific types of emotional discomfort (dejection or agitation) (e.g. Polasky & Holahan, 1998; Tangney, et al., 1998). Instead support has been found for a significant relationship between the general magnitude of discrepancy and emotional discomfort (Key, et al., 2000). It is however of interest that after controlling for HAD anxiety and depression scores the experimental group was no longer significant. This infers that depression is a better predictor for such discrepancies as opposed to whether an adolescent does or does not DSH. The only exception to this was when depression and anxiety was entered as a covariate for ideal-ought discrepancies where the experimental group maintained its significance. However, *post-hoc* analysis revealed that this related to a significant difference in discrepancies between both the DSH and psychiatric group and the community controls as opposed to a significant difference between adolescents who DSH and psychiatric controls.

Therefore adolescents who DSH had significantly larger self-discrepancies than community controls but this appeared to be a factor of increased levels of depression as opposed to a specific association with DSH. Furthermore, adolescent who DSH did have significantly larger ideal-ought discrepancies than psychiatric controls but this finding became non-significant when depression was entered as a covariate.

The finding that levels of self-complexity failed to differentiate adolescents who DSH, psychiatric and community controls is surprising, especially as self-complexity theory (Linville, 1985) would predict a significant between group difference. Linville (1985) predicted that high levels of stress would lead to more depressive symptoms in subjects low in self-complexity than

in subjects with greater self-complexity. It could therefore be hypothesised that a between group difference would be expected if only for the fact that the psychiatric and DSH groups both scored significantly higher on an assessment of depressive symptoms. This could be the result of a Type 2 error as a consequence of an underpowered study. Furthermore, despite replicating both Orbach et al's (1998) and Linville's (1985) card sorting procedures the researcher was present when the card sorting task occurred and acted as a "scribe" if the participant required a trait to be sorted into more than one self-aspect. This may have indirectly led participants to feel pressurised into replicating traits across groups, increasing the *H* self-complexity score. However, a recent meta-analysis of published and unpublished research on self-complexity found on average a weak negative relation between self-complexity and well being in cross sectional designs, with highly variable results across studies (Rafaeili-Mor & Steinberg, 2002).

In reference to Baumeister's (1990) theory of suicide, adolescents who DSH have been shown to have large self-discrepancies and negative affect however, such discrepancies were not significantly different from a psychiatric control group who have not self-harmed. Furthermore, although previous research has highlighted that a reduced self-complexity is associated with a desire to escape from the self (Dixon & Baumeister, 1991) this study failed to find such impairments in self-complexity in adolescents who DSH. This could also be explained as a consequence of DSH being placed on a continuum with suicide. Any differences in self-perception between adolescents who DSH and psychiatric controls may not be as significant as the discrepancies between suicidal adolescents and psychiatric controls. However, 47% of the DSH group had also attempted suicide within the past year. It may be that adolescents who DSH have equivalent levels of self-discrepancies as psychiatric controls but that their subjective experience of these discrepancies, and ability to cope with them is diminished. Certainly

previous research has highlighted that irritability and heightened sensitivity to stressful situations, as well as emotional lability, are regarded as a characteristic subjective experience of suicidal individuals (Orbach, 1997). Further research is required in this area.

It should also be noted that a significant amount of qualitative data was obtained during the process of this research but its analysis was out with the scope of this paper. It would be of interest to use qualitative methods such as thematic coding in a subsequent paper to investigate the elicited personal constructs and any thematic differences between participant groups.

This study sought to assess a community based sample of adolescents that DSH, providing greater generalisability than an inpatient or Accident and Emergency sample. However, this study lacks representation of people of non-Caucasian ethnic origin and males, therefore it is questionable whether its results can be transferred to an ethnic minority population or provide specific information on male self-representations. No demographic information was available for adolescents who refused to participate therefore it cannot be determined whether the investigated sample was completely representative of adolescents who DSH and who attend CAMHS.

Furthermore, it would have been beneficial to use the K-SADS for all psychiatric diagnoses as opposed to just depressive symptoms. Although diagnoses were discussed with the referring clinician and matched to DSM-IV this would have provided a more thorough investigation of psychiatric morbidity. Finally, this study was underpowered therefore any results should be interpreted with caution.

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Table 1. Age, deprivation levels and gender of DSH, psychiatric and control groups.

Group	n	Age			Deprivation Level				
		Mean	SD	Range	Mean	SD	Range	Male	Female
DSH	15	15.20	1.42	13-17	5.33	1.59	2-7	2 (13%)	13 (87%)
Psychiatric	15	15.67	1.13	14-18	4.20	1.70	2-7	4 (27%)	11 (73%)
Control	15	14.60	1.24	12-16	4.13	1.51	2-7	2 (13%)	13 (87%)

Table 2. Means and standard Deviations of HADS Depression and Anxiety Scores
According to Study Groups.

Variable	Control	Psychiatric	DSH	F(2, 44)
HADS Depression				
M	2.27 _a	6.80 _b	8.53 _b	14.94*
SD	2.28	3.57	3.70	
HADS Anxiety				
M	6.40 _a	12.33 _b	13.80 _b	13.95*
SD	3.56	4.14	4.06	

Note: Means with different subscripts across rows were significantly different
 **p*<.001

Table 3. Means, Standard Deviations, and F ratios of Self-Discrepancies According to Study Groups.

Variable	Control	Psychiatric	DSH	F(2, 44)
Actual Self-Ideal Self				
M	1.31 _a	1.89 _b	1.87 _b	8.12**
SD	0.46	0.47	0.42	
Actual Self-Ought Self				
M	1.40 _a	1.97 _b	1.99 _b	4.62*
SD	0.52	0.66	0.62	
Ideal Self-Ought Self				
M	0.47 _a	0.76 _{a b}	0.88 _b	4.55*
SD	0.32	0.45	0.38	

Note: Means with different subscripts across rows were significantly different
 *p<.05. ** p<0.005

Table 4. Means, Standard Deviations, and *F* ratios of Self-Complexity (*H* value) According to Study Groups.

<i>H</i> Value	Control	Psychiatric	DSH	F (2, 44)
M	2.36	2.22	2.56	1.20
SD	0.47	0.45	0.79	

Chapter 5

Single N Research Study (Abstract Only)

An Evaluation of the Impact of Habit Reversal Components on Stereotypic Movements and Underlying Anxiety

Single N Research Study submitted in partial fulfilment of the requirements for the degree of
Doctorate in Clinical Psychology

Prepared in accordance with the requirements for submission to

Behavioural and Cognitive Psychotherapy

(See Appendix 5.1 for notes for contributors)

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ABSTRACT

Habit Reversal (HR: Azrin & Nunn, 1973) is a psychological, behavioural intervention that has proved to be highly effective in reducing problematic repetitive behaviours or “Habit Disorders” e.g. Stereotypic Movement Disorders, Trichotillomania, Stuttering and Tic Disorders. Recent research has shown that, in contrast to Azrin and Nunn’s (1973) original HR protocol, consisting of nine procedures, two components, awareness training and a competing response phase, are equally effective in reducing Habit Disorders (Azrin & Peterson, 1989), accompanied by a social support component when working with children (Woods, Miltenberger & Lumlet, 1996). A significant limitation of the literature is that behaviours treated with HR are defined topographically instead of functionally and research investigating HR’s effects on the underlying function of these behaviours is limited. This single subject, multiple baseline study investigated the effectiveness of HR in reducing a Stereotypic Movement Disorder in an 8-year-old boy and its effects on the underlying function of this behaviour, tension reduction. HR significantly reduced repetitive behaviours. The competing response phase proved to be more effective than awareness training, as found in previous research (Peterson & Azrin, 1988). HR did not produce a significant reduction in parentally rated anxiety levels, but it did produce a reduction in Total Scores on standardised anxiety measures to levels below clinical significance. Anxiety management procedures (psycho-education and relaxation techniques) also failed to significantly reduce anxiety levels, however Total Scores on standardised assessments of anxiety were already below a clinically significant level when this treatment component was introduced. Future research implications are discussed.

