Youth deliberate self-harm: Interpersonal and intrapersonal vulnerability factors, and constructions and attitudes within the social environment.

By

Jessica Anne Garisch

A thesis

Submitted to the Victoria University of Wellington in

fulfilment of the requirements for the degree of

Doctor of Philosophy

In Psychology

Victoria University of Wellington

2010

Abstract

Deliberate self-harm (DSH) is defined in this thesis as the intentional, culturally unacceptable, self-performed, immediate and direct destruction of bodily tissue that is of low-lethality and absent of overdose, self-poisoning and suicidal intent. DSH is a serious mental health problem among young people internationally (Hawton et al., 2006; De Leo & Heller, 2004) and is associated with multiple maladaptive psychological and social outcomes (D'Onofrio, 2007; Hawton et al., 2006). This thesis utilised secondary school student (N=2068), teacher (N=109), guidance counsellor (N=8), and university student (N=2063) populations to assess factors relating to interpersonal and intrapersonal vulnerability to DSH, and how DSH is received and understood within young peoples' environment.

Study 1 presents psychometric analyses, descriptive statistics and basic inferential statistics of surveys developed for secondary school student and university student populations. These surveys measured history of DSH and multiple correlates of DSH behaviour. Assessing the psychometric qualities of these surveys informed their later use in developing regression models of DSH in Study 2.

Study 2 assessed predictors and functions of DSH behaviour using a variety of samples and methodologies. Study 2.1 presents cross-lag and structural equation models of DSH, where the most consistent direct predictor of DSH was low self-esteem, which was proximally impacted by internalising symptoms, and more distally by alexithymia and low mindfulness. Study 2.2a investigated functions of DSH, and how this related to psychological wellbeing. Engaging in DSH for emotional relief or control was associated with the poorest wellbeing among females (i.e. higher rates of DSH, sexual abuse and bullying), while engaging in DSH for multiple reasons was associated with the poorest wellbeing among males (i.e. higher rates of DSH, bullying, abuse history, and low resilience). Study 2.2b qualitatively investigated reasons given for youth DSH by secondary school students, university students, and secondary school teachers using content analysis; DSH was most often attributed to emotional issues (e.g. externalising emotional pain). Study 2.3 assessed the relationships between DSH, emotional experience, self-defeating thoughts, coping strategies, and substance abuse over a six

week period with a sample of university students. DSH was linked to having more self-defeating thoughts and general negative emotional experience, as well as having more negative, and less positive, emotions during salient events.

Study 3 investigated social responses to DSH through interviews with eight secondary school guidance counsellors (Study 3.1), and a survey study on stereotypes and attitudes towards DSH (Study 3.2). A thematic analysis was conducted on the interview transcripts, indicating that DSH was commonly viewed as immature, attention seeking, abnormal and dangerous. The interviews suggested stigma in secondary schools towards DSH and fear and resistance around engaging the issue. The stereotypes and opinions survey was conducted with secondary school students, teachers and university students to assess common stereotypes of self-harmers, and willingness and confidence to help youth who self-harm. DSH was viewed negatively by all sample groups. Many participants felt unable and incompetent to help youth who self-harm.

Across youth samples lifetime prevalence rates for DSH were consistently in the range of 39-49%. Overall the findings suggest that DSH is heterogeneous, with numerous possible factors contributing to vulnerability. Knowledge from this thesis can be applied to prevention of DSH (e.g. assisting youth with internalising symptoms and low self-esteem), intervention (e.g. teaching emotional coping strategies) and increasing social awareness and understanding to counter stereotypes and thereby ease disclosure.

Acknowledgements

Contents

List of Tables

List of Figures

List of Appendices*

---

*All appendices are in electronic form (refer to CD in back inside cover)

Appendix A1: University student information sheet for Study 1.1

Appendix A2: University student survey for Study 1.1

Appendix A3: University student debriefing sheet for Study 1.1

Appendix B1: School student information sheet for longitudinal survey

Appendix B2: School student survey, first round

Appendix B3: Changes to the DSHI-s scale for the school student longitudinal survey, second round

Appendix B4: Contact information sheet for secondary school participants

Appendix B5: Guide for teachers when distributing the school longitudinal survey

Appendix B6: Debriefing sheet for secondary school participants

Appendix B7: Secondary school student models of DSH

Appendix C1: University student information sheet and survey for Study 1.3a

Appendix C2: University student debriefing sheet for Study 1.3a

Appendix D1: University student information sheet for longitudinal survey, first round

Appendix D2: University student information sheet for longitudinal survey, second round

Appendix D3: University student longitudinal survey, first round

Appendix D4: University student longitudinal survey, second round

Appendix D5: University student longitudinal survey debriefing sheet

Appendix D6: University student models of DSH

Appendix E1: University student information sheet for diary (Study 2.3)

Appendix E2: Diary entry format, Study 2.3

Appendix E3: University student diary debriefing sheet, Study 2.3

Appendix E4: University student diary contact information sheet

Appendix F1: Guidance Counsellor interview information sheet and consent form

Appendix F2: Guidance counsellor semi-structured interview schedule

Appendix F3: Initial thematic map

Overview

Deliberate self-harm (DSH) is a prevalent and problematic phenomenon among adolescents and young adults. Self-reported lifetime history of DSH among young people ranges from between 7 and 44%, depending on the definition and self-report measure used and whether the measure was inclusive of behaviours with suicidal intent (Gratz, 2006; Gratz & Chapman, 2007; Nada-Raja, Skegg, Langley, Morrison & Sowerby, 2004; Whitlock, Eckenrode & Silverman, 2006a; Young, Sweeting & West, 2008). DSH is most prominent during adolescence and young adult life (Fox & Hawton, 2004; Muehlenkamp & Gerierrez, 2004; Whitlock et al., 2006b), thus researching DSH in this age-bracket provides insight into the development and continuation of this behaviour. The path to adulthood is fraught with obstacles, including problems with identity formation and disengagement from parental security. DSH is potentially another obstacle that young people experience, best avoided given the negative consequences (both physical and psychological), and correlates of DSH behaviour (e.g. depression).

DSH is a problematic behaviour because of the physical and/or emotional damage it can cause. The potential physical damage caused by DSH ranges in severity from relatively minor scratches or bruising, to deep cuts that need sutures to stem blood loss (D'Onofrio, 2007). Self-harm can also refer to self-poisoning, which ranges in severity dependent on dose-body interaction. Aside from the immediate and potentially permanent physical damage that DSH can cause the body, there are numerous long-term psychological and social consequences that deserve attention. DSH has been linked to suicide (Cooper et al., 2005); when DSH no longer proves effective in managing emotional pain an individual may turn to suicide as a last resort (D'Onofrio, 2007; Laye-Gindhu & Schonert-Reichl, 2005; Walsh, 2006). Alternatively, an individual may unintentionally suicide when engaging in DSH. Maladaptive psychological correlates of DSH behaviour and ideation include depression, anxiety, low self-esteem, and poor coping skills (De Leo & Heller, 2004; Nixon et al., 2002; McGee, William & Nada-Raja, 2001). Negative social experiences that are more common among individuals with a history of DSH include peer victimisation and childhood abuse (Ruiz-Veguilla, Diaz & Prados, 2004; Walsh, 2006). The link between DSH and these negative

variables suggests multiple sites for intervention, both at the individual (e.g. therapy for depression) and social (e.g. anti-bullying initiatives) level. Understanding how the correlates of DSH fit together in relation to DSH is essential for the appropriate and effective targeting of prevention, intervention and recovery programmes.

To assist individuals who engage in DSH effectively there needs to be a better understanding of the causes and context of such behaviour. Discovering what contextual factors are related to DSH provides insight into the experiences of people who self-harm; understanding that can assist in identification of vulnerable individuals, or those likely to already be engaging in DSH. Early identification of vulnerable individuals allows for intervention before severe and irreversible consequences, including suicide.

It is not just the intra-psychic antecedents of DSH that are important. The maladaptive social experiences associated with DSH (e.g. victimisation; Ruiz-Veguilla et al., 2004) and the potential for negative reactions to DSH post-disclosure (e.g. anger, disgust; Walsh, 2006) requires attention. Understanding the social factors associated with DSH will suggest ways to buffer against DSH or improve the social and therapeutic experiences of those already engaging in DSH via changes in their social environment. Providing insight into the social context of DSH makes the behaviour more understandable and recognisable, with the potential of fostering empathy and support, rather than horror and avoidance.

This thesis represents an extension of my honours dissertation (published as Garisch & Wilson, 2009), which investigated vulnerabilities to DSH among secondary school students aged 16 and above in New Zealand; specifically focussing on alexithymia (i.e. poor ability to identify and describe one's emotions coupled with poor interoceptive awareness; Sifneos, 1972) and bullying. Although that dissertation identified many correlates of DSH consistent with previous research (e.g. depression, anxiety, low self-esteem, alexithymia, bullying and concern over one's sexuality) and presented a model of DSH using correlational data (see *Figure 1*), many questions were left unanswered. This thesis is designed to elaborate on some of these questions.

Figure 1 illustrates how important correlates of DSH potentially work together to create vulnerability to engaging in this behaviour. The model was both theoretically driven and data driven (a theoretically built model was revised to fit the data set). As

shown in *Figure 1*, the only correlate directly linked to DSH was self-esteem. This suggests that other vulnerability factors work through low self esteem to lead to DSH behaviour; being depressed, anxious or bullied may only result in self-harm when an individual has low self esteem. Perhaps a lack of self-worth leads a person to direct their anger and frustration towards themselves. Other associations shown in the model (e.g. depression is directly linked with anxiety; the bi-directional effects of bullying on self-esteem) are supported by previous research (Colman, Ploubidis, Wadsworth, Jones & Croudace, 2007; Skues, Cunningham & Pokharel, 2005). Previous research has also found friends' DSH and participants' DSH to co-vary; indeed this is generally the highest correlate of DSH reported in research internationally (De Leo & Heller, 2004). This thesis was designed to refine the model further.
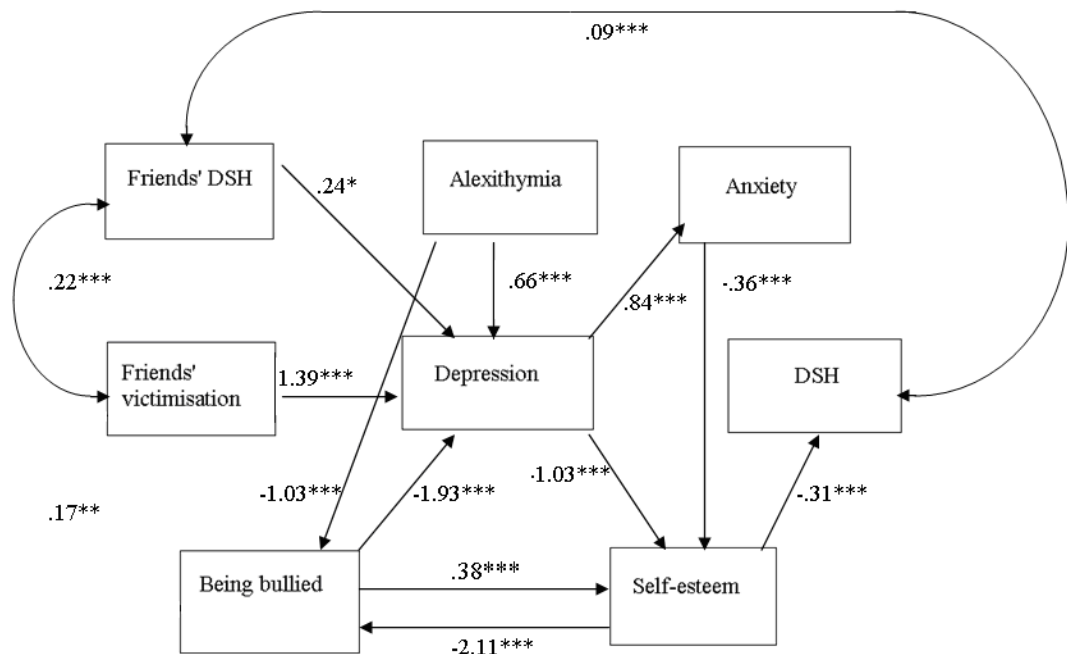
Figure1. Reformulated path model of covariates of DSH based on dissertation research (X^2 (14, 288) = 21.15, p=.10, CFI=.99, RMSEA 90% CI= .04 (.00-.08)) *p<.05; **p<.01; ***p<.001

The cross-sectional design of the honours dissertation meant that causality could not be assessed; empirically supported causal pathways to DSH remain elusive. In addition, although the dissertation pointed to the social context in which DSH is likely to occur (i.e. bullying), other contextual factors are likely to be important for different people. Study one and two of this thesis is aimed at developing a comprehensive model of DSH using data from both secondary school students and university students. A

survey administered twice over a period of 3-8 months was used to assess factors causal to engaging in DSH; while diary data provided the means to assess fluctuations in emotional experience and substance use as they relate to changes in DSH behaviour.

My honours dissertation was almost exclusively quantitative. This left gaps in understanding how individuals who engage in DSH conceptualise their own behaviour. Qualitative research offers rich descriptive information on the experiences of people who engage in DSH. For example, Hume and Platt (2007) identified three themes within the personal accounts of patients with a history of DSH admitted to an emergency department in Edinburgh; experience of mental illness, experience of alcohol dependency, and experience of traumatic life events or life stressors, each seen as precipitating and maintaining participants' DSH. Study two includes a section on reasons participants reported for engaging in DSH, with both quantitative and qualitative analyses for various data sets. As the ultimate goal of clinically relevant psychological research should be to inform clinical practice to reduce suffering, this thesis will discuss applications of the identified model and qualitative data, and comment on appropriate avenues of therapeutic practice.

The two-way process of psychological research necessitates awareness of the effect of research upon participants (Kassam-Adams & Newman, 2002). Given that DSH is a sensitive topic (Wilstrand, Lindgren, Gilje & Olofsson, 2007), Study three investigates participants' reactions to the research through feedback surveys and interviews with secondary school guidance counsellors. Negative comments aimed at individuals who engage in DSH occurred regularly throughout this research. In response to this, Study three includes an investigation into the stereotypes associated with DSH, and how this is influenced by personal experience of DSH. Knowledge of how others perceive people who engage in DSH is important for understanding the lived experience of DSH, including social network factors and barriers to help-seeking.

My interest in the area of self-harm came from working with adolescents and youth in the community, and a desire to understand and improve the mental health of young people. I am studying to become a clinical psychologist, and have a special interest in working with youth. Self-harm is a serious mental health concern among youth in New Zealand, and the Ministry of Health has established a nationwide campaign to tackle self-harm and suicide (see http://www.nzips.govt.nz/priorities/suicide.php). I seek to understand the area of self-

harm in order to better inform my practice as a clinician working with youth. I am also highly committed to improving the knowledge and understanding of adults working directly with youth in the community (e.g. teachers and guidance counsellors) about self-harm. This includes uncovering and challenging stereotypes held about youth who self-harm, and increasing awareness of the high prevalence rates of DSH in our community.

Introduction: What is DSH and why is it important?

This introduction begins with a discussion of the terminology and definition of DSH, presenting the rationale for the definition of DSH used in this thesis. Beginning with a definition allows for consistency in terminology, and guards against ambiguity about what exactly is being studied; it lays the foundation for beginning to understand the area of interest. I discuss prevalence of DSH both internationally and in New Zealand; this sets the scene for why DSH is an important area for research (i.e. it is highly prevalent among youth). The recent 'epidemic' of DSH among youth will be discussed, underscoring why it is an important area of research *now*. I will then outline the correlates of DSH behaviour to illustrate why it is a concerning behaviour (i.e. associated with multiple maladaptive outcomes). This is followed by a discussion of theoretical models of DSH and empirical support (or lack thereof) for these various models. Theoretical models are discussed at this point because they draw together the various correlates of DSH. These models provide an overarching theoretical understanding of DSH, but do not provide first-hand insight into the lived experience of DSH. To expand on the reader's understanding further, I then describe qualitative research on reasons for DSH, individuals' social experiences in relation to their DSH, and consumer and non-clinical research participants' experiences when seeking help for their DSH behaviour. This provides an understanding of the lived experience of people who self-harm which complements the theoretically driven understanding discussed under correlates and models of DSH. Finally I present a brief paragraph summarising the research presented in this thesis to indicate how it will expand on existing knowledge of DSH.

Defining Deliberate Self-Harm

The different terminology used to describe DSH and alternative definitions are discussed and critiqued below, culminating in presentation of the definition used in this thesis. This definition is based on empirical research on DSH behaviour, including its common presentation and self-reported function.

Alternative Terminology

There have been many terms used to describe self-harm, including "deliberate self-harm", "self-mutilation", "self-inflicted violence", "delicate self-cutting" and "self-injury", "parasuicide" and "suicide gesture" (Alderman, 1997; Favazza, 1992; Walsh, 2006; Williams, 1997). All of these terms are problematic in some way. Alderman (1997) and Walsh (2006) suggest that the term 'self-mutilation' is derogatory and sensationalistic, with the majority of DSH causing little, if any, long-term scarring. 'Parasuicide' is an umbrella term to include all physically harmful acts against the self; it is too broad for current purposes and fails to make distinctions between highly heterogeneous behaviours (Walsh, 2006). The term 'suicide gesture' has been criticised for portraying the behaviour as a means of manipulation and attention-seeking, and minimising its seriousness (Walsh, 2006).

Several of these terms have been used apparently interchangeably (e.g. 'parasuicide', 'attempted suicide' and 'self-harm' in Williams, 1997), further complicating the operationalisation of DSH in the literature. Also, 'parasuicide' and 'suicide gesture' imply the motivation of ending life; this is inconsistent with many self-reported motivations for self-harm that indicate DSH is utilised as a coping mechanism to go on living (Nixon, Cloutier & Aggarwal, 2002). I have chosen to use the term deliberate self-harm (DSH), as this highlights the intentional nature of the behaviour and does not minimalise or sensationalise it. However, the term deliberate self-harm has been used to indicate all forms of physical self-harm, including overdose on mediation and self-poisoning, irrespective of suicidal intent (e.g. Hawton, Rodham & Evans, 2006b). My definition will be narrower than this; it will exclude suicidal intent, and it will exclude overdose and self-poisoning. I expand on the reasons for this below.

DSH: The Importance of Intent

The idea of a spectrum of suicidal behaviours (e.g. Firestone & Seiden, 1990; Stanley, Winchel, Molcho, Simeon & Stanley, 1992) has led some authors to caution against incorporating intent into a definition of DSH (e.g. Hawton et al., 2006b). Self-destructive behaviour ranges on a continuum from relatively commonplace cognitions and behaviours (e.g. self-abusive thoughts, substance abuse) right through to high

lethality suicidal acts (e.g. gunshot) (Firestone & Seiden, 1990). Stanley et al. (1992) place DSH on a continuum with suicide, and suggest that both behaviours are precipitated by impulsivity and aggression and involve serotonin dysfunction; however Stanley et al. (1992) also view DSH and suicide as distinct entities, with DSH lacking intent to die and resulting in less serious outcomes.

Most research on DSH considers it to be deliberate (e.g. Favazza, 1992), but not all researchers stipulate it to be void of suicidal intent. Hawton et al. (2006b), prominent researchers in the field, define DSH as including any act of self-injury or self-poisoning, irrespective of apparent motivation or intent. This avoids the issue of motivation. The goal behind the behaviour provides insight into the underlying need or difficulty that prevention, intervention and treatment programmes need to address. Suicidal self-harming behaviour requires a different treatment approach (e.g. psychiatric admission is

Table 1.

Comparison of deliberate self-harm and suicidal behaviours (Pattison & Kahan, 1983, p870).

Deliberate self-harm behaviour	Suicidal behaviour
More frequent among young people	More frequent after age 45
Equally frequent in both sexes	Completed suicide more frequent among males
Increase in incidence during the past 20 years	Rates the same or decreased during the past 20 years
Low lethality	High lethality
400-600 incidents per 100,000 population per year	10 deaths per 100,000 population and 100 attempts per 100,000 population
Sense of relief experienced after the incident in most cases	No relief reported after the incident
Chronic, repetitious pattern	Usually only one or two episodes
Moderate incidence of alcohol and/or drug abuse	High rate of alcohol and/or drug abuse
Low-lethality methods	Highly lethal methods
Different methods used by the same individual	Only one method characteristically used
Seen by others as "manipulative" or "attention seeking"	Seen by others as "serious" or "cry for help"
Infrequent death-orientated thoughts	Frequent death-orientated thoughts

more likely; Carr & McNulty, 2006), and is experienced as qualitatively different for the individual (i.e. to end life versus sustain it using a maladaptive coping mechanism) to non-suicidal self-harm. Suicidal behaviours and DSH also have distinct clinical characteristics (see Table 1; Pattison & Kahan, 1983).

I argue, as others have done (e.g. Walsh, 2006), that suicide attempts and non-suicidal self-harming behaviours are qualitatively different; they serve different, though related, functions. While suicide is intended to permanently eliminate consciousness, DSH is intended to modify consciousness and reduce distress to facilitate survival (Walsh, 2006). Nixon et al. (2002) assessed characteristics of repetitive DSH among hospitalised adolescents and found that almost half viewed DSH as a means to **stop** suicidal ideation and attempts, and DSH was commonly used to regulate affect rather than try to end life. Meuhlenkamp and Gutierrez (2004) found that adolescents with a history of DSH were significantly less "repulsed" by life than those with a history of suicide suggesting a more positive attitude towards life.

Both qualitative and quantitative research with patients diagnosed with personality disorder indicates that DSH and suicide are distinct phenomena. Among their sample of chronically suicidal women with BPD Brown, Comtois and Linehan (2002) found that DSH was reported to serve as an expression of anger, self-punishment, to facilitate normal emotions, and distract oneself, while suicide attempts were carried out to (supposedly) make others' lives easier. Stone (1990, cited in Stanley et al., 1992) conducted a 10-15 year follow-up study of patients with personality disorder, 53 of whom had a history of DSH. Of those with a history of DSH, five successfully completed suicide during the follow-up period. All five belonged to a subgroup of 37 participants with a history of both DSH and a previous suicide attempt(s). Stanley et al. (1992), citing Stone (1990), suggests that this indicates that DSH and suicide have distinct natural pathways, irrespective of their tendency to co-vary.

The explanations given by individuals who DSH for their behaviour focus on coping with emotional upheaval (e.g. Meuhlenkamp & Gutierrez, 2004; Nixon et al., 2002; Brown et al., 2002). This has led several researchers to include the aim of reducing psychological distress in their definition of DSH (D'Onofrio, 2007; Motz, 2001;

Suyemoto, 1998; Walsh, 2006). Though research suggests that this is the case (Briere & Gil, 1998; D'Onofrio, 2007; Claes et al., 2005; Hawton et al., 2006), including this in a definition of DSH is problematic, as forms of psychological distress are heterogeneous and difficult to amalgamate into a single category of experience. For this reason, my definition of DSH will not include the intent to relieve psychological pain.

The Importance of Method of Self-Harm

The problematic nature of self-reported intent (Lundh, Karim & Quilish, 2007) requires that other avenues must be sought to distinguish between self-harm with, and without, suicidal intent. Focussing on method may offer insight into intent. Walsh (2006, p. 28) suggests that "the chosen method of self-harm often communicates a great deal about the intent of the self-destructive person". Methods most likely to result in death include gunshot, hanging, overdose, self-poisoning and jumping from a height; whereas behaviours such as cutting, self-hitting, and head-banging are not likely to be deadly unless taken to the extreme (Walsh, 2006).

Reviews of international statistics (e.g. from England and Wales, in Williams, 1997; from North America in Walsh, 2006) suggest that cutting only accounts for a very small percentage of suicides per year (less than 0.5%), whereas hanging, gassing, self-poisoning, drowning and gunshot wounds, account for the overwhelming majority of deaths by suicide. Douglas et al. (2004) analysed hospital admission data over an 18-month period in Manchester for rates of 'near-fatal' self-harm (i.e. self-harm likely to lead to death or involving damage to a vital area of the body) and found that 74% were cases of overdose and 11% cases of laceration (directed at the throat and other areas where major arteries are present).

In New Zealand, cutting accounts for very few deaths by suicide. Brazier (2000) found that methods of suicide among youth in Wellington (the same location as this research) during the period 1986-1995 were similar to those reported internationally (e.g. Williams, 1997; Walsh, 1996). Of the 142 youth suicides in Wellington during 1986-1995, the majority were the result of hanging (60%), gunshot wound (14%), carbon-monoxide poisoning (13%), overdose (7%), jumping from a height (4%), self-poisoning (1%), self-immolation (<1%), and being hit by a train (<1%). Self-cutting did not

appear in Brazier's (2000) report as a method of completed suicide among Wellington youth during this period.

Walsh (2006) considers the low-lethality behaviours of cutting (which is generally directed at the arms, legs and abdomen; Crowe, 1996), hitting and head-banging to be examples of DSH rather than attempted suicide. I will be assessing these low-lethality behaviours and consider them non-suicidal, as they very rarely result in completed suicide, and are reportedly performed as a coping mechanism to endure life's problems rather than a means of ending life (Nixon, Cloutier & Jansonn, 2008)

Overdose and self-poisoning are often utilised with suicidal intent, and therefore will be excluded from my definition of DSH. Taking an overdose is more commonly associated with suicidal intent, while cutting is often associated with depression, anger and the relief of tension (Hawton et al., 2006). The medications or chemicals used in an overdose and in self-poisoning generally take a certain amount of time to take effect (dependent on physiology and the composition of the drug) and the exact effect is not always controllable or desired; whereas the site, extent, and timing of the damage caused by cutting, head-banging, scratching and the like is immediate and under the individual's direct control. In addition, the time to 'efficacy' of the self-harm may have important consequences for the individual. Direct, physical, low-lethality DSH can be kept secret more easily than self-harm through overdose or self-poisoning. Overdose and self-poisoning have higher hospital presentation rates than direct, physical, low-lethality DSH (e.g. cutting, scratching); suggesting a greater likelihood of discovery. The higher chance of discovery, compared to the secrecy possible with low lethality DSH, suggests the later may be something the individual can privately own.

The physical damage left by cutting, head-banging and other such low-lethality means of self-harm is directly visible on the body (at least to the 'victim'), whereas the effects of an overdose or self-poisoning generally is not. The scars or short-term marks may serve a communicative function or symbolise something for the individual. An overdose or self-poisoning episode, while communicating distress, does not have the same ability to serve as a lasting physical reminder of past distress. In addition, theorists have suggested that DSH may serve the function of boundary-setting for some individuals (e.g. Straker, 2006). The act of DSH can be seen to re-affirm the physical boundary between the self and the outside world or other people through making the boundary of the skin salient. The low-lethality acts of DSH that fall under my definition

(e.g. cutting, head-banging etc.) serve this function of boundary-setting in a direct and observable way through the potential marks they leave on the skin. An overdose or self-poisoning does not usually have the same observable effects that mark the body as separate from the external world. This in/out metaphor may be especially salient among individuals whose boundaries have been violated (e.g. sexual abuse, which is associated with DSH; Hawton et al., 2006). These various distinctions between self-poisoning and overdose in comparison to forms of low lethality DSH has led me to consider them separately.

Behaviours Not Considered to be DSH in this Thesis

Researchers commonly separate DSH from the repetitive and stereotyped self-injury characteristic of autism and intellectual disability (Suyemoto, 1998). Such self-injury is likely to be more organically driven and qualitatively different. It is also important to distinguish DSH from socially or culturally accepted self-injurious behaviours (Suyemoto, 1998; Turp, 2003; Walsh & Rosen, 1998; Walsh, 2006). Behaviours, such as scarification performed to signify tribal affiliation and blood-letting as part of religious ceremony, are not cases of DSH as conceptualised here or in the general research literature (see also Walsh, 2006).

Injury caused by tattooing, piercing, or a procedure to beautify the body are generally not cases of DSH. In fact, Cleas et al. (2006) found that both having a tattoo and a piercing were significantly negatively related to DSH. Tattooing, piercing, and beautification procedures are performed for aesthetic motives, whereas DSH is never designed to improve attractiveness. Also, tattooing, piercing and beautification are not usually done to oneself but are carried out by another person. Therefore they differ from DSH in both means and motivation (Alderman, 1997). Although individuals may enlist others to inflict injury on them, this is different to self-performed DSH which offers the individual greater control over the level of injury, occurs in a different social setting, and is likely to be hidden. Due to these differences I have excluded desired injury caused by another from my definition of DSH.

Eating disorders, including anorexia nervosa (AN) and bulimia nervosa (BN), have been linked to DSH (Claes, Vandereycken & Vertommen, 2001; Favaro et al. 2008), and indeed some authors include eating-disordered behaviour in their definition

of self-harm (e.g. Alderman, 1997; Turp, 2003). Both eating-disordered behaviour and DSH often stem from emotional issues (e.g. the 'emotional eater'; performing DSH to relieve emotional pain), evidence contagion (i.e. behaviour copied/taken up by members of a social group cued by an initial behaviour by an in-group member; Forman-Hoffman & Cunningham, 2008; Rosen & Walsh, 1989; Taiminen, Kallio-Soukainen, Nokso-Koivisto, Kaljonen & Helenius, 1998), and can have obsessive and ritualistic qualities (Halmi et al., 2003; Walsh, 2006). However, there are notable differences between eating-disordered behaviour and the direct, physical DSH that is the focus of this thesis. Motivations for eating disordered behaviour are characteristically linked to the drive for the 'ideal' body (Maisel, Epston & Borden, 2004), while DSH is never performed to achieve physical 'perfection' (Alderman, 1997). Also, the DSH that is the focus of this thesis incurs direct, purposeful, physical damage on the body; whereas eating-disordered behaviour is aimed at changing body shape, the resultant physical damage (e.g. organ failure) is not generally desired. In addition, eating-disordered behaviour can induce psychosis due to bodily deprivation (Hudson, 1984); this does not occur as a result of low-lethality DSH. For these reasons, I have chosen to exclude eating disordered behaviour from my definition of DSH. Other researchers have distinguished between DSH and eating disordered behaviour either explicitly in their definition of DSH, or implicitly by assessing them separately as distinct constructs (e.g. Alderman, 1997; Favaro et al., 2008; Skegg, Nada-Raja & Moffitt, 2004). In addition, Heath, Toste and Beettam (2006) found that only 10 of their sample of secondary school teachers (N=50) agreed with the statement "students who self-injure often have eating disorders"; which suggests that the majority of adults involved with youth view DSH and eating disordered behaviour as distinct.

DSH will be defined here as the intentional, culturally unacceptable, self-performed, immediate and direct destruction of bodily tissue that is of low-lethality and absent of overdose, self-poisoning and suicidal intent. This definition excludes self-harm caused by accidental injury, self-harm performed as part of a cultural process or event, injury caused by another person (even if desired), self-harm via an overdose or self-poisoning, and suicidal self-harm.

The scale I have used for assessing history of DSH was developed by Lundh et al. (2007), who define DSH as "non-fatal forms of deliberate, direct destruction/alteration of body tissue, resulting in injury severe enough for tissue

damage (e.g. scarring) to occur". The scale is based on the Deliberate Self Harm Inventory (DSHI; Gratz, 2001); and is titled the Deliberate Self Harm Inventory – Short form (DSHI-s). Lundh et al. (2007) did not exclude acts with suicidal intent in their definition, preferring to focus on concrete behaviours without relying on awareness of intent, stating that introspective reports have unknown validity and adolescents' memory retrieval for their intentions may be unreliable. In addition, research suggests that individuals who engage in DSH may display autobiographical memory deficits (Sinclair, Crane, Hawton, Williams, & Mark, 2007).

The DSHI-s is the utilised measure for this thesis because the behaviours in the DSHI-s fit within the definition of DSH, the questionnaire is behaviourally based (and therefore less open to interpretation) and asks about multiple forms of DSH. Using a multi-item measure increases reliability, and ensures that a wider range of DSH is identified. This is important in gauging the frequency of different methods, and their association with various correlates and groups. Also, the DSHI-s was developed from the DSHI (Gratz, 2001), which has been used effectively with university students, and scores on the DSHI covary with known correlates of DSH (Gratz, 2006). Though the Lundh et al. (2007) DSHI-s scale has unpublished internal reliability, Bjarehed and Lundh (2008) report an acceptable internal reliability of a 9-item short form (assessed at two time points).

Definition and measurement of psychological constructs are closely related; how a construct is conceptually defined determines its identification. Measurements of DSH are described below, tied to the authors' conceptualisation of DSH behaviour.

Measures and Prevalence of DSH

This section discusses various measures of DSH and their utility, followed by international and New Zealand prevalence statistics. Sex differences in international and national (i.e. New Zealand) prevalence rates are discussed. The 'epidemic' of DSH among youth worldwide is then highlighted and alternative explanations are offered.

Self-report measures of DSH.