Keywords: stereotypic movement disorder, pacing, habit reversal, anxiety, child, single-case design

Chapter 6

Appendices for Chapters 1 - 5

APPENDIX 1.1 Notes to Contributors for submission to Clinical Psychology

Notes to Contributors

- Articles of 1000—2000 words are welcomed. Send two hard copies of your contribution and also your e-mail address in case the editors need to contact you. Please do not send a floppy disk.
- When sending a copy, make sure it is double spaced, in a reasonably sized font and that all pages are numbered.
- Give a 40-word summary at the beginning of the paper.
- Contributors are asked to use language which is psychologically descriptive rather than medical and to avoid using devaluing terminology; i.e. avoid clustering terminology like ‘the elderly’ or medical jargon like ‘person with schizophrenia’. If you find yourself using quotation marks around words of dubious meaning, please use a different word.
- We reserve the right to shorten, amend and hold back copy if needed.
- Articles submitted to Clinical Psychology will be sent to members of the Editorial Collective for refereeing. We shall then communicate directly with authors.
- Include a word count at the end (including references).
- Spell out all acronyms the first time they appear.
- Include the first names of all authors and give their employers, and remember to give a full postal address for correspondence.
- Give references in Clinical Psychology style, and if a reference is cited in the text make sure it is in the list at the end.
- Don’t include tables and figures unless they save space or add to the article.
- Ask readers to request a copy of your questionnaire from you rather than include the whole of it in the article.

APPENDIX 1.2 Strength and Difficulties Questionnaire Total Difficulties Scoring Criteria

Low Needs	Some Needs	High Needs
0 – 13	14 – 16	17 - 40

APPENDIX 1.3 Questionnaire regarding Parental Concerns about their Child.

Childs name:Date of Birth:

What is your understanding of why your child was referred to Clinical Psychology?

.....
.....
.....

Please tick one or more of the following boxes that best describes your concerns about your child's current difficulties

- ☐ Difficulties following parental separation/divorce
- ☐ Specific fear or phobia
- ☐ Low confidence
- ☐ Behavioural problems e.g. temper tantrums, cheeky, not doing what told etc.
- ☐ Toileting Difficulties
- ☐ Anxiety
- ☐ Sleep difficulties
- ☐ Difficulties following a stressful incident e.g. a car crash, burglary etc.
- ☐ Feeding difficulties
- ☐ Lack of concentration
- ☐ Difficulties following family bereavement
- ☐ Other (if so please specify)

.....
.....

What do you hope to achieve from attending the Clinical Psychology service with your child?

.....
.....
.....
.....

Thank you for completing these questionnaires. Please return the completed questionnaires in the pre-paid envelope provided. Written advice and information specific to your child's needs will be sent shortly.

APPENDIX 1.4 Departmental Handout List

Difficulties following parental separation/divorce

Divorce and Children	2 pages
Stepfamilies	2 pages

Specific fear or phobia

Childhood Phobias.....	2 pages
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Low confidence

Building Your Child's Confidence.....	1 page
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Behavioural problems

Temper Tantrums	2 pages
Positive Parenting, advice and tips	2 pages
Language to help your child learn "good behaviours".....	1 page
Rewarding good behaviour.....	1 page

Toileting Difficulties (distributed according to child's age/problems specified)

Dealing with Childhood Bowel Control Difficulties.....	2 pages
Dealing with Childhood Bladder Control Difficulties.....	2 pages
Toilet Training.....	2 pages

Anxiety

Anxiety.....	2 pages
Separation Anxiety.....	1 page

Sleep difficulties

Sleep Problems – Settling your child to sleep.....	1 page
Sleep Problems – Waking through the night.....	1 page
Sleep Problems – Early waking.....	1 page
Sleep Problems – Nightmares.....	1 page

Difficulties following a stressful incident

Childhood Reactions to Stress.....	1 page
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Feeding difficulties

Food Refusal.....	3 pages
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Lack of concentration

Increasing your child's attention.....	1 page
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Difficulties following family bereavement

Bereavement.....	3 pages
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Other

Child led play.....	1 page
Dealing with Biting.....	2 pages
Peer Relationships.....	2 pages
Coping with Bullying.....	2 pages
Supporting a Child When a Family Member has Seriously Illness...	2 pages

APPENDIX 1.5: Sample of Handouts

TEMPER TANTRUMS

Parents find that tantrums are difficult to understand and difficult to cope with. If a child is having a lot of tantrums or is having very big tantrums, parents wonder what they should do. A child’s tantrums can cause worry and distress for the whole family.

Do all children have tantrums? **YES** most children have tantrums at some point.

Why Do Tantrums Occur?

Tantrums are anger outbursts. We all feel angry at times and anger can sometimes be a natural feeling. However, whatever the cause of the anger and the tantrum, children must learn how to control their anger and express it in the right way so that they do not hurt themselves or others.

This control is learned as the child grows. For example, angry toddlers often scream, kick, and throw things – they might even bite. Adults of course are less likely to show these behaviours!

When are Tantrums Most Likely to Occur?

Tantrums are most common around two years of age, this is when most children show them. They carry on after that but in many children become less frequent.

Tantrums are most likely to occur when a child is **tired** or **hungry** and peak times are the end of a morning, late afternoon and just before bedtime.

Tantrums usually occur over some conflict with parental authority.

Tantrums also occur during disputes with other children over toys or over play.

What Can be Done About Tantrums?

It is easy to lose your calm, especially if you are in public when your child has a tantrum – **but it is important to keep yourself as calm as possible**. The main message you want to get across to your child is that you are in charge, but that you also want to help them control their temper. You want your child to learn that no matter how loud they shout or scream, you will not give in to their demands. Some of the things you can do are:

- Take absolutely no notice of small misbehaviours e.g. whining, rude comments and protests (i.e. that your child doesn't want to do something).
- If you are at home and your child tantrums, shouts or screams, whenever possible try not to give attention to their behaviour. You can do this by doing something else, e.g. reading a magazine, making a cup of tea etc. But only do this if your child is SAFE.
- You are going to help your child feel calm again by keeping calm yourself.
- Avoid shouting and hitting. This can often make the situation worse.
- Try not to use wild threats e.g. you are grounded for a month.
- It might be helpful to talk to the child about what upset them. Listening to why your child is upset does not mean that you will give in to what they want. It will be better to do this after the tantrum when you are both calm.

After the tantrum remember to:-

Praise the child for being calm again. Then think carefully about what happened in the lead up to the tantrum and ask yourself:

1. What exactly happened?
2. Could I see it coming?
3. What could I have done to avoid it before it became full blown?
4. Does the child have angry or jealous feelings that you can sympathise with or do something about?
5. Does the child need to learn that it is alright to wait, or alright for somebody to have something s/he wants, or alright for the parent to say "no".

Asking yourself these questions will help you learn the particular situations that trigger your child's tantrums. Knowing what triggers your child's temper tantrums will help you plan ahead in the future to avoid potential problems.



APPENDIX 2.1: Notes for contributors to Journal of the American Academy of Child and Adolescent Psychiatry

MISSION

The Journal's purpose is to advance research, clinical practice, and theory in child and adolescent psychiatry. We are interested in manuscripts from diverse viewpoints, including genetic, epidemiological, neurobiological, cognitive, behavioral, psychodynamic, social, cultural, and economic. Studies of diagnostic reliability and validity, psychotherapeutic and psychopharmacological treatment efficacy, and mental health services effectiveness are encouraged. We wish to receive only papers in which the subjects are 18 years of age or younger unless the subjects are parents or have been followed since childhood.

TYPES OF MANUSCRIPTS

The major manuscript categories are regular articles (research reports) and case studies. Review articles (theoretical or critical analyses of the literature) must be invited by the Editor. Ideas for Special Sections or Special Communications must be approved by the Editor before submission. Clinical Perspectives: Communicate potential topics directly to the Associate Editor, Michael Jellinek, M.D., Pres., Newton Wellesley Hospital, 2014 Washington Street, Newton, MA 02462. Dr. Jellinek works with authors to develop their Clinical Perspectives submissions. When they are ready, they undergo formal peer review

AUTHORS' PROFESSIONAL AND ETHICAL RESPONSIBILITIES

Ethics

Research involving human beings must be conducted ethically with due regard for informed consent. Please include in the manuscript a statement of IRB approval and description of consent/assent procedures.

Duplicate Publication

Manuscripts are considered for publication with the understanding that they represent original material and have not been submitted or accepted elsewhere, either as a whole or any substantial part.

Divided Publication

Piecemeal publication of small amounts of data from the same study is not acceptable. Each publication should report enough new data to make a significant and meaningful contribution to the development of new knowledge or understanding. The Journal is less interested in divided analyses of data from large data sets. We are most interested in the core, primary analyses from studies and the papers that have the most important and integrative findings for improving clinical care and furthering research.

When data from a study are reported in more than one publication, the cover letter accompanying the manuscript submitted to the Journal must list all reports that include any data on any of the same subjects that have been published, are in press, have been submitted elsewhere, or are in preparation. There must be a clear explanation of any overlap of this sample with the sample in any other paper. Published papers that are closely related to the submission or contain key methodological descriptions must be cited in the manuscript and copies of them must be submitted to the Editor. The cover letter must inform the Journal's Editor how the manuscript being submitted to the Journal is different from other manuscripts from the study and why it warrants independent publication.

Conflict of Interest

Authors are responsible for recognizing and disclosing financial and other ties that might appear to be a conflict of interest.

Authorship

Give authorship credit only if substantial contributions have been made to *all* of the following:

- Conception and design of study or analysis and interpretation of data.
- Drafting the article or revising it critically for important intellectual content.
- Final approval of the version to be published.

Participation solely in the acquisition of funding, the recruitment of subjects, or the collection of data does not justify authorship. General supervision of the research group is not sufficient for authorship. Each author is required to have participated sufficiently in the work to take public responsibility for the content.

PEER REVIEW

Manuscripts are subject to peer review. A consulting reviewer may be added at any stage of the review process to address technical questions. Papers that clearly do not fit our format, mission, or publication priorities will be returned without review. The Journal finds that blinding manuscripts with respect to the authors' identity and affiliation helps in providing unbiased reviews. A paper is judged by four essential criteria: Is the material new, true, important, and comprehensible?

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PREPARATION OF MANUSCRIPTS**General Instructions**

Use 8 1/2-by-11-inch paper, 10-point or larger font, and 1-inch margins. Double-space all copy, including title page, abstract, list of references, tables, and figure captions. Number pages consecutively throughout. Blinding other than the title page and financial disclosure is the responsibility of the author. During online submission, upload of separate electronic documents is required for the following:

- Title page
- Financial disclosure
- Each figure (blinded)
- All remaining items (blinded), e.g., abstract, text, references, tables, together in one document

Length

Manuscripts exceeding word limits will not be accepted without permission from the Editor. Manuscripts of excessive length may be returned unreviewed.

- Research reports—6,000 words, including title page, abstract, references, tables, and figures. Limit tables and figures to 5 or fewer double-spaced manuscript pages.
- Case studies—2,500 words.
- Clinical Perspectives—2,200 words.

Components

Each manuscript must contain the following elements, ordered as below. Review of manuscripts lacking one of these parts may be delayed until the submission is complete. Begin each element on a separate page.

See the Instructions for Authors on our Web site (<http://jaacap.edmgr.com>) for a checklist to assist in manuscript preparation.

1. The following will be required in an online form:

- A running head (an abbreviated form of the main title) of 40 or fewer characters and spaces.
- Name, address, telephone and fax numbers, and e-mail address of the corresponding author.
- Name(s) of study statistical expert(s); if none, state that on the cover sheet.
- Word count, including references and tables.

2. Title page-in a separate electronic document provide:

- Title
 - Regular articles-maximum 15 words
 - Case studies-maximum 10 words
- The full names of authors and their academic degrees (on a separate line).
- Affiliations and acknowledgment paragraph of no more than 120 words, with authors' affiliations, any necessary credit lines, and the name and address for reprint requests and/or correspondence. Include a description of financial support relevant to the manuscript.

3. Structured abstract-maximum 200 words-first numbered page:

- The abstract must stand on its own and must meet the quality criteria set by *JAMA* (Winker, 1999;281:1129Y1130). Do not include general statements that refer the reader to the text. Do not cite references in the abstract.
- Research articles
 - Objective: the primary purpose of the study
 - Method: design of the study, main outcome measures, and age range of subjects
 - Results: key findings
 - Conclusions: including clinical significance
- Review articles
 - Objective: the primary purpose of the review
 - Method: data sources, study selection (number of articles reviewed and the selection process)

- Results: methods of data synthesis and key findings
- Conclusions: summary statement of what is known, including potential applications and research needs
- Case studies require an unstructured abstract of not more than 100 words.
- Key words-3 to 5 key words to be used for indexing

4. Text

• Technical items

- Begin on the second numbered page.
- Spell out all abbreviations (other than units of measure) the first time they are used.
- Do not use footnotes to the text.
- When using direct quotations, cite the page number for the quotation in the text, immediately after the quotation. Include the text reference citation as well.
- Use the generic term for a drug. When it is necessary to refer to the proprietary name, list it in parentheses after the generic term, followed by the register mark

• Research reports: Sections titled Introduction, Method, Results, and Discussion are required.

- Introduction
 - Purpose of the study
 - A priori hypotheses
 - Recent and relevant literature review
- Method

• Participants/Subjects

- Sampling frame and sampling and recruitment strategies
- Inclusion and exclusion criteria
- Determination of sample size (include power calculation)
- Complete information about sample composition: gender, race/ethnicity, and family occupational status and educational attainment. Use the current and codable occupational categories, four educational attainment categories (without H.S. diploma, H.S. graduate without college education, some college education, degree from 4-year college or more), and five race/ethnicity categories (e.g., U.S. Bureau of Census).
- Representativeness of the sample

• Measures

- Variables measured
- Instruments used: You must provide sufficient information about rating scales and other measures so that readers can access them for their own use. Unpublished instruments may be made available via the Article Plus feature.
- Assessment instruments: Authors of manuscripts reporting on studies of diagnostic interviews or rating scales are encouraged to submit the STARD flow diagram and checklist (for more information, see *Annals of Internal Medicine* 2003;138:40Y44)

• Design and Procedures

- Method of randomization (if applicable)
- Degree of “blindness”
- Response rates or follow-up rates and possible bias
- If a manual-based treatment is used, you must include information on how to obtain the manual. The Article - Plus feature may be used to provide access.

• Data Analysis

- Describe all analyses with names of specific statistical tests used.
- Justify and clearly reference the use of unusual statistical techniques.

- If multiple comparisons are unavoidable, use an appropriate adjustment to control type I error.
- State whether tests were one- or two-tailed.

• **Results**

- Summary statistics (such as means and standard deviations)
- When reporting significant results, include the statistical test used, the test value, degree(s) of freedom, and the probability level (p value).

- When possible, report confidence intervals on the main findings

• **Discussion:** Subsections titled Limitations and Clinical Implications are required.

- Focus on integrating the findings into what is known and how these findings advance theory or practice.

- Limitations—point out and discuss any weaknesses in study design or execution that may limit generalizability of the findings.

- Clinical Implications—relevance for clinical practice or developmental theory (i.e., why should a clinician read this paper?)

5. References

- **References in text:** If there are more than two authors in a citation, use “et al.” after the first author’s name. If more than one citation appear together, arrange them in alphabetical order.

• **Reference list**

- **Accuracy of references is the responsibility of the author. Arrange in alphabetical order by author names; do not number.**

- Use initials and surnames of authors.

- List all authors’ names for each publication.

- If several papers by one author are cited, list them in chronological order. When an author has published several papers in the same year, the date is followed by a, b, c, d, etc.

- Refer to the U.S. National Library of Medicine’s List of Journals Indexed in *Index Medicus*.

- Do not cite unpublished manuscripts, submitted manuscripts, or personal communications in the reference list; note only in the text.

- Include “in press” manuscripts in the reference list.

- If using Endnote\ software, visit www.isiresearchsoft.com to obtain the *Journal’s* style file.

- Consult a recent print issue of the *Journal* for sample references prepared using *Journal* style.

6. **Tables and figures** Tables and figures should comprise no more than a total of 5 double-spaced manuscript pages. The *Journal* does not publish tables or figures that have appeared in other publications. Cite previously published materials only for reference.

Tables

- Create tables using the table creation and editing feature of your word processing software (e.g., Word, WordPerfect). Do not use Excel or comparable spreadsheet programs. Tables submitted in any other format will be returned to the author for reformatting.