Several measures have been developed to assess history of DSH behaviour, including the DSHI (Gratz, 2001), the adolescent version of the DSHI (utilised in this

thesis; Lundh et al., 2007), the Functional Assessment of Self-Mutilation (FASM; Lloyd, Kelley & Hope, 1997), the Self-Injurious Thoughts and Behaviours Interview (SITBI; Nock, Holmberg, Photos & Michel, 2007), the Inventory of Statements About Self-Injury (ISAS; Klonsky & Glenn, 2009), the Self-Injurious Behaviours Questionnaire (SIBQ; Paivio & McCulloch, 2002), and the Self-harm Inventory (SHI; Sansone, Wiederman & Sansone, 1998). The DSHI, is a 17-item, behaviourally-based measure asking about a wide variety of physically self-harming behaviours, and is perhaps the most widely recognised scale for assessing DSH history. Asking concrete questions about DSH history has been found to yield higher prevalence rates for DSH than is generally found when employing a single-item question (e.g. Gratz & Chapman, 2007; De Leo & Heller, 2004).

Multi-item scales are more reliable and valid than a single item measure, which means that a multi-item measure of DSH has an obvious psychometric advantage over the single item measures that are sometimes used (e.g. De Leo & Heller, 2004). Single item measures are more likely to be influenced by changes in response style over time (e.g. daily changes in mood) and to be misinterpreted or interpreted differently across administrations (Liu, 2009). Creating a composite score out of several items is more stable over time, and less likely to be misinterpreted (i.e. the participant is unlikely to misinterpret all the items in the scale, thus the overall score is less affected by a failed understanding). Validity is improved by using multiple items because the complexity of the underlying construct is more likely to be covered; a single item measure may only represent a broad gloss of the underlying measurement construct. The prototypical method of DSH is cutting (Walsh, 2006), but using this as a single item to represent self-harm behaviour excludes multiple other common methods (e.g. burning).

Aside from improved reliability and validity, there are several other reasons why asking concrete questions for different types of DSH would raise self-reported prevalence rates. Firstly, individuals may not consider certain behaviours which fall under the researcher's definition of DSH to be examples of DSH behaviour. Explicitly asking about whether an individual has engaged in a specific behaviour may be required, rather than asking if an individual has ever purposely hurt themselves and leaving the participant to decide what behaviours qualify as self-harm. Secondly, such a strategy of assessment is behaviourally-based, and thus relatively free from ambiguity. Thirdly,

offering a brief description of the different behaviours in question facilitate better memory-retrieval for an event meeting the criteria.

For the reasons outlined above the DSHI-s, developed by Lundh et al. (2007) for adolescents, will be used. The DSH-s asks about 14 different types of DSH, whether participants have engaged in any other form of DSH not listed in the scale, and if self-reported DSH has ever led to hospitalisation or medical treatment. When piloting this scale with 15 year old students (N=128) Lundh et al. (2007) found that 65.9% had engaged in at least one type of DSH at least once, and 13.8% had engaged in DSH many times. This is considerably higher than the prevalence rates of 7.2% to 14.8% for DSH among adolescent samples reported elsewhere (e.g. De Leo & Heller, 2004; Ross & Heath, 2002) using single- or two-item measures.

Prevalence of DSH.

As indicated above, prevalence rates of DSH vary depending on the method for assessing history of DSH and the population being assessed. In general, studies have asked a single item question to assess whether a participant has engaged in DSH, and this is often followed up with questions on method of harm, and a description of the event (e.g. De Leo & Heller, 2004). Comparison of prevalence rates across research is problematic given the diverse assessment methodology. Further, definitions of DSH vary across studies, thus researchers are not always measuring the same behaviour, and in several cases DSH is not distinguished from suicidal behaviour. See Table 2 for an overview of prevalence rates found in different studies.

My focus is on DSH among community adolescents and young adults. Therefore extensive data on DSH among patient samples is not included here, other than to state that rates of DSH are typically considerably higher among inpatient samples (e.g. Briere & Gil (1998) found that prevalence rate for history of DSH over a six month period was 4% for a community sample and 21% for an inpatient sample). High rates of DSH among clinical populations may be because DSH is a diagnostic characteristic for certain disorders (e.g. (BPD); American Psychological Association, 2004). Also, known correlates of DSH such as depression, anxiety and substance abuse are more prevalent among psychiatric patients than the general population (Carr & McNulty, 2006).

Hospital-based statistics for DSH have been reported, but it is generally recognised that these under-report the prevalence of DSH. For example only 10.3% of Australian adolescent participants with a history of DSH had presented to hospital (De Leo & Heller, 2004) and only 12.6% of a community sample of adolescent participants reporting a history of self-harm in the previous year (including overdose) had been hospitalised for their injuries (Hawton et al., 2006). These studies suggest that a large proportion of DSH is not included in hospital statistics as medical attention is not sought. In addition, a number of cases of DSH that present to hospital will not be identified as self-harm but as accidental injury or injury of undetermined cause (Conner, Langley, Tomaszewski & Conwell, 2003; Hawton et al., 2006).

Early statistics on the prevalence of DSH (i.e. prior to the 1990s) are drawn almost exclusively from hospital admission or presentation data. Even given the concerns raised above, these statistics suggest that DSH is on the rise. In reviewing the literature Fox and Hawton (2004) and Hurry (2000) found that DSH among adolescents has increased according to data from Australia, Europe and the United States from the 1960s through to the 1990s. Olfson, Gameroff, Marcus, Greenberg & Shaffer (2005) examined national trends in the hospital presentations of youth for DSH between 1990 and 2000 using data taken from the Healthcare Cost and Utilization Project, which represents inpatient data from approximately 20% of the United States population. Though they found a decrease in hospital presentations in this period for overdoses and non-significant changes in rates of presentation for other high-lethality methods of self-harm (e.g. hanging, gun-shot wounds), presentation rates for cutting significantly increased. The divergent results for cutting compared to other methods of self-harm (e.g. overdose, hanging) was attributed to cutting being of low-lethality and representing 'self-mutilation' rather than suicidal self-harm (Olfson et al., 2005).

Hawton, Fagg, Simkin, Bale and Bond (2000) assessed changes in rates of presentation for self-harm of youth 19 years or below to the general hospital at Oxford between 1985 and 1995. During this period the number of children and adolescents admitted for self-harm and overdose or self-poisoning rose by 28.1%. Data from the same time period as reported by Hawton et al., 2000, indicated that rates of presentations rose by 50.9% overall, by 62.1% for males, and by 42.2% for females (Hawton et al., 2006a). The most marked increase of 194.1% in presentation rates was for 15-24 year olds.

O'Loughlin and Sherwood (2005) analysed trends in hospital presentations for self-harm from 1981-2000 in the general hospital of Kidderminster in England. Looking at overdose, self-poisoning and other forms of self-harm together, including cutting, overall presentation rates were 10% higher for males and 4% higher for females in the second half of the time-period compared to the first half. Overall, the highest increases in presentation rates for both sexes were in the 15-24 age groups.

National statistics for DSH based on hospital admissions are lower than self-report population-based studies. Claassen and Trivedi (2006) report rates for self-harm based on hospital presentations between 2002-2003 for the United States population at 0.1 to 0.2%. These statistics are much lower than the self-reported prevalence rate of 4% for DSH found among adult community samples (Briere & Gill, 1998; Klonsky, Oltmanns & Turkheimer, 2003).

Olfson et al. (2005) report the hospitalisation rate for self-inflicted injuries (including those with suicidal intent, overdose and self-poisoning) was 0.05%, or 49 per 100 000 in the youth population, rising to 105 per 100 000 for youth between the ages of 15 and 20. This rate is substantially lower than the prevalence found in community samples of adolescents reported below (De Leo & Heller, 2004; Evans, Hawton & Rodham, 2005; Hawton et al., 2006b; Ross & Heath, 2002).

There are currently no reported time-trend statistics for rates of DSH among the general population using self-report methodology. As only a small percentage of young people who engage in DSH present to hospital (De Leo & Heller, 2004; Hawton et al., 2006a) this apparent rise in DSH according to hospital data is only a bi-proxy indication of population trends for DSH, with limited reliability for making inferences. However, assuming that these hospital statistics reflect changes within the general population, it is important to consider what may be driving this increase in DSH among adolescents and young adults.

I now turn to more recent statistics on the rate of DSH in community samples. Firstly, looking at adult community samples, Briere and Gil (1998) studied the frequency of DSH in the general population in the United States over a six month period using the item 'intentionally hurting yourself [e.g., by scratching, cutting or burning] even though you weren't trying to commit suicide' with a likert scale of 0 (never) to 3 (often).

Using mail-distributed surveys, Briere and Gil (1998) found that 4% of 927 adults had engaged in such behaviour at least once and 0.3% had done so often.

Five years later Klonsky et al. (2003) published a study with 1986 United States air force military recruits (mean age = 20) that included investigation of DSH. If participants endorsed the items 'when I get tense, hurting myself physically somehow calms me down' or 'I have hurt myself on purpose several times', but did not endorse the item 'I have tried to commit suicide', they were classified as having a history of DSH. Approximately 4% of participants had a history of DSH according to this methodology (consistent with Briere & Gil, 1998 reported above). However this is likely to be an under-representation given that any participant with a history of attempted suicide would be excluded from this statistic, and social pressures among military populations may be a barrier against disclosure of any form of behaviour that could be considered 'weak' (Manning & Marlowe, 1990).

The highest prevalence rates of DSH are for young people. Looking at studies in chronological order may suggest that DSH is on the rise, but this is confounded by the wide heterogeneity in methodology. Ross and Heath (2002) assessed lifetime prevalence of DSH among Canadian adolescent in both an urban school and a sub-urban school (N=440) firstly using a screening item asking whether participants had ever hurt themselves on purpose, followed by an interview to confirm a history of DSH. Prevalence rates were 21.2% for urban, and 19.6 for suburban students' self-reported history of self-harm and the interview confirmed 13% and 14.8% respectively as having a history of DSH (Ross & Heath, 2002).

De Leo and Heller (2004) conducted a study exploring DSH among Australian adolescents (N=3767, mean age=15.4), with history of DSH assessed using the single item 'have you ever deliberately tried to hurt yourself (e.g. cut yourself or taken an overdose)?', followed by questions regarding participants' most recent DSH episode. Lifetime prevalence of DSH was 12.4%, with DSH in the previous twelve months being 8.4% (of whom 6.2% described an event which met the study's criteria for an episode of DSH; participants who did not describe their most recent episode of DSH were excluded from this statistic). Similarly, and during the same time period, Muehlenkamp and Gerierrez (2004) reported that 15.9% of 390 community adolescents in the United States had a history of DSH.

Laye-Gindhu and Schonert-Reichl (2005) assessed prevalence of DSH among a community sample of Canadian adolescents (N=424, mean age=15); 15% had a history of DSH, 42% reported a history of DSH ideation, and 9% reported having been preoccupied with thoughts of DSH. Around the same time Evans et al. (2005; Hawton et al., 2006b) assessed past year prevalence of DSH behaviour and ideation among English adolescents (N=6020) aged 15-16 years. Prevalence of DSH in the previous year was 6.9%, while 15% of the sample had DSH ideation in the past year without engaging in DSH.

Most recently, O'Connor, Rasmussen, Miles and Hawton (2009) conducted a study of DSH among 2008 Scottish adolescents aged 15-16 years. DSH was assessed with the question: 'Have you ever deliberately taken an overdose (e.g. pills or other medication) or tried to harm yourself in some other way (such as cut yourself)?' The lifetime prevalence was 13.8%. Similarly, Laukkanen et al. (2009) conducted a study with 4205 Finish adolescents aged 13-18 years where the lifetime prevalence for self-cutting was 11.5% and for current DSH was 1.8%. Lifetime prevalence of other types of DSH was 10.2%.

Recent studies with university student populations and young adults have found prevalence rates ranging from 7 to 44% depending on the definition and instrument used to assess DSH. Whitlock et al. (2006a) found that 7.3% of 2875 United States university students had a lifetime history of DSH when asked to indicate out of a list of 16 self-harming behaviours which they had engaged in. A year later Young, Van Beinum, Sweeting and West (2007) found similar rates for lifetime history of DSH using a sample of similar age (i.e. 18-20) in Scotland as part of a larger longitudinal study. Participants were asked 'have you ever tried to hurt yourself or harm yourself deliberately?', followed up with questions on the type of DSH and motive, age of onset and current DSH . Lifetime prevalence for DSH for the sample was 7.1%, with 1.6% engaging in DSH at time of assessment.

During the same time period Gratz and colleagues (Gratz & Chapman, 2007; Gratz, 2006) reported considerably higher rates of DSH using a more inclusive assessment instrument (i.e. wider range of behaviour recoded as DSH). Gratz and Chapman (2007) assessed male undergraduate students' (N=102, Mean age=22.7) history of DSH using the Deliberate Self-Harm Inventory (DSHI; Gratz, 2001). Forty-four percent of the sample reported a lifetime history of at least some kind of self-

harming behaviour, of whom 84% had done so more than once. Gratz (2006) assessed DSH among a larger sample of female undergraduates (N=249, mean age=23) using the DSHI (Gratz, 2001), and found that 37% had a lifetime history of DSH, with 72% of these participants having harmed themselves more than once.

Although these statistics give a glimpse at comparisons across groups, it is important to remember that these studies differ in method, assessment of DSH, and definition of DSH behaviour; thus the prevalence rates are not directly comparable. In addition, some prevalence statistics for self-harming behaviour have limited use here as no distinction is made between DSH and suicidal behaviour. For example, Sourander, et al. (2006) assessed adolescent DSH with the double-barrelled item 'I deliberately try to hurt or kill myself'. Sourander et al. (2006) found that at age twelve 2.7% of the girls and 3.1% of the boys answered yes to this question, while at age 15 the figures were 12.6% and 4.6% respectively. Similarly, Gonzalez-Forteza et al. (2005) assessed DSH among adolescents in Mexico using the screening question 'have you ever hurt, cut, intoxicated or harmed yourself on purpose to take your life?', yielding an overall prevalence rate of 7.2%.

In review, lifetime history of DSH among the general adult population is reported at approximately 4% (Klonsky et al., 2003; Briere & Gill, 1998); though this is likely to be a conservative estimate given under-reporting and social desirability bias (e.g. to appear strong among military recruits in Klonsky et al., 2003). The prevalence of DSH among adult clinical populations is significantly higher (e.g. 21%, Briere & Gill, 1998). As this thesis focuses on DSH among adolescents and young adults, the most relevant statistics are those for university student and adolescent populations, which range from 7.1% to 44% (Gratz, 2006; Gratz & Chapman, 2007; Nada- Raja et al., 2004; Whitlock et al., 2006a; Young et al., 2007). For the general adolescent population the prevalence of history of DSH ranges from 7.1% to 15% (De Leo & Heller, 2004; Evans et al. 2005; Hawton et al., 2006b; Laye-Gindhu & Schonert-Reichl, 2005; Ross & Heath, 2002). These statistics for different population groups vary widely, perhaps due to a lack of consistent methodology and definition in the study of DSH. These statistical differences may also reflect actual differences in DSH over time and across groups.

New Zealand rates of DSH among adolescents and young adults.

Prevalence data for DSH among New Zealanders is available from non-clinical samples (e.g. Coggan, Bennett, Hooper & Dickinson, 2003; Nada-Raja et al., 2004; Nada-Raja, Morrison & Skegg, 2003; Skegg et al., 2004), hospital-based statistics (e.g. Conner et al., 2003) and outpatient samples (e.g. Fortune, 2006). Psychiatric samples in New Zealand have much higher reported prevalence rates for DSH (e.g. almost 50% among outpatient youth; Fortune, 2006) than non-clinical samples.

As with data from other countries, hospital-based statistics may only represent the tip of the iceberg. Conner et al. (2003) present data from the New Zealand National Minimum Dataset (NMDS) on hospital admission rates for DSH in 1997. Prevalence for hospital admission due to self-harm was 82.6 per 100 000 of the population (includes self-poisoning). This is considerably lower than rates reported among New Zealand non-clinical samples presented below.

Prevalence data for community samples of New Zealand adolescents and young adults represent the most pertinent sample sets for this thesis, given that my focus is on DSH among young people. Data from my honours dissertation includes prevalence for DSH among a sample of New Zealand secondary schools students (N= 325; mean age = 16.6). An initial screening question asked participants if they had ever deliberately harmed themselves, and this was followed up with questions about the most recent episode of DSH (e.g. how long ago it was, whether help was sought beforehand; taken from De Leo & Heller, 2004). Approximately 15% of the sample reported having engaged in DSH at least once during their lifetime (19% for females, 8% for males) (Garisch & Wilson, 2009). This falls within the prevalence range of 7.2% to 15% for DSH among adolescence reported by other studies internationally (e.g. De Leo & Heller, 2004; Evans et al. 2005; Hawton et al., 2006b; Laye-Gindhu & Schonert-Reichl, 2005; Ross & Heath, 2002).

Table 2

Prevalence rates of DSH

Author	Country	Urban/rural	Sample Type	Sample size	Mean age	DSH measure	% DSH
Klonsky, Oltmans & Turkheimer (2003)	United States	Urban	Military recruits	1986	20	2 items to assess for history of DSH; excluded participants from having a history of DSH if had ever attempted suicide. Life-time history.	4%
Briere & Gil (1998)	United States	Mixed	General adult	927	46	1 item, excluded suicidal intent. Over last 6 months	4%
Briere & Gil (1998)	United States	Mixed	Clinical sample	390		1 item, excluded suicidal intent. Over last 6 months	21%
Evren & Evren (2005)	Turkey	Urban	Male substance abusing patients			DSH history assessed by clinical interview	34.6%
De Leo & Heller (2004)*	Australia	Urban	Community adolescents	3767	15.4	Single item screening question for life-time history, with follow-up questions regarding most recent episode	12.4%
Claassen et al. (2006)	United States	Mixed	National hospital admission rates			Hospital admission rates for DSH	0.1-0.2%
Olfson, Gameroff, Marcus, Greenburg & Shaffer (2005)	United Stated	Mixed	Youth hospital admission rates		5-20 years	Hospital admission rates for DSH	0.05%
Whitlock et al. (2006)*	United States	Urban	University students	2875		Self-reported engagement in list of 16 types of DSH. Assessed life-time history	7.3%
Gratz & Chapman (2007)	United States	Urban	Male undergraduate students	102	22.7	DSHI (Gratz, 2001); Life-time history	44%

Study	Country	Setting	Sample	N	Age	Measure	Prevalence
Gratz (2006)	United States	Urban	Female undergraduate students	249	23	DSHI (Gratz, 2001); Life-time history	37%
Nada-Raja, Skregg, Langley, Morrison & Sowerby (2004)*	New Zealand	Mixed	Longitudinal cohort, community sample		26	Semi-structured interview. Assessed life-time history	DSH meeting ICD definition: Females=16%, Males=11% Low-lethality DSH: Females=24%, Males=35%
Young, Van Beinum, Sweeting & West (2007)*	Scotland	Mixed	Longitudinal cohort, community sample		18-20	Single screening question, with follow-up questions (e.g. on type of DSH)	7.1%
Evans et al. (2005); Hawton et al. (2006)*	England	Urban	Community adolescents	6020	15-16	Past-year prevalence	6.9%
Muehlenkamp & Gerierrez (2004)	United States	Urban	Community adolescents	390	16.2	Life-time history	15.9%
Ross & Heath (2002)*	Canada	Urban	Community adolescents			Single item screening question followed by a confirmatory interview. Assessed lifetime history	21.2% by self-report, 13% confirmed by interview
Ross & Heath (2002)*	Canada	Sub-urban	Community adolescents			Single item screening question followed by a confirmatory interview. Assessed lifetime history	19.6% by self-report, 14.8% confirmed by interview
Laye-Gindhu & Schonert-Reichl (2005)*	Canada	Urban	Community adolescents	424	15	Assessed lifetime history	15%
Lundh, Karim & Quilish (2007)	Sweden	Urban	Community adolescents	128	15	Self-reported engagement in 14 types of DSH, plus open-ended question of having	65.9%

							engaged in any type of DSH. Assessed lifetime history
Coggan, Bennett, Hooper & Dickinson, 2003*	New Zealand	Urban and Rural	Community adolescents	3265	Unknown, age range approx. 12-19	Self-reported attempted DSH and DSH ideation	19% had attempted DSH in previous 6 months; 32% had DSH ideation in previous 6 months.
Conner, Langley, Tomaszewski & Conwell, 2003*	New Zealand	Mixed	Hospital statistics	All hospital admission in 1997	Lifespan	Cases of admission for DSH taken from the New Zealand Minimum Dataset (NMDS)	82.6 per 100 000 of the population
Skegg, Nada-Raja, Dickinson & Williams, 2003	New Zealand	Mixed	Longitudinal community cohort	946	26	Self-reported lifetime history of DSH meeting ICD definition, and a broader definition of lifetime history of DSH including intoxication and self-hitting. Divided participants by level of same-sex attraction	DSH meeting ICD definition: Males: Opposite sex attraction only: 7%, Minor same sex attraction: 29%, Major same sex attraction: 38% Females: Opposite sex attraction only: 13%, Minor same sex attraction: 19%, Major same sex attraction: 44% Broader forms of DSH: Males: Opposite sex attraction only: 6%,

							Minor same sex attraction: 31%, Major same sex attraction: 25%
							Females:
							Opposite sex attraction only: 3%, Minor same sex attraction: 5%, Major same sex attraction: 11%
O'Connor, Rasmussen, Miles & Hawton (2009)	Scotland	Urban	Community adolescents	2008	15-16 years	Self-reported lifetime prevalence. Single item measure: 'Have you ever deliberately taken an overdose (e.g. pills or other medication) or tried to harm yourself in some other way (such as cut yourself)?'	Lifetime prevalence: 13.8%
Laukkanen, Rissanen, Honkalampi, Kylma, Tolmunen & Hintikka (2009)*	Finland	Urban	Community adoelscents	4205	13-18 years	Self-reported lifetime history of cutting, whether currently engaged in cutting, and lifetime prevalence of any other type of DSH.	Lifetime prevalence of cutting: 11.5%. Prevalence of current self-cutting: 1.8%. Prevalence of other DSH: 10.2%

* found a sex difference

Coggan et al. (2003) reported a slightly higher rate for attempted DSH among New Zealand secondary school students (N= 3265). Coggan et al. (2003) collected data from six randomly selected secondary schools in Auckland and Northland, New Zealand, gathering from students in all year groups (age-range approximately 12-19). Prevalence for DSH ideation in the past six months was 32% (males 24%, females 37%), while prevalence for attempted DSH in the past six months was 19% (males 15%, females 22%). Maori (i.e. indigenous New Zealanders), Pacific Island and 'Other' ethnic groups had significantly higher rates of DSH ideation and attempts than participants categorising themselves as Pakeha/New Zealand European or Asian. Attempted DSH in the previous six months was significantly higher among students in the first three years of secondary school compared to the last two years.

Nada-Raja, Skegg and colleagues investigated DSH among a cohort of young New Zealanders as part of the longitudinal Dunedin multidisciplinary study (e.g. Nada-Raja et al., 2004; Nada-Raja et al., 2003; Skegg, Nada-Raja, Dickinson & Williams, 2003). Participants took part in a semi-structured interview at age 26 querying DSH over the previous year, and DSH ideation and suicidal ideation and attempts. According to a more strict definition of DSH advocated by the International Classification for Diseases (ICD), 16% of females and 11% of males had a lifetime history of DSH, while past-year prevalence was 2% for females and 3% for males (3% overall). Of the participants meeting the ICD definition of DSH 60% had taken an overdose, while 36% had self-cut.

Less severe DSH (e.g. self-hitting, self-biting) was much more prevalent among the Dunedin sample than DSH meeting the strict ICD definition. Lifetime prevalence for low lethality forms of DSH was 24% for females and 35% for males, while 12% of the sample reported at least one episode of low lethality DSH in the past year. However, not all forms of low-lethality DSH included in the assessment meet my definition of DSH (e.g. self-denial of food as punishment), making direct comparison with my research problematic. Self-hitting or punching a wall had a past-year prevalence of 9.5%, while the figure was 0.4% for self-biting or wounding. None of the less severe self-harm episodes (not meeting the ICD definition) involved self-reported suicidal intent (excluding some cases of alcohol abuse among males), including self-biting and self-battery (Raja et al., 2004), supporting exclusion of suicidal intent for DSH as defined in this thesis.

Skegg et al. (2003) investigated the relationship between DSH and same-sex attraction among the Dunedin Multidisciplinary study cohort at age 26 (N=958) following the same semi-structured interview format as the studies by Nada-Raja, Skegg and colleagues reported above (e.g. Nada-Raja et al., 2003). A behaviour was considered DSH if it met the ICD definition, which includes behaviours with and without suicidal intent. Reported prevalence rates were divided by sex and then into groups based on whether participants were attracted to the same vs. the opposite sex. Male participants with only opposite sex, minor same sex, and major same sex attraction had prevalence rates of 7%, 29% and 38% for lifetime history of DSH respectively, while the figures were 13%, 19% and 44% for females participants in these categories based on same-sex attraction, respectively. Skegg et al. (2003) demonstrate that same sex attraction is a risk factor for DSH, and provide useful statistics on prevalence of DSH in New Zealand.

Sex differences in prevalence rates of DSH.

Researchers offer mixed information about whether or not the prevalence of DSH differs between the sexes. In his review of the literature, D'Onofrio (2007) suggests that females have significantly higher rates of DSH that males, and attributes this to the over-representation of females in clinical population studies, socialisation effects (i.e. females learn to turn their anger inwards, males are encouraged to discharge their anger outwards towards others) and higher rates of childhood abuse among females. McAllister (2003, cited in D'Onofrio, 2007) attributes the recent rise in DSH among males (e.g. O'Loughlin & Sherwood, 2005) to increased identification of past abuse among males, social encouragement of emotional awareness among male children and youth, and reduction in social tolerance of externalising one's anger.

However, there are no consistent sex differences in the prevalence of DSH in the general population. Neither Briere and Gill (1998) nor Klonsky et al. (2003) found sex differences in their general, clinical or military samples. Among young adults and university student samples findings relating to sex differences have been mixed. Young et al. (2007) found no significant sex difference in the lifetime prevalence of DSH among their sample of 18-20 year old Scottish youth. In their sample of young New Zealanders assessed at age 26, Nada-Raja and colleagues (e.g. Nada-Raja et al., 2003) found that males were more likely to have engaged in DSH in the past year. Among

university students Whitlock et al. (2006a) found that females were more likely to have a repeat (but not single incident) history of DSH.

In general, research has found DSH to be more prevalent among adolescent females than adolescent males; however this finding is inconsistent. Hawton and colleagues have found higher rates of DSH and DSH ideation among female adolescents than male adolescents (e.g. Evans et al., 2005; Hawton et al., 2006b), but males who engage in DSH may do so at a more frequent rate (Hawton et al., 2006b). In their sample of Australian adolescents, De Leo and Heller (2004) found significantly more females reported DSH in the past year. However, to be counted as having engaged in DSH, participants in De Leo and Heller's (2004) study were required to give a description of their most recent episode of DSH; 41% of males who reported a history of DSH did not give a description of their most recent episode, while the figure was 16% for females (De Leo & Heller, 2004). This is likely to have led to an under-representation of the prevalence of DSH among males in the sample. Among community samples of Canadian adolescents, DSH was found to be more common among females than males (Laye-Gindhu & Schonert-Reichl, 2005). In contrast to these findings Muehlenkamp and Gerierrez (2004) found no significant sex difference in the prevalence of DSH in their community sample of adolescents in the United States. Data from New Zealand adolescents is also inconsistent; Coggan et al. (2003) reported higher prevalence rates among males than females, while Garisch and Wilson (2008) found female participants (18%) were significantly more likely to have engaged in DSH than male participants (9%). Sex differences in the prevalence of DSH have been variable across studies and this research seeks to address this issue by establishing common patterns in prevalence rates for males and females across samples.

The vulnerability of youth.

In non-clinical groups, DSH commonly begins in early to mid-adolescence (Fox & Hawton, 2004; Muehlenkamp & Gerierrez, 2004; Whitlock et al., 2006a), peaks in the early to mid-twenties, and drastically declines, or ceases, by the thirties independent of psychological intervention.

Using logistic regression Briere and Gil (1998) found that DSH was associated with younger age in their representative general adult sample and in their clinical

sample. Among university students Whitlock et al. (2006a) found that participants older than 24 years were slightly, but significantly, less likely to engage in DSH than younger cohorts. Evren and Evren (2005) found that Turkish male substance-dependent patients who had a history of DSH were significantly more likely to be younger than participants with no history of DSH. In assessing the pattern of DSH across the life course (ages 18-60) in BPD psychiatric patients and non-BPD patients Sansone, Gaither and Songer (2002) found the frequency of DSH increased steadily until ages 18-24, and then remains relatively constant throughout the rest of the age-period assessed. Both high and low lethality behaviours demonstrated this pattern (Sansone et al., 2002).

Several hypotheses have been offered to help explain the restriction of the majority of DSH to adolescence and young adulthood, and the tendency for DSH to decline or cease by age 30 to 35. Adolescence involves the development of independence, boundaries and identity. It has been argued that the absence of rites of passage into adulthood in western society may have fostered DSH as a means of demonstrating independence and separation through marking the body as one's own and no longer under parental control (Conterio, Lader & Bloom, 1998). In addition, adolescents frequently use their external appearance to communicate their identity (e.g. clothes, body piercing), and DSH may be a continuation of this (e.g. to identify with a youth culture).

The increase in stress and rates of depression and the numerous developmental tasks that need to be accomplished (e.g. realigning social network with one's peer group, leaving home) during adolescence and young adulthood (Carr, 1999) may account for DSH being most prevalent among youth. This hypothesis is supported by research linking DSH to depression (de Man, 1999; Hawton et al., 2006b), and research finding interpersonal stressors and other distressing events to be common precipitants of DSH (De Leo & Heller, 2004; Harrington, 2001; Hawton et al., 2006b; Ruiz-Veguilla et al., 2004). One obvious stressor of adolescence is puberty.

Age of onset for DSH may be related to biological changes of puberty. Young et al. (2007) found that females with a history of DSH generally reported a younger age of onset for their DSH than males with a history of DSH. This may be due to females undergoing puberty earlier than males. Additionally, pubertal changes often coincide with other environmental changes such as bullying (Pepler et al., 2006). The hormonal changes of puberty make adolescents more vulnerable to emotional turmoil, while

extreme negative emotions are associated with DSH (e.g. Hawton et al., 2006). Adolescents' emerging sexuality may cause anxiety and confusion, especially if an adolescent is unsure of their sexual orientation (e.g. Skegg et al., 2003).

Aside from the affective and social consequences of puberty, adolescent development also involves cognitive maturation. The frontal lobes, responsible for executive functioning including curbing impulsivity, do not fully develop until early adulthood (Giedd et al., 1999). DSH is known to be associated with impulsivity independent of other factors including depression, anxiety and self-esteem (Hawton et al., 2006b); thus a lack of maturity in executive functioning among adolescents may make them vulnerable to DSH (and other risky behaviours). Of the adolescents in their sample who cut themselves, Hawton et al. (2006b) found that almost half thought about cutting themselves for less than an hour beforehand, suggesting impulsivity and lack of forethought. The above discussion suggests DSH is more prevalent in adolescence for a number of reasons, including the assertion of independence and identity, stress of maturity and puberty, changes in mood and environment, and cognitive risk factors (poor executive functioning) during this age-period. The importance of each of these factors to individual cases of DSH is likely to vary tremendously.

Explanations for the present DSH 'epidemic' among youth.

DSH among adolescents has been referred to as the "new epidemic" (Derouin & Bravender, 2004). In the 1980s practitioners pointed to anorexia and bulimia as the new and rising psychological problem among young people; DSH appears to have taken over this role as of the mid-1990s (Walsh, 2006). The idea of DSH as the new 'epidemic' may represent a moral panic (Lloyd, 2008), a term first coined by Cohen as "a condition, episode, person or group of persons [who] become defined as a threat to societal values and interests" (Cohen, 1987, p.9). The mass media dramatise and emphasis the qualaties of the event or group that categorise them as deviant and which threaten the social order, such that it becomes a national (and in the case of DSH international) issue. Cohen (1987) focussed on youth subcultures representing moral panics (e.g. Mods and Rockers); these groups become linked with violence and engender emotional reactions from the public due to their construction as endangering societal order and values. DSH and the associated youth subculture 'Emo' (Greenwald, 2003) have been ridiculed by media and constructed as dangerous (Newstalk ZB,

15/03/07). DSH represents a threat to the value society places on the lives of young people (e.g. as the makers of our future), and the lives of people in general, due to the obvious self-inflicted physical damage it causes. The idea of DSH as the "new epidemic" (Derouin & Bravender, 2004) suggests a spreading disease among youth. Research does point to a rise in DSH among youth internationally (e.g. O'Loughlin & Sherwood, 2005); possible explanations for this rise are discussed below.