- Tables that are a single column are actually lists and should be included in the text as such.

- Avoid duplicating information in the text and in tables.

- Number tables consecutively using Arabic numerals in order of appearance in the text.

- Cite each table in the text and note approximately where it should be placed.

- Type each table on a separate page with the title and legend included.

- Double-space the table and any footnotes to it.

- Set each separate entry in a single table cell.

- Do not use underlining.

- Properly align numbers, both horizontally and vertically.

- Use brief headings for columns.
- If abbreviations are necessary, define them in a key at the end of the table.
- Keep footnotes to a minimum; if necessary, use superscript letters to denote them.

Figures

Figures must be submitted in electronic form (“digital art”). Each figure must be submitted as a separate electronic file. Each figure must be saved in a separate electronic file. See the Instructions for Authors on our Web site (<http://jaacap.edmgr.com>) for more detailed information about preparing figures that reproduce well, are clear to the reader, and will be accepted by our online submission software. Further guidelines for preparing digital art are available at www.LWWonline.com. Click For Authors, then Artwork in the menu to the right. See the Digital Art Checklist and 5 Steps for Creating Digital Art.

1. Financial disclosure

In a separate electronic document titled *Disclosure*, provide a paragraph listing all current financial ties with for-profit enterprises. This includes, but is not limited to, industry research funding, stockholdings/ownership interest, consulting relationships, and speaker’s bureaus. Financial benefit from instruments, technology, or treatments mentioned in the manuscript must also be disclosed. If all (or some) of the authors have nothing to disclose, write "The (other) authors have no financial relationships to disclose."

MANUSCRIPT PROCESSING

Authors can usually expect a decision within 6 to 10 weeks. Review comments that are judged useful to authors will be sent with the decision. Accepted papers are subject to editorial revisions and copyediting. However, the contents of the paper remain the responsibility of the author. Page proofs will be sent by email by the publisher, Lippincott Williams & Wilkins. Corrected proofs must be returned to the publisher within 48 hours. Authors will be billed for excessive changes on proofs (not due to printer error). Changes that have been made to conform to journal style will stand if they do not alter the authors’ meaning. Only the most critical changes to the accuracy of the content will be made. Changes that are stylistic or are a reworking of previously accepted material will be disallowed. The publisher reserves the right to deny any changes that do not affect the accuracy of the content.

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Systematic Review Quality Criteria

Methodology

1) Did the study address a clearly focussed question?

(Question can be focussed in terms of the population studied, the risk factors studied or the outcomes considered)

Yes ☐ (2)

Can't tell/poorly addressed ☐ (1)

No ☐ (0)

2) Did the authors use an appropriate method to answer their question?

(Consider if the study design is a good way of answering the question under the circumstances. Did the method address the study question?)

Yes ☐ (2)

Can't tell/Partly ☐ (1)

No ☐ (0)

3) Were the procedures used clearly described /is the study replicable given the information stated?

Yes ☐ (2)

No ☐ (0)

4) Did the study clearly define deliberate self-harm/attempted suicide?

Yes ☐ (2)

No ☐ (0)

5) Were inclusion and exclusion criteria for the study clearly stated?

Yes ☐ (2)

Can't tell/ Partly ☐ (1)

No ☐ (0)

6) Was a power calculation reported or referred to?

Yes ☐ (2)

No ☐ (0)

7) Did the study recruit enough participants to satisfy this power calculation?

Yes ☐ (2)

Can't tell ☐ (1)

No ☐ (0)

Not applicable ☐

8) Were participants recruited in an acceptable way?

(Was there a selection bias which might compromise the generalisability of the findings? Were the participants representative of the defined population)

Yes ☐ (2) Can't tell ☐ (1) No ☐ (0)

9) Did the study have a comparison group of adolescents who hadn't deliberately self-harm/had not attempted suicide?

Yes ☐ (2) Can't tell ☐ (1) No ☐ (0) Not applicable ☐

10) Were the control group selected and recruited in an acceptable way?

Yes ☐ (2) Can't tell ☐ (1) No ☐ (0) Not applicable ☐

11) Were experimental and control groups selected from source populations, comparable in all respects other than the factor under investigation?

(e.g age, gender, socio economic status etc).

Yes ☐ (2) Can't tell ☐ (1) No ☐ (0) Not applicable ☐

Sample

12) Was the response rate or refusal rate / drop out rate specified?

Yes ☐ (2) Can't tell/Partly addressed ☐ (1) No ☐ (0)

13) Were inferential statistics used to assess differences between those who refused/dropped out and those who participated in the study?

Yes ☐ (2) Can't tell/partly ☐ (1) No ☐ (0) Not applicable ☐

14) Was the following demographic information specified?

Age (mean) Yes ☐ (2) / No ☐ (0)

Age (range or standard deviation) Yes ☐ (2) / No ☐ (0)

Socio economic class or income Yes ☐ (2) / No ☐ (0)

Gender Yes ☐ (2) / No ☐ (0)

Ethnic origin Yes ☐ (2) / No ☐ (0)

Measures

15) Did the study report validity and reliability statistics for its chosen standardised measure of family functioning?

Yes ☐ (2) Partly ☐ (1) No ☐ (0)

16) Did the study include a diagnostic instrument to assess for depression?

Yes ☐ (2) No ☐ (0)

17) Has the diagnostic instrument been shown to be reliable and valid for use with adolescents?

Yes ☐ (2) No ☐ (0) Not Applicable ☐

18) Did the study include a standardised measure to assess depression severity?

Yes ☐ (2) No ☐ (0)

19) Has the standardised measure of depression been shown to be reliable and valid for use with adolescents?

Yes ☐ (2) No ☐ (0) Not Applicable ☐

20) Was suicidal intent assessed?

Yes (standardised instrument) ☐ (2)

Yes (non-standardised) ☐ (1)

No ☐ (0)

Not Applicable ☐

21) Has this instrument been shown to be reliable and valid for use with adolescents?

Yes ☐ (2) Can't tell ☐ (1) No ☐ (0) Not Applicable ☐

22) Were other relevant variables, appropriate to the research question, assessed using standardised instruments?

Yes ☐ (2) Can't tell/Partly ☐ (1) No ☐ (0)

23) Were the standardised measures used to assess these variables reliable and valid instruments for adolescents?

Yes ☐ (2) Can't tell ☐ (1) No ☐ (0) Not Applicable ☐

Results

24) Did the authors identify and account for all important confounding variables in the study design and analysis? (e.g. depression, psychiatric morbidity, refusal rates etc.)

Yes ☐ (2) Mentioned but not taken into ☐ (1) No ☐ (0)
account in the analysis

25) Was the statistical analysis appropriate? (e.g. parametric / non-parametric / relevant to research question etc.)

Yes ☐ (2) Can't tell/ Partly ☐ (1) No ☐ (0)

26) Were the results of the study clearly reported?

(Did they report confidence intervals, p values and effect sizes? Have they reported the rate/ratio between any group?)

Very clearly ☐ (2) Reasonably clearly ☐ (1) Vague ☐ (0)

27) Was there discussion of the extent of generalisability of the findings?

Yes ☐ (2) Can't tell/Partly ☐ (1) No ☐ (0)

Ethical Considerations

28) Did the study state that it had received ethical approval?

Yes ☐ (2) Can't tell / partly addressed ☐ (1) No ☐ (0)

Scoring

Total Score:

Maximum possible Total score:
(Accounting for non-applicable questions)

Total Percentage:
(Accounting for non-applicable questions)

Overall Quality Grade:

APPENDIX 2.3: Reliability and Validity of Measures of Family Functioning

• McMaster Family Assessment Device (Epstien, et al., 1983)

Reliability

- **Internal Consistency.** In the initial psychometric studies, coefficient alphas were the highest for the General Functioning Scale (.83-.86) and lowest for the Roles scale (.57-.69) (Epstien, et al., 1983). Subsequent reports consistently support internal stability of all scales but the Roles scale and data using adolescents yield comparable alpha (Harrigan, 1989). Users should either delete the Roles scale or interpret its results with caution.

- **Test-Retest.** 1 week test-retest reliability has been demonstrated to be adequate (Miller et al, 1985).