Factors which may account for the rise in DSH among youth include changing socio-economic conditions and disadvantage, globalisation and associated cultural changes. Youth are especially vulnerable to these changes because they need to find a place for themselves and their identity within a fast-paced and ever-changing social fabric. The ordinary tasks of adolescence are made more difficult due to the lack of stability in many contemporary families (e.g. high divorce rates) and peer support (i.e. high mobility). Related to globalisation, internationalised mass media means that ideas are free-flowing and easily accessible. Individuals around the world can easily learn about DSH, either passively (e.g. as portrayed on television media) or actively (e.g. via online discussion forums), and exposure may foster DSH in vulnerable youth.

Looking at the broad socio-cultural context, several authors have suggested that a rise in DSH may be due to changing socio-economic conditions, with socio-economic inequality on the rise in Western and developing nations since the 1980s and 1990s, including New Zealand (Easton, 1999, cited in Pearce & Smith, 2003; Lynch, Due, Muntaner & Davey Smith, 2000; Chang, 2002). Adolescents and young adults of low socio-economic background experience psychosocial and environmental risks (Luther & Latendresse, 2003; Pearce & Smith, 2003) that may create vulnerability to DSH, including poor living conditions, lack of opportunity, and other stressors placed on families due to economic hardship. This hypothesis is supported by numerous studies linking DSH among adolescent and young adults to social and economic disadvantage (e.g. poverty, lower income, and poor housing; Johnston, Cooper, Webb & Kapur, 2006; Ayton, Rasool & Cottrell, 2003).

Socio-economic disadvantage may also impact on youths' psychological wellbeing. Williams (1997) suggests that poor social comparison to others (e.g. according to economic means) leads to lowered self-esteem, which can facilitate the depressive cognitions associated with DSH. The act of DSH may serve as a form of protest against the perception of entrapment created by socioeconomic disadvantage

(Williams, 1997). More generally, social identity theory suggests sense of identity is predicated on positive comparison to others (Tajfel & Turner, 1986). Individuals of low social economic status (SES) have limited opportunities for positive comparison with others materially. Financial and materially-gauged achievement is highly valued in Western society (Kasser, 2003); this may negatively impact on people of low SES in terms of their identity formations, and subsequently foster multiple vulnerability factors linked to DSH (e.g. low self-esteem, poor self-efficacy beliefs, negative self-attributions, dissociation; Evans et al., 2004; Sampson, Mukherjee, Ukoumunne, Mullan & Bullok, 2004; Zlotnick et al., 1996). *Figure 1* (see p. 3) suggests self-perception is central to DSH (i.e. self-esteem is directly linked); thus identity formation may impact significantly on vulnerability to DSH behaviour. At the other end of the socio-economic continuum, affluent youth are more likely to experience depression and anxiety, face high achievement demands from parents, be isolated from adults, and abuse substance (for a review see Luthar & Latendresse, 2003) than their peers; all factors associated with DSH (De Leo & Heller, 2004; D'Onofrio, 2007; Evans et al., 2005)

Factors associated with globalisation have coincided with a rise in mental health problems including depression, anxiety and social isolation (McMichael & Beaglehole, 2000), all factors related to DSH among youth (De Leo & Heller, 2004; Hawton et al., 2006b). Globalisation is related to increased poverty due to exacerbation of economic disparities, employment insecurity due to a changeable job market, sub-standard wages due to increasing international competition from cheap overseas markets, environmental changes (e.g. global warming), excess food consumption leading to obesity-related disease, and the disintegration of familial social networks and neighbourhood communities due to urbanisation and family members living in different geographical regions (for a review see McMichael & Beaglehole, 2000). These social and cultural changes place extra stress on individuals. For individuals already vulnerable to stressors (e.g. due to affective instability), these contextual effects make DSH more likely. Youths' marginal status in terms of financial security and social connection (e.g. choosing to leave home) means that they may be especially vulnerable to the negative effects of globalisation.

Similarly, Conterio et al. (1998) point to contemporary cultural trends that may be fostering DSH among youth. Firstly, the transient nature of relationships, with people moving frequently, leads to a lack of steady support from family, neighbours and

friends. Secondly, the collapse of the extended family in Western society means that individuals have fewer confidants in times of crisis, and young people grow up with few opportunities to communicate and discuss their internal distress with others, and thus begin to rely on doing rather than telling or communicating distress verbally. The link between DSH and the collapse of the extended family is indicated by higher rates among youth whose parents have separated or divorced (Walsh & Rosen, 1988, cited in Walsh, 2006). Conterio et al. (1998) state that 'families are becoming atomised', leading to isolation, which leads to introspection. When an individual is already emotionally vulnerable, this introspection can prove difficult, and the body becomes the canvas for the frustrations and emotions that have been ignored by society and had no interpersonal outlet. Thirdly, Western culture's emphasis on 'quick-fix' solutions (Nader, Dubrow & Stamm, 1999) and immediate gratification suggests that one should deal with any uncomfortable experience immediately, including negative emotions.

Worldwide media associated with globalisation may also be a factor in the rise of DSH among youth. It is widely recognised that DSH has contagion effects (e.g. Rosen & Walsh, 1989). The portrayal of DSH on television (e.g. in 'Hollyoaks', a television soup opera about characters aged late teens to early twenties who attend a community college), in magazines among celebrities (e.g. DSH by Princess Diana, Johnny Depp, Amy Winehouse), and on the internet, means that youth are increasingly exposed to such behaviours. In his practical guide to DSH for clinicians, Walsh (2006) places factors that influence DSH into four categories, one of which is direct media influence; this includes DSH in the general media, celebrity DSH, and discussion of DSH in online chat rooms, message boards and blogs.

Online interviews with young people (18-35 years) who have engaged in DSH found that approximately one third began engaging in DSH after learning about it from an outside sources (e.g. the media, a friend) (Hodgson, 2004). However, given that Hodgen's (2004) sample was recruited online, his participants may be more likely to discover DSH through media. Hodgson (2004) suggests that other-learning of DSH may become more common (compared to self-learning via accidental injury); there was a significant age gap between participants who had learned of DSH via outside-sources versus accidental discovery, with younger participants more likely to discover DSH via other-learning. Learning from outside sources was associated with earlier DSH onset (average of 14 years, compared to 16 years for self-learned DSH). Hodgson (2004)

suggests that, given the raised profile of DSH in the media, prevalence is likely to increase, while age of onset is likely to decline.

The profile of DSH has also been raised by the 'Emo' sub-culture, which initially emerged out of the 'emotional hard-core' music of the late-1980s characterised by emotive lyrics, with some songs directly relating to cutting (Greenwald, 2003). The term 'Emo' is now popularly used to describe someone who is experiencing negative emotions of sadness and loneliness, and is used to express fashion styles (e.g. long fringes, wearing tight black clothes, dark eye make-up) and attitudes in support of emotional suffering and self-harm (Canterbury suicide project, 2006). Emo has been described as a current element in popular culture that encourages DSH among young people (Newstalk ZB, 15/03/07).

The youth 'Emo' subculture has been portrayed negatively in the media, and been the butt of many jokes (e.g. 'Why did the man want his grass to be Emo? So it would cut itself'; Vaughan, 2006). This negative stigma may extend to all young people who self-harm, irrespective of whether they identify with the 'Emo' label. The 'Emo' subculture has been mobilised to pass DSH off as a fad of moody teenagers, which constructs DSH as less serious (i.e. a passing phase). In an environment of potential ridicule and labelling (i.e. as 'Emo') it is not surprising that the majority of youth DSH is not disclosed (Evans et al., 2005; Hawton et al., 2006b; Whitlock et al., 2006a).

Characteristics and Covariates of DSH

This section discusses method of DSH in terms of preference and underlying pathology. Following this the secrecy commonly surrounding DSH is discussed. Secrecy by the individual engaging in DSH is a hindrance to recovery and suggests social repercussions of disclosure. The social advocacy (implicit and explicit) of secrecy is mentioned in relation to DSH as taboo.

Multiple versus preferred method of DSH.

Empirical literature suggests that many individuals who engage in DSH employ multiple methods (see Table 3). The use of multiple methods may suggest that different

forms of DSH serve the same function (i.e. are easily substituted for one another), or different methods may be employed at different times depending on the desired effect or the means available. New Zealand data also suggests that individuals who engage in DSH use multiple methods; Fortune (2006) found that adolescents referred to a mental health service in Auckland were likely to use both cutting and self-poisoning to self-harm.

Table 3

Percentage of self-harmers using multiple methods

Study	Sample	Percentage of self-harming participants using multiple methods
Whitlock et al. (2006)	University students	60%
Hawton et al. (2006)	Community adolescents	55%
Muelenkamp & Gerierrez (2004)	Community adolescents	22%
Paivio & McCullogh (2004)	Female undergraduate psychology students	60%

The ritualistic nature of DSH for some people (Walsh, 2006) may suggest that people gravitate towards a preferred method consistent with their ritual. Some clients have reported following a particular behavioural script when engaging in DSH (e.g. implement layout, bandage preparation; Harris, 2000), suggesting that perhaps individuals settle on a preferred method. However, review of the literature indicates multiple methods are used by single individuals (e.g. Hawton et al., 2006b; Whitlock et al., 2006a). Heterogeneity in method appears to be common; or perhaps individuals have multiple rituals dependent on the chosen method.

Method and site of DSH: clue to underlying disturbance?

Method of DSH may offer insight into level of underlying pathology. Inflicting DSH without a tool may signal a more primitive level of disturbance (Walsh, 2006). Hitting, scratching and biting the body, according to Walsh (2006), often occurs in a more impulsive and explosive state, and may be related to psychosis or intellectual

disability (underlying pathology that can include DSH and is excluded from my definition). Employing a knife, razor blade or cigarette to self-harm enables more precise control of bodily damage; however control may be limited in states of high stress, impulsivity or volatility, where damage may be more extensive than intended. There are likely to be exceptions to Walsh's (2006) generalisation; for example, in certain circumstances no tool may be available and the only means of DSH is via hitting, biting and scratching with fingernails. This is reflected in the use of multiple methods as summarised in Table 3.

Drawing on his clinical experience, Walsh (2006) suggests that wounding to create symbols or words on the body signifies less control and a higher level of disturbance. Although the process may involve greater attention to detail, according to Walsh (2006) such individuals are usually highly distressed. This relates to the communicative function of DSH; perhaps an individual who uses their body as a canvas to communicate distress sees no other route to express their emotional and physical needs. This may reflect poor emotion regulation and communication skills and/or poor social support (i.e. a social environment that discourages emotional expression or communication of distress; e.g. an abusive context).

The place on the body where an individual chooses to harm themselves may also provide insight into underlying disturbance. It has been suggested that wounding the breasts (among women) and genitalia may signify disturbance relating to past sexual abuse (Motz, 2001). For the individual with an abuse history who self-harms in this way, DSH may function to destroy or remove a part of their body they consider dirty, tainted or not under their control. Marking the breast and genitals may be a form of re-claiming these parts of the body (Motz, 2001). Also, the DSH may be seen as a mechanism for protecting against further assault by making the body less sexually attractive to potential abusers (i.e. as damaged and unattractive) (Conterio et al., 1998).

The site of DSH impacts on whether or not it will be noticed by others. DSH is most likely to be performed on areas which are easily accessible, such as the forearm, thigh or abdomen (Fortune, 2006; Walsh, 2006). DSH on an area of the body that is generally uncovered (e.g. the forearm), is presumably more likely to serve a communicative function than on an area that is generally kept hidden (e.g. the inner thigh). This is important information for assessing the function of the DSH for the individual. If the individual wants the DSH to be discovered then they should be more

likely to self-harm on areas of the body that are viewed by others; while the reverse would be true when the individual desires to keep their DSH hidden. Thus the site of DSH relates to the level of secrecy surrounding the behaviour.

Secrecy surrounding DSH.

DSH is most often a secretive behaviour (Alderman, 1997; Claes et al., 2005); which prevents help-seeking and therefore hinders recovery. In a study of English adolescents, Evans et al. (2005) found that 20% of self-harming adolescents reported that nobody knew of their DSH, and 40% of adolescents who had DSH ideation reported that nobody was aware they were having such thoughts. In addition, Hawton et al. (2006b) report that only approximately one tenth of their participants who engaged in DSH sought help beforehand. Whitlock et al. (2006a), in their sample of 2875 United States undergraduate and graduate students, found that 40% of their participants who had engaged in DSH reported nobody knew of their DSH; the figure was 31% for participants with repeated DSH.

These figures are especially concerning considering the importance of confidantes in times of distress (Davidson & Demaray, 2007; Williams, Connolly, Pepler, & Craig, 2005). For example, social support has been found to buffer against the negative psychological effects of being bullied (Davidson & Demaray, 2007; Williams et al., 2005). Also, adolescents who need help the most (i.e. who generally cope poorly with psychological stress) are those least likely to seek help (Ciarrochi, Deane & Wilson, 2002); and poor emotional coping and awareness (including alexithymia) have been linked to having few social supports (e.g. Lumley, Ovies, Stettner, Wehmer & Lakey, 1996).

Secret DSH may serve a different function for the individual than DSH that is communicated and made known. Secret DSH allows for extended self-punishment, whereas DSH that is revealed to others powerfully communicates distress and has the potential to facilitate increased attention, support and concern. However, there is a paradox here, as DSH that is communicated may be viewed as attention-seeking and thus be trivialised; while hidden DSH is considered more serious and representative of severe psychopathology but is closed to assistance (Crouch & Wright, 2004; Gilbertson & Wilson, 2008). Crouch and Wright (2004) report that the participants in their study of

adolescent inpatients classified individuals who engaged in DSH into two groups; those who engaged in DSH for attention and those who engaged in DSH for genuine reasons (e.g. release). Adolescents on the unit classified as 'attention-seekers' were reviled, and seen as 'stupid'. However, being classified as a genuine idealised 'self-harmer' carried a behavioural tariff; it required the DSH to cause a certain (unspecified) amount of physical damage, and it required the behaviour to be kept secret. Being in the 'attention-seeking' group had the freedom of seeking attention and receiving help, but entailed being shunned and hated by the rest of the patients on the unit. Being classed in the 'authentic' group allowed participants to distance themselves from the devalued label of attention-seeker. This group categorisation sets up a vicious cycle because seeking help to recover from the DSH entails validating the devalued self-perception of DSH as attention-seeking.

Similarly, New Zealand youth have been found to make a distinction between 'serious' or 'standard' self-harm and self-harm that is 'inauthentic' or 'less serious' (Gilbertson & Wilson, 2008). In interviews of the friends of people who have engaged in DSH, Gilbertson and Wilson (2008) found that participants made a distinction between DSH that is 'inauthentic' and performed as part of a current trend to be part of 'Emo' subculture and/or for attention, and DSH that is 'serious' and engaged in for emotional issues.

Due to the stigma of attention-seeking and trivialisation surrounding disclosed DSH, individuals who confide in someone about their DSH may receive negative feedback and therefore elect not to disclose in the future. This distinction between hidden and disclosed DSH results in a catch-22 scenario, as disclosure leads to negative social reactions (e.g. being considered 'inauthentic'), while non-disclosure prevents people from receiving support beneficial for intervention and recovery.

On the individual level, secrecy may signal poor emotional awareness and lack of acknowledgement that help is desirable. Unfortunately it is those who lack emotional competence and awareness, factors associated with DSH (Laye-Gindhu & Schonert-Reichl, 2005; Walsh, 2006), that are the least likely to seek help (Ciarrochi et al., 2002). Evans et al. (2005) found that adolescents who engaged in DSH had fewer people they felt able to talk to about their problems than adolescents who had DSH ideation and no history of DSH. Having engaged in multiple episodes of DSH was associated with reporting even fewer people to talk to about one's difficulties (Evans et al., 2005). This

secrecy is likely to be facilitated by the shame experienced by people who engage in DSH (Nixon et al., 2002), and may be compounded by rejection and disgust from those they do confide in (Alderman, 1997).

Secrecy may relate to the social environment. An environment that abhors DSH and reacts negatively to such behaviour is likely to foster secrecy. Constructing DSH as taboo hinders self-disclosure and encourages feelings of helplessness among confidantes when such behaviour is disclosed, as individuals may have limited knowledge of where to turn to in times of crisis. If society views DSH as a topic to be avoided the isolation and stigma youth who self-harm may feel is likely to worsen. The taboo, stigma and stereotypes surrounding DSH are investigated in Study three.

Like DSH, the topic of suicide is often avoided. Researchers have suggested that media publicity on suicidal behaviours can lead to contagion or copy-cat effects (Walsh, 2006), generating fear around discussion. Support for this fear is found in research indicating that suicide rates significantly increase following the suicide of a celebrity or a character in a fictional television series (for a review see Gould, Jamieson & Romer, 2003).

However, other research suggests that discussion of suicidal behaviour or suicidal thinking does not lead to increased rates of suicide or attempted suicide (Gould et al., 2005). Extensive research and review by the Department of Mental Health of the World Health Organisation (2000) suggests that reporting suicide correctly, without dramatization and extensive detail on method, has no ill-effects, and may in fact prevent further suicides. Fabian (1986) highlights that taboo surrounding suicide is not helpful, and may create problems as people remain ill-informed and unable to effectively deal with suicidal thoughts or behaviours.

There has been heated debate in New Zealand (and other nations) over whether suicide should be a topic open for discussion (e.g. Collins, 2005; Walker, 2006). The Ministry of Health (1999) has issued guidelines for the reporting and portrayal of suicide, due to fear of copycat suicides or suicide contagion if suicide is normalised or communicated inappropriately. In 2005 in New Zealand secondary schools, the Project Hope and the Yellow Ribbon campaigns, which have since disbanded, advocated open discussion of suicide and increasing awareness. Both were criticised by the government as potentially normalising and generating unhealthy interest in suicide. Associate Health

Minister Jim Anderton voiced the opinion that Yellow Ribbon may encourage suicide by drawing attention to it:

> Anderton: "You don't need grandstanding. You don't need to try to raise the profile. You almost have to go down under the radar screen and just be careful." (New Zealand Herald, Feb 11, 2005)

Commentators have suggested there is too little New Zealand research to know whether the policy of limited discussion is a good strategy for suicide prevention, or whether silence leads to lives being lost (e.g.Walker, 2006). Such fears likely extend to DSH, as both DSH and suicide involve self-performed bodily harm, and both evidence contagion (Rosen & Walsh, 1989; Yip et al., 2006). An aim of this thesis is to better understand the social implications of DSH given that, like suicide, the social climate may favour silence.

It is important to understand the context and reasons behind any resistance to open discussion of DSH. A social climate of silence may foster escalation of DSH and impede recovery. Study three of this thesis will look at the stereotypes of DSH to uncover the social climate surrounding young people in New Zealand as it relates to self-harming behaviour.

Correlates of DSH.

DSH is associated with a variety of maladaptive experiences, behaviours and cognitions. Although there is a plethora of research outlining the connection between DSH and factors associated with poor cognitive, behavioural, social and affective functioning (for a review see Evans, Hawton & Rodham, 2004), there is no quantitatively based, empirically supported, comprehensive causal model linking these factors together to explain DSH. Study two involves the development of such a model using multiple factors known to be significantly related to DSH. While the section below outlines correlates of DSH these do not occur in a vacuum; individuals who DSH may be experiencing any number of them at any one time.

DSH and affective functioning.

DSH is associated with poorer affective functioning. Research with various clinical and non-clinical populations has consistently found DSH to be associated with higher scores on measures of depression and anxiety (e.g. De Leo & Heller, 2004; Hawton et al., 2006b; Meuhlenkamp & Gutierrez, 2004; Sampson et al., 2004). Among both community and inpatient samples of self-harming adolescents the most commonly reported experiences prior to DSH are depression and feelings of loneliness. These negative affective states reduce during, and especially after, an episode of DSH, accompanied by a sense of relief (Laye-Gindhu & Schonert-Reichl, 2005; Nixon et al., 2002). Nixon et al. (2002) suggest that DSH may be a self-medicating mechanism for depression, especially considering the affect-modulating and addictive qualities of DSH endorsed by their sample.

DSH and sense of self.

DSH has been linked to factors indicative of poor self-perception and integration of identity, including low self-esteem, personality disorder (PD), and dissociation. DSH has consistently been linked to low self-esteem (Evans et al., 2004; Haines & Williams 1997; Laye-Gindhu & Schonert-Reichl, 2005; Lundh et al., 2007; McGee, Williams & Nada-Raja, 2001). Adolescents with a history of DSH have significantly lower self-esteem than those with no history of self-harm (Laye-Gindhu & Schonert-Reichl, 2005; Lundh, 2007). McGee et al. (2001) investigated self-esteem, hopelessness and self-harming behaviours including suicide in a longitudinal study with young New Zealanders. Low self-esteem at ages 11 and 13 was associated with a higher prevalence of DSH ideation reported by children and their parents at ages 9 to 13 (McGee et al., 2001). Haines & Williams (1997) found that male prisoners with a history of DSH were less able to maintain their self-esteem than prisoners with no history of DSH.

DSH is associated with PD, most notably BPD. In their sample of psychiatric inpatients Sampson et al. (2004) found a history of DSH was associated with increased probability of having a BPD diagnosis. Indeed, one of the clinical characteristics of BPD is DSH (APA, 2004), thus it is not surprising that the two co-vary in clinical populations. Given that the characteristics of PD occur on a continuum in the general population (Donnelly, 1998), the emotional splitting and disjointed nature of identity and interpersonal experience associated with BPD.

Carr and McNaughlty (2005) suggest that DSH in general may be related to struggles with identity and self-perception, particularly in the context of interpersonal relationships. This may be especially pertinent for youth, as a primary developmental task of adolescence is identity formation and the development of close interpersonal relationships outside the family (Suyemoto, 1998). Since PD, including BPD, should not be routinely diagnosed in adolescents, the link between BPD and DSH in younger cohorts remains elusive.

DSH has also been linked to dissociation. Both Motz (2001) and D'Onofrio (2007) suggest that DSH may be associated with dissociation in one of two ways; an individual may engage in DSH to end the numbness and depersonalisation characteristic of dissociation, or an individual may engage in DSH to facilitate a dissociative state to distract themselves from the reality of their internal emotional experience. Among adolescent inpatients admitted for DSH, Nixon et al (2002) found a subgroup of their participants (40.5%) engaged in DSH to stop feeling numb and out of touch with reality. Engaging in DSH to achieve dissociation suggests a desire to avoid insight and introspective thought that is grounded in reality; a preference for avoidant coping. Zlotnick et al. (1996) found dissociation predicted unique variance in DSH independent of alexithymia and history of sexual abuse in a sample of female inpatients.

DSH and lack of introspective awareness and insight.

DSH is associated with low mindfulness, lack of constructive introspection and poor emotional awareness. Mindfulness is characterised by awareness and attention to present moment-to-moment experience (Kabat-Zinn, 1995), and has been found to foster wellbeing (e.g. Brown & Ryan, 2003; Chang et al., 2004). In their adolescent sample Lundh et al. (2007) found that DSH was associated with lower scores on mindfulness.

DSH is associated with poor constructive introspection and emotional awareness, with research linking DSH to alexithymia and poor emotional intelligence (Evren & Evren, 2005; Garisch & Wilson, 2009; Hintikka et al., 2004; Paivio & McCulloch, 2004; Zlotnick et al., 1996). Alexithymia has been shown to be positively correlated with DSH (Paivio & McCulloch, 2004; Garisch & Wilson, 2009). Zlotnick et al. (1996) found that alexithymia contributed unique variance in the prediction of DSH

independent of dissociation and history of childhood sexual abuse among female psychiatric inpatients. Similarly, Evren and Evren (2005) found that level of alexithymic symptomology was significantly higher among male substance abusers with a history of DSH compared to those with no DSH history.

The term 'emotional intelligence' has been used to refer to the ability to "perceive, understand, and manage one's emotions" (p. 1105, Ciarrochi, Chan & Bajgar, 2001); these skills are poorer in individuals with a history of DSH (Evans et al., 2005; Gratz & Chapman, 2007; Laye-Gindhu & Schonert-Reichl, 2005). These abilities will not be called 'emotional intelligence' in this thesis, as 'intelligence' traditionally suggests something fixed and innate. Instead these abilities will be referred to as the 'adaptive use of emotions'; this term is more explicit and not wrapped in the same controversy as 'emotional intelligence' (Izard, 2001). In their study on the relationship between adaptive use of emotions and personality disorder characteristics among university students Leible and Snell (2004) found that BPD symptomology was associated with reduced emotional clarity and poorer emotion regulation. As BPD is associated with DSH, an extension of Leible and Snell's (2004) findings would be that DSH is associated with less emotional clarity and regulation. Adaptive use of emotions has been found to be associated with larger and better quality social networks and greater life satisfaction (Austin, Saklofse & Egan, 2005). Adaptive use of emotions is also a buffer against depression, anxiety and low self-esteem (Salters-Pedneault, Roemer, Tull, Rucker & Mennin, 2006; Zimmerman, Rossier, de Stadelhofen & Gaillard, 2005).

DSH and abuse.

All types of childhood abuse have been linked to DSH (Hawton et al., 2006b; Walsh, 2006). Hawton et al. (2006b) found that physical abuse increased the probability of having engaged in DSH fourfold among English adolescents, independent of depression, anxiety, self-esteem and other covariates. Sexual abuse history was also associated with DSH; but this was not an independent predictor, perhaps due to the lack of statistical power associated with low prevalence in the sample (Hawton et al., 2006b).

D'Onofrio (2007) suggests that parental childhood abuse results in a poorly integrated sense of self as the child has their physical and emotional needs invalidated,

and learns to ignore their own needs at the expense of their parents. This poorly integrated sense of reality and personal experience leads to the bodily expression of the sense of self. This shift in expression is particularly likely in adolescence, when bodily changes are highly salient (D'Onofrio, 2007). In reviewing the literature, D'Onofrio (2007) suggests that past trauma, including childhood abuse, serves to intensify the adolescent's disconnection from their body, leading to the body being perceived as separate from the self. The body then comes to represent the psychological pain of the abuse and trauma, making it a target for self- and other-(e.g. abuser) directed anger.

DSH and bullying.

Bullying and DSH share the same vulnerability factors. Adolescents who are bullied are more likely to be depressed, have low self-esteem, experience anxiety and psychosomatic complaints, be withdrawn, and experience pro-social difficulties (Baldry, 2004; Rigby, 2003). The same is true of adolescents with a history of DSH (Laye-Gindhu & Schonert-Reichel, 2005; Muchlenkamp & Garierrez, 2004; Coggan et al., 2003; Evans et al., 2004). In addition, adolescents who are bullied are more likely to experience a sense of disconnection from their peers, teachers and school (Skues et al., 2005). Disconnection is likely to foster feelings of loneliness or social isolation, both precipitants of DSH (Walsh, 2006), and emotionally supportive social connections are known to be important in recovery from DSH (Shaw, 2006).

Research suggests DSH is significantly more prevalent among bullied adolescents. Ruiz-Veguilla et al. (2004) found that DSH was significantly more common among Spanish victims of bullying. In New Zealand, Coggan et al. (2003) found DSH co-varied with bullying experiences over the past year. However, Hawton et al's (2006b) research suggests that while bullying is a correlate of DSH, the effect is indirect as other factors (e.g. depression and anxiety) outweigh the effects of bullying under multivariate analysis of predictors of DSH.

The relationship between bullying and DSH may be due to multiple mechanisms. For example, an individual who engages in DSH may be an easy target for a bully due to low self-esteem and poor emotion regulation (i.e. easily intimidated and emotionally responsive). Also, an individual who engages in DSH may have friends with similar psychological difficulties, and these friends may be poor protectors or buffers

against bullies (Hodges, Malone & Perry, 1997). Additionally, an individual who engages in DSH may actively seek out persecution from others as an extension of their self-harm (similar to how some researchers consider remaining in an abusive relationship to be DSH; Gratz & Chapman, 2007).

DSH and substance abuse.

DSH has been linked to alcohol consumption, smoking, and illegal drug use (Hawton et al., 2006b). Hawton et al. (2006b) found that alcohol use was associated with a higher likelihood of having engaged in DSH, smoking was found to be significantly positively correlated with DSH, and drug use was a significant strong predictor of having engaged in DSH for both genders. In their study of coping strategies associated with DSH, Evans et al. (2005) found that adolescents with a history of DSH were more likely to have an alcoholic drink when angry or upset than non-DSH adolescents. Both DSH and substance abuse reflect an avoidant coping style; neither resolves the individual's underlying issue(s) but both behaviours may be utilised for short-term relief.

Drawing on clinical observations, D'Onofrio (2007) suggests that some individuals who DSH avoid substance use, viewing it as contamination of the body and loss of control which they abhor; whereas for others substance use is another form of mood alteration, with DSH utilised if the substance does not have the desired effect. This distinction in attitude to substance abuse may map on to ritualised and controlled DSH and impulsive DSH respectively.

DSH and suicide.

DSH, although believed to have the function of preserving life through providing a means of coping with internal distress (Walsh, 2006), is nevertheless associated with suicide. Laye-Gindhu and Schonert-Reichl (2005) found DSH to co-vary with suicidal cognitions, having a suicide plan and having attempted suicide. Laye-Gindhu and Schonert-Reichl (2005) found that the self-conscious emotions of shame, guilt and disgust increased after an episode of DSH. In cases of chronic and enduring DSH, individuals may find it increasingly difficult to manage these negative emotions

post-DSH, with suicide becoming a more likely option (Laye-Gindhu & Schonert-Reichl, 2005). Also, if an individual engaging in DSH is in a dissociated and/or drug altered state they may self-harm more seriously than desired resulting in unintended death. Suicide in relation to DSH was discussed previously on p. 7-9; research suggests they are functionally and qualitatively different in method and intent (Brown et al., 2002; Meulenkamp & Gerierrez, 2004; Nixon et al., 2002; Pattison & Kahan, 1983; Walsh, 2006).

Connecting correlates of DSH.

The correlates of DSH discussed above are likely to all fit together to help explain an individual's pathway to DSH; and it is important to conceptualise them holistically. *Figure 1* (see p. 3) presents a model from my honours dissertation based on theory and supported by correlational data. This thesis aims to improve and broaden this model through both cross-sectional and longitudinal[1] data analysis incorporating additional known vulnerability factors for DSH (e.g. concerns about sexuality). Thus, the model depicted in *Figure 1* is a springboard for further analysis. The validity of the various pathways in the model will be explored (and the pathways refined) in Study 2 using longitudinal self-report survey data from secondary school students and university students querying DSH behaviour and various correlates of DSH. What follows is an expansion on how these correlates may fit together to generate vulnerability to DSH.

According to the model presented in *Figure 1*, self-esteem appears central to whether an individual engages in DSH behaviour. Self-esteem is the only variable in the model which significantly directly predicts DSH (i.e. unique shared variance over and above other predictor variables). Self-perception links with multiple vulnerability factors for DSH. Low self-esteem may relate to succumbing to peer pressure to becoming involved in substance abuse, a factor associated with DSH (Hawton et al., 2006b). In addition, low self-esteem among youth has been linked to victimisation (O'Moore & Kirkham, 2001), and being bullied is linked to DSH (Hawton et al., 2006b). Low self-

---

[1] The analyses referred to as 'longitudinal' in this research are not truly longitudinal as they do not extend for more than 8 months (most longitudinal research is for several years and involves a research team, e.g. measuring developmental changes). The 'longitudinal' analyses in this research are conducted using data collected over an extended time period (3-8 months). I have referred to them as 'longitudinal' for ease of understanding and to avoid repeated explanation.

esteem may also motivate DSH behaviour, with the individual viewing themselves as worthless and deserving of harm and pain.

There is likely to be a connection between low self-esteem and lack of self-knowledge and introspection (e.g. emotional awareness, alexithymia, mindfulness). Baumgardner (1990) suggests that belief in one's self-knowledge is associated with higher self-esteem. Therefore, as alexithymia, poor emotional awareness and low mindfulness are associated with poor self-knowledge and confusion relating to introspective awareness they are also likely to be related, and perhaps causal to, low self-esteem. Frustration associated with not understanding one's own internal experience may undermine confidence and foster feelings of low self-worth. This is supported by research linking alexithymic symptomology to low self-esteem among university students (Yelsma, 1995; Zimmerman et al., 2005). Alternatively, low self-esteem may lead to mistrust of one's introspective reflection; understanding of internal experience and emotion may be considered false due to poor faith in one's self-efficacy for emotional knowledge.

The associated correlates of alexithymia and adaptive use of emotions create a vulnerability to, and protection against, DSH respectively. Negative social consequences of alexithymia include peer victimisation, and a history of childhood abuse (Paivio & McCulloch, 2004). Alexithymia may relate to a failed mechanism in emotional reciprocity within social relationships, poor social support, peer rejection and bullying. Poor emotion regulation is similarly related to lower self-esteem, and social difficulties (Lumley, Ovies, Stettner, Wehmer & Lakey, 1996).

Paivio and McCulloch (2004) found that the relationship between childhood abuse and DSH was fully mediated by alexithymia, with the exception of sexual abuse, which was not correlated with alexithymia. Alexithymia may reflect a coping style bought on by abuse, with difficulty describing and identifying emotions being part of a general avoidance of emotion processing because of potential reminders of past abuse or trauma. This also relates to dissociation, as a dissociative state is reportedly utilised by individuals to avoid reminders of past abuse. Several researchers suggest that abuse survivors use DSH to dissociate from the intense emotions associated with their abuse history (e.g. D'Onofrio, 1997). Thus abuse history, and bullying (as another example of victimisation), may be indirectly linked to DSH via alexithymia and other indicators of emotional functioning.

The above section does not outline relative importance of correlates of DSH (i.e. hierarchy of evidence for each correlate and comparison of effect sizes for DSH). However, the correlates reviewed above have all been consistently linked to DSH in the literature (see p 52-61). Certain variables appear central to DSH, such as self-esteem (Fox & Hawton, 2004) and friends and family DSH (De Leo & Heller, 2004), and the importance of these variables is indicated by their proximal relationship to DSH in the theoretical associations outlined in Study 2.1 (p.106). Rather than focus on the weight of evidence for the relationship between each correlate and DSH, the focus of the above review provides a summary of consistent findings, and focuses on how these correlates relate to each other, no simply how they relate to DSH (i.e. to establish possible mediation, moderation, and second- or third- order relationships with DSH).

Other variables associated with DSH (e.g. attachment; Straker, 2006) were not been included in the development of a longitudinal model, or reviewed here for pragmatic reasons (i.e. space constraints do not allow a review of all possible correlates), and because this thesis focuses on internal experience, and school and peer environment rather than other areas of functioning (e.g. family life; though abuse history represents a by-proxy measure of this). The correlates chosen for inclusion and review were also based on variables assessed in my dissertation research (Garisch & Wilson, 2009), which this thesis sought to expand on.

The section above offers some insight into how the various correlates of DSH may work together to create vulnerability to DSH behaviour. The interaction and associations between various factors, and how they cause DSH (either directly or indirectly) will be investigated in Study two.

Theoretical Models and Frameworks of DSH

Theoretical models of DSH focus on one main causal mechanism for DSH behaviour (e.g. to reduce anxiety), while theoretical frameworks use a broader approach with greater scope and explanatory depth to include multiple causal variables or pathways. Numerous theoretical models have been proposed to explain DSH (e.g. Alderman, 1997; Chapman et al., 2006; Sayemoto, 1998; Yates, 2004). These models are not mutually exclusive; multiple models may be applicable to any individual or sub-group of individuals who engage in DSH. Emotional regulation models will be presented first and in the greatest depth as these represent the most common

understandings of DSH among professionals working with young people, and the most common motives expressed by youth who DSH. This will be followed by briefer discussion of biological, social, trauma, sexual, and feminist models, and behavioural reinforcement-based frameworks of DSH. The Experiental Avoidance Model (EAM Chapman et al., 2006) and a psychological model developed by Nock and Cha (2009), which represent comprehensive theoretical understandings of DSH, will be presented last. The diversity of the various models highlights the fact that there are multiple pathways to DSH and further suggests that individuals who engage in DSH are highly heterogeneous.

Models of DSH.

The most widely used models conceptualise DSH as a coping mechanism to relieve or contain negative affect. These include the affect regulation model, the anxiety reduction model, the hostility model, the tension reduction model, the dissociation model, the boundaries model, and the experiential avoidance model.

The affect regulation model suggests DSH is utilised as a coping mechanism to channel negative, painful, overwhelming or extreme emotions into a physical modality (Nixon et al., 2002). DSH is associated with an inability to use symbols to express emotion, with self-harm substituted for verbal emotional expression. Many individuals who engage in DSH give emotional reasons for their behaviour (e.g. Nixon et al., 2002), supporting this model of DSH. The significant positive correlation consistently found between alexithymia and DSH (Garisch & Wilson, 2008; Paivio & McCullogh, 2004; Zlotnick et al., 1996) also supports this model, as it suggests that individuals who engage in DSH indeed have difficulty introspecting and discussing their emotions with others. On the other hand, individuals who engage in DSH may be acutely aware of their emotions, but may lack more adaptive ways to deal with them and therefore turn to DSH.

Two other models related to emotion regulation are the dissociation model and the boundaries model. The dissociation model suggests that DSH is utilised to maintain a bounded and whole sense of self and identity when experiencing intense emotions by facilitating a dissociative state. The correlation between DSH and dissociation (e.g. Zlotnick et al., 1996) supports this model; however the use of DSH to end feelings of

numbness among a sub-group of adolescent inpatients admitted for DSH (Nixon et al.; 2002) does not. It may be that some individuals engage in DSH to induce a dissociative state, while others use DSH to end dissociation or become grounded in present experience (Alderman, 1997; D'Onofrio, 2007; Walsh, 2006). Similarly, the boundaries model suggests DSH is utilised as a means of maintaining, defining and confirming boundaries during times of emotional distress (Suyemoto, 1998). This model fits with the idea of DSH confirming the in/out boundary of the body through marking the skin as a barrier between external and internal experience (Straker, 2006). Qualitative research suggests sensations on the skin caused by DSH create a sense of boundedness for the individual and a distinction between the inside and outside of the body (Straker, 2006); DSH serves to confirm the individual's emotional experience as bounded and within them.

Similar to the affect regulation model, the tension reduction, anxiety reduction and hostility models all view DSH as a strategy to reduce internal psychological tension. Haines, Williams, Brian and Wilson (1995) found a reduction in psychological and physiological distress post-presentation of a personalised DSH script among prison inmates with a history of DSH, suggesting that DSH results in psychological response. Thus there is a physiological reduction in tension, followed by subjective feelings of reduced distress. The anxiety reduction model proposes that during times of stress the individual may experience mounting anxiety which they lack the skills or capacity to resolve, resorting to DSH to relieve the anxiety and re-instate homeostatic emotional levels (Bennum, 1984; Ross & Heath, 2003). The hostility model expands on the anxiety reduction model by stating that it is both feelings of hostility and anger that the individual cannot cope with, and subsequently self-harms. Mounting hostility (and anxiety) cannot be expressed against its source in a socially acceptable way, which causes tension. To relieve the tension the individual directs their anger inwards (i.e. self-harms), resulting in tension-relief. Ross and Heath (2003) assessed community adolescents' DSH, hostility and anxiety; history of DSH was significantly associated with other- and self-directed hostility and anxiety. Of those interviewed 79% cited anxiety and hostility as driving their DSH behaviour (Ross & Heath, 2003), supporting the anxiety reduction model and the hostility model.

Biological models link DSH to endorphin levels. One model hypothesises that DSH functions to attain and maintain normal endorphin levels when endorphins are

low (Alderman, 1997; Sher & Stanley, 2009). Another model proposes that habituation to high levels of endogenous opioids due to prolonged abuse leads to DSH as a mechanism for maintaining the high levels of endorphins the individual is accustomed to (Alderman, 1997). A third model proposes that someone who self-harms develops an addiction to the release of endorphins before, during and after DSH (Alderman, 1997). Research supports theory linking endorphins and opioids to DSH. A single case study found releasing endorphins through exercise reduced the urge to DSH (Wallenstein & Nock, 2007). In addition, opiate antagonists significantly decrease DSH among certain groups of children and adolescents with intellectual disability or autism spectrum disorders, likely due to preventing endorphin release and the associated reinforcement of DSH (for a review see Chabane, Leboyer & Mouren-Simeoni, 2000).

DSH has also been linked to excess dopamine and/or insufficient serotonin (e.g. Crowell, Beauchaine, McCauley, Vasilev & Stevens, 2008; Sivam, Pugazhenthi, Pugazhenthi & Brown, 2008). Neonatal destruction of nigrostriatal dopaminergic neurons in rats leads to later susceptibility to DSH behaviours (Sivam et al., 2008). Rats predisposed to DSH due to damage to the dopamine pathway who DSH have higher levels of serotonin than those rats that do not self-harm (Sivam et al., 2008). Crowell et al. (2008) found that adolescent vulnerability factors for DSH (e.g. poor parent-child interaction patterns) are exacerbated by serotonin dysfunction.

Social models of DSH include the observational learning model and interpersonal model. The observational learning model suggests DSH begins by modelling others self-harming behaviours when the model is seen as benefiting from DSH (e.g. receiving attention, care or relief; Alderman, 1997). One of the strongest correlates of DSH is DSH among friends and family members (De Leo & Heller, 2004), suggesting that modelling and social reinforcement may be very important in the development and maintenance of DSH behaviour. Contagion of DSH (e.g. Rosen & Walsh, 1989) suggests that modelling behaviour can be a significant factor in the choice to begin or re-engage in DSH. The interpersonal model of DSH suggests individuals engage in DSH to receive social support (Hilt, Nock, Lloyd-Richardson & Prinstein, 2008). Hilt et al. (2008) found that adolescent DSH was linked to increased positivity in relationships with fathers over time, suggesting DSH may involve social positive reinforcement. Social factors of attention and support are forms of secondary gain, while emotion regulation forms the primary motivator for self-harm (Levenkron, 1998).

Psychoanalytic explanations suggest DSH is a thwarted suicide attempt, an expression of depression through self-punishment, or a means of reintegrating one's sense of self and reinstating boundaries (for a review see Alderman, 1997). DSH has been consistently linked to depression (De Leo & Heller, 2004; Hawton et al., 2006b; Meuhlenkamp & Gutierrez, 2004), and research suggests DSH reaffirms boundaries of the body and experience for some individuals (D'Onofrio, 2007), supporting the latter two psychodynamic explanations. DSH is quantitatively and qualitatively different to suicide (see p. 7-9), discrediting the idea of DSH as a thwarted suicide attempt.

Several models link DSH to trauma history. The environmental model proposes DSH is a means of maintaining homeostasis and expressing conflict in situations of abuse (for a review see Messer & Fremouw, 2008; Suyemoto, 1998). Abuse facilitates modelling and vicarious reinforcement of self-harming behaviour (for a review see Suyemoto, 1998) as the abused child learns to associate harm (self- and other-inflicted) with care. This is supported by the significant association between DSH and history of childhood abuse (e.g. Hawton et al., 2006b; Klonsky & Moyer, 2008a).

Yates' (2004) traumagenic model suggests that the deficient coping associated with childhood trauma leads to engaging in DSH as a compensatory coping mechanism to regulate emotion and deal with interpersonal problems. In such cases DSH serves an adaptive function. This model is supported by the association between DSH and childhood abuse (Hawton et al., 2006b), by the use of DSH to regulate emotion (Laye-Gindhu & Schonert-Reichl, 2005; Nixon et al., 2002), and by the mediation of the relationship between childhood sexual abuse history and DSH by alexithymia (which suggests the link between sexual abuse and DSH is caused by underlying deficits in emotional processing; Paivio & McCulloch, 2004).

Yates' (2004) traumagenic model is paralleled by Deiter, Nicholls and Pearlman's (2000) argument that DSH is caused by failure to develop 'self-capacities' following childhood abuse. These self-capacities include the ability to tolerate intense emotion and maintain self-esteem and a sense of connection with others; all these abilities are impaired in cases of DSH (Evans et al., 2004; Evans et al., 2005; Walsh, 2006). Deiter et al. (2000) found that outpatient participants with a history of childhood abuse or a history of DSH showed greater impairment in their self-capacities; the most impaired had a history of both childhood abuse and DSH.

The sexual model suggests DSH is used to avoid, punish, control or gratify sexuality, consistent with the finding that DSH commonly begins during puberty (Fox & Hawton, 2004; Muehlenkamp & Gerierrez, 2004; Whitlock et al., 2006b). Hawton et al's (2006) finding that DSH co-varies with sexuality concerns among English adolescents is also consistent with this model, as is the positive association between DSH and same-sex attraction found by Skegg et al. (2003). The stress caused by sexuality and sexual relationships in adolescence may be an antecedent to DSH.

Feminist approaches suggest DSH is performed by women to reject idealised femininity and avoid being seen as an object for masculine desire (Walsh, 2006; Crowe, 1996). DSH is viewed as "reflecting women's experiences of trauma, silencing, and objectification within a patriarchal society" (Shaw, 2006, p. 155) and as a means of (re)gaining control over the body and internal experience, or alternatively (or in conjunction) to punish oneself for perceived encouragement of abuse (Crowe, 1996).

Theoretical frameworks of DSH.

Researchers have proposed various frameworks to explain initial DSH and continuation of the behaviour. These include the Experiential Avoidance model (EAM; Chapman et al., 2006), the diathesis-stress model (Nock & Prinstein, 2004, 2005), the Four Functions model (FFM; Nock & Prinstein, 2004, 2005), the addiction model, the operant-process model, and behaviourism-based models. The EAM is discussed first and in the greatest depth, as it fits with the conceptualisation of DSH as a coping regulation strategy, consistent with the primary understanding of DSH in the literature and in this thesis.

The Experiential Avoidance Model (EAM; see *Figure 2*; Chapman et al., 2006) is a behavioural theoretical framework developed to explain DSH, where DSH is conceptualised as a means to terminate negative emotional arousal and is thus negatively reinforced. This idea is subsumed in most theoretical understandings of DSH as coping mechanism to regulate, manage or avoid emotions, including the tension reduction, affect regulation, hostility, and boundary models. Research suggests DSH results in a reduction in both psychological and physiological distress (e.g. Haines et al., 1995), and is engaged in for emotional reasons (e.g. depression, loneliness; Nixon et al., 2002), supporting the EAM. In one study over 70% of 131 self-harming hospitalised

adolescents reported negative emotions prior to DSH (e.g. anger, sadness), and many reported reduction in negative affect following self-harm (Sim, Adrian, Zeman, Cassano & Friedrich, 2009).

The EAM views DSH as avoidance behaviour to escape unwanted emotion, somatic experiences, thoughts, or memories. An individual experiences unwanted negative emotion and engages in DSH to alleviate or eradicate the emotion, which negatively reinforces the DSH behaviour. Over time the association between negative emotion and DSH is strengthened (repeated pairings), and self-harming in response to negative emotion may become automatic. DSH is significantly related to other avoidance behaviours including drug and alcohol abuse (Hawton et al., 2006), thought suppression (Chapman et al., 2006) and dissociation (D'Onofrio, 2007), and with psychiatric disorders characterised by experiential avoidance, including depression, BPD, and PTSD (for a review see Chapman et al., 2006). Alexithymia, poor emotional awareness and poor adaptive use of emotions are all linked to DSH (Evren & Evren, 2005; Evans et al., 2005; Gratz & Chapman, 2007; Laye-Gindhu & Schonert-Reichl, 2005; Paivio & McCulloch, 2004) and are all likely to foster vulnerability to experiential avoidance behaviours, because the individual would lack skills necessary to appropriately manage emotional turmoil.
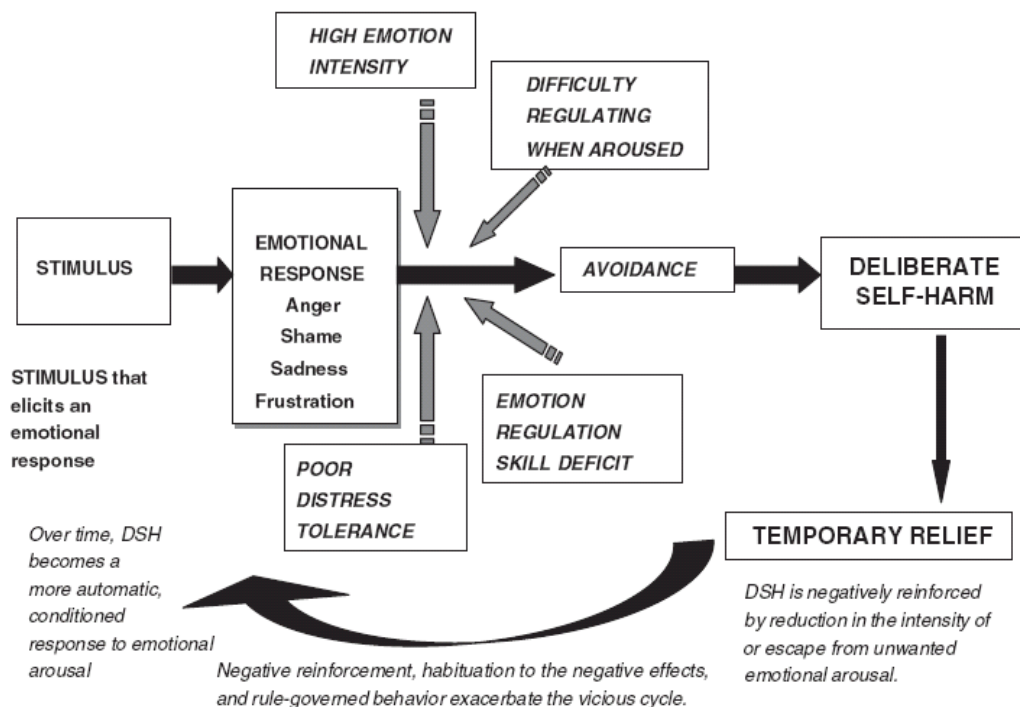
Figure 2. Experiential Avoidance Model (EAM) of DSH (from Chapman et al., 2006, p. 373)

There are negative consequences to experiential avoidance, including a possible rebound effect where the emotion returns with increased intensity or frequency, reduced opportunity for extinction because the individual does not learn that the emotional response is manageable, or the individual may develop a habitual verbal rule such as 'if I cut I will feel better', which limits sensitivity to the negative consequences of cutting as these are incongruent with expectations and beliefs. As the link between DSH and tension reduction strengthens and DSH becomes more automatic the individual habituates to the negative consequences of DSH such as pain, fear and negative social reactions. Thus any negative effects of DSH weaken, while positive association increases over time, culminating in a vicious cycle of DSH. Related to the EAM is the model of DSH as a mechanism to suppress aversive thoughts among highly emotionally reactive people (Najmi, Wegner, & Nock, 2007). High emotional reactivity is seen as leading to suppression, which is ultimately ineffective. The person then engages in DSH as a distraction technique.
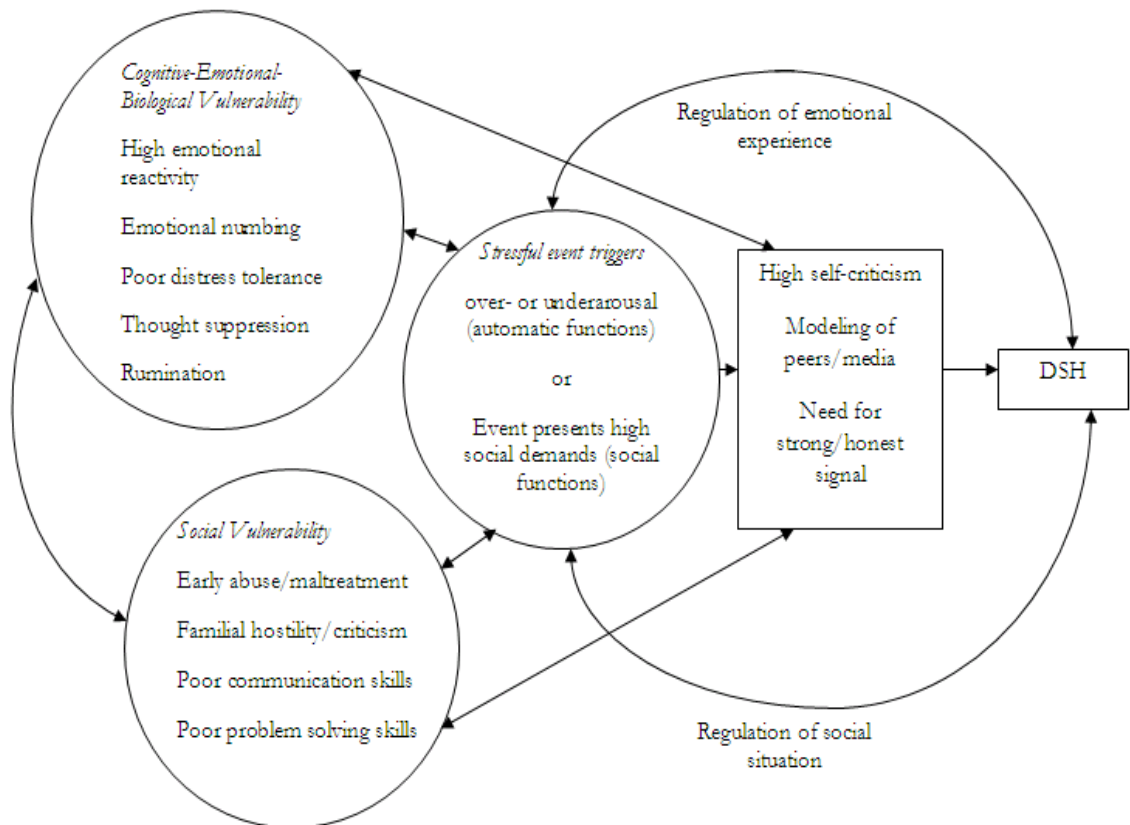
Figure 3. Diathesis-stress model of DSH (Nock & Cha, 2009, p. 74).

Nock and Prinstein (2009, cited in Nock and Cha, 2009) have proposed an inclusive diathesis-stress psychological model of the development and maintenance of DSH (see *Figure 3*). This model suggests biological, environmental and psychological predisposing factors (e.g. emotional reactivity) make an individual less able to cope with stressors. Coupled with risk factors specific to self-injury (e.g. contagion in peer group, high self-criticism) the individual may turn to DSH to regulate their emotional and/or social experience. This model, along with the EAM, will be referred to in discussion of the research findings in relation to theory at the end of this thesis.

The FFM (Nock & Prinstein, 2004, 2005), addiction model and operant-process model explain DSH in terms of antecedents and maintaining factors. The functions of DSH are described along two dichotomous dimension; positive and negative reinforcement, and automatic or social contingencies. The FFM suggests four over-arching functions of DSH; DSH for automatic negative reinforcement (i.e. to remove or escape a negative state such as anxiety), DSH for automatic positive reinforcement (e.g. to gain a desired state, to 'feel something'), DSH for social positive reinforcement (e.g. attention), and DSH for social negative reinforcement (e.g. to avoid obligatory social tasks). This model allows for the explanations of DSH offered by other researchers (e.g. emotion regulation models of DSH, social environment model of DSH), and provides on over-arching perspective of DSH that encompasses its heterogeneity.

The addiction model (Alderman, 1997) suggests that DSH is cyclical; it continues due to the effects of DSH and its consequences. The cycle begins when negative emotions lead to the build up of tension and possibly dissociation, culminating in an episode of DSH. The DSH has short term positive effects (e.g. endorphins, relief from tension), but leads to negative feelings (e.g. shame, guilt), which contributes to a build-up of negative emotions, and the cycle begins anew (for a review see Alderman, 1997). This cycle of addictive emotional release is reported in the literature (e.g. Walsh, 2006). DSH is often precipitated by depression and loneliness, and followed by a reduction in negative affect and sense of relief (Laye-Gindhu & Schonert-Reichl, 2005; Nixon et al., 2002), which is behaviourally reinforcing according to operant principles. In operant conditioning timing is crucial; consequences that occur immediately after, during, or even slightly before the behaviour have the largest impact. Consequences that occur immediately before, during or after DSH are primarily reinforcers (e.g. endorphin or tension release; Laye-Gindhu & Schonert-Reichl, 2005; Nixon et al., 2002), while

negative consequences are often delayed (e.g. social rejection post-discovery, long-term scarring). According to the operant conditioning model of DSH (Alderman, 1997), because reinforcers are more closely associated in time with DSH than punishers there is a high likelihood that DSH will reoccur.

Theoretical explanations for DSH are useful for facilitating understanding, however first-hand descriptions, narratives and insights from the lived experience of DSH offer unique perspectives on the context in which DSH is likely to occur. Qualitative studies provide useful background information on DSH behaviour, correlates of DSH, and barriers to effective treatment and recovery.

Personal Perspectives: Giving a Voice to Those Who Engage in DSH

The heterogeneous nature of models of DSH suggests using quantitative aggregated data to understand the experiences of people who self-harm is limited. This thesis incorporates qualitative data to add rich description to the context and experience of DSH.

Qualitative research offers in-depth insight into the construction and causes of DSH. Harris (2000) analysed letters received from six women (age range 20-45) who engaged in DSH describing their life experiences and experiences with Accident and Emergency (A&E) staff. The reasons these women gave for their DSH revolved around gaining symbolic relief, release from negative emotion, and the communication of inner distress. They also used 'the bad' metaphor to refer to the wrongs done to them by others (i.e. abuser or rapist); the DSH was seen as a means of removing 'the bad'. For the women in Harris' (2000) study DSH functioned to cope with emotional pain (by externalising it through physical pain), gain temporary relief from internal distress, communicate psychic pain, and react against 'the bad' internalised after abuse. These explanations fit with the emotion regulation models and the EAM, the environmental model, and the trauma-related models described above.

Similarly, adolescent inpatients' qualitative accounts of their DSH point to emotion regulation as a primary reason for DSH behaviour. Crouch and Wright (2004) conducted interviews and observational studies on an adolescent inpatient unit (N = 11, aged 12-16) for adolescents with a recent (or current) history of DSH. These adolescents identified strong emotional states of anger and distress as common precipitants of DSH, and frequently cited emotional release as the motivator for DSH.

Feelings of calm and avoidance of painful emotions were said to occur after the DSH episode (Crouch & Wright, 2004). This build-up of emotional tension followed by feelings of release fit with the explanations of DSH offered by several of the models and frameworks outlined above (e.g. the tension reduction model, the affect regulation model, the EAM). Participants also saw DSH as a social phenomenon, and thought imitation or copying of DSH was common (this was derided); this is consistent with the observational learning model of DSH and underscores the issue of contagion.

Qualitative interviews with patients admitted to hospital for DSH suggest several causal personal experiences, including the experience of psychiatric illness, alcohol dependency, and traumatic life events or chronic life stressors (Hume & Platt, 2007). Hume and Platt (2007) conducted interviews with patients admitted to hospital for a repeat episode of DSH (N = 14, age range 16-50 years). Overdose was the most common reason for admission, though other DSH was common. Participants viewed DSH as a consequence of mental illness, commonly depression; half felt frustrated at not getting adequate support for their psychiatric illness and saw DSH as a definite means of getting support and attention. However, the motive of attention and support is not likely to be normative for individuals who DSH given that most cases do not present to hospital (De Leo & Heller, 2004; Hawton et al., 2006a) and DSH is often a secretive behaviour (Hawton et al., 2006a; 2006b). Also common in this sample was a desire to be admitted to hospital to escape overwhelming and uncontrollable emotions that culminate in DSH. Over two thirds of the sample consumed alcohol prior to the episode of DSH that resulted in their hospital admission, and three saw their DSH as a culmination to a binge drinking session. Five of the participants saw their DSH as resulting from a traumatic event or chronic life stressor (e.g. sexual abuse, loss of a parent, HIV). These participants' narratives were characterised by hopelessness and pessimism for the future especially in relation to their DSH. The personal accounts in these interviews (Hume & Platt, 2007) suggest many different life circumstances can foster vulnerability to DSH.

Vulnerability to DSH is further compounded by a sense of being different or misunderstood, and the social stereotypes surrounding DSH. Using online interviews and focus groups, Adams, Rodham and Gavin (2005) investigated how 26 young people aged 16-26 years with a history of DSH perceive themselves, the interaction between the self and DSH, and how others' reactions to DSH impacted on participants' self-

perceptions. A consistent theme in the interviews and focus groups was the idea of the 'abnormal self'. Participants viewed themselves as alien to others; which invalidated the self and highlighted differences, and was related to the idea that DSH signalled insanity. For participants, these negative (and isolating) self-judgements were reinforced by others' reactions, which made them feel more abnormal or that their behaviour was unacceptable. Most invalidating for participants was others' unwillingness to attempt to understand the perspective of those who self-harm. By ignoring the experiences of those who DSH their experiences are rendered invalid, further undermining sense of self-worth. This is a difficult situation, as the individual who engages in DSH wants to be accepted for who they are, but disclosure may result in invalidation or confirmation that they are abnormal (Adams at al., 2005). Thus the idea of an 'abnormal self' prevalent among individuals who engage in DSH serves to isolate them from feelings of connection with others, hinders open communication, and creates (or perpetuates) a rift in understanding. Participants wanted people to acknowledge the person beyond the act of DSH (Adams et al., 2005).

Social stereotypes perpetuate the feeling of being abnormal among individuals who self-harm. As discussed previously, DSH is often viewed as attention seeking, especially if not kept secret (Crouch & Wright, 2004; Gilbertson & Wilson, 2008), and is stereotyped as manipulative (Harris, 2000; Wilstrand et al., 2007). The stigma and stereotyping surrounding DSH can demonstrate itself in nasty comments or messages posted on DSH discussion sites or venues. Adams et al. (2005) commented that the most frustrating thing throughout their online focus group discussions were inflammatory messages written by non-participants. The stigma and stereotypes associated with DSH may limit help-seeking, further isolate and ostracize individuals from the community, and contribute to feelings of inadequacy and low self-esteem. It is important to understand the stigma and stereotypes surrounding DSH in order to foster more open and therapeutic orientation towards those who DSH.

The school context is vitally important in understanding the social factors impacting on DSH among youth. Attitudes held by teachers, other school staff, and students towards students who engage in DSH are important (e.g. may impact on decisions to disclose). Limited qualitative research has been conducted assessing teachers' attitudes and reactions to DSH, however Best (2005) interviewed teachers and other professionals about DSH among secondary school students in England, finding

that teachers felt ill-equipped to deal with DSH. The emotions evoked in teachers and school staff in reaction to DSH included "sorrow, alarm, panic, anxiety, and shock, and of being scared, distressed, upset, taken aback, fazed, freaked out, repulsed, bewildered, frustrated and mystified" (Best, 2004, p. 10). Upon disclosure of student DSH, teachers often reported the urge to immediately send the student to the guidance counsellor, with limited personal involvement (despite the teacher being the chosen confidante for disclosure of such a personal issue). Best (2004) reports that DSH training was poor across schools and advocates increased training programmes. Poor knowledge, coupled with fear and anxiety over student disclosure of DSH (Best, 2004) is likely to foster an environment where DSH is not open for discussion and students may feel that there is no place to go for help.

Looking at clinical populations also offers insight into attitudes and stereotypes associated with DSH. Research assessing attitudes towards individuals who engage in DSH has primarily been conducted with medical staff, using quantitative data. Doctors and nurses have been found to view DSH as an alternative form of communication for some young people, and as a 'cry for help' related to difficulty communicating emotions (Anderson et al., 2005). These mirror inpatients' explanations for their DSH as a relief from emotions such as anger and frustration (e.g. Nixon et al., 2002).

Other qualitative studies find that medical staff can feel negatively towards patients who DSH; Wilstrand et al. (2007) analysed nurses' descriptions of caring for patients who engage in DSH, and several described patients' DSH as a forced action towards people around them. The nurses reported feeling frustrated, manipulated and cheated, but acknowledged having limited understanding of DSH patients' difficulties (Wilstrand et al., 2007) possibly contributing to their frustration. Among health professionals, feeling able to effectively manage adolescent clients or patients who engage in DSH is associated with less negative feelings towards these clients (Crawford, Geraghty, Street and Simonoff, 2003).

Friedman et al. (2006) found that 77% of their participating A&E staff identified attention as a reason for patient DSH; a motive which had a negative connotation association with manipulation rather than seeking medical attention for 'appropriate' reasons among preliminary focus group participants. A&E staff with more years experience felt significantly more anger towards patients presenting with DSH, and tended to feel more inadequate in dealing with DSH. This could reflect frustration at

seeing the same individuals, or same problems present for different individuals, again and again without any observable improvement, or known avenue of therapeutic effectiveness. This could also reflect a generational effect, where youth and adults construct, approach and understand DSH differently (see DSH as a **generational** issue in Study 3).

In A&E departments, staff report feeling that they have inadequate training in understanding and treating DSH, and fear saying or doing the wrong thing (Anderson, Standen & Noon, 2003; 2005). This is related to the idea that talking about things might make the situation worse (Anderson et al., 2003a). Thus, lack of understanding leads to limited interaction, and limited interaction means that help seeking may be discouraged. Doctor and nurse participants in Anderson et al. (2003a) also reported difficulty relating to DSH patients; upon reflecting on their own youth they reported that they would never have engaged in DSH, and could not understand what it must be like for a patient presenting with DSH. Poor understanding fosters emphasis of differences, which can result in stereotyping through distinguishing DSH patients as an 'out-group'.

Patients presenting at hospital with DSH report negative experiences and treatment by staff (e.g. Harris, 2000; Lindgren, Wilstrand, Gilje & Olofsson, 2004). Females previously admitted for DSH report widespread anger relating to treatment, and that staff lacked sympathy, attempted to embarrass them about wasting hospital time and resources, and suggested they were selfish. These same participants also reported feeling that staff objectified, stigmatised and labelled them, did not value them as patients, failed to meet their expectations or needs, and were unwilling to talk about DSH for fear that it would have a contagion effect, furthering a sense of invalidation (Harris, 2000 Lindgren et al., 2004).