Validity

- **Concurrent Validity.** The predicted relationship between the scales of the FAD and FACES-II, when treated linearly (Olson, et al., 1979) provide adequate evidence of concurrent validity for the FAD.

- **Discriminant Validity.** 67% of non-clinical and 64% of a clinical group were correctly predicted by the FAD (Epstien, et al., 1983).

• Family Adaptability and Cohesion Scales (Olson, et al., 1982, 1985)

Reliability

- **Internal Consistency:** Alpha reliability is higher for the FACES II due to an increased number of items when compared to FACES III (Olson, et al., 1991). Measures of internal consistency for the FACES III show alpha reliabilities of .68 for the entire measure, .77 for the Cohesion factor, and .62 for the Adaptability factor (Olson, et al., 1985)

- ***Test-retest reliability.*** Over a period of 4 to 5 weeks, coefficients were .83 for Cohesion, .80 for Adaptability, and .84 for the entire FACES II measure based on a university and high school sample (Olson, et al., 1991). The test-retest reliability of the FACES III is estimated to be similar to that of FACES II (Olson, et al., 1985).

Validity

- ***Concurrent Validity.*** Treating data obtained by FACES II in a linear manner has demonstrated some evidence of concurrent validity and reported higher for FACES II than for FACES III (Hampson, et al., 1991).

- ***Discriminant Validity.*** FACES III has discriminated between families presenting clinically and families with few difficulties, and with respondents representing various problems (Edman, et al., 1990; Henggeler, et al., 1991; Olson, et al., 1991)

• Family Assessment Measure (Skinner, et al., 1983)

Reliability

- ***Internal Consistency.*** Substantial internal consistency (coefficient alpha) is reported. Based on data from 474 families, scale reliabilities for the General Scale were .93.

- ***Test-Retest Reliability.*** No reported evidence

Validity

- ***Concurrent Validity.*** In studies that compared data reported by wives to those of their spouses, for clinical and non-clinical samples, the results paralleled those reported in similar studies using the FACES II (Olson & Portner, 1983).

- ***Discriminant Validity.*** The FAM was found to adequately discriminate between clinical and non-clinical families (Skinner, 1987).

• **Family Environment Scale (Moos & Moos, 1981)**

Reliability

- **Internal Consistency.** Internal consistency data from original sample range from .61 for

Independence to .78 for Cohesion, Intellectual-cultural orientation, and Moral-Religious

Emphasis subscales (Moos, 1974). Cronbach's alpha for the nine subscales of the Dutch version

of the FES varied from .33 to .81 (Jansma, 1988)

- **Test-Retest Reliability.** Eight-week test-retest reliabilities varied from .73 to .86; 12-month

stabilities for averaged family subscale means varied from .63 for Cohesion to .81 for

Organisation.

Validity

- **Concurrent Validity.** The Cohesion scale of the FES was correlated .86 with the FACES III

Cohesion, .68 with the Affective Involvement scale of the FAD (Perosa & Perosa, 1990).

- **Discriminant Validity.** Moos and Moos (1986) report numerous studies in which FES

subscales discriminate between at risk families and "normal" families.

APPENDIX 3.1: Doctorate of Clinical Psychology Course Handbook Guidance on Preparation of Major Research Proposal

This can be written in the form of an application to a Local Research Ethics Committee and be presented, in full, in the final Research Portfolio. A copy of the letter(s) of ethical approval received from the LREC must also be included in the Research Portfolio. In circumstances where the completed project deviated from the original approved plan, the trainee must insert a clear explanation of these changes. Any further correspondence with the LREC, which relates to such changes must also be appended. The Major Research Project Proposal should include the following headings.

- Full title of project
- Summary of Project
- Introduction
- Aims and hypotheses
 - o *Aims*
 - o *Hypotheses*
- Plan of Investigation
 - o *Participants*
 - o *Recruitment*
 - o *Measures*
 - o *Design and Procedures*
 - o *Settings and Equipment*
 - o *Power Calculation*
 - o *Data Analysis*
- Practical Applications
- Timescale
- Ethical Approval
- References

Instructions to Authors

Authors should ensure that their manuscripts and cover letters meet the criteria below before submitting their manuscripts electronically (in .rtf, PDF, or .doc format) via the [Submission Portal Entrance](#).

David Watson, PhD
Editor, *Journal of Abnormal Psychology*
Department of Psychology
The University of Iowa
Iowa City, IA 52242-1407

General correspondence may be directed to the [Editor's Office](#).

In addition to postal addresses and telephone numbers, authors are requested to supply electronic mail addresses and fax numbers, if available, for potential use by the editorial and production offices. Authors should keep a copy of the manuscript to guard against loss.

Masked reviews are optional and must be specifically requested in the cover letter accompanying the submission. For masked reviews, the manuscript must include a separate title page with the authors' names and affiliations, and these ought not to appear anywhere else in the manuscript. Footnotes that identify the authors must be typed on a separate page. Authors are to make every effort to see that the manuscript itself contains no clues to their identities.

Most of the articles published in the *Journal of Abnormal Psychology* are reports of original research, but other types of articles are acceptable. Short Reports of replications or of failures to replicate previously reported results are given serious consideration. Comments on articles published in the journal are also considered. Case studies from either a clinical setting or a laboratory will be considered if they raise or illustrate important questions that go beyond the single case and have heuristic value. Manuscripts that present or discuss theoretical formulations of psychopathology, or that evaluate competing theoretical formulations on the basis of published data, may also be accepted. Finally, the Journal will consider articles that present, explicate, or evaluate experimental or analytic methods of particular relevance to psychopathology. [For further information on content, authors may refer to the Journal Description](#).

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manuscripts are copyedited for bias-free language (see chap. 2 of the Publication Manual).

References. References should be listed in alphabetical order. Each listed reference should be cited in text, and each text citation should be listed in the References.

Figures. Graphics files are welcome if supplied as Tiff, EPS, or PowerPoint. High-quality printouts or glossies are needed for all figures. The minimum line weight for line art is 0.5 point for optimal printing. When possible, please place symbol legends below the figure image instead of to the side. Original color figures can be printed in color at the editor's and publisher's discretion provided the author agrees to pay \$255 for one figure, \$425 for two figures, \$575 for three figures, \$675 for four figures, and \$55 for each additional figure.

Articles will be published in five different sections of the *Journal*: Brief Reports, Regular Articles, Extended Articles, Case Studies, and Commentaries:

- Brief Reports must not exceed 5,000 words in overall length. This limit includes all aspects of the manuscript (title page, abstract, text, references, tables, author notes and footnotes, appendices, figure captions) except figures. Brief Reports also may include a maximum of two figures. For Brief Reports, the length limits are exact and must be strictly followed.
- Regular Articles typically should not exceed 9,000 words in overall length (excluding figures).
- Extended Articles are published within regular issues of the *Journal* (they are not free-standing) and are reserved for manuscripts that require extended exposition beyond the normal length restrictions of a Regular Article. Typically, Extended Articles will report multiple experiments, multifaceted longitudinal studies, cross-disciplinary investigations, or studies that are extraordinarily complex in terms of methodology or analysis. Any submission that exceeds a total of 12,000 words in length automatically will be considered for publication as an Extended Article.
- Case Studies and Commentaries have the same length requirements as Brief Reports.

Components of all cover letters, in addition to items 1–4 below, will contain the following: (a) the full postal and email address of the corresponding author; (b) the complete telephone and fax numbers of the same; (c) the proposed category under which the manuscript was submitted; and (d) a request for masked review, if desired, along with a statement ensuring that the manuscript was prepared in accordance with the guidelines above. Authors should also specify the overall length of the manuscript (in words) and indicate the number of tables and figures that are included in the manuscript.

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Last, as the APA requires authors to reveal any possible conflict of interest in the conduct and reporting of research (e.g., financial interests in a test procedure, funding by pharmaceutical companies for drug research), authors must disclose the presence or absence of such conflicts in the cover letter.

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Date 26 August 2005
Your Ref
Our Ref

Direct line 0141 211 3824
Fax 0141 211 3814
E-mail anne.mcmahon@gartnavel.gla.ac.uk

Dear Miss Kirkpatrick

Full title of study: An Investigation of Self-Discrepancy and Self-Complexity in Adolescents that Deliberately Self Harm
REC reference number: 05/S0701/74

Thank you for your letter of 29 July 2005, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information was considered at the meeting of the Sub-Committee of the REC held on 25 August 2005. A list of the members who were present at the meeting is attached.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised. *However Committee request the removal of the underlined section in the PIS which indicates "you do not have to deliberately self harm to take part" and this altered to indicate "you do not have to have a history of self harm to join in"*

The favourable opinion applies to the research sites listed on the attached form.