Service users have certain things they would like to receive during care for DSH. Women in Lindgren et al's. (2004) study wanted hospital staff to be open to talking about patients' DSH, to see the person behind the DSH and value them as human beings, give patients autonomy in their own care, and for staff to believe them and convey that they believed in the patient's ability to recover. Patients admitted for an episode of DSH (and with previous DSH history) have been found to want immediate after-care (i.e. not have to wait a long time to see a counsellor), favour the idea of an emergency services card for someone to call on demand, and prefer community based care (Hume & Platt, 2007).

Personalised accounts of recovery give useful information to inform treatment practices. Sinclair and Green (2005) conducted qualitative interviews on cessation of DSH among 20 patients previously seeking treatment at an English hospital for DSH. Participants identified several factors as key to their recovery, including having someone unaffiliated with their family to talk to, abstaining from alcohol, and having recognition and treatment for depression or any other mental illness present and potentially fostering their DSH. Shaw (2006) investigated women's accounts of their journey towards ceasing their DSH behaviour and found that multiple factors were implicated in recovery, including appropriate professional treatment, social support, avenues for disclosure, encouraging interests and self-initiative and independence.

These qualitative studies offer insight into the lived experience of DSH. Emotional regulation appears central to DSH behaviour, and personal accounts underscore the heterogeneity in life circumstances of those who engage in DSH (e.g. Hume & Platt, 2007; Shaw, 2006). Studies two and three incorporate qualitative and quantitative components aimed at uncovering reasons for DSH, and social circumstance, attitudes and stereotypes towards DSH present in society.

Overview of the Studies in this Thesis

This introduction and literature review points to a high prevalence of DSH internationally; especially among youth (De Leo & Heller, 2004; Evans et al. 2005; Hawton et al., 2006b; Laye-Gindhu & Schonert-Reichl, 2005; Ross & Heath, 2002). Additionally, DSH behaviour appears to be increasing among the 15-24 year age bracket (Fox & Hawton, 2004; Hawton et al., 2000; Olfson et al., 2005; O'Loughlin & Sherwood, 2005). As DSH is associated with multiple maladaptive outcomes, including suicide (Laye-Gindhu & Schonert-Reichl, 2005), it is an important topic to understand and apply prevention and intervention. This thesis begins with a psychometric analysis (Study one) of various scales later used to construct a model of DSH. Study two develops a comprehensive model of DSH with secondary school student (adolescent) and university student (young adult) data, and separate models by sex. Study two also presents a diary study looking primarily at emotional experience and DSH over a six week period. A section on reasons for DSH behaviour is included in Study two, which draws on several sources and data sets. A thematic and rhetorical analysis of interviews

with guidance counsellors on the experience of participation in the overall research project and the challenges of investigating DSH in secondary schools is presented in Study three. Because of the often-cited concern around contagion, Study three also presents a feedback study to assess the experience of participating in the diary study presented in Study two. Both the interviews and brief feedback study offer a window into the experience of participation. Finally, Study three presents a stereotype and opinions study to investigate how DSH is perceived and received in the youth environment (i.e. by secondary school students, teachers, and university students).

Study One: Psychometric Analyses

This study outlines how the quantitative measures used in Study two were chosen, and the psychometric properties of those measures. Firstly the reasons for including certain measures are discussed, along with presentation of their psychometric properties. Details of the construction of the secondary school student survey are presented; followed by an outline of the development of the short-form longitudinal survey for university students, including psychometric properties of the short forms of the scales used, scale inter-correlations and preliminary analyses.

Choosing the Appropriate Measures

The primary aim of this thesis is to develop a comprehensive model of deliberate self-harm. It is therefore important to ensure that the psychometric properties of the scales used to measure DSH predictors are sound. Also, to develop a comprehensive model, common correlates of DSH need to be identified for analysis. Firstly, a review of the literature was conducted to discern the primary correlates of DSH (see p. 41-47). After deciding on the constructs relevant for inclusion in the surveys, self-report measures for these constructs were chosen for use from the literature. Choice of scales was based on brevity, appropriateness for use with adolescents, reliability and validity, ease of access, and the amount of published data on the scale looking at correlates and psychometric properties (e.g. for outcome comparison).

Measuring DSH

As discussed on pages 14-15 there are multiple self-report instruments to assess history of DSH. I have chosen to use the DSHI-s (Lundh et al., 2007), as this asks about multiple forms of DSH, is behaviourally based, and has sound psychometric properties with an adolescent population. The types of DSH included in the DSHI-s are based on clinical observations, clients' reflections on their DSH behaviour, and common DSH behaviours reported in the literature. The DSHI-s has 16 items; 14 assess for different types of DSH, one whether participants have engaged in any other type of DSH, and the final question assesses whether participants' DSH ever warranted hospitalisation or medical treatment. Lundh et al. (2007) included four possible alternative responses to items 1-15; "never", "once", "more than once" and "many times". I have used five alternative responses; "no", "thought about doing it", "once",

"more than once", and "many times". I included DSH ideation as this is related to actual DSH and shares the same correlates (e.g. Coggan et al., 2003; Skegg et al., 2004, Lundh et al., 2007). A factor analysis of the DSHI-s (to assess whether a DSH profile has different correlates and/or prevalence rates) is presented; there is no existing published data on the factor structure of the DSHI-s.

Lundh et al. (2007) provides no internal reliability data; however a later article available subsequent to survey development for Study 2 gives reliability data for a shortened version of the DSHI-s (the DSHI-9; Bjarehed & Lundh, 2008). Bjarehed and Lundh gave the DSHI-9 to 14 year old Swedish students across two time points and found the internal reliability to be .66 at Time 1 and .85 at Time 2, and high test-retest stability over two months. Although the DSHI-9 is a modified version of the DSHI-s, these two scales remain highly similar; the internal reliability of one is indicative of the other.

The DSHI-s is less informative than the original DSHI, and Lundh et al. (2007) suggest including other supplementary measures to make the assessment more extensive. As such, I have included follow up questions on length of time since last DSH episode, a scale on the function of participants' DSH, an open-ended question for participants' to give a brief description of their last DSH episode, and two questions on help-seeking behaviour prior to DSH.

To assess construct validity of the DSHI-s I assessed its correlation with the SHI (Sansone et al., 1998), an established longer measure of self-harm behaviour. I also assessed whether both scales correlate similarly with known correlates of DSH (e.g. self-esteem, alexithymia), to ensure the DSHI-s validly measures DSH, comparable to longer, more established, measures. The SHI is a self-report measure of intentional self-destructive behaviours developed to screen for BPD; it assesses lifetime history of 22 different types of self-harm, how many times respondents have engaged in them, and how recently. The items of the SHI are derived from self-harming behaviour described in the literature, and from the authors' clinical experience (Sansone et al., 1998). In my preliminary survey the SHI has a 3-point response format; "No, never even thought of doing this", "No, but I have thought about it", and "Yes, I've done this".

I chose to include a scale assessing the function of DSH behaviour taken from the Functional Assessment of Self-Mutilation measure (FASM; Lloyd, Kelley & Hope,

1997). This scale has 22 items (the original had 23, but one was omitted based on the recommendation of Nock and Prinstein, 2004); including 21 different reasons for DSH behaviour with an additional open-ended item for participants' to write another reason not included in the measure. A four-factor solution was found for adolescents admitted to a psychiatric inpatient unit; 'automatic-negative reinforcement', 'automatic-positive reinforcement', 'social-negative reinforcement', and 'social-positive reinforcement' (α's .62 to .85; Nock & Prinstein, 2004). A factor analysis with community adolescents is presented on pages 84-7.

The literature points to several primary correlates of DSH among youth. Those included in the surveys for Study 2 can be grouped into psychological variables (e.g. depression, anxiety and introspective awareness), social variables (e.g. bullying, friends and family members' DSH, abuse history) and behaviours (e.g. substance abuse) (see p. 41-47 for a review of these correlates).

Measurement of Psychological Correlates

Psychological correlates of DSH include depression, anxiety, low self-esteem, alexithymia, poor adaptive use of emotions, resilience, mindfulness, sexuality concerns, and impulsivity (De Leo & Heller, 2004; Evans et al., 2005; Evren & Evren, 2005; Hawton et al., 2006b; Lundh et al., 2007; Meuhlenkamp & Gutierrez, 2004; Sampson et al., 2004; Skegg et al., 2004). These correlates will be measured in the longitudinal surveys developed for Study two and incorporated into comprehensive models of DSH.

Depression and anxiety were measured using the Self-rating Depression Scale (SDS; Zung, 1964; example item: "I have crying spells or feel like it") and the Self-rating Anxiety Scale (SAS; Zung, 1971a, 1971b; example item: "I am afraid for no reason at all") respectively. Both scales were developed from the diagnostic criteria and clinical descriptions of their respective disorders, and consist of 20 items rated on a 4-point likert scale where 1 is 'none of the time' and 4 is 'most of the time', with participants rating according to how they feel at the time of completing the measure. Both scales have good psychometric properties (Zung, 1971a, 1971b; Knight, Hendrika, Waal-Manning & Spears, 1983). Research has found BPD patients (whose diagnostic characteristics include DSH) score higher on the SDS and SAS than control groups (e.g. Shen et al., 2008), suggesting these measures are useful for determining individual

differences related to DSH. SDS scores have been found to covary with alexithymia in young adults (e.g. Picardi, Toni & Caroppo, 2005); another correlate of DSH included in this study.

Self-esteem was measured using Rosenberg's Self-esteem Scale (RSE; Rosenberg, 1965). The RSE is a commonly used unidimensional 10-item self-report measure with good face validity, internal reliability, and test-retest reliability (Rosenberg, 1965; p. 16-18). Each item is measured on a 4-point likert scale from "stongly agree" to "strongly disagree". I chose the RSE to assess self-esteem as it was specifically developed for adolescents, is brief, has been extensively used in the literature, and has sound psychometric properties. At-risk community adolescents who are resilient have greater self esteem as measured by the RSE than non-resilient at-risk adolescents (Rouse, Ingersoll & Orr, 1998). My model includes resiliency and multiple psychological and behavioural risk factors for wellbeing (e.g. depression, bullying); including self-esteem offers insight into the relationship between these variables (e.g. possible mediator or moderator of causal effects). Oguz-Duran and Tezer (2009) reported that higher RSE scorers had more positive self-thoughts and emotions, coped better with stress, were more able to communicate effectively to form strong close relationships, had better time management and organisational coping skills (in university context), and reported better eating and sleeping habits. This suggests that higher self-esteem as measured by the RSE is associated with behavioural and psychological well-being.

Alexithymia will be measured using the self-report 20-item Toronto Alexithymia Scale (TAS-20; Taylor, Ryan & Bagby, 1986) with a 7-item likert scale, where 1 is 'strongly disagree' and 7 is 'strongly agree'. A three factor solution is most commonly used, including the factors 'Difficulty Identifying Feelings' (DIF; α = .78), 'Difficulty Describing Feelings' (DDF; α = .75) and 'Externally Oriented Thinking' (EOT; α = .66) (Bagby et al., 1994). Overall the TAS-20 shows satisfactory internal reliability (α = .78), and has been used with both inpatient and community samples. I chose to use this instrument to measure alexithymia as it is the most extensively used in the literature, which gives me ample research to draw upon for comparison. Also, TAS-20 scores are significantly associated with DSH (Evren & Evren, 2005; Garisch & Wilson, 2009).

Two scales for adaptive use of emotions were assessed in a preliminary study (p. 74-79); the Schutte (Schutte et al., 1998), and the adolescent Swinbourne University Emotional Intelligence Test (SUEIT; Stough, 2006). Both scales were developed for use

with adolescent community populations. The Schutte has 33 items, with four inter-correlated factors; 'optimism/mood regulation', 'appraisal of emotions', 'utilisation of emotions', and 'social skills' (factors α's .68 to .80, overall scale α=.89; Saklofske, Austin & Minski, 2003). The adolescent SUEIT (Stough, 2006) was developed in 2001/2, is a 57-item self-report measure, and includes four factors; 'emotional awareness and expression', 'understanding of emotions of others', 'use of emotions in thought', and ' emotional management and control'. There is limited literature on the SUEIT, with no information on internal reliability. The Schutte and SUEIT were compared (p. 74-79) to determine which measure to incorporate in the final longitudinal surveys for Study 2.

The 'emotional intelligence' construct has been criticised (Izard, 2001). I refer to what is measured using the Schutte and the SUEIT, and related measures, as 'adaptive use of emotions' (as advocated by Izard, 2001); but the validity of such a construct has been questioned. Several authors suggest that measurement of emotional intelligence does not provide unique insight into psychological experience (e.g. it may be measuring nothing beyond cognitive ability and personality; Amelang & Steinmayr, 2006). However, research has shown the Schutte can reliably measure adaptive use of emotions among adolescents, and scores on the Schutte are associated with emotion skills, social support, satisfaction with social support and emotion regulation even after controlling for self-esteem and anxiety (Ciarrochi et al., 2001). Other studies link adaptive use of emotions to important psychological factors including openness, agreeableness, life-satisfaction, and mental and psychosomatic health (Austin et al., 2005; Schutte, Malouff, Thorsteinsson, Bhullar & Rooke, 2007). This suggests it is appropriate to include assessment of adaptive use of emotions in measuring factors associated with psychological wellbeing, including assessing predictors of DSH.

Resilience will be measured using the scale developed by Wagnild and Young (1993). This is a 15-item self-report measure, with a 7-point likert scale where 1 is 'strongly disagree' and 7 is 'strongly agree', and has good internal reliability (α = .91; Wagnild & Young, 1993). The scale was originally developed to measure changes in resilience following intervention programmes, making it sensitive to changes in resilience across time. This makes it ideal for use in Study 2 where I measure changes in DSH and its correlates over time. Research has found resilience to buffer against DSH and suicidal thinking or behaviour (e.g. Everall, Altrows & Paulson, 2006). Evarall et al. (2006) identified that resilience in four areas was associated with their sample's journey

away from suicidality; social resilience (e.g. harnessing social support), emotional processes (e.g. working through their emotions with a sense of agency and control), cognitive processes (e.g. fostering an internal locus of control whereby participants began to feel in control of their behaviour and emotions) and working towards life goals.

Several studies have found mindfulness is negatively correlated with DSH among young people (e.g. Lundh et al., 2007). The incorporation of mindfulness practice into interventions for DSH (e.g. DBT; Miller, Rathus & Linehan, 2007) highlights the importance of including mindfulness in a comprehensive model of DSH. There are several self-report mindfulness measures available, including the Mindfulness and Attention Awareness Scale (MAAS; Brown & Ryan, 2003), the Toronto Mindfulness Scale (Bishop et al., 2003), the Kentucky Inventory of Mindfulness Scale (KIMS; Baer, Smith & Allen, 2004), and the Cognitive and Affective Mindfulness Scale – Revised (CAMS-R; Feldman, Hayes, Kumar, Greeson & Laurenceau, 2007). The briefest appropriate instrument for this study was the CAMS-R. Other instruments were either inappropriate in design (e.g. the Toronto Mindfulness Scale measures the capacity to invoke a mindfulness state, not mindfulness itself; the MAAS does not include the acceptance and non-judgemental component of mindfulness) or not pragmatic due to length (e.g. the KIMS has 36 items). Although brief (12 items), the CAMS-R covers the breadth of the mindfulness construct, is appropriate for use with adolescents, has acceptable internal reliability (in Feldman et al., 2007 sample: 1 α = .74, sample 2 α = .77), and is strongly associated with other mindfulness measures, supporting its validity (Feldman et al., 2007).

Sexuality will be measured using the single item from my Honours dissertation research (Garisch & Wilson; 2009); "Have you ever worried about issues around sexuality (e.g. being straight, gay, etc.)?". There are four possible responses; "no", "yes, once", "yes, a lot", and "decline to say". This item was used for its brevity, and because it is not intrusive (adolescents may be especially sensitive to issues around their sexuality). This item was significantly correlated with lifetime history of DSH in my honours dissertation research (r(323)=.17, p<.05). Previous research suggests same-sex attraction is a risk factor for self-harming behaviour among youth (Skegg et al., 2003), and homosexual youth have elevated rates of suicidal acts and ideation compared to heterosexual youth (van Heeringen & Vincke, 2000).

The last psychological correlate of DSH to be included in the model is impulsivity. Impulsivity will be measured using the Barratt Impulsivity Scale (BIS II, Patton, Stanford & Barratt, 1995); a 30-item measure with a 4-point likert scale where 1 is "rarely/never", 2 is "occasionally", 3 is "often" and 4 is "almost always/always". The BIS II is based on a tri-dimensional model of impulsivity including 'motor impulsiveness', 'cognitive impulsiveness' and 'non-planning impulsiveness', resulting in a three factor solution (von Diemen, Szobot, Kessler & Pechansky, 2007; Spinella, 2007). The BIS II has acceptable internal reliability and is widely used (α= .83; for a review see Stanford et al., 2009). Hawton et al. (2006b) found impulsivity covaried with DSH among English adolescents, and predicted unique variance in DSH score independent of depression, anxiety and self-esteem among female participants.

Measurement of Social Correlates

Many researchers have identified the important link between bullying and DSH (e.g. Cleary, 2000; Coggan et al., 2003; Evans, Marte, Betts & Siliman, 2001). Bullying will be measured using questions from Section D of the Peer Relations Questionnaire (PRQ; Rigby, 1998). An initial question queries whether participants have been bullied over the past year, with follow-up questions on six different types of bullying using a 3-point likert scale where 1 is "never", 2 is "sometimes, and 3 is "often". The PRQ is widely used internationally, is appropriate for secondary school students, and covers a wide range of bullying (e.g. verbal, relational, physical). It does not include electronic bullying, thus I have included the item "Being teased, called names or threatened over text or email?" Electronic bullying has been linked to DSH (Garisch & Wilson, 2009), and received significant attention in New Zealand in relation to suicide (Canterbury Suicide Project, 2006).

A set of questions assessing social network factors was developed specifically for this study. An item within the social network measure related to DSH within participants' social network (strongest correlate of DSH; De Leo & Heller, 2004). Participants indicated how many of the five people closest to them had engaged in DSH by answering the question "which of these friends do you KNOW have ever deliberately tried to harm themselves? (e.g. cut themselves or taken an overdose?")" where 0 is "never has", 1 is "has once", 2 is "has more than once" and DK is "don't

know". Overdose was included here even though it is excluded in my definition of DSH because DSH is often kept hidden (Alderman, 1997; Claes et al., 2005; Whitlock et al., 2006b), and a friend is more likely to know if someone has overdosed, given that help-seeking may be forced upon the individual who poisons themselves. I argue this is acceptable given the link between DSH meeting my definition and self-poisoning (i.e. they often co-occur).

An assessment of links in social network was developed and included in the secondary school longitudinal survey. This is a diagram asking participants to draw lines linking the five people closest to them in their social network if these people know each other. This information is useful as a by-proxy measure of social network cohesion and changes over time, and can also be used to assess whether participants' friends who know each other engage in similar behaviours (e.g. if friends who know each other both have a history of DSH this would further support a contagion effect). The measure was based on social network measure used to measure political orientation among social groups (Liu, Ikeda & Wilson, 1998).

Also assessed in the social network questions were peers' substance abuse and experiences of being bullied (i.e. vicarious trauma), using the questions "which of these friends do you KNOW use alcohol" and "which of those friends do you KNOW have been bullied at school?" respectively. The measure was short for pragmatic reasons, but still offers insight into the contribution of these predictor variables. Homophily effects suggest people associate or gravitate towards people similar to ourselves, or once in a group people become more alike or emphasise their similarities (Liu, Ikeda & Wilson, 1998). DSH is associated with being bullied and alcohol and drug abuse (e.g. Hawton et al., 2006); homophily effects suggest youth who DSH will have friends who also engage in DSH (also based on contagion), abuse alcohol and drugs, and are bullied.

Abuse history is an important correlate of DSH (Hawton et al., 2006b). Abuse was not measured in the preliminary studies of this thesis that contributed to survey development, and questions on abuse were only included in later versions of the secondary school survey. This is because the topic of DSH proved controversial among secondary schools, and adding questions on abuse in addition to the sensitive questions on DSH, bullying, substance abuse, and sexuality may have discouraged participation. Thus, the first three schools surveyed did not have abuse questions in their Time 1 surveys. However, once data was collected at Time 1 for these schools, and no negative

feedback from students or guidance counsellors was received, it was decided that questions on abuse history be added to allow for a more comprehensive understanding of DSH, given the importance attributed to abuse history (childhood sexual abuse in particular) in the literature (e.g. Hawton et al., 2006b; Weierich & Nock, 2008). Schools were given the explicit option of excluding the abuse questions; only one chose to do so.

A brief 2-item screening instrument was chosen to assess history of childhood sexual and physical abuse (Thombs, Bernstein, Ziegelstein, Bennett & Walker, 2007), based on brevity and limited intrusiveness. The majority of self-report surveys on abuse history were either too long, even in their short form (e.g. the Childhood Trauma Questionnaire – Short Form is 25 items; Berstein et al., 2003). Longer surveys have more items, are more time-consuming, and participants are more likely to find them intrusive. The 2-item screening instrument includes the questions "When I was growing up, people in my family hit me so hard that it left me with bruises or marks", and " When I was growing up, someone tried to touch me in a sexual way or tried to make me touch them"; on a 5-point likert scale where 1 is "never", 2 is "rarely", 3 is "sometimes", 4 is "often", and 5 is "very often". Among a sample of community women, Thombs et al. (2007) found the 2-item screener to have 84.8% sensitivity (percentage of participants who are correctly categorised as having been abused out of the total number of participants who have an abuse history) and 88.1% specificity (percentage of participants who are correctly categorised as not having been abused out of the total who have no abuse history) when compared to physical and sexual abuse history identified using a semi structured interview. This suggests the screener is a valid assessment instrument for history of childhood sexual and physical abuse.

Measurement of Behavioural Correlates

Substance abuse was the only behavioural correlate of DSH included in the survey. Four items were developed for this study as a brief measure of participants' substance abuse; "Have you ever taken (legal) party pills?" (party pills became illegal in New Zealand during my research; before they were made illegal the word 'legal' was included in this item), "Have you ever taken illegal drugs (e.g. Cannabis, etc.)?", "Have you ever smoked a cigarette?", and "Have you ever drunk alcohol to excess?".

Responses included "No", "Yes, once", and "Yes, more than once". These items were used for pragmatic reasons, to keep the survey as short as possible while including all major correlates of DSH identified in the literature. Multiple authors have found DSH to be linked to substance abuse among youth (e.g. Sinclair & Green, 2005; McCloskey & Berman, 2003; Evans et al., 2005; Hawton et al., 2006b)

Study 1.1   Preliminary Study

A preliminary study was conducted with introductory level university psychology students to assess what measures of adaptive use of emotions to use, and the appropriateness of the adolescent DSHI-s (Lundh et al., 2007) for use with young New Zealanders. Most introductory level university students come directly from finishing school, and are in their late teens or early twenties, justifying their use as a young adult sample.

As mentioned earlier, the 'emotional intelligence' construct has been criticised for contributing little to assessment. Measures of this construct have also tended to overlap with alexithymia and anxiety (e.g. Austin et al., 2005). This preliminary study assesses whether adaptive use of emotions (or 'emotional intelligence') uniquely predicts DSH when alexithymia and anxiety are partialed out and whether Schutte or SUEIT scores offer greater predictive value for DSH.

In addition, the adolescent DSHI-s will be assessed for overlap with the SHI (Sansone et al., 1998) and comparison of correlations between these two measures of self-harm and the TAS-20, Schutte, SUEIT and SAS scales will be assessed.

Method

Participants.

Participants were 207 (139 female) introductory level psychology students aged 17-44 years (mean = 19.62, S.D.= 4.18) from Victoria University of Wellington, who participated to receive course credit. The mean age falls within late adolescence, which makes it a useful sample population to assess scales later given to adolescents in secondary schools. 75.4% of the sample identified as Pakeha/New Zealand European, 6.8% as Maori, 2.9% as Pacific Islander, 7.7% as Asian, and 2.9% as being from another ethnic group.

Measures.

Measures included in this preliminary survey were the TAS-20 (Taylor et al., 1986), the SUEIT (Stough, 2006), the Schutte (Schutte et al., 1998), the adolescent DSHI-s (Lundh et al., 2007) and the SHI (Sansone et al., 1998). All these measures are described above (p. 65-74). The survey included social demographic information on sex, age, ethnicity and nationality (see appendix A2).

Procedure.

All the studies in this thesis were approved by the School of Psychology ethics committee at Victoria University of Wellington. Participants enrolled in the study over web-based sign-up. Several times were allotted for participation. Participants completed the self-report survey in groups of 1-15 students, in a quiet room at desks. Participants first read through the information sheet and signed a consent form (see appendix A1) and were then given the opportunity to ask any questions before completing the survey. Upon completion participants were given a debriefing sheet (see appendix A3), and again given the opportunity to ask questions of the experimenter. Participation took no more than half an hour, and was voluntary and confidential. Participation counted towards a mandatory course requirement for research participation.

Results and Discussion

An Alpha level of 5% was used for all statistical analyses in this thesis unless specified otherwise[2]. Table 4 presents descriptive statistics for the TAS-20, the SUEIT, the Schutte, the SAS, the adolescent DSHI and the SHI.

Basic scale psychometrics and descriptive statistics.

A score on the TAS-20 below 51 is counter-indicative of alexithymia (Tull, Medaglia, 2005); 65.8% of participants scored below 51, while 34.2% had scores indicative of alexithymia. All scales had acceptable overall internal reliability, as did most of the subscales with the notable exception of the EOT subscale of the TAS-20, and factor four of the Schutte (see Table 4).

---

[2] Several analyses required multiple significance tests, increasing the likelihood of family-wise error (i.e. increased likelihood of significant result when result non-significant).

Table 4

Descriptive statistics and internal reliability of the TAS-20, SUEIT, Schutte, DSHI-s and SHI.

Measure	Mean (S.D.)	Cronbach's alpha
TAS-20	2.37 (.47)	.79
DIF	2.20 (.85)	.83
DDF	2.64 (.86)	.77
EOT	2.36 (.52)	.58
SUEIT	3.13 (.21)	.89
F1: Emotional recognition and expression	3.12 (.37)	.78
F2: Understanding emotion of others	3.06 (.25)	.86
F3: Emotions direct cognition	3.04 (.39)	.79
F4: Emotional management and control	3.19 (.30)	.83
Schutte	3.60 (.45)	.90
F1	3.57 (.60)	.80
F2	3.57 (.59)	.82
F3	3.65 (.52)	.74
F4	3.54 (.61)	.67
SAS	1.84 (.45)	.87
Adolescent DSHI	1.43 (.60)	.84
SHI	1.41 (.86)	.86

Validating the use of the DSHI-s.

The DSHI-s and the SHI display considerable construct overlap. Total scores for these two measures were significantly positively correlated, r(204)= .79, p<.001. Correlations of 0.8 or stronger are considered large effect sizes (Cohen, 1960; Johnson, Hays & Hui, 2009); the correlation between the DSHI and the SHI (i.e. 0.79) borders being considered large. This shared variance, plus the fact that both measures are correlated with the same variables (see Table 5), suggests a shared construct and that DSHI-s scores are associated with self-destructive behaviours more generally as

measured by the SHI, supporting the use of the DSHI-s. It is acceptable that the adolescent DSHI-s and the SHI do not correlate even more highly, as the SHI was developed for use in clinical samples, is a more inclusive measure of self-harming behaviour and the DSHI-s specifically focuses on physically harmful low-lethality behaviours.

Table 5

Correlations between scale scores

	TAS-20	SUIET	Schutte	SAS	DSHI-s
TAS-20					
SUIET	.14				
Schutte	-.46***	.31***			
SAS	.59***	.21**	-.31***		
DSHI-s	.38***	.16*	-.23**	.40***	
SHI	.37***	.13	-.24**	.46***	.79***

*p<.05, **p<.01, ***p<.001

Correlations indicate that DSH as measured by both the adolescent DSHI-s and the SHI was significantly positively correlated with alexithymia and anxiety, and significantly negatively correlated with the Schutte and the SUEIT (see Table 5), suggesting these measures are valid in developing comprehensive models of DSH. The correlation between the SUIET and Schutte is relatively low, given that they are intended to measure the same construct.

Assessing whether to include 'adaptive use of emotions' and what scale to employ.

Hierarchical regression analyses were conducted to see whether adaptive use of emotions as measured by the Schutte or the SUEIT contribute unique variance to DSH when alexithymia and anxiety were entered first into the regression equation and scores on the measures of adaptive use of emotions entered second. Alexithymia and anxiety are known correlates of DSH (Evans et al., 2004; De Leo & Heller, 2004; Laye-Ginhu & Schonert-Reichl, 2005; Zlotnick et al., 1996). I wanted to establish whether adaptive

use of emotions added further predictive value for DSH to determine whether it would be a useful construct to include in a comprehensive model of DSH. Brevity was important, and to avoid including measures unnecessarily I sought to include only those that gave the best unique predictive value for DSH behaviour.

A regression was conducted with TAS-20 and SAS mean scores entered first, and the total mean Schutte score entered second. The first step in the regression was significant, $F(2, 201) = 19.37$, p<.001, R^2 adjusted =.15, indicating that alexithymia and anxiety share significant variance with DSH. The second regression was also significant, $F(3, 200) = 13.83$, p<.001, R^2 adjusted =.16, though Schutte total mean score did not add significant unique variance to the prediction of DSH score (R^2 change = .01, F change$(1, 200)$-2.46, p=.12). To further assess the variance in DSH explained by scores on the TAS-20, SAS and the Schutte subscales, a stepwise regression was conducted with TAS-20 and SAS mean scores entered first and mean score on the four subscales of the Schutte entered in a second block. The first step in the regression was significant, $F(2, 201) = 19.37$, p<.001, R^2 adjusted =.15 (as per the regression above), and the second step was also significant, $F(6, 197) = 12.76$, p<.001, R^2 adjusted =.26 (R^2 change = .11, F change $(4, 197)$=8.10, p<.001). Only Factor 1 ($t(197) = -5.28$, p<.001) and Factor 3 ($t(197) = 3.35$, p<.01) were significant predictors.

Having assessed the utility of the Schutte, a hierarchical regression was conducted with TAS-20 and SAS scores entered first and SUEIT total mean score entered second. The first step in the regression was significant, $F(2, 201) = 19.37$. p<.001, R^2 adjusted =.15 (as per above regressions). The second step was also significant, $F(2, 201) = 12.86$, p<.001, R^2 adjusted =.15, however, total SUEIT score did not offer unique variance in the prediction of DSH (R^2 change = .01, F change $(1, 200) = .04$, p=.84). To further assess the predictive value of SUEIT subscales scores for DSH, a regression was conducted with TAS-20 and SAS mean scores entered first, and scores on the subscales of the SUIET entered in a second block. The second step in the regression was significant $F(6, 197) = 7.39$, p<.001, R^2 adjusted=.16. The SUEIT subscales did not share significant unique variance with DSH separate from anxiety and alexithymia (R^2 change = .01, F change $(4, 197) = 1.34$, p=.26).

The construct of adaptive use of emotions (otherwise known as 'emotional intelligence') as measured by the Schutte contributed an understanding of DSH unique from alexithymia and anxiety, as shown by the hierarchical regressions with the Schutte subscales entered second. The results suggest that adaptive use of emotions is associated with less DSH, and supports incorporating this construct into developing comprehensive models of DSH. The above results are in favour of using the Schutte rather than the SUEIT, as the subscales of the Schutte contribute significant unique variance to DSH while the subscales of the SUEIT do not. In addition, the Schutte has been widely used with adolescents and is shorter and therefore more desirable for pragmatic reasons.

Preliminary study conclusion.

In sum, this preliminary study supports the use of the DSHI-s as a measure of DSH among young people, and the inclusion of adaptive use of emotions in Study 2 by confirming that these constructs are associated with DSH. The results from regression analyses support the use of the Schutte as a measure of adaptive use of emotions in preference in the SUEIT.

Study 1.2   Psychometric Properties of the Longitudinal Survey

After conducting the preliminary study I had decided on the measures to include in my surveys with secondary school and university students (i.e. DSHI-s, TAS-20, RSE, Schutte, SDS, SAS, Resiliency measure, CAMS-R, BIS-II, Reasons for DSH measure taken from FASM, 2 screening items for physical and sexual abuse, social network questions, section D from the PRQ with an additional electronic bullying item). This next section outlines the method of distributing the survey to secondary school students at Time 1 (T1), and presents analyses of the survey's psychometric properties and preliminary findings.

Method

Participants.

Participants were 1162 (42.58% Female, 57.42% male, 23 missing data on sex) students from ten secondary schools in the Wellington region with an average age of 16.35 years (S.D = .62). 71.14% self-identified as Pakeha/NZ European, 8.79% as

Maori, 3.82% as Pacific Islander, 11.28% as Asian, and 4.97% as belonging to another ethnic group (N= 36 for missing data on ethnicity). Government statistics (Ministry of Education (MoE), 2010) for the Wellington region indicate that 51.12% of students in the year-groups assessed are male and 48.88% female, which is comparable to the gender ratio of this sample. The regional statistics for ethnicity of secondary school students in Wellington (57.73% Pakeha, 19.60% Maori, 10.82% Pacific Islander, 9.19% Asian, 2.66% Other; MoE, 2010) indicates that the sample was over-represented by Pakeha/NZ European and under-represented by Maori and Pacific Island students.