Conditions of approval

The favourable opinion is given provided that you comply with the conditions set out in the attached document. You are advised to study the conditions carefully.

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	Version	Date
----------	---------	------

Application		20 June 2005
Investigator CV	SAB	(None Specified)
Investigator CV	FK	(None Specified)
Investigator CV	KMD	(None Specified)
Protocol		(None Specified)
Interview Schedules/Topic Guides	self-discrepancy protocol	20 June 2005
Interview Schedules/Topic Guides	Acts of deliberate self harm inventory (Davidson 2002)	(None Specified)
Interview Schedules/Topic Guides	self complexity protocol - one	20 June 2005
Interview Schedules/Topic Guides	Hospital Anxiety and Depression Scale	(None Specified)
Interview Schedules/Topic Guides	suicide intent scale	(None Specified)
Participant Information Sheet	one	10 June 2005
Participant Information Sheet	two	28 July 2005
Participant Consent Form	two	28 July 2005
Participant Consent Form	Parent/Guardian	28 July 2005
Participant Consent Form	12-15 yrs - one	20 June 2005
Participant Consent Form	16 yrs plus - one	20 June 2005
Response to Request for Further Information		29 July 2005
Other	letter AG	01 May 2005

Management approval

The study should not commence at any NHS site until the local Principal Investigator has obtained final management approval from the R&D Department for the relevant NHS care organisation.

Membership of the Committee

The members of the Ethics Committee who were present at the meeting are listed on the attached sheet.

Notification of other bodies

The Committee Administrator will notify the research sponsor that the study has a favourable ethical opinion.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

05/S0701/74	Please quote this number on all correspondence
-------------	--

With the Committee's best wishes for the success of this project,

Yours sincerely

A W McMahon
Research Ethics Co-ordinator (Manager) on behalf of Dr Paul Fleming, Chair

Email: Anne.McMahon@gartnavel.gla.comen.scot.nhs.uk

Enclosures:

Attendance at Sub-Committee of the REC meeting on 25 August 2005
Standard approval conditions
Site approval form (SF1)

Divisional Headquarters
Gartnavel Royal Hospital
1055 Great Western Road
GLASGOW G12 0XH
Telephone 0141 211 3600
www.nhsgg.org.uk



Miss Fiona A Kirkpatrick
Trainee Clinical Psychologist
Section of Psychological Medicine
Academic Centre, Gartnavel Hospital
1055 Great Western Road, Glasgow
G12 0XH

Date 28 July 2006
Your Ref
Our Ref

Direct line 0141 211 3824
Fax 0141 211 3814
E-mail anne.mcmahon@gartnavel.gla.ac.uk
glacomen.scot.nhs.uk

Dear Miss Kirkpatrick

Study title: An Investigation of Self-Discrepancy and Self-Complexity
in Adolescents that Deliberately Self Harm
REC reference: 05/S0701/74

Amendment number:
Amendment date: 06 July 2006

Thank you for submitting the above amendment, which was received on 17 July 2006. It is noted that this is a modification of an amendment previously rejected by the Committee.

The modified amendment was considered at the meeting of the Sub-Committee of the REC held on 27 July 2006. A list of the members who were present at the meeting is attached.

Ethical opinion

I am pleased to confirm that the Committee has given a favourable ethical opinion of the modified amendment on the basis described in the notice of amendment form and supporting documentation.

Approved documents

The documents reviewed and approved are:

Document	Version	Date
Modified Amendment		06 July 2006

Membership of the Committee

The members of the Ethics Committee who were present at the meeting are listed on the attached sheet.

Research governance approval

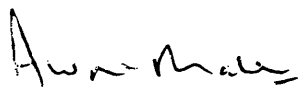
All investigators and research collaborators in the NHS should notify the R&D Department for the relevant NHS care organisation of this amendment and check whether it affects research governance approval of the research.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

05/S0701/74:	Please quote this number on all correspondence
---------------------	---

Yours sincerely



A W McMahon
Research Ethics Co-ordinator (Manager) on behalf of Dr Paul Fleming, Chair

E-mail: Anne.McMahon@gartnavel.gla.comen.scot.nhs.uk

Copy to: Mr. Brian Rae
[R&D Department for NHS care organisation at lead site]

Enclosures *List of names and professions of members who were present at the meeting and those who submitted written comments*



How Young People who Deliberately Self Harm See Themselves.

A Research Study

Thank you for reading this information sheet. I work at the University of Glasgow, and I am carrying out a study looking at how young people who deliberately self harm see themselves.

You are being invited to take part in this study. Before you (and your parent(s)/guardian if you are under 16 year old) decide whether you want to take part, it is important that you read this sheet. It lets you know why the study is being done and what will happen if you take part. Please read this sheet carefully and discuss it with other people if you wish. If there is anything that you or your parent(s)/guardian do not understand, or that you would like to know more about, please contact me. My name, telephone number, and email address is at the bottom of this sheet.

What is this all about?

This study will look at how young people who deliberately self harm see themselves. It will then compare their views against the views of other young people that do not deliberately self-harm. This study will investigate how you see yourself right now and how you would like to be.

Why have I been asked to take part?

The service or group that you attend is helping me to find young people between the ages of 12 and 17 that would be interested in taking part. You may or may not deliberately self-harm. I am looking to speak to a range of young people therefore you do not have to have a history of self-harm to join in. About 54 young people will be taking part in this study.

Do I have to take part?

No, it is up to you (and your parent(s)/guardian if you are under 16) to decide if you want to take part. If you decide to take part, and you are under 16, you and your parent(s)/guardian will be asked to sign a consent form. If you are 16 years old or over, your parent(s)/guardians signature is not needed, but you may still find it helpful to talk over the study with them. After the consent form has been signed you will be given a copy of it and a copy of this information sheet to keep. You can change your mind about taking part or stop at any time - you do not have to give a reason and nobody will be upset. If you decide not to take part anymore, and are currently attending a mental health team, it will not affect your treatment in any way.

What will happen to me if I take part?

If you decide to take part in the study, then I will arrange a time for us to meet up in a suitable place. We will meet in a quiet room by ourselves. I will ask you some questions and ask you to complete some questionnaires about how you are feeling. I will also ask you to complete two tasks that help me to find out how you see yourself now and how you would like to be. Some of the questions that I ask will be about your experiences of deliberate self-harm. We will talk for no longer than an hour and you can have a break if you want to.

Will other people find out what I have to say?

Anything you say will be confidential. Your name will not be on any of my notes and my notes will be destroyed when I complete my training course. I will only discuss what you say with other professionals if I am worried that you may harm yourself or others, or be in danger. If I feel that I need to do this I will tell you before I do so.

What are the possible disadvantages and risks of taking part?

It is unlikely that there is a risk involved in taking part in this study, but sometimes people can find it upsetting talking about how they feel and about their deliberate self harm. In the unlikely event that you feel upset after talking to me, you can speak to a member of staff within the building who talks to other young people when they are upset or worried.

What are the possible benefits of taking part?

The information that you provide through talking to me will help build up a picture of how young people who deliberately self harm feel about themselves. Once we have a good idea of important issues, we will be able to use this information to help other young people.

What happens to the results of the research study?

When I have finished writing up the research from this study I hope to publish the results in a journal. There will be no way of identifying you from the journal article as all names and personal information will be removed. If you would like to have a copy of this article once it has been published, please let me know.

Who is organising and funding this study?

The Department of Psychological Medicine at the University of Glasgow are funding this research project as part of my postgraduate studies in Clinical Psychology and this study will form the research part of my clinical training.

Members of the public and staff working for the NHS in Glasgow have formed a committee and have read over this research study to make sure that it is ethical (in your best interest and not harmful to you) and worthwhile doing.

Who can I contact if I want to ask questions about the study?

If you have any questions you would like to ask, you can contact me, Fiona Kirkpatrick, on 0141 211 0607 or email me at 9707519k@student.gla.ac.uk

Thank you for taking the time to read this information.