Measures.

Measures on DSH included the DSHI-s (Lundh et al., 2007) with an additional question on how long ago participants' last DSH episode was, a measure of reasons for DSH taken from the FASM (Lloyd et al., 1997), an item describing participants' last episode of DSH, and two items on help-seeking for DSH behaviour (based on De Leo & Heller, 2004). Other measures included in the survey were the TAS-20, the RSE (Rosenberg, 1965), the Schutte (Schutte, 1998), the SDS, (Zung, 1964), the SAS (Zung, 1971a, 1971b), the Resilience Scale (Wagnild & Young, 1993), Section D from the PRQ (Rigby, 1998) with the addition of a question on electronic bullying, the CAMS-R (Feldman et al., 2007), items on substance abuse, sexuality concerns, and social network developed for this thesis, and the BIS II (Patton et al., 2005) (see appendix B2). All these measures are described previously on pages 65-74.

Procedure.

Secondary school guidance counsellors were approached to take part in a three-pronged study involving a longitudinal survey, an online diary study, and implementation and evaluation of an emotion skills training programme (which was later rejected as a study for this thesis because too few schools were able to participate). Thirty-one schools in the Wellington region were approached to take part in 2007 and 2008. Ten schools agreed to participate in the longitudinal survey (see Table 6). Seven of these schools were mixed-sex, two were all-boys schools, and one was an all-girls school. The schools were of mixed decile. Decile indicates the extent a school draws its student population from low socioeconomic communities (ranging from those with

Table 6

Details of participating schools

School	Year Group	Surveys returned/ total enrollment	Where survey took place	Mixed sex or co-ed	Public / private	Decile
S1	Year 12 & 13 cohorts (27 classes, bar 2 (1: non-fluent in English, 1: teacher refused participation)	346/641	During class time with teacher supervision	Mixed	Public	8
S2	Year 12 & 13 (4 classes)	54/92	During class time with teacher supervision	Mixed	Pubic	9
S3	Year 12 & 13 cohort	122/162	Allotted time where students went to a large lecture hall to complete the survey as a group with teacher and pastoral care provider supervision	All boys	Private	10
S4	Year 12 cohort (7 classes; 1 excluded vulnerable student)	107/210	During class time with teacher and research supervision	Mixed	Public	10
S5	Year 12 & 13 cohort	137/200 [a]	Year 12 students completed the survey as a group in an assembly hall with teacher and researcher supervision. Year 13 students self-selected to participate during study time.	Mixed	Private	9
S6	Year 12 & 13 cohort	141/168	Year 12 & 13 students completed the survey together in a hall with pastoral care provider and researcher supervision.	All boys	Private	10
S7	Year 12 & 13 cohort	138/273	During an extended form time period with teacher supervision.	Mixed	Public	7
S8	Self-selected Year 12 & 13 students	15 [b]	Self-selected students came to a separate class room during class time, supervised by researcher.	Mixed	Public	3
S9	Self-selected Year 12 & 13 students	19 [b]	Self-selected students came to the library to complete the survey during class time. Supervised by the researcher and pastoral care provider	Mixed	Public	4
S10	Year 12 & 13 cohort	83/120 [a]	During class time with teacher and researcher supervision.	All girls	Private	6

[a] school provided an estimated number of students enrolled. [b] school did not provide a figure for number of students enrolled.

highest proportion of low socioeconomic students (1) to lowest proportion (10)). I requested the opportunity to talk to students about the study 1-2 weeks before Time 1 distribution of the surveys and eight of the schools agreed to have me speak to the participating year groups (Years 12 and 13) either separately or together. One school declined due to lack of assembly time, and at another school the guidance counsellor introduced the study to students himself during senior assembly time.

Before survey administration students were reminded that participation was voluntary and anonymous (participants had a unique identifying number to track participation). The survey began with an information sheet (see appendix B1), and ended with a contact sheet for help services (see appendix B4) that students could tear off and take away with them to refer to if the survey raised any sensitive issues for them. The procedure at each school was slightly different to accommodate the schools' preferred mode of participation (see Table 6). Participants were given approximately 40-50 minutes to complete the survey (with the exception of school S7, where students were given 20 minutes). Debriefing sheets were put up on school notice boards (see appendix B6).

Results and Conclusion

Table 7 presents descriptive and internal reliability statistics for the scales used at Time 1. DSH was highly prevalent within the sample, in comparison to the prevalence rates with similar samples reported in the literature (e.g. De Leo & Heller, 2004). Table 8 presents the prevalence rates for the different types of DSH using the Time 1 sample. The prevalence for lifetime history of DSH at least once was 48.7% (females 49.4%, males 48%); 17.1% had engaged in one type of DSH at least once, 11.7% had engaged in two types of DSH at least once, 5.3% had engaged in three types of DSH at least once, 4.6% had engaged in four types of DSH at least once, and 10.2% had engaged in five or more types of DSH at least once. Of those with a history of DSH, 403 (72.54%) answered how long ago their last DSH episode was; 12.16% self-reported their last episode as within the last week, 13.15% as within the last month, 28.29% as within the last year, and 46.40% as over a year ago. This indicates that DSH behaviour was mostly historical, rather than current.

All measures demonstrated acceptable internal reliability ($\alpha > .70$), with the exception of the subscales DDF and EOT (.42 and .25 respectively). This suggests that assessing the associations between these facets of alexithymia (i.e. difficulty describing feelings and externally oriented thinking) and other constructs may be unreliable when using the subscales of the TAS-20.

Table 7

Descriptive statistics for the scales in the longitudinal survey-adolescent version.

Scale (number of items)	Mean	Cronbach's alpha
DSHI-s (16)	1.31 (.52)	.87
TAS-20 (20)	3.16 (.78)	.74
DIF (7)	2.47 (1.25)	.85
DDF (5)	3.22 (1.05)	.42
EOT (8)	3.73 (.83)	.25
ROS (10)	3.08 (.62)	.88
Schutte (33)	3.45 (.55)	.91
F1 (9)	3.55 (.68)	.80
F2 (9)	3.47 (.68)	.80
F3 (11)	3.35 (.62)	.76
F4 (4)	3.50 (.78)	.72
SAS (20)	1.86 (.46)	.86
SDS (20)	2.08 (.41)	.80
Resilience scale (15)	5.18 (1.07)	.93
PRQ (bullying scale) (7)	1.33 (.47)	.87
CAMS-R (12)	2.63 (.44)	.75
BIS II (30)	2.37 (.33)	.79

Table 8

Prevalence of different types of DSH in T1 sample

Type of DSH	Ever engaged in (%)	Thought about (%)	Once (%)	More than once (%)	Many times (%)
Cut	14.22	6.90	5.26	5.26	3.71
Burned with cigarette/lighter	13.52	2.41	7.24	4.22	2.07
Carved words/designs into skin	17.92	3.45	9.56	6.03	2.23
Scratched skin until bled/scarred	15.70	1.56	8.63	3.97	3.02
Bit the skin until broken	8.89	1.56	5.09	2.68	1.12
Rubbed sandpaper on the skin	7.92	.34	5.08	1.55	1.29
Dripped acid onto the skin	4.93	.78	3.37	.61	.95
Scrubbed bleach/oven cleaner into the skin	2.24	.69	1.29	.60	.34
Stuck sharp objects into the skin e.g. pins, needles, staples.	20.19	1.98	8.28	8.37	3.54
Rubbed glass into the skin	2.84	.95	1.21	1.03	.60
Broken bones	1.81	1.38	.95	.52	.34
Banged head	13.82	3.20	8.03	3.37	2.42
Punched oneself	14.04	2.07	7.92	4.65	1.46
Prevented wounds from healing	13.40	2.59	5.27	4.67	3.46

Factor analyses.

Factor analyses were performed on both the DSHI-s and functions of DSH section of the FASM. There is no published factor analysis of the DSHI-s, thus an exploratory factor analysis was performed using the entire T1 dataset. Principal components analysis (PCA) with oblique rotation was performed, where factors are allowed to correlate (Giles, 2002). This method of PCA was chosen because different types of DSH are assumed to be related. The Kaiser-Meyer-Olkin Measure of sampling

adequacy was .91, while the Bartlett's test of sphericity was highly significant, indicating that it was appropriate to proceed with the factor analysis. The scree plot suggested a two factor solution. The two factor solution explained 47% of the variance. The first factor, labelled "common" DSH, had 10 items (α = .86). The second factor was labelled "uncommon" DSH and had 4 items (α = .61)[3]. The factors were labelled "common" and "uncommon" DSH because the first factor incorporated types of DSH that are most prevalent (e.g. burning, scratching) and considered typical (i.e. cutting, hence the generic label "cutter" for someone who self-harms; Brickman, 2004), while the second factor included less common types of DSH (e.g. breaking bones), and DSH involving unusual implements (e.g. acid). The factors were significantly, moderately correlated (r(1160=.53, p<.001), indicative of their shared underlying construct.

Nock and Prinstein (2004) found a four factor structure for their scale of reasons for DSH from the FASM using an adolescent psychiatric inpatient sample (see p x). A Confirmatory Factor Analysis (CFA) was conducted on the T1 dataset (missing data deleted) using AMOS to test this factor structure. The χ^2/ df of 800/183= 4.37, CFI=.85, RMSEA =.11 (confidence interval .10-.11). All these indices indicate unacceptable fit.[4] However, all four factors had satisfactory, or highly satisfactory,

---

[3] A confirmatory factor analysis (CFA) with data gathered at the second survey administration was conducted (although questions of DSH were in relation to previous 3-8 months, not lifetime history). Participants were 823 secondary school students (422 male; mean age =16.48, S.D.= .70). A CFA (with missing data deleted) of this two factor structure yielded a Chi²/ df of 438/76 = 5.76. The CFI was .91 and the RMSEA was .08 (confidence interval of .07 - .08). This indicates a poor fitting model. Perhaps this indicates that the types of physical DSH queried in the survey are best thought of as a single construct (i.e. unitary factor). However, the 'uncommon DSH' factor only has 4 items, and few participants engaged in these behaviours; thus the statistical strength of the analysis was poor. Also, the internal reliability of the subscales were reliable in the secondary dataset ('Common DSH' factor α = .87; 'Uncommon DSH' factor α = .73).

[4] Model fit indices assess whether a model has an acceptable goodness-of-fit with the data. Tanaka (1993) distinguish between four types of model fit indices: absolute (e.g. χ^2), relative (compare model's χ^2 to a null model where all measured variables are uncorrelated, e.g. Normed Fit Index (NFI)), parsimony (e.g. Parsimony NFI (PNFI)) and noncentrality-based indices (e.g. Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index CFI); Hu and Bentler (1999) recommend using one relative fit index and the RMSEA to assess model fit to minimize Type 1 and Type 2 error. This thesis uses the indices χ^2, NFI, CFI, PNFI and RMSEA. A non-significant χ^2 indicates a good fit, however this statistic is sensitive to sample size, and is best used when N= 75 to 200 (less appropriate for large samples as these almost always have a significant χ^2). Models with large correlations (as in the Study 2.1 models) often have poor fit according to the χ^2 statistic (increased Type 1 error) (Kenny, 1998). Other absolute fit indices (i.e. GFI and AGFI) will not be used in this thesis as they are not recommended by researchers (Kenny, 1998). NIF, CFI and PNFI statistics of more than .90 were historically considered acceptable, but researchers now recommend a more stringent cut-

Table 9

Factor structure of the Reasons for DSH scale from the FASM.

Item	Factor		
	Attention/ Understanding	Emotional relief/ control	Avoidance / manipulation
3. To get attention.	.75		
7. To try to get a reaction from someone, even if it is negative.	.68		
8. To receive more attention from your parents or friends.	.82		
11. To get other people to act differently or change.	.73		
12. To be like someone you respect.	.61		
15. To let others know how desperate you are.	.75		
16. To feel more a part of a group.	.60		
17. To get your parents to understand or notice you.	.77		
19. To get help.	.51		
2. To relieve feeling numb or empty.		.84	
4. To feel something, even if it is pain.		.78	
6. To get control of a situation.		.62	
10. To punish yourself		.76	
14. To stop bad feelings.		.77	
21. To feel relaxed.		.68	
1. To avoid school, work, or other activities.			.65
5. To avoid doing something unpleasant you don't want to do.			.77
9. To avoid being with people.			.68
13. To avoid punishment or paying the consequences.			.73
18. To give yourself something to do when alone.			.51

off of ≥ .95. The PNFI penalises complexity, and may not be appropriate for judging the fit of the complex models presented in Study 2.1. An RMSEA ≤ .05 indicates a good fit, while ≥ .10 indicates poor fit. Ideally the RMSEA 90% confidence interval should have a lower value close to 0 and an upper value ≤ .08 (Kenny, 1998).

20. To make others angry.			.47
Percentage of variance explained by each factor	25.05	20.60	17.82

internal reliability; 'automatic-negative reinforcement' α = .75, 'automatic-positive reinforcement' α = .77, 'social-negative reinforcement' α = .83, and 'social-positive reinforcement' α = .92.

The factor structure proposed by Nock and Prinstein (2004) was developed using an inpatient sample; the current research focuses on non-psychiatric community samples. To see whether a better fit could be obtained for the datasets in this research an EFA was conducted using SPSS. This was a PCA using varimax rotation. The KMO was .93, and Barlett's test of sphericity was significant ($\chi^2(210)=3672.30$, p<.001),

Table 10

Correlations between predictor variable scores and DSHI-s scores.

Scale	Correlation (r) with DSHI-s
TAS-20	.37**
RSE	-.34**
Schutte	-.15**
SAS	.35**
SDS	.38**
Resilience scale	-.34**
CAMS-R	-.28**
BIS II	.24**
Section D of PRQ (bullying scale)	.31**
Sexuality concerns	.23**
Substance abuse	.32**

*p<.05, **p<.01

indicating that it was appropriate to conduct a factor analysis on the dataset. The scree plot indicated a three-factor solution demonstrated good fit. The first factor encompassed 9 items where the function of DSH could be described as 'attention

/understanding' α = .92, the second factor included 6 items suggesting DSH functioned for 'emotional relief/control' α = .89, and the third factor had 6 items

suggesting DSH functioned for 'avoidance or manipulation' α = .85 (all highly reliable). The three factor model explained 63.47% of the variance. Table 9 presents the factor items and loadings.[5] This scale and its factors will be analyzed in relation to DSH and reasons for DSH self-reported by secondary school students and teachers (see Study 2.3).

Correlates of DSH.

Correlations between DSH and the various variables measured in the longitudinal survey at Time 1 are reported in Table 10 above. All the scale scores were significantly related to the DSH-s, supporting inclusion of these variables as predictor variables in models of DSH in Study two.

Group differences.

Analyses were conducting to assess group differences based on sex, SES, household composition, ethnicity, help-seeking behaviour and social network factors.

Sex differences in the predictor variables.

Sex and socio-demographic differences in DSH score were assessed using the complete T1 dataset to see if different model considerations may need to be taken into account for different groups. A MANOVA was conducted, indicating sex differences in DSH and the predictor variables, $F(19, 583) = 11.76$, $p < .001$. Table 11 presents descriptive

---

[5] A CFA of this three factor model was conducted with the T2 secondary school dataset with missing data deleted (N=130, 61 females, 68 males, mean age = 16.38, S.D.=.66), which yielded a Chi²/ df of 498.85/186 = 2.68. The CFI was .79 and the RMSEA was .11 (confidence interval of .10 - .13). This indicates a poor fitting model. This may be due to the small sample size lowering statistical power, especially for items with low endorsement. The internal reliability of all three factors were reliable in the secondary dataset ('attention/understanding' α = .90, 'emotional relief/control' α = .87, 'avoidance or manipulation' α = .79).

statistics and sex differences in DSH and the predictor variables. Female participants self-reported significantly more alexithymia symptoms (difficulty identifying feelings in particular), greater adaptive use of emotions (particularly optimism and mood regulation, and utilisation of emotions (F1 and F3 of Schutte)), higher anxiety and depression symptomology, significantly lower self-esteem, less resilience, less bullying by peers, less mindfulness and less impulsivity than male participants.

Sex differences in DSH.

Sex differences in DSH were assessed using the complete Time 1 dataset with a MANOVA of sex by type of DSH (14); $F(14, 1139)=8.91$, $p<.001$. Tests of between-subject effects revealed that female participants self-reported higher rates of cutting (mean$_F$= 1.69, S.D. = .05; mean$_M$=1.30, S.D.=.04, $F(1, 1138)=39.01$, $p<.001$), carving words, pictures or designs into the skin (mean$_F$ =1.60, S. D.=.05; mean$_M$=1.41, S.D.=.04); $F(1, 1138)=9.18$, $p<.001$;) and self-scratching until scarring or bleeding (mean$_F$=1.49, S.D.=.05; mean$_M$=1.36, S.D.=.04; $F(1, 1138)=4.47$, $p<.05$) while males self-reported higher rates of rubbing sandpaper (mean$_M$=1.28, S.D.=.03; mean$_F$=1.08, S.D.=.03; $F(1, 1138)=22.91$, $p<.001$) and dripping acid on the skin (mean$_M$=1.20, S.D.=.02; mean$_F$=1.04, S.D.=.03; $F(1, 1138)=20.68$, $p<.001$).

There was no significant difference in prevalence of DSH for students from mixed-sex and single sex male and female schools, $F (3, 1159)= .97$, $p = .38$ in the T1 dataset.

Socio-economic differences in DSH.

Socio-economic factors were considered next, including decile (see p. 80 for a description), primary caregiver's occupation (a list of occupation salaries was taken from a New Zealand government website of 2006 statistics; Career Services, 2010) and used to assign each participant with an income value for their primary caregiver), and who the student lived with (e.g. single vs. both parents). Correlation analyses using the complete Time 1 dataset showed that decile was weakly (though significantly) related to DSH, $r(1162)=-.08$, $p<.01$(higher rate of DSH was associated with going to a lower

Table 11

Sex differences for DSH and predictor variables

Measure	Males: Mean (S.D.)	Females: Mean (S.D.)	F-values
DSHIA	1.30 (.53)	1.32 (.50)	.01
TAS-20	3.08 (.73)	3.24 (.81)	3.95*
DIF	2.26 (1.18)	2.73 (1.26)	18.10***
DDF	3.19 (1.03)	3.27 (1.07)	.01
EOT	3.74 (.79)	3.68 (.88)	.73
ROS	3.20 (.60)	2.92 (.61)	27.72***
Schutte	3.39 (.56)	3.54 (.51)	4.24*
F1	3.57 (.69)	3.50 (.66)	6.53*
F2	3.43 (.72)	3.52 (.61)	1.44
F3	3.18 (.61)	3.57 (.56)	46.08***
F4	3.47 (.80)	3.54 (.76)	.41
SDS	2.02 (.41)	2.17 (.41)	25.47***
SAS	1.77 (.42)	1.97 (.46)	30.94***
Resilience	5.23 (1.06)	5.13 (1.08)	4.54*
Section D of PRQ	1.37 (.49)	1.28 (.43)	7.30**
CAMS-R	2.67 (.42)	2.57 (.45)	9.44**
BIS-II	2.35 (2.40)	2.40 (.35)	4.68*

*$p<.05$, **$p<.01$, ***$p<.001$; N range 1102-1119.

decile school); while participants' primary caregiver's income was not significantly related to DSH, $r(900)=-.02$, $p=.55$.

Research suggests that low and high income adolescents are at risk of engaging in DSH (see p 39-40), thus the data was assessed for a U-shaped curve, to see if students from both high and low income families are more vulnerable to DSH. A regression using curve estimation was conducted and suggested that this was not the case, $F(1, 898)=.36$, $p=.55$, $R^2<.001$.

Table 12

Group differences in DSH behaviour based on income and decile

Type of DSH	HI	MI	LI	ANOVA income	HD	MD	LD	ANOVA decile
	M(S.D.)	M(S.D.)	M(S.D.)		M(S.D.)	M(S.D.)	M(S.D.)	
Cut	1.39(.92)	1.48(1.11)	1.50(1.05)	.99	1.31(.87)	1.48(1.14)	1.58(1.12)	7.78***
Burned with cigarette/lighter	1.28(.81)	1.46(1.05)	1.32(.81)	3.01 (p=.05)	1.34(.90)	1.38(.94)	1.40(.97)	.37
Carved words/designs into skin	1.32(.81)	1.58(1.15)	1.54(1.03)	5.68**	1.37(.91)	1.39(.98)	1.62(1.12)	7.89***
Scratched skin until bled/scarred	1.31(.88)	1.47(1.07)	1.43(.97)	2.02	1.36(.95)	1.43(1.03)	1.47(1.04)	1.34
Bit the skin until broken	1.24(.72)	1.25(.82)	1.20(.69)	.39	1.30(.85)	1.21(.75)	1.22(.71)	1.35
Rubbed sandpaper on the skin	1.16(.67)	1.25(.79)	1.19(.64)	1.10	1.28(.83)	1.18(.66)	1.16(.65)	3.11*
Dripped acid onto the skin	1.11(.50)	1.18(.70)	1.10(.44)	2.04	1.20(.68)	1.07(.48)	1.11(.53)	3.66*
Scrubbed bleach/oven cleaner into the skin	1.08(.42)	1.09(.47)	1.06(.40)	.42	1.07(.39)	1.11(.55)	1.05(.35)	1.69
Stuck sharp objects into the skin e.g. pins, needles, staples.	1.47(1.05)	1.69(1.26)	1.51(1.04)	3.01*	1.61(1.17)	1.47(1.10)	1.60(1.16)	1.03
Rubbed glass into the skin	1.06(.42)	1.11(.59)	1.06(.34)	1.16	1.05(.36)	1.14(.62)	1.10(.51)	2.26
Broken bones	1.04(.24)	1.05(.40)	1.07(.43)	.71	1.03(.26)	1.14(.63)	1.06(.34)	5.60**
Banged head	1.36(.89)	1.42(1.01)	1.36(.84)	.37	1.31(.86)	1.40(1.01)	1.43(.97)	1.96
Punched oneself	1.35(.85)	1.36(.91)	1.39(.90)	.17	1.34(.87)	1.35(.93)	1.41(.95)	.68
Prevented wounds from healing	1.36(.92)	1.44(1.10)	1.39(.96)	.43	1.40(1.02)	1.34(.95)	1.44(1.05)	.76

Group differences in prevalence for different types of DSH were assessed using a series of one-way ANOVAS for high- (HD), medium- (MD), and low- decile (LD) participants and participants from high- (HI), medium (MI) and low- income (LI) families using the complete Time 1 dataset (Table 12). There were significant differences between income groups for burning, carving the skin, and sticking sharp objects into the skin; and between decile groups for cutting, carving the skin, rubbing sandpaper into the skin, dripping acid onto the skin, and breaking bones. Analyses suggest that higher SES participants reported the lowest rates of certain types of DSH (e.g. carving the skin, sticking sharp objects into the skin, i.e. traditional forms of DSH) and may prefer to engage in different types of DSH (e.g. rubbing sandpaper into the skin, dripping acid onto the skin) than lower SES participants (e.g. cutting and carving the skin; see Table 18). Perhaps this relates to greater access to rarer implements (i.e. sandpaper, acid) among higher SES participants.

Household composition: differences in DSH.

A MANOVA found no significant difference in average DSH for participants living in a single- or two- parent household, those with and without siblings at home, and those with and without a step-parent, $F(1071, 3)=1.29$, $p=.13$.

Ethnic group differences in DSH.

Next it was assessed if DSH score, and preferred type of DSH, differed by ethnic group using the complete T1 dataset. A one-way ANOVA found no significant differences in mean DSH score by ethnic group, $F(1121)=1.06$, $p=.37$. A MANOVA found a significant difference between ethnic groups for different types of DSH (ethnic group x history of 14 types of DSH), $F(14, 1126)= 1.70$, $p<.01$. Tests of between-subject effects indicated a significant difference between ethnic groups for carving words, pictures or designs into the skin, $F(4, 1126)=3.80$, $p<.01$; and for breaking bones, $F(4, 1126)= 2.90$, $p<.05$. Post-hoc Tukey tests were indicated that Maori participants (mean = 1.82, S.D.=1.25) had a significantly higher lifetime prevalence of carving words, designs or symbols into the skin than both European/Pakeha participants (mean = 1.44, S.D.= 1.00; $p<.01$) and Asian participants (mean = 1.40, S.D.= .92; $p<.05$). Pacific Island participants (mean = 1.24, S.D.= .70) had significantly

higher prevalence rates for breaking bones than both European/Pakeha participants (mean = 1.05, S.D. = .35; p<.01) and participants from the 'other' ethnic group category (mean = 1.04, S.D.= .19; p<.05). Pacific Island participants also tended towards having higher rates of breaking bones than Maori participants (mean = 1.06, S.D.= .38; p<.07) and Asian participants (mean = 1.07, S.D.= .33; p<.06), however these effects only bordered significance (p<.10). All the analyses looking at ethnic group differences for types of DSH had only small samples and in some cases the specific types of DSH were also very infrequent. These analyses are exploratory and require replication.

Help-seeking behaviour.

Of participants with a history of DSH (N=538), 47.96% (N=258) responded to the question of whether they had sought help before their last episode of DSH. Out of these participants, 85.09% responded 'no', 10.84% responded 'yes, once', and 3.88% responded 'yes, more than once', consistent with literature suggesting most DSH is kept hidden and/or undisclosed (De Leo and Heller, 2004).

For participants with self-reported history of DSH, 14.87% (N=80) indicated who they sought help from. Of these participants, 81.24% said they had sought help from a friend, 32.48% from a family member, 10.02% from a teacher, 23.74% from a guidance counsellor or psychologist, 2.49% from a telephone helpline, and 15.00% from an 'other' source (note: participants could respond with more than one help source). Participants were most likely to seek help from friends, which is consistent with the literature (e.g. De Leo & Heller, 2004).

Sex and ethnic group differences in help-seeking were assessed. A One-way ANOVA found no significant sex difference in help-seeking, $F_{(252,1)}= 2.94$, p= .09. Ethnic group differences in help-seeking were assessed using a Chi-squared analysis; no significant difference between ethnic groups was found for whether or not participants sought help before their last episode of DSH, $X^2_{(4)} = 3.72$, p=.45. Again, the sample size was small (i.e. few participants had responded to the questions on help-seeking, and several ethnic groups had very low participant numbers in the sample, e.g. Pacific Island).

There was a significant overall difference for DSH predictor variables and reasons for DSH between participants who did (N=144) and did not (N=25) seek help before their last episode of DSH, $F(14, 154)=2.51$, $p<.01$. Descriptive statistics and F-values are presented in Table 13. Seeking help was associated with higher scores on depression, anxiety and bullying, and greater endorsement of 'emotional relief/control' as the function of DSH (which is linked to a more negative DSH profile, especially among females, see p. 153). This suggests that help-seeking is linked to more negative psychological and social outcomes. Perhaps a young person is more likely to seek help when their situation is especially dire, or it may be that the process of help seeking fosters negative experiences (e.g. ridicule). Research has linked help-seeking to self-stigma (Vogel, Wade & Haake, 2006), and in the case of DSH, seeking help can lead to

Table 13

T-tests for help-seeking (yes/no) and mean scale scores.

Scale	No help sought M (S.D.)	Help sought M (S.D.)	t-test statistic
DSHIA	1.73 (.68)	1.97 (.73)	2.75
TAS-20	3.37 (.85)	3.81 (.89)	5.61
SDS	2.25 (.42)	2.51 (.38)	8.62**
SAS	2.04 (.51)	2.35 (.40)	8.35**
ROS	2.78 (.67)	2.43 (.56)	6.38*
Schutte	3.29 (.59)	3.44 (.58)	1.27
Resilient	4.77 (1.34)	4.36 (1.35)	2.30
CAMS-R	2.45 (.47)	2.38 (.73)	.44
BIS-II	2.45 (.33)	2.46 (.30)	.04
PQR + electronic	1.43 (.49)	1.85 (.73)	13.20***
Substance abuse	2.03 (.71)	2.07 (.81)	.08
DSH attention/understanding	1.24 (.41)	1.31 (.41)	.54
DSH emotional relief/control	1.46 (.53)	1.88 (.52)	13.44***
DSH avoidance or manipulation	1.24 (.40)	1.36 (.38)	

*p<.05, **p<.01, ***p<.001.

Table 14

Correlations between social network factors and DSH and the predictor variables.

Social Network variable	Variable										
	DSHI-s	SDS	SAS	TAS-20	Schutte	ROS	Resilience	CAMS-R	BIS-II	Bullying	Substance use
Friends' DSH	.35***	.27***	.22***	.16***	-.06	-.20***	-.19***	-.17***	.14***	.23***	.16***
Friends' alcohol use	.10**	.02	.00	-.05	.01	-.01	-.01	-.03	.16***	.01	.51***
Friends' being bullied	.26***	.16***	.14***	.13***	.04	-.12***	-.06	-.07*	.07*	.28***	-.01
Friends' cohesiveness	-.04	-.04	-.09**	-.11**	.07*	.10**	.07*	.03	.04	-.05	.10**
Friends' closeness (psychologically)	-.04	-.07*	-.03	-.09**	.25***	.07*	.18***	.08*	.04	-.14***	.10**
Friends' giving comfort	.08*	.12***	.05	.12***	-.26***	-.10**	-.16***	-.10**	.01	.12**	-.09**

*p<.05, **p<.01, ***p<.001; N range 606-946.

trivialisation of the behaviour as not 'real' self-harm (e.g. Gilbertson & Wilson, 2008), which may foster feelings of invalidation. Causality remains unknown due to the cross-sectional nature of this analysis, and caution in interpretation is warranted given the small sample.

Social network factors.

Social network factors correlated with participants' DSH history, and mean scores on the various predictor variables (see Table 14). Feeling comfortable talking to close friends about worrying issues was associated with poor psychological (e.g. depression) and social outcomes (e,g, bullying), which is consistent with the previous finding that help seeking before most recent episode of DSH is linked to poorer wellbeing. The most consistent correlate of the DSH predictor variables was friends' DSH. These results support a homophily or contagion effect for DSH, and behaviour and psychological symptoms more generally (i.e. being bullied, depression, anxiety etc.).

Study 1:3   Developing a Short Form of the Longitudinal Survey for University Students

This section outlines development of a short form of the longitudinal survey for university students. Models of DSH will be created using this short survey to compliment the models developed with secondary school students (see Study 2.1b). The full longitudinal survey was first piloted with university students, and then each of the scales reduced to a minimal number of items while maintaining validity and reliability. The measures needed to be brief due to time constraints associated with the method of data collection (a maximum of ten minutes was allowed for survey completion).

Study 1:3a   Preliminary Study to Create a Longitudinal Survey – Short Form.

After reporting the process of shortening the survey, Time 1 data from the first cohort of university students will be presented to provide psychometrics and preliminary analyses of the shortened scales.

Method

Participants

Two data-sets were used for this study. The first is from the preliminary study reported above (p. 74-79) using university student data to assess which measures to use in the secondary school longitudinal survey (see p. 74 for a description of the sample). The second data set completed the entire full-length pilot survey for the university student longitudinal survey-short form (N= 66 (20 male), mean age = 19.8 years (S.D = 2.9), 75.4% self-identified as Pakeha/New Zealand European, 4.6% as Maori, 7.7% as Pacific Islander, 9.2% as Asian, and 3.1% as belonging to another ethnic group). The total sample, therefore, comprised 273 participants (81 male), with a mean age of 19.7 years (S.D. = 3.9). According to self-identified ethnicity, 77.7% were Pakeha/New Zealand European, 6.4% were Maori, 4% were Pacific Islander, 8.8% were Asian and 3.2% self-identified as belonging to another ethnic group. The samples were combined to utilise all available university student data.

Measures

For methodology for the first sample see pages 74-75. The same measures used for the secondary school survey were used (see p. 65-74), except questions on bullying and functions of DSH were excluded (see appendix C1).

Procedure

Participants enrolled in the experiment over web-based sign-up. Several times were allotted for participation. Participants completed the self-report survey in groups of 1-15 students, in a quiet room at desks. The session began with participants reading through the information sheet and signing a consent form (see appendix C1). Participants were then given the opportunity to ask any questions before completing the survey. Upon completion, participants were given a debriefing sheet (see appendix C2), and given the opportunity to ask questions. Participation took no more than half an hour, and was voluntary and confidential. Participants received partial completion of a mandatory course requirement for research participation.

Table 15

Descriptive statistics of scales in the preliminary study for developing a short-form of the longitudinal survey.

Scale	Mean (S.D.)	Cronbach's alpha (full scale)	Cronbach's alpha (short version)
Adolescent DSHI	1.36 (.49)	.83	.82
TAS-20	2.62 (.66)	.81	.72
DIF	2.35 (.94)	.85	
DDF	2.85 (.95)	.69	
EOT	2.71 (.86)	.70	
ROS	3.10 (.67)	.90	.80
Schutte	3.61 (.45)	.89	.80
F1	3.59 (.63)	.82	
F2	3.58 (.53)	.80	
F3	3.67 (.50)	.70	
F4	3.60 (.62)	.67	
SAS	1.82 (.45)	.86	.80
SDS	1.97 (.44)	.86	.81
Resilience scale	5.32 (1.04)	.93	.85
Section D of PRQ (bullying scale)	1.44 (.53)	.87	
CAMS-R	2.67 (.44)	.78	.72
BIS II	2.36 (.36)	.84	.73

Results and conclusion

Descriptive statistics and internal reliability for the full scales and short forms are presented in Table 15. Internal reliability of the short-form subscales are not given as the short form scales were not designed to capture subscale constructs. All scales were factor analysed using PCA, and items with the highest loading on a scale (according to factor analysis) were kept for inclusion in the short form. The DSHI-s was abbreviated to 6 items, the TAS-20 to 9 items (3 items from each factor), the Schutte to 12 items, the SAS and SAD to 3 items each, the BIS II to 6 items, the RSE to 2 items, and the

CAMS-R to 3 items. The 2-item screening measure for physical and sexual abuse and the items on substance abuse and sexuality concerns developed for this thesis were kept as originally developed. Section D of the PRQ (bullying measure) was excluded from the final measure as it was more suitable for secondary school students, not young adults, and removing it was pragmatic as it reduced survey length. All short-forms of the measures have acceptable internal reliability and were subsequently used in the university student longitudinal survey outlined below.

Study 1:3b   Psychometric Properties of the University Student Longitudinal Survey - Short Form

The method for the university longitudinal survey is presented below, along with descriptive statistics, correlations between DSH and the predictor variables, and sex and ethnic group differences. Finally, a summary of Study 1 is presented.

Method.

Participants.

Participants were 593 (404 female) introductory level psychology students at Victoria University of Wellington who completed the first administration of the survey in 2008 (The survey was distributed twice during the academic years of 2008 and 2009 to develop models of DSH; presented in Study 2). Mean age was 19.7 years (S.D = 4.8). Broken down by ethnicity, 80.2% self-identified as Pakeha/New Zealand European, 5.6% as Maori, 1.3% as Pacific Islander, 7.3% as Asian, and 5.6% as another ethnic group.

Measures.

The short form measures developed in the preliminary study (p 96-8) were included in this study (see appendix D1). However, the short form on the DSHI-s included 1 additional item on self-poisoning/overdose, "have you ever intentionally overdosed on medication, drugs or chemicals with the intention of harming yourself?" not previously used, to assess the association between DSH as defined in this thesis and self-poisoning.

Procedure.

Introductory level psychology students took part in mass testing during their allocated lab times for partial completion of a mandatory course requirement for research participation. The 2008 cohort completed the survey as part of a booklet along with surveys distributed by other researchers in the psychology department. The 2009 cohort completed the survey on lab computers through a programme called Survey Monkey, along with several other surveys for other researchers in the psychology department. Students participated in their lab class (approximately 10-16 students), at desks in silence, supervised by their tutor. The survey began with a information sheet, and participants signed a consent form (or indicated consent electronically) before commencing (see appendix D1). After completing the booklet participants were given a debriefing sheet (2008) or were presented with a debriefing sheet on their computer screen (see appendix D5), while also being verbally debriefed by their lab tutor (2009). Participation was voluntary and confidential.

Results and Conclusion

Table 16 presents the means and standard deviations for the various short-form scales, along with internal reliability data. The short-form measures all demonstrated

Table 16

Descriptive statistics of the short-form scales for the first cohort of university students at Time 1.

Scale (number of items)	Mean (S.D.)	Cronbach's alpha
DSHI-s-7 (7)	1.43 (.67)	.82
TAS-9 (9)	3.63 (.94)	.61
ROS-2 (2)	3.29 (.71)	.73
Schutte-12 (12)	3.78 (.48)	.71
SAS-3 (3)	1.90 (.64)	.75
SDS-3 (3)	1.95 (.65)	.73
Resilience scale-3 (3)	5.37 (1.12)	.79
CAMS-R-3 (3)	2.97 (.58)	.74
BIS II-6 (6)	2.30 (.50)	.70

reasonable internal reliability (α>0.70), except the TAS-9 (α=.61).

Prevalence of lifetime history of DSH at least once was 43.7% (females 46.1%, males 38.4%). Of those with a history of DSH, the majority (79.00%) had engaged in 1-3 different types of DSH behaviour in their lifetime (see *Figure 4*). This suggests that youth may have their preferred method, rather than engaging in many different types of DSH, supporting the idea of a DSH-script involving particular procedures and implements (Haines et al., 1995). The DSHI-s-7 items of self-harm meeting the definition in this thesis (i.e. items 1-6) were significantly moderately correlated with item 7 of the DSHIA-s-7 assessing self-poisoning. This supports the use of assessing friends and family DSH through a query of self-poisoning on the social network scale in the secondary school longitudinal survey, and supports including an overdose item in the DSHI-s-7 (may act as a by-proxy for assessing self-harm meeting the definition in this thesis).
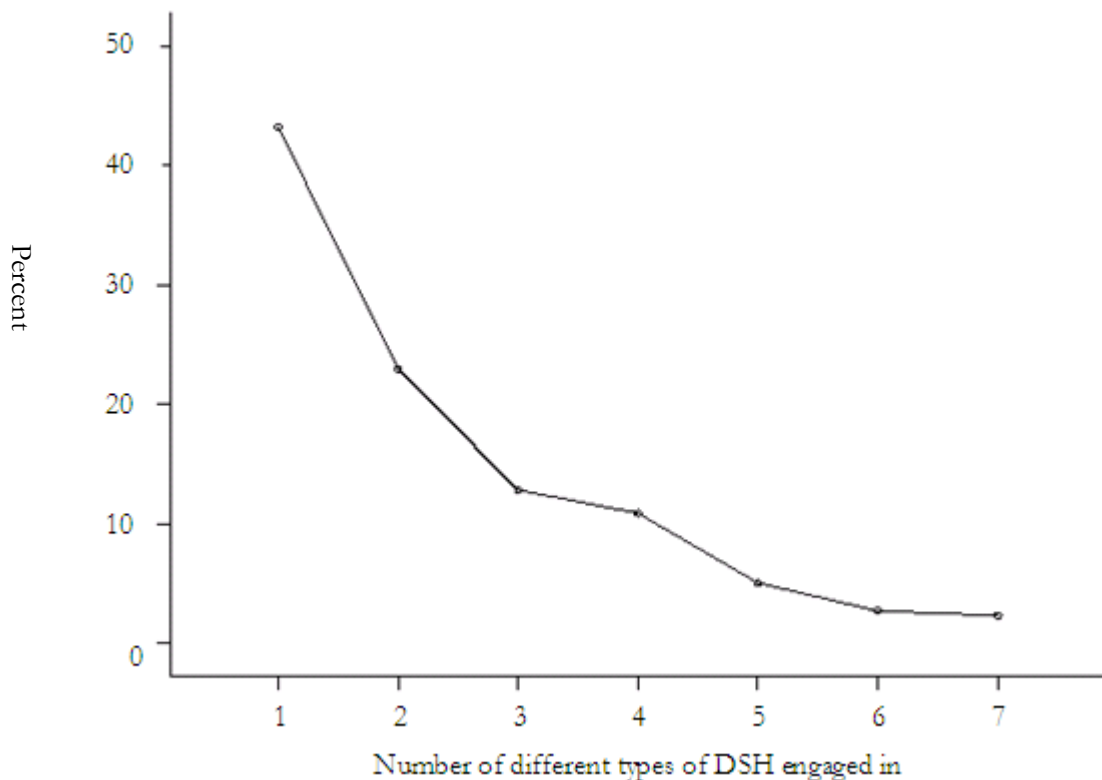
Figure 4. The Percentage of participants who had engaged in 1-7 types of DSH.

Group differences.

Group differences based on sex and ethnicity are presented below.

Sex differences in the predictor variables.

A MANOVA indicated a significant overall sex difference for the predictor variables, F(10, 534)=6.07, p<.001. Between-subjects effects are presented in Table 12 below. Female participants self-reported significantly greater symptoms of alexithymia, lower self-esteem and greater adaptive use of emotions than male participants. These sex differences were also found among secondary school participants; however females in the secondary school sample were also significantly less mindful and less resilient and had significantly more depressive symptoms and impulsivity than males (see p. 88-90). Sample differences may be due to age (e.g. depression peaks markedly in adolescence among females; Mash & Wolfe, 2002). To check this possibility the MANOVA was re-run with age as a covariate. Overall sex differences remained significant, F(10,

Table 17

Sex differences for DSH and predictor variables

Measure	Mean item score (S.D.)		F-test of sex differences
	Male	Female	
DSHIA-7	1.40 (.67)	1.44 (.68)	.46
TAS-9	3.42 (.95)	3.72 (.93)	11.09**
ROS-2	3.33 (.69)	3.28 (.72)	13.90***
Schutte-12	3.66 (.47)	3.83 (.47)	26.94***
SDS-3	1.91 (.61)	1.95 (.66)	.34
SAS-3	1.67 (.59)	1.99 (.64)	1.25
Resilience-3	5.35 (1.09)	5.39 (1.13)	.52
CAMS-R-3	3.00 (.57)	2.96 (.58)	.14
BIS-II-6	2.34 (.51)	2.29 (.49)	.64
Substance abuse - 3	2.32 (.70)	2.25 (.72)	1.27

*p<.05, **p<.01, ***p<.001

582)=5.46, p<.001, and between-subjects effects found the same variables to demonstrate significant sex-differences (all F's≥9.82, p's<.01), while the remaining variables were non-significant (F range=.37-1.85, p>.05). This suggests that the sample

age does not account for the difference in sex-effects between the secondary school and university student sample.

Sex differences in DSH.

A t-test of sex differences for total score on the DSHI-7 was non-significant, $t(553)=-.83$, $p=.41$. This suggests that males and females in the sample did not have significantly different total scores for lifetime history of DSH. However, a MANOVA revealed significant sex difference in overall history of the seven different types of DSH assessed, $F(7, 542)=6.76$, $p<.001$. A test of between subjects effects suggested females scored significantly higher on rates of self-cutting ($mean_F=1.79$, S.D.$=.06$; $mean_M=1.46$, S.D.$=.10$), $F(1, 548)=7.72$, $p<.01$, and scratching than males ($mean_F=1.60$, S.D.$=.06$, $mean_M=1.36$, S.D.$=.09$), $F(1, 548)=7.72$, $p<.01$. Male participants scored significantly higher on rates of self-punching than females ($mean_M=1.49$, S.D.$=.06$; $mean_F=1.20$, S.D.$=.04$), $F(1, 548)=17.11$, $p<.001$. There were no significant sex differences for self-reported lifetime history of burning, carving (words, pictures or designs into the skin), preventing wounds from healing, or overdose (all F's ≤ 1.73, p's$>.05$).

Ethnic group differences in DSH.

A MANOVA found no significant differences between the ethnic groups for total self-reported lifetime history of DSH overall or the seven different types of DSH, $F(28, 517)=.94$, $p=.55$.

Correlates of DSH.

Table 18 presents the correlations between DSH score and the predictor variables. DSH was correlated with all the predictor variables, supporting their use in developing comprehensive models of DSH with a university student sample (see Study 2).

Summary of Study 1

All the preliminary analyses suggest DSH among youth is relatively normative given that approximately a third to half of participants had a history of DSH, which

Table 18.

Correlations between scores on the predictor variables and DSH.

Scale	Correlation (r) with adolescent DSHI-7
TAS-9	.29**
ROS-2	-.43**
Schutte-12	-.10*
SAS-3	.42**
SDS-3	.38**
Resilience scale-3	-.32**
CAMS-R-3	-.28**
BIS II-6	.26**
Sexuality concerns	.30**
Substance abuse	.19**

*p<.05, **p<.01; *N* range 548-555.

further validates exploration of this important issue. The preliminary university student studies support the use of the DSHI-s as a measure of DSH, and using the Schutte as a measure of adaptive use of emotions. All datasets suggest that DSH is correlated with the predictor variables chosen for inclusion in the development of comprehensive models of DSH.

The sex differences in relation to DSH behaviour found in the analyses suggest that this is an important variable to consider in understanding vulnerability or resilience to DSH. In Study 2 separate models will be created by sex considering the sex differences in predictor variables and rates of certain types of DSH (p. 129-130, 134, 137). The next study presents the longitudinal datasets and models of DSH.

Study Two: Longitudinal Survey, Diary Study, and reasons for DSH

Introduction

Study 2 provides in-depth analyses of inter- and intra-personal predictors and functions of DSH using three studies. It is important to identify predictors of DSH, to help understand what leads to vulnerability, and what factors may protect against engaging in DSH.

Study 2.1 presents cross-sectional and longitudinal models of DSH developed from surveys given to secondary school and university students outlined in Study 1. Cross-lag correlations are presented first, followed by structural equation models.

Youth participants' reasons for their DSH, and the reasons teachers attribute to student DSH, based on quantitative and qualitative data, are assessed in Study 2.2. This provides insight into how youth explain their DSH, and how DSH is understood by the adults (i.e. teachers) around them.

Study 2.3 presents a diary study with university students. This study aimed to compliment the model data and reported functions of DSH by analysing the weekly emotional experience of youth and whether this differs according to DSH history.

Study 2.1

Figure 5 presents the proposed model of DSH informed by research, incorporating all the predictor variables included in the surveys. The association between certain variables and DSH are poorly understood (e.g. mindfulness) and/or have received little attention in the DSH literature (e.g. resilience), making it difficult to place them in the model. However, I have attempted to do so, and will present my rationale below. What follows is a discussion of the hypothesised pathways presented in *Figure 5*.

All the variables I included in my longitudinal surveys are significantly associated with DSH; either directly or indirectly. I will look at the psychological, social and behavioural correlates in turn and discuss their hypothesised links to DSH.
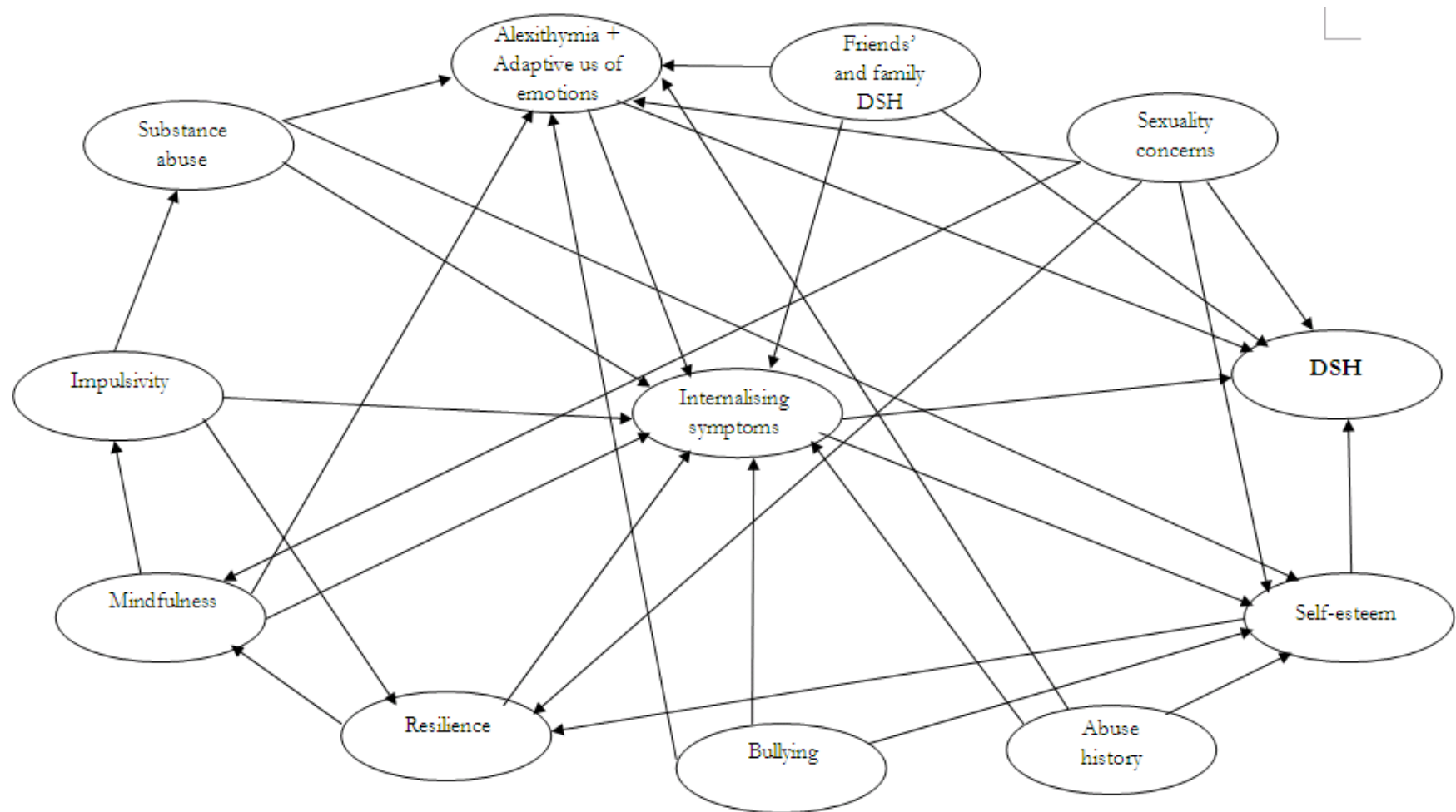
Figure 5

Theoretical associations between variables in a comprehensive model of DSH

Hypothesised Pathways of Psychological Correlates

Psychological correlates of DSH included in the model are depression and anxiety, low self-esteem, alexithymia, poor adaptive use of emotions, resilience, mindfulness, sexuality concerns, and impulsivity (De Leo & Heller, 2004; Evans et al., 2005; Evren & Evren, 2005; Hawton et al., 2006b; Lundh et al., 2007; Meuhlenkamp & Gutierrez, 2004; Sampson et al., 2004; Skegg et al., 2004).

Internalising symptoms and self-esteem.

Research literature suggests a direct link between internalising symptoms (depression and anxiety), low self-esteem and DSH. Personal accounts of DSH suggest that depressive cognitions precede an episode of DSH (Nixon et al., 2002), and feelings of anxiety may culminate in an episode of DSH in order to relieve tension (Favazza, 1996; Strong, 1998). Emotion regulation models of DSH support a direct link between internalising symptoms and DSH (e.g. EAM, Chapman et al., 2006). Low self-worth is also known to be proximal to episodes of DSH (Strong, 1998), and self-directed violence may require a certain lack of self-worth (i.e. in order to consider oneself deserving of harm) or concern for the self. Thus I have directly linked depression, anxiety and self-esteem to DSH in *Figure 5*.

Emotional processing.

The emotional processing variables of alexithymia and adaptive use of emotions are both hypothesised to be directly linked to DSH, and indirectly via the pathways of depression and anxiety. Directly, poor emotional awareness may lead to DSH to 'feel something'. This is consistent with anecdotal reports (e.g. Straker, 2006, p.101) and the dissociation model (Alderman, 1997). Indirectly, feelings of emotional ineptitude, or recognition of an inability to solve or understand emotional problems may lead to depression, anxiety or low self-esteem. There is no causal model in the literature to draw upon, but research does link alexithymia to internalising problems (i.e. anxiety and depression) (Modestin, Furrer & Malti, 2004; Zimmerman et al., 2005).

Resilience.

Resilience is hypothesised to buffer against DSH via its curtailing effect on internalising symptoms and low self-esteem. Again, there is no research literature linking these variables and DSH. However, the link between resilience and stressful negative life events (that foster resilience in some people; Hjemdal, Aune, Reinfjell, Stiles & Friborg, 2007) suggests resilience is associated with DSH (as alternative response to stress; Nixon et al., 2002). The negative correlation between DSH and resilience found in Study 1 suggests that resilience may buffer against DSH in some way; this is likely to be via the psychological strength resilience offers against feelings of low self-worth and negative affect (Hjemdal et al., 2007).

Mindfulness.

Mindfulness has been found to be significantly lower among self-harming adolescents than their non-self-harming peers (Lundh et al., 2007), and mindfulness skills are incorporated into DBT for adolescents who self-harm as core component of treatment (Miller, Rathus & Linehan, 2007). Mindfulness was hypothesised to be indirectly associated with DSH via internalising symptoms and self-esteem, and via alexithymia. Given that mindfulness is correlated with lower depression and anxiety and higher self-esteem (Brown & Ryan, 2003) it was hypothesised that mindfulness would guard against these negative affect states preceding an episode of DSH. Mindfulness is significantly positively correlated with emotion regulation, even after controlling for depression, anxiety and stress, suggesting that cultivating mindfulness may lead to improved emotion regulation skills (Erisman, Salters-Pedneault & Roemer, 2005). Mindfulness has been linked to clarity of feelings, mood repair and attention to emotions, suggesting that mindfulness enables an individual to sit comfortably with emotional distress (Feldman et al., 2007). Thus, it was hypothesised that mindfulness would be associated with lower DSH via lower alexithymic symptoms, curtailing the internalising symptoms that may result from poor emotional processing skills.

Sexuality concerns

It was hypothesised that sexuality concerns would be directly related to DSH, and indirectly via internalising symptoms and self-esteem. Previous research consistently links same-sex attraction to DSH (e.g. Skegg, 2003). Increased risk of suicidal behaviours among homosexual and bisexual youth has been link to depression, hopelessness and low self-esteem (van Heeringen & Vincke, 2000); thus internalising symptoms and low self-worth bought on by sexuality concerns may foster vulnerability to DSH.

Impulsivity.

Impulsivity was hypothesised to be indirectly related to DSH via internalising symptoms. Research suggests that impulsivity can predict the onset of depression, ever after controlling for substance use and social network size (Grano et al., 2007). Also, it may be that impulsivity fosters poor tolerance of emotional distress, where an individual will engage in DSH as a quick-fix impulsive solution to relieve negative affect.

Hypothesised Pathways of Social Correlates

Social correlates of DSH included in the model are bullying experiences, childhood physical and sexual abuse, and social network factors including friends and family members' DSH, bullying experiences and substance abuse.

Bullying.

Bullying was expected to be indirectly linked to DSH via internalising symptoms and self-esteem, and through alexithymia's indirect pathway. This expectation was based on previous literature linking victimisation to decreased self-esteem, increased depression and anxiety and poor emotion regulation (Cowie & Berbondini, 2002; O'Moore & Kirkham, 2001; Rigby, 2003; Skues *et al.*, 2005), and the notion that internal cognitions guide responses to social experience. The association between victimisation and behaviour is dependent on the cognitions that go along with explaining and understanding the victimisation. Depressive cognitions may lead to explanations that foster feelings of low self-worth such as "I'm worthless and deserve to be punished", while anxious cognitions may foster tension (e.g. constant worry about future attacks

may cause hyper-arousal); subsequent negative affect may lead to an episode of DSH as a tension-reduction strategy.

Abuse history.

Childhood abuse was hypothesised to be indirectly related to DSH via multiple psychological variables; most directly through depression, anxiety and self-esteem, and more indirectly through poor emotion processing. Research suggests the link between childhood sexual abuse and suicide attempts is mediated by depressive symptoms (Bergen et al., 2003). In their meta-analysis of the link between childhood sexual abuse and DSH, Klonsky and Moyer (2008a) suggest that childhood sexual abuse has no direct link to DSH, but that "childhood sexual abuse might contribute to the initiation of self-injurious behaviour through mediating variables such as depression, anxiety and self-derogation" (p. 168). Childhood physical abuse may foster difficulty in identifying and describing feelings, as the individual is likely to experience mixed or alternate emotions towards the aggressor (i.e. love and fear for a family member who is abusive); this may cause confusion and anxiety around the relationship. Also, an abusive parent may not provide a safe environment for discussion of feelings, which may hinder the development of competent emotional processing.

Social network.

The only factor from the social network scale included in the model was friends and family members' DSH; this was expected to be indirectly linked to DSH via depression and anxiety, and via alexithymia. Friends and family DSH was hypothesised to foster internalising symptoms due to homophily effects and a sense of helplessness (Best, 2005). It was also hypothesised that friends and family members who self-harm would be poor role models for emotional development, fostering alexithymia. Parents with alexithymia may be unable to model appropriate emotional expression to their children, or help them develop self-soothing strategies when emotionally distressed, fostering vulnerability to DSH. Friends and family members' DSH was also hypothesised to be directly linked to DSH through contagion effects (Taiminen et al., 1998); and this link is supported by the fact that some youth begin DSH once hearing or learning of it through the media and other people (Hodgson, 2004).

Hypothesised Pathways of Behavioural Correlates

Substance abuse.

Substance abuse is the only behavioural correlate of DSH included in my model; hypothesised to be indirectly linked to DSH via internalising symptoms, self-esteem and alexithymia. Hawton et al. (2006b) reported that smoking and alcohol use had a significant association with DSH among English adolescents, but this effect was mediated by other variables including depression, anxiety and self-esteem. This supports an indirect pathway from substance abuse and DSH via internalising symptoms and self-esteem. Substance abuse may affect interoceptive awareness (e.g. hyper/hypoarousal impacting on deciphering emotions from bodily symptoms); this diminished emotional awareness may foster DSH as an emotion regulation strategy.

The hypothesised connections above are based on available literature and theoretical understandings; however no model has attempted to incorporate these variables to develop a comprehensive model of DSH. Not only might these vulnerabilities, and buffers, overlap with one another, but alternative pathways are possible, and may also be theoretically justifiable. In the models presented below theoretical hypotheses will be tested empirically. The models presented in Study 2.1 will be modified according to data-driven changes, and consistencies across datasets will be pulled out for discussion. Pathways that remain significant across models and datasets are more likely to reflect true predictors of DSH, and these will be important to discuss and replicate in future research.

Study 2.1   Models of DSH

The secondary school and university student models are presented alongside each other, with cross-lag models presented first (using matched longitudinal data only; Study 2.1a), followed by structural equation models (Study 2.1b) of psychological DSH predictors, and then of psychological, social and behavioural predictors of DSH. Separate models are presented for the psychological predictors, followed by the addition of social and behavioural predictors, because incorporating these latter variables overshadowed underlying relationships that were best observed by incorporating variables in a stepped manner (e.g. sexuality concerns no longer directly predicted DSH when social and behavioural factors were incorporated in the model, possibly

demonstrating proximal versus distal mechanisms of vulnerability). Incorporating social and behavioural variables may mask underlying relationships between psychological predictors and DSH that are important to note.

Although initially only a large secondary school sample was going to be used to develop models of youth DSH, a university student population was also assessed to provide further insight into the association between the predictor variables and DSH among young adults. A secondary sample gives predictive paths added validity and generalisability.

Methodology

The methodology for secondary schools is presented first, followed by that used for university students.

Secondary school sample methodology

The methodology at T1 is outlined on pages 79-82. T2 methodology is given below. T1 data was used to develop the models, T2 for model-check analyses, and the longitudinal dataset was used for cross-lag correlations and to develop a longitudinal model of psychological predictors of DSH.

Participants.

Matched participants were N = 495 (256 male) of the 1162 that completed the survey at first administration; mean age was 16.2 (S.D.=.56). Several factors account for the high attrition. Fifty-four participants either did not give a unique identifier or gave an incomplete identifier at Time 1, preventing their data from being matched. Also elements of the unique identifier may have changed for participants over the time period (e.g. one element called for the last 4 digits of their phone number, which may have changed if they had moved or changed phone provider), or participants may have changed schools (especially those taking part at S4, where T1 and T2 occurred over 2007 and 2008), or not been present at the second administration of the survey. In addition, participation was voluntary, and students may have chosen not to take part in the survey a second time or made an active choice not to facilitate data matching. Broken down by ethnicity, 74.6% of the matched sample identified themselves as European New Zealanders/Pakeha, 8.9% as Maori, 3.5% as Pacific Islander, 10.2% as

Asian, and 2.8% as another ethnicity. This ethnic break-down is similar to that found for the entire T1 sample (see p. 79-80).

Measures.

Measures were the same as T1 (see p. 65-74), except the DSHI-s was modified at T2 to ask about DSH behaviour since T1 survey distribution (ranging 3-6 months, depending on the school; see appendix B3).

Procedure.

T2 survey distribution took place 3-8 months after T1. The length of time between survey distributions depended on the school curriculum timetable and when schools could fit the research into their calendar. The procedure was the same as for T1 (see p. 80-82, appendices B1-B6). Results and the researcher's contact details were sent to schools to post on their notice-boards as debriefing information (see appendix B6).

University student sample methodology

Data collection for university students was conducted over the 2008 and 2009 academic years. Participant data was matched across time for those students enrolled in both the first and second trimester psychology courses of the 2008 and 2009 cohorts. Three datasets were used; cross-sectional T1 (for model development) and T2 data (for model-check) and participants matched data over time (to conduct cross-lag correlations and develop a longitudinal model of DSH). The matched dataset was considerably smaller as not all participants enrol in both courses during an academic year, and there was an error in the computer programme used for data collection in 2009 which prevented matching participant data.

Participants.

Participants were introductory level psychology students at Victoria University of Wellington enrolled in 2008 and 2009.

Time 1 dataset

There were 1291 (618 female, 631 male, 42 missing data) participants, mean age of 19.63 years (S.D. = 4.46). Broken down by ethnicity, 86.76% identified as Pakeha/New Zealand European, 6.31 % as Maori, 0.62 % as Pacific Islander, 3.56 % as Asian, and 2.76% as belonging to another ethnic group.

Time 2 dataset

There were 1142 (591 female, 528 male, 23 missing data) participants, mean age of 19.89 years (S.D. = 4.35). Broken down by ethnicity, 76.10% identified as Pakeha/New Zealand European, 6.83 % as Maori, 2.07 % as Pacific Islander, 10.96 % as Asian, and 4.04% as belonging to another ethnic group.

Matched dataset

There were 322 (223 female, 99 male, 7 missing data on sex) participants, mean age of 19.90 years (S.D. = 5.76). Broken down by ethnicity, 81.70 % identified as Pakeha/New Zealand European, 5.68 % as Maori, 1.26 % as Pacific Islander, 6.62 % as Asian, and 4.73% as belonging to another ethnic group.

Measures.

The survey included the DSHI-s-7, TAS- 9, Schutte-12, SAS-3, SAD-3, BIS II-6, RSE-2, CAMS-R-3, 2 items screening for physical and sexual abuse, 4 items on substance abuse, and 1 item assessing sexuality concerns. The instructions for the DSHI-s-7 differed slightly for T1 and T2; at T1 items related to lifetime DSH and at T2 the items related to DSH behaviour since last completing the survey (see appendix D3 and D4).

Procedure.

Introductory level psychology students took part in a mass testing procedure during their allocated lab times to receive course credit. The survey was completed in a booklet (2008) or on computers (2009) using an online programme called Survey Monkey, along with surveys distributed by other researchers in the psychology department. Students participated in their lab class (approximately 10-16 students), at desks (2008) or computers (2009) in silence, supervised by their lab tutor. The survey began with an information page, and participants indicated consent before commencing (see appendices D1 and D2). After completion participants were presented with debriefing information (see appendix D5). Participation was voluntary and confidential. Matched participants completed the survey at two time points (under the same conditions) spaced approximately 4 months apart (if completing within the same academic year) or 8 months apart (if completing over trimester two of 2008 and trimester one of 2009).

Results and Discussion

Lifetime prevalence rates of DSH for secondary school and university student samples are presented on pages 82-4 and 101 respectively. Prevalence rates of DSH over the follow-up period (3-8 months) were 34.48% for secondary school students and 17.26% for university students. This suggests current engagement in DSH is more common among adolescents compared to youth adults, consistent with research suggesting DSH peaks in adolescents and declines into young- and mid-adulthood (Whitlock, 2006b).

T-test found no significant difference in mean DSH scores or scores on the DSH predictor variables between matched and unmatched participants for both samples (all t's ≤ 1.77, all p's>.05); except for abuse history among university students, which was significantly higher among unmatched (mean = 1.34, S.D.=.71) than matched (mean=1.24, S.D.=.54) participants, t(874)=2.18, p<.05.

Internal reliability, and test-retest reliability statistics for T1 and T2 for the various scales for both samples are presented in Table 19, along with the correlations between the DSH predictor variables at T1 and T2 DSH. The internal (i.e. α >.70) reliability for all scales were acceptable except for the BIS-II-6 for the university student sample. Correlations between T1 and T2 scores (i.e. test-retest reliability) on measures were variable for both samples (i.e. .37-.73 for the secondary school sample; .50-.80 for the university student sample). Giles (2002) suggests that test-retest reliability coefficients are normally high (.90), but that some constructs are too unstable for consistency in measurement across time; the DSH predictors are perhaps too unstable to facilitate meaningful test-retest reliability statistics. All the correlations between T1 predictor variables and T2 DSH were significant for both samples, further validating the use of these measures in developing models of DSH.