Consent form (young people between 12-15 years old)

Young Persons Version

A study of how young people who deliberately self harm see themselves

1. I have read and understood the information sheet for the above study (dated 28th July 2005, version number 2) and have had the opportunity to ask questions.

Tick box
☐
2. I understand that participation is voluntary and that I am free to withdraw at any time without giving a reason, without my medical or legal rights being affected.

☐
3. I agree to take part in this study

☐

Young Person

.....
Name of Young Person

.....
Date

.....
Signature

Researcher

.....
Name of Researcher

.....
Date

.....
Signature

Consent form (young people 16 years old or over)

A study of how young people who deliberately self harm see themselves

- | | Tick box |
|---|--------------------------|
| 1. I have read and understood the information sheet for the above study (dated June 2005, version number 1) and have had the chance to ask questions. | <input type="checkbox"/> |
| 2. I understand that I do not have to take part if I do not want to and that I can withdraw at any time without giving a reason, without my medical or legal rights being affected. | <input type="checkbox"/> |
| 3. I agree to take part in this study | <input type="checkbox"/> |

Young Person

.....
Name of Young Person	Date	Signature

Researcher

.....
Name of Researcher	Date	Signature

1 for young person; 1 for researcher; 1 for clinical team
Version 1, Date: 10th June 2005

Consent form (young people between 12-15 years old)

Parent/Guardian Version

A study of how young people who deliberately self harm see themselves

- | | |
|---|--------------------------------------|
| 1. I have read and understood the information sheet for the above study (dated 28th July 2005, version number 2) and have had the opportunity to ask questions. | Tick box
<input type="checkbox"/> |
| 2. I understand that my child's participation is voluntary and that we are free to withdraw at any time without giving a reason, without my child's medical or legal rights being affected. | <input type="checkbox"/> |
| 3. I agree that my child can take part in this study | <input type="checkbox"/> |

Parent/guardian

.....
Name of Parent/Guardian	Date	Signature

Researcher

.....
Name of Researcher	Date	Signature

1 for young person; 1 for researcher; 1 for clinical team
Version 2, Date: 28th July 2005

APPENDIX 4.5: Self-Complexity Trait Words

Kind	Happy	Friendly
Unfriendly	Funny	Helpful
Hard-working	Talkative	Confident
Intelligent	Fun to be with	Lazy
Annoying	Moody	Shy
Cheeky	Loud	Sarcastic
Bitchy	Worry a lot	Relaxed
Bossy	Short tempered	Get bored easily
Quiet	Sensible	Daring
Strong	Weak	Positive
Negative	Understanding	Reliable
Honest	Nice	Energetic
Lively	Polite	Impatient
Rude	Outgoing	Enthusiastic
Patient	Different	Individual
Competitive	Organised	Unorganised
Rebellious	Loving	Warm
Imaginative	Selfish	Stupid
Not studious	Studious	Withdrawn
Irresponsible	Unsure of myself	Snobby
Sensitive	Open	Considerate
Easily upset	Bubbly	Easy going
Sporty	Not sporty	Caring
Unpopular	Original	Thoughtful
Unusual	Not confident	Forgetful
Aggressive	Popular	Sad
Timid	Ill at ease	Clumsy
Crazy	Ill-mannered	Grumpy
Mean	Worrier	Tries hard
Pushy		

Appendix 4.6 Self-Aspect Groups of Sorted Attributes and Attribute Clusters Derived From Them

Group1	Group2	Group3	Group4	Group5
Enthusiastic	Bubbly	Relaxed	Clumsy	Energetic
Organised	Clumsy	Warm	Moody	Shy
Popular	Grumpy	Thoughtful	Honest	Quiet
Clumsy	Helpful	Clumsy	Sarcastic	Fun to be
Bubbly	Strong	Caring	Loud	with
Hardworking	Lively	Worrier	Timid	Kind
Tries Hard	Talkative	Friendly	Bitchy	Open
Daring	Funny	Easy going	Confident	Outgoing
Studious	Happy	Considerate		Competitive
Nice	Cheeky	Polite		Stupid
Funny	Rebellious	Individual		Relaxed
Sensitive	Understanding	Loving		Patient
Sensible	Reliable			
Helpful	Positive			
Worry a lot	Crazy			
Intelligent				
Imaginative				

Attribute Cluster #1 (in Group 1 only): *Enthusiastic, Organised, Popular, Hardworking, Tries Hard, Daring, Studious, Nice, Sensitive, Sensible, Worry a lot, Intelligent, Imaginative* ($n_1 = 13$)

Attribute Cluster #2 (in Group 2 only): *Grumpy, Strong, Lively, Talkative, Happy, Cheeky, Rebellious, Understanding, Reliable, Positive, Crazy* ($n_2 = 11$)

Attribute Cluster #3 (in Group 3 only): *Warm, Thoughtful, Caring, Worrier, Friendly, Easy Going, Considerate, Polite, Individual, Loving* ($n_3 = 10$)

Attribute Cluster #4 (in Group 4 only): *Moody, Honest, Sarcastic, Loud, Timid, Bitchy, Confident* ($n_4 = 7$)

Attribute Cluster #5 (in Group 5 only): *Energetic, Shy, Quiet, Fun to be with, Patient, Kind, Open, Outgoing, Competitive, Stupid* ($n_5 = 10$)

Attribute Cluster #6 (in Groups 1 and 2): *Bubbly, Funny, Helpful* ($n_6 = 3$)

Attribute Cluster #7 (in Groups 3 and 5): *Relaxed* ($n_7 = 1$)

Attribute Cluster #8 (in Groups 1, 2, 3 and 4): *Clumsy* ($n_8 = 1$)

Residual Category (in no group) $n_9 = 32$

$$H = \log_2 88 - 1/88(13\log_2 13 + 11\log_2 11 + 10\log_2 10 + 7\log_2 7 + 10\log_2 10 + 3\log_2 3 + 1\log_2 1 + 1\log_2 1 + 32\log_2 32)$$

$$H = 6.46 - 1/88(48.12 + 38.05 + 33.22 + 19.65 + 33.22 + 4.75 + 0 + 0 + 160)$$

$$H = 6.46 - 3.83 = 2.63$$

BOSCOT TRIAL

ACTS of DELIBERATE SELF- HARM INVENTORY Kate Davidson

This instrument is designed to ensure accurate collection of data about attempted acts of suicide and incidents of self-harm.

*For the purposes of the research project the instrument is categorical. The interviewer should note that a trained rater will assess if a particular episode meets the criteria for either a suicide attempt or self-harm. **The instrument is not a measure of severity.** The aim of the interview is to assess the frequency of attempts of both suicide and self-harm over a six month time period (12 months at baseline).*

SUICIDAL ACTS

The criteria for suicidal acts are:

1) deliberate;

This means that the act could not be construed as an accident and there was planning involved. The subject accepts ownership of the act e.g. claiming not to have read the indications on a bottle of medications before taking it in excess would not be considered as a suicidal act.

2) life threatening;

The subject's life was deemed to be seriously at risk, or he or she thought it to be at risk, as a consequence of the act.

3) resulted in medical intervention or intervention would have been warranted;

The subject may have sought or would have warranted medical intervention or medical intervention was sought on their behalf. Medical intervention need not be treatment but at the minimum a physical examination is implied.

SUICIDAL ACTS

1. Over the past 6 months (12 months at baseline) have you attempted to kill yourself?
(The interviewer should describe to the patient the definition of an attempt at suicide given above).

YES NO If no, go to Part II

2. On how many occasions can you recall trying to kill yourself? Number

List in chronological order (*most recent first*):

	Date	Method	accuracy (a,r,q,i)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

If more use separate sheet

3. Interviewer should assess the accuracy of these statements at the end of the interview.

a- accurate r- reasonably accurate q-questionable i- inaccurate

4. Date of first suicidal act for this time period _____ (not at baseline)

The interviewer should then elicit the following information for each act commencing with the earliest attempt over the last 6 months (or 12 months if baseline).

Suicidal Act 1

1 Date of the event: _____

2 What was the method used? *Please circle below*

- | | | |
|------------------------------------|----|-----------------------------|
| Overdose | 1 | (please list in Question 6) |
| Self-laceration | 2 | |
| Burning | 3 | |
| Swallowing sharp objects | 4 | |
| Hanging | 5 | |
| Shooting | 6 | |
| Jumping from height or under train | 7 | |
| Car exhaust fumes | 8 | |
| Other – please specify _____ | 9 | |
| Two or more (please circle) | 10 | |

(Only include life threatening self-induced injury here e.g. overdose necessitating hospital assessment or admission, self-laceration leading to severe loss of blood requiring transfusion or stitching, razor blade ingestion leading to surgical intervention, etc)

3 Were plans made? (a plan is a set of systematic, premeditated, co-ordinated events, even if carried out impulsively at the time)

Yes (1)

No (2)

4. Did the patient contact anyone about the possible attempt?

Yes (1)

No (2)

5. Did the patient leave a note indicating that the act was suicidal?

Yes (1)

No (2)

6. What drugs &/ or alcohol were consumed during the act and in what quantity?

a) Alcohol Yes 1
 No 2 Number of units _____

b) Paracetamol Yes 1
 No 2 Number taken _____

c) Antidepressants Yes 1 Type _____
 No 2 Number taken _____

d) Other drugs Yes 1 Please Specify _____
 No 2 Number taken _____

7. Which hospital was the patient admitted to or treated at (if any)?

Name of hospital _____

Suicidal Act ____ (please enter act number)

1 Date of the event: _____

2 What was the method used? *Please circle below*

- | | |
|------------------------------------|-------------------------------|
| Overdose | 1 (please list in question 6) |
| Self-laceration | 2 |
| Burning | 3 |
| Swallowing sharp objects | 4 |
| Hanging | 5 |
| Shooting | 6 |
| Jumping from height or under train | 7 |
| Car exhaust fumes | 8 |
| Other – please specify _____ | 9 |
| Two or more (please circle) | 10 |

(Only include life threatening self-induced injury here e.g. overdose necessitating hospital assessment or admission, self-laceration leading to severe loss of blood requiring transfusion or stitching, razor blade ingestion leading to surgical intervention, etc)

3 Were plans made? (a plan is a set of systematic, premeditated, co-ordinated events, even if carried out impulsively at the time)

Yes (1) No (2)

4. Did the patient contact anyone about the possible attempt?

Yes (1) No (2)

5. Did the patient leave a note indicating that the act was suicidal?

Yes (1) No (2)

6. What drugs &/ or alcohol were consumed during the act and in what quantity?

a) Alcohol Yes 1
 No 2 Number of units _____

b) Paracetamol Yes 1
 No 2 Number taken _____

c) Antidepressants Yes 1 Type _____
 No 2 Number taken _____

d) Other drugs Yes 1 Please Specify _____
 No 2 Number taken _____

7. Which hospital was the patient admitted to or treated at (if any)?

Name of hospital _____

DELIBERATE SELF-HARM (not suicide act)

CRITERIA FOR ACTS OF DELIBERATE SELF-HARM ARE:

1) deliberate;

This means that the act could not be construed as an accident and that the subject accepts ownership of the act.

*If a patient reports self-harm events that occur within hours of each other (for example, scratching wrists or cigarette burning), these are to be considered as one event. **ONLY** when 24 hours has passed between events are they to be considered as separate acts.*

2) resulting in potential or actual tissue damage;

You may wish to ask for clarification if appropriate

1. Have you harmed yourself in any other way over the last 6 months (or 12 months, if baseline)? For example by cutting or burning yourself?

(The interviewer should describe to the patient the definition of self-harm given above).

YES (1)

NO (2)

2. How many times have you harmed yourself in any of these ways over the last 6 months (or 12 months, if baseline)?

Number

Note most recent act first.

Date	Method
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Key

1. Cutting, scratching or stabbing
2. Burning
3. Other (specify)
4. Two or more (in same episode)

If pattern or method is different to responses above for remainder of acts, please provide details in above format.

3. Interviewer should assess the accuracy of these statements at the end of the interview. _____

a- accurate

r- reasonably accurate

q- questionable

i- inaccurate

4. How many acts were associated with alcohol and / or drugs? _____

5. How many acts were associated with alcohol only? _____

APPENDIX 5.1: Notes for contributors to Behavioural and Cognitive Psychotherapy

Instructions to Authors

Submission to Behavioural and Cognitive Psychotherapy

Articles written in English and not submitted for publications elsewhere should be sent to:

Paul M Salkovskis

Editor

Behavioural and Cognitive Psychotherapy

Department of Psychology

Institute of Psychiatry

De Crespigny Park

Denmark Hill

London SE5 8AF

UK

Tel: 020 7848 5039

E-mail: journal.editor@babcp.com

Manuscript preparation

A PDF of the manuscript must be submitted electronically at

<http://mc.manuscriptcentral.com/babcp> and original figures can be supplied as attachments. Articles must be typed double-spaced throughout allowing wide margins all round. Where unpublished material e.g. behaviour rating scales, therapy manuals etc., is referred to in an article, copies should be submitted as an additional document to facilitate review.

Submissions will be sent out for review exactly as submitted. Authors who want a blind review should indicate this at the point of submission of their article, omitting details of authorship and other identifying information. Submission for blind review is encouraged.

Abbreviations where used must be standard. The Systeme International (SI) should be used for all units: where metric units are used the SI equivalent must also be given. Probability values and power statistics should be given with statistical values and degrees of freedom (e.g. $F(1,34) = 123.07, p < .001$), but such information may be included in tables rather than in the main text. *Spelling* must be consistent within an article, either using British usage (*The Shorter Oxford English Dictionary*), or American usage (*Webster's new collegiate dictionary*). However, spelling in the list of references must be literal to each publication.

Details of style not specified here may be determined by reference to the *Publication manual of the American Psychological Association* or the style manual of the British Psychological Society.

Articles should conform to the following scheme:

- a. *Title page*. The title should phrase concisely the major issues. Author(s) to be given with departmental affiliations and addresses, grouped appropriately. A running head of no more than 40 characters should be indicated.
- b. *Abstract*. The abstract should include up to six key words that could be used to describe the article. This should summarize the article in no more than 200 words.
- c. *Text*. This should begin with an introduction, succinctly introducing the point of the paper to those interested in the general area of the journal. *Attention should be paid to the Editorial Statement which appears in the January and July issues at the back of the Journal*. References within the text should be given in the form of Jones and Smith (1973) or (Jones & Smith, 1973). When there are three or up to and including five authors the first citation should include all authors; subsequent citations should be given as Williams *et al.* (1973). Authors with the same surname should be distinguished by their initials. The appropriate positions of tables and figures should be indicated in the text. Footnotes should be avoided where possible.
- d. *Reference note(s)*. A list of all cited unpublished or limited circulation material, numbered in order of appearance in the text, giving as much information as possible about extant manuscripts.
- e. *References*. All citations in the text should be listed in strict alphabetical order according to surnames. Multiple references to the same author (s) should be listed chronologically, using a, b, etc., for entries within the same year. Formats for journal articles, books and chapters should follow these examples:

Kaltenthaler, E., Parry, G. and Beverley, C. (2004). Computerised cognitive behaviour therapy: a systematic review. *Behavioural and Cognitive Psychotherapy*, 32, 31–55. doi:10.1017/S135246580400102X.

Tharp, R.G. & Wetzel, R.J. (1969). *Behaviour modification in the natural environment*, New York: Academic Press.

Roskies, E. & Lazarus, R.S. (1980). Coping theory and the teaching of coping skills. In P.O. Davidson & S.M. Davidson (Eds), *Behavioural medicine: Changing health lifestyles*. New York: Brunner/Mazel.

- f. *Footnotes*. The first, and preferably only, footnote will appear at the foot of the first page of each article, and subsequently may acknowledge previous unpublished presentation (e.g. dissertation, meeting paper), financial support, scholarly or technical assistance, or a change in affiliation. A concluding (or only) paragraph must be the name and full mailing address of the author to whom reprint requests or other enquires should be sent.
- g. *Tables*. Tables should be numbered and given explanatory titles.
- h. *Figure captions*. Numbered captions should be typed on a separate page.
- i. *Figures*. Original drawings or prints must be submitted for each line or half-tone illustration. Figures should be clearly labelled and be camera-ready wherever possible.

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