Study 2.1a Cross-lag Models

AMOS version 16 (Arbuckle, 2007) was used to investigate the model of DSH proposed in *Figure 5*. A bottom-up approach was taken, beginning with simple cross-lag correlations and working towards more complex models. Kenny (1975) suggests that cross-lag models are an intermediary step between cross-sectional correlational analyses and structural modelling; correlational analyses were conducted in Study 1, and structural models are presented below following a series of cross-lag correlations.

Table 19

Descriptive statistics, internal reliability, and test-retest for T1 and T2 matched data set.

Measures	Secondary school student sample				University student sample			
	α T1	α T2	Test-retest reliability	Correlation :T1 predictors and T2 DSH	α T1	α T2	Test-retest reliability	Correlation :T1 predictors and T2 DSH
TAS-20 /TAS-9	73	71	.53***	.18***	70	80	.68***	.34***
RSE/RSE-2	89	90	.68***	-.25***	72	75	.80***	-.18**
Schutte/ Schutte-12	90	92	.49***	-.10*	75	79	.60***	-.16**
SDS/SDS-3	78	81	.61***	.28***	72	76	.58***	.40***
SAS/SAS-3	85	86	.62***	.19***	77	78	.65***	.34***
Resilience/ Resilience-3	91	93	.61***	-.27***	79	77	.50***	-.31***
Bullying (PRQ)	85	90	.37***	.12*				
CAM-R/ CAM-R-3	75	76	.65***	-.19***	74	77	.62***	-.34***
BIS-II/ BIS-11-6	80	79	.73***	.14*	66	66	.74***	.19***
DSHI-s/ DSHI-s-7	.86	.84	.55***	.55***	.83	.73	.60***	.60***

* p<.05, **p<.01, ***p<.001, N range: Secondary school sample: 663-830, University sample: 250-328.

A cross-lag correlation involves two constructs measured at two time-points, which generates four variables, X_1, X_2, Y_1, and Y_2, and six correlations (two cross-sectional: X_1 and Y_1, X_2 and Y_2; four across time: X_1 and X_2, Y_1 and Y_2, X_1 and Y_2, Y_1 and X_2). A cross-lag correlation assesses the strength of the relationship between the two constructs across time (correlations X_1 and Y_2, Y_1 and X_2), while controlling for measurement error and spuriousness (e.g. by partialling out Y_1 from the X_1 and Y_2 cross lag correlation; Kenny, 1975).

A series of cross-lag correlations were performed separately for both samples using the longitudinal data for each predictor variable and DSH. Missing data and outliers were deleted (as advocated by Kenny, 1975). Error terms and cross-sectional correlations were modelled in the analyses, but are not presented here as they are not central to cross-lag results and add unnecessary clutter. These cross-lag models are displayed below (with standardised co-efficients), beginning with psychological correlates.

Simple cross-lag correlations.

For both samples T1 DSH was associated with higher anxiety, lower resilience, and less adaptive use of emotions at T2, while the reverse was non-significant. DSH may lead to anxiety relating to scars and discovery (known concerns among youth who self-harm; Hodgson, 2004), and to a sense of loss of control as is becomes more ingrained and relied upon to cope with everyday distress. Perhaps engaging in DSH for an extended period lowers personal coping resources (resilience) as the behaviour becomes habitual (see addictive qualities of DSH; Nixon et al., 2002). Poor ability to adaptively use emotions may lead to poorer functioning when emotionally distressed, and prevent comfortable acknowledgement of emotional experience. These symptoms likely create vulnerability to using DSH to escape from emotions, or as an alternative form of emotional expression.

T1 DSH also predicted T2 internalising symptoms, depression, lower self-esteem, and lower mindfulness for both samples. Multiple studies correlate DSH with depression in youth (e.g. Harrington, 2001; Hawton et al., 2006b), and personal accounts suggest DSH often occurs in the context of depression (Sinclair and Green, 2005). Self-esteem may decrease post-DSH due to internalising negative stigma (e.g. as attention seeking and manipulative; Friedman et al., 2006) associated with the behaviour. The relatively immediate relief or distraction from emotional or internal experience that DSH offers (see data on personal accounts; Nixon et al., 2002) is incompatible with a mindful stance of non-judgement, acceptance, and awareness of emotional experience (Germer, 2005). Over time DSH may lead to intolerance of emotion and internal distress, or internal distress may be more quickly rejected and trigger self-harm as an escape mechanism, at the expense of being mindful of emotions.

Among university students T1 depression and internalising symptoms predicted T2 DSH (though not among the secondary school participants). This is consistent with youths' self-reports of depressive symptoms preceding episodes of DSH (e.g. Nixon et al., 2002), and emotion regulation models of DSH behaviour (p. 50-51, 54-57). This suggests a cyclical downward spiral of DSH behaviour, where initial low mood may create vulnerability toward engaging in the behaviour, and engagement in DSH maintains or heightens this low mood over time.

The models in *Figures 6* and *7* suggest that depression and DSH have a cyclical relationship; while depression may lead to DSH (consistent with Nixon et al., 2002), DSH also appears to predict increased depression. DSH appears to be associated with increased anxiety rather than vice-versa. In fact, the secondary school model suggests high T1 anxiety is associated with less T2 DSH. Perhaps anxious youth are protected against engaging in DSH because of fear of social judgement or consequences. Depression was linked to later increased anxiety for both samples. Perhaps DSH fosters vulnerability to depression over time, which is turn facilitates anxious symptoms (e.g. negative interpretation of benign events), further fuelling a downward spiral in affect regulation. This is consistent with the EAM (Chapman et al., 2006), where emotional upset leads to DSH to regulate emotion, however the self-harm fosters further negative internal experience (e.g. shame, guilt) and reduced ability to cope over time, and DSH re-occurs.

There was no significant cross-lag relationship DSH and alexithymia, impulsivity or substance abuse for either sample, and no significant relationship between DSH and bullying for the secondary school sample. This suggests that none of these variables are directly predictive of DSH across time.

The above cross-lag correlations suggests DSH is directly (perhaps causally) related to psychological vulnerability in various domains (e.g. DSH fosters increased depression and anxiety and lower self-esteem), but not the social/behavioural variables of bullying, and substance abuse. These factors may be more distal to DSH, rather than proximal predictors. The next section assesses the predictors of DSH together using structural equation modelling to investigate indirect and direct prediction of DSH.

T1   T2   T1   T2
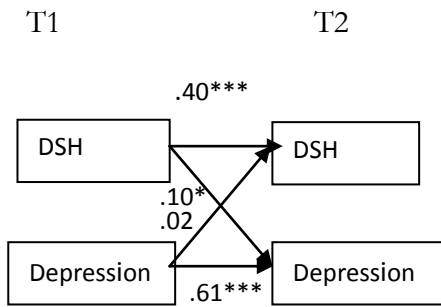
*Figure 6.*Secondary school cross-lag: Depression & DSH
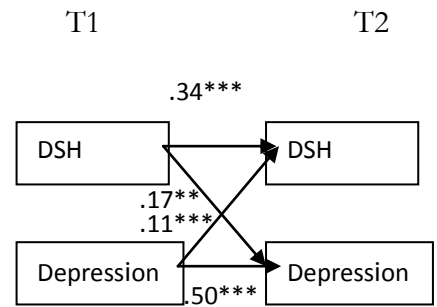
Figure 7. University student cross-lag: Depression & DSH
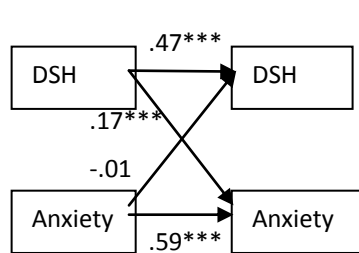
Figure 8. Secondary school cross-lag: Anxiety & DSH
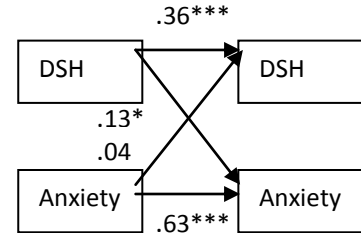
Figure 9. University student cross-lag: Anxiety & DSH
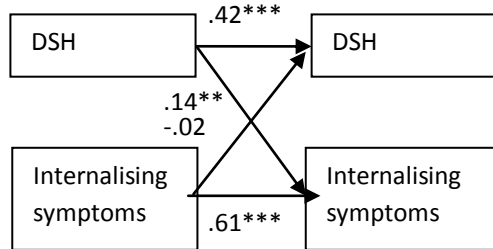
Figure 10. Secondary school cross-lag: Internalising & DSH
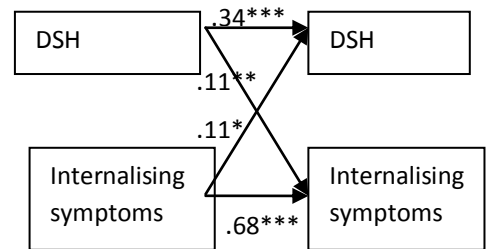
Figure 11. University student cross-lag: Internalising & DSH
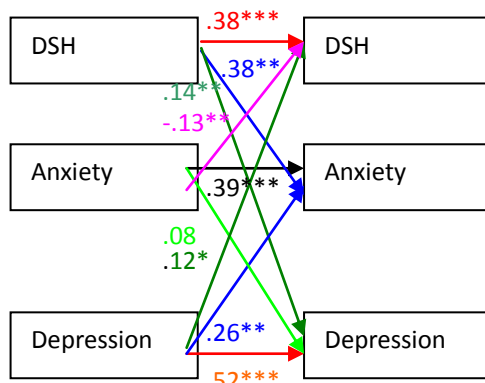
Figure 12. Secondary school cross-lag: Depression, Anxiety & DSH
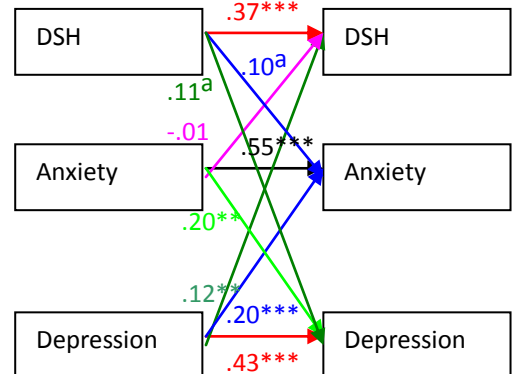
Figure 13. University cross-lag: Depression, anxiety & DSH

119

Secondary School sample   University Sample

T1   T2   T1   T2
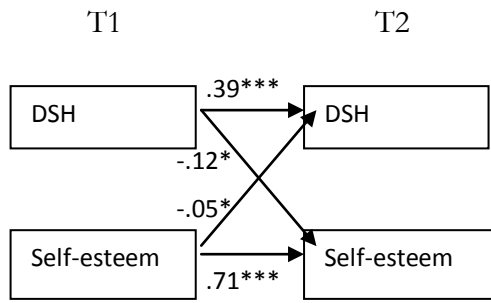
Figure 14. Secondary school cross-lag: Self-esteem & DSH
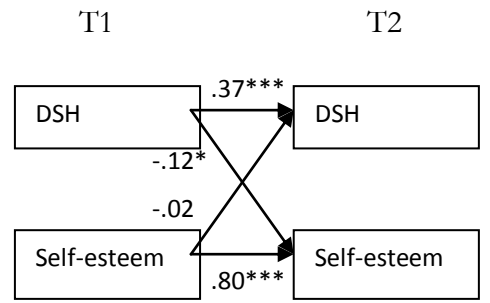
Figure 15. University sample cross-lag: Self-esteem & DSH
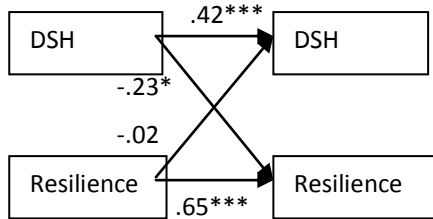
Figure 16. Secondary school cross-lag: Resilience and DSH
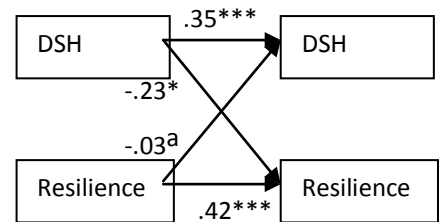
Figure 17. University sample cross-lag: Resilience and DSH
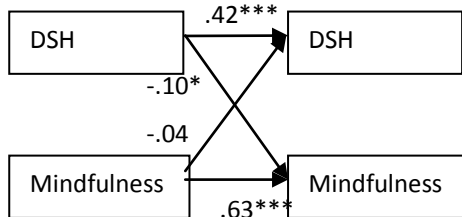
Figure 18. Secondary school cross-lag: Mindfulness & DSH
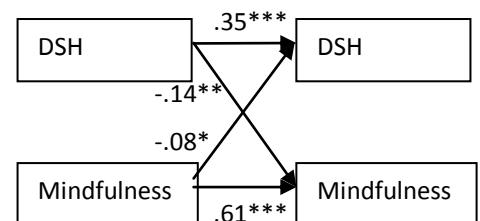
Figure 19. University sample cross-lag: Mindfulness & DSH
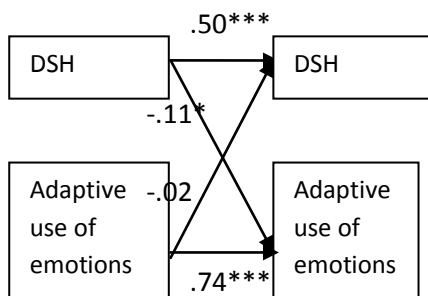
Figure 20. Secondary school cross-lag: Adaptive use of
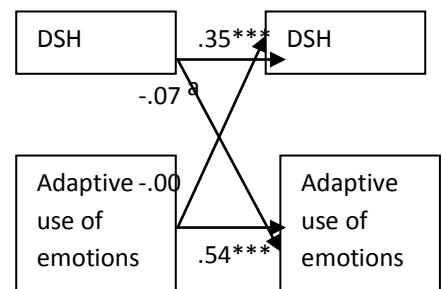
emotions & DSH

Figure 21. University sample cross-lag:

Adaptive use of emotions & DSH

*p<.05, **p<.01, ***p<.001, [a] p<.10

Secondary School sample

University Sample

T1   T2

T1   T2
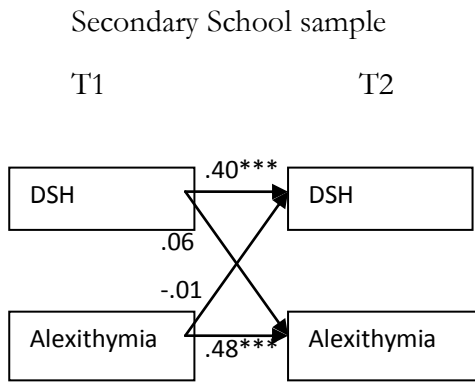
Figure 22. Secondary school cross-lag: Alexithymia & DSH
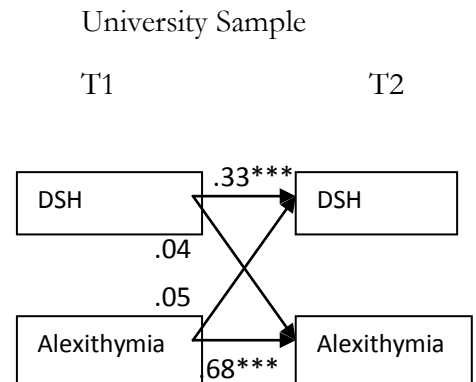
Figure 23. University sample cross-lag:
Alexithymia & DSH
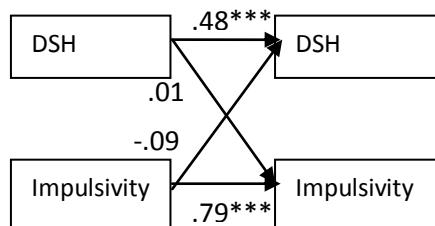
Figure 24. Cross-lag correlation: Impulsivity & DSH
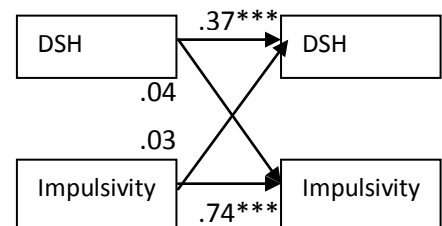
Figure 25. University sample cross-lag:
Impulsivity & DSH
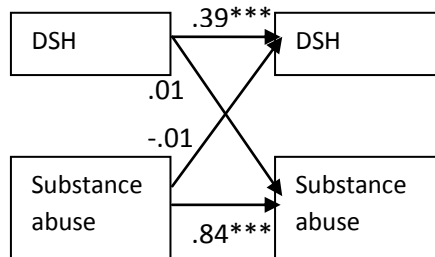
Figure 26. Secondary school cross-lag: Substance use & DSH
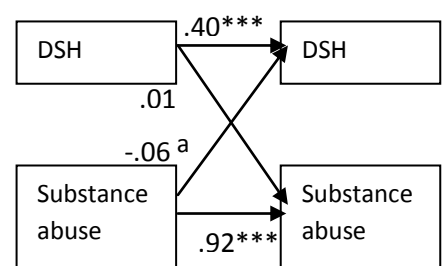
Figure 27. University sample cross-lag:
Substance use & DSH
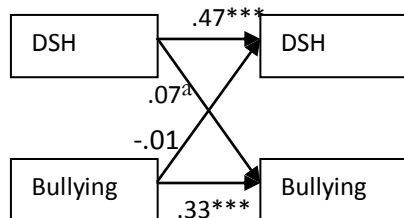
Figure 28. Secondary school cross-lag: Bullying & DSH

*p<.05, **p<.01, ***p<.001, +p<.10

Study 2.1b   Structural Equation Models

Cross-sectional and longitudinal data were used to develop models of DSH. For cross-sectional models, T1 data were used to develop the models, while T2 data were used to perform secondary confirmatory analyses. The variables presented in the models are latent variables, which are made up of clusters of observed variables (single item scores) of 3-4 items each (Hair, Anderson, Tatham & Black, 1995)[6]. Items with higher correlations were clustered together, or items were divided into clusters according to factor structure of the scale (e.g. TAS-20 items were clustered into EOT, DIF, and DDF). However 'friends and family DSH' was made up of a mean score and 'sexuality concerns' was measured using a single item. The path coefficients (standardised regression weight) indicate the strength of the relationships between variables, with larger coefficients indicating a stronger relationship. Generally these co-efficients range from -1 to 1 in magnitude.[7] There are several instances in the models below where the path coefficients are above 1. Given that many variables are being used, several with construct overlap (e.g. mindfulness and impulsivity can be considered opposite behavioural responses), there is likely to be third variable effects.

The longitudinal models (from both samples) do not control for T1 DSH and T2 predictor variable scores (when predicting T2 DSH scores using T1 predictor variable scores), which is a limitation of this study. This is because at T1 lifetime DSH was assessed, while at T2 history of DSH over the period since T1 distribution was assessed. It would not have been appropriate to deduct scores from one time-point to another to assess change over time, as the data reflect different timeframes of DSH behaviour. T2 DSH scores reflect DSH behaviour since T1 participation, and therefore were considered reflective of changes in DSH over this time period.

The university student models differ from those created using the secondary school dataset as fewer items were used to assess the latent constructs, and several variables were excluded from the survey (i.e. bullying and social network factors). Abuse history will be assessed in the university student models, adding insight into this important correlate of DSH. Abuse history was not included in the secondary school

---

[6] A parcel of 3 items taken from the BIS was deleted from the secondary school student models as it did not significantly correlate with its latent variable 'impulsivity', and thus poorly fit the model and was not a valid representation of the construct it was intended to represent.

[7] However, the standardised regression weight indicating the relationship between two variables in a structural equation model can be above 1, usually when there is multicollinearity in the data, or shared variance with a third variable (Joreskog, 1999).

models as a large proportion (65.04%) of participants did not complete the items for this variable, which meant that including abuse history greatly decreased statistical power.

SEM: Psychological Predictors of DSH

Structural equation modelling of the relationships between psychological predictors was conducted first. For both samples, T1 data was used to assess a proposed model based on *Figure 5* (see appendices B7.a and D6.a), and this was amended using a data-driven approach (i.e. non-significant paths were deleted, and paths added according to the modification indices identified in AMOS; see *Figures 29* and *30*), and tested using T2 datasets (see appendices B7.b and D6.b). The revised models were then tested on longitudinal data (see *Figure 31* and *32*). A similar process was followed separately for male and female data. DSH differs by sex both quantitatively (e.g. cutting is more common among females) and in its association with predictor variables (see p. 101-103). The revised model was tested on males and females separately (see appendices B7.c, D6.c, D6.e), revised (see *Figures 33-36*), and tested on secondary (T2) datasets (see appendices B7.c, B7.e, D6.d and D6.f). The revised models had superior model fit, and all paths were significant with no further modification indices recommended by AMOS. See Table 20 and 21 for model fit indices (refer to footnote on p. 85 for information on interpretation) for secondary school student and university student models respectively. All the cross-sectional models had significant X^2 statistics, which indicates poor fit. Given the complexity of the models this statistic may be too conservative an assessment of model fit. The RMSEA of all the models is <.10 (including the confidence interval), indicative of acceptable fit. The NFI, CFI and PNFI statistics were not satisfactory for the secondary school models. This may be because the heterogeneity of youth DSH prevents consistent associations between variables of psychological functioning and DSH behaviour. The university student models all had acceptable model fit according to the RMSEA (i.e. confidence interval between .00-.10) and CFI (i.e. ≥.95, except appendix D6.b where this bordered acceptability) statistics. The NFI was also acceptable, or bordered acceptability across the university student psychological models; while the PNFI did not indicate acceptable fit. However, the PNFI penalises complexity, and may not be appropriate for judging the fit of the complex models presented here. The

longitudinal university student model (*Figure 32*) was the most well-fitted to the data (e.g. non-significant X^2).

Despite several of the models having poor fit indices, the similarities across youth samples (e.g. importance of self-esteem and sexuality concerns) indicates that the results reflect meaningful (perhaps replicable) associations between DSH and predictor variables. In terms of prediction of DSH (R^2), the secondary school cross-sectional model of psychological predictors (*Figure 28*) explained 20% of the variance in DSH behaviour, and the male (*Figure 33*) and female (*Figure 35*) models explained 26% and 36% respectively. The longitudinal secondary school model of psychological predictors (*Figure 31*) explained 22% of the variance in DSH. For the university student sample, the cross-sectional model of psychological predictors (*Figure 30*) explained 43% of the variance in DSH, while the cross-sectional male (*Figure 34*) and female (*Figure 36*) models explained 25% and 48% respectively, and the longitudinal model (*Figure 32*) explained 19% of the variance in DSH. This suggests that among secondary school students DSH was best predicted by separating analyses by sex, as this explained the greatest amount of variance. Among university students, the model explaining the most variance was the cross-sectional model incorporating data from both sexes.

For both the secondary school and university student cross-sectional models, DSH was directly predicted by low self-esteem and sexuality concerns. When using the longitudinal datasets only low self-esteem (which was fostered by internalising symptoms) remained a significant direct predictor of DSH, while sexuality concerns was no longer significant. This suggests that sexuality concerns tend to exist alongside DSH (as demonstrated by cross-sectional data), but are not necessarily causal (as suggested by the analyses across time).

Low self-esteem was consistently predicted by internalising symptoms for both samples, while internalising symptoms was predicted by alexithymia and mindfulness. This suggests that among youth poor ability to identify, describe and be mindful of current emotions fosters internalising symptoms of depression and anxiety (consistent with Garisch & Wilson, 2009), which in turn is related to low self-esteem. This lowered self-esteem is directly predictive of DSH. This is consistent with Nock and Cha's (2009) diathesis stress model of DSH, where lowered coping strategies (e.g. alexithymia) means that emotions are not regulated, and this model suggests that self-esteem is the proximal

Table 20

Secondary school sample: Model fit indices of path models of psychological predictors of DSH.

Model fit indices	Proposed model T1 data (appendix B7.a) N=491	Revised model T1 data (*Figure 29*) N=472	Model check T2 data (appendix B7.b) N=385	Test revised model with longitudinal data (*Figure 31*) N=227	Revised model tested on T1 male data (appendix B7.c) N= 280	Revised model tested on T1 female data (appendix B7.c) N= 224	Revised Male model (T1 data) (*Figure 33*) N= 226	Revised female model (T1 data) (*Figure 35*) N= 224	Model check male model (appendix B7.d) N=181	Model check female model (appendix B7.e) N=208
X²	2499***	2029.73***	1992.54***	1302.94***	1430.89***	1386.76***	1387.62***	1354.11***	1382.79***	1390.77***
Degrees freedom	578	548	548	548	548	548	549	549	549	549
X²/df	4.32	3.70	3.64	2.38	2.61	2.53	2.53	2.47	2.51	2.53
NFI	.73	.76	.73	.69	.73	.68	.70	.67	.66	.69
CFI	.77	.81	.78	.79	.81	.77	.79	.77	.76	.78
PNFI	.67	.70	.67	.64	.67	.62	.64	.62	.60	.64
RMSEA (confidence interval)	.08 (.08-.09)	.08 (.07-.08)	.08 (.08-.09)	.08(.07-.08)	.08 (.07-.08)	.09 (.08-.09)	.08 (.07-.08)	.08 (.08-.09)	.09 (.09-.10)	.09 (.08-.09)

***p<.001 Models incorporating both sexes N range = 387-487, Separate models by sex N range = 178-212.

Table 21

University student sample: Model fit indices of path models of psychological predictors of DSH.

Model fit indices	Proposed model T1 data (appendix D6.a) N= 1127	Revised model using T1 data (*Figure 30*) N= 1123	Model check using T2 data (appendix D6.b) N= 614	Revised model using longitudinal data (*Figure 31*) N= 287	Test revised model on male data (appendix D6.c) N= 548	Test revised model on female data (appendix D6.e) N= 542	Revised male model (*Figure 34*) N= 545	Revised female model (*Figure 36*) N= 545	Model check of male model (appendix D6.d) N= 341	Model check of female model (appendix D6.f) N= 267
X^2	220.87***	220.49***	225.22***	51.83 (p=.26)	162.07***	112.62***	108.64***	116.44***	106.83***	88.50***
Degrees freedom	49	51	51	46	51	40	42	44	42	44
X^2/df	4.51	4.32	4.42	1.13	3.18	2.82	2.59	2.65	2.54	2.01
NFI	.96	.96	.93	.95	.94	.95	.96	.95	.94	.93
CFI	.97	.97	.94	.99	.96	.97	.98	.97	.96	.96
PNFI	.60	.63	.61	.66	.62	.58	.61	.63	.60	.62
RMSEA (confidence interval)	.06 (.06-.10)	.05(.05-.06)	.08 (.07-.09)	.02 (.00-.05)	.06 (.05-.07)	.06 (.05-.07)	.05 (.04-.07)	.06 (.04-.07)	.07 (.05-.08)	.06 (.04-.08)

***p<.001

factor which facilitates the decision to engage in DSH (see *Figure 3*, p. 56). This pattern was also found in the female only models (see *Figure 35* and *36*).
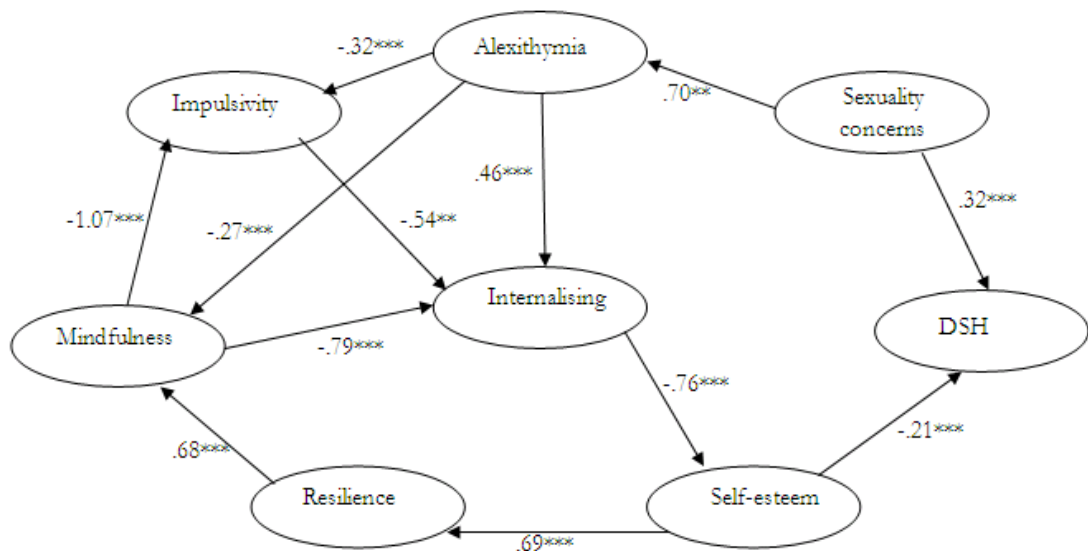
Figure 29. Secondary school: Revised model of psychological factors and DSH
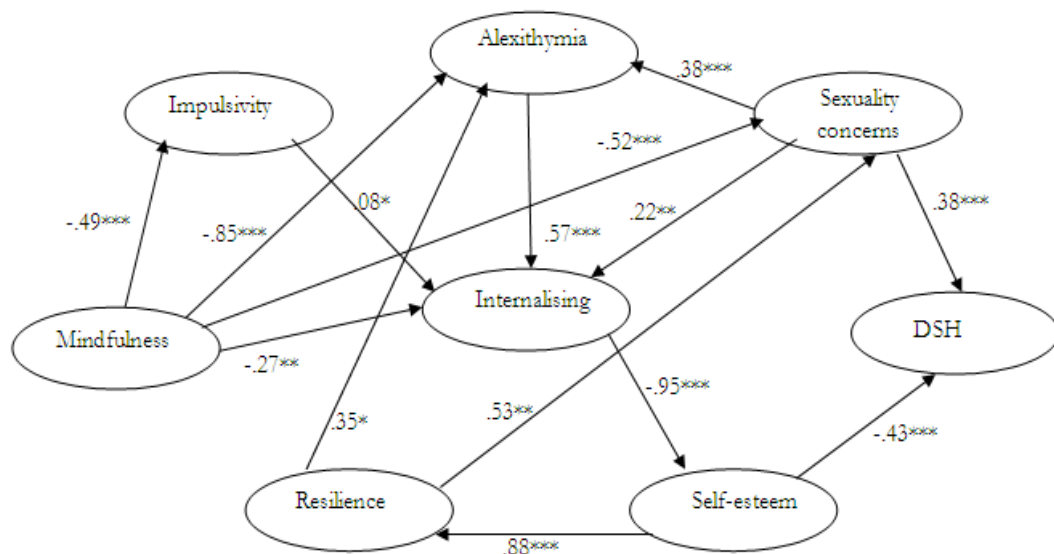
Figure 30. University student: Revised model of psychological factors and DSH

*p<.05, **p<.01, ***p<.001
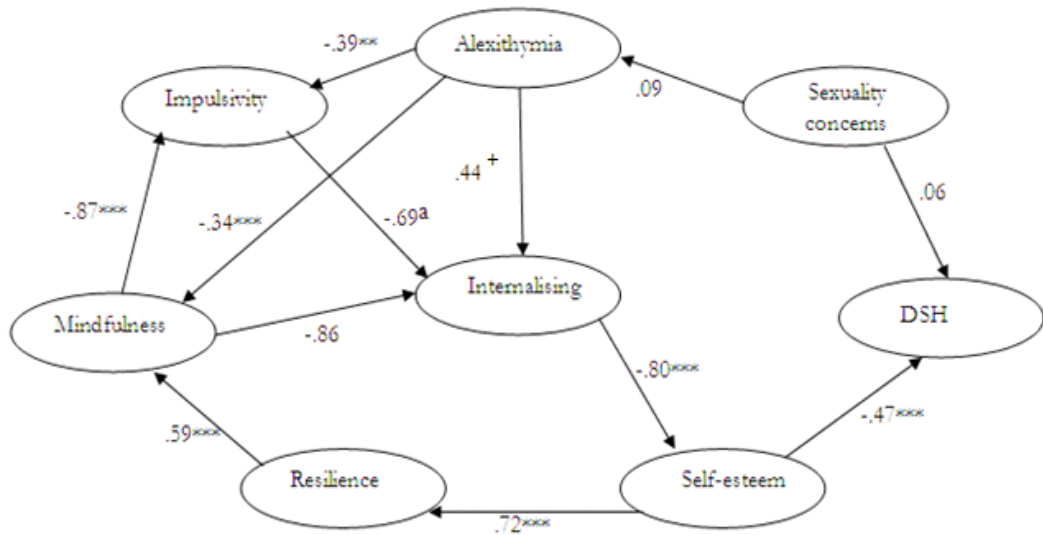
Figure 31. Secondary school: Longitudinal model of psychological predictors of DSH.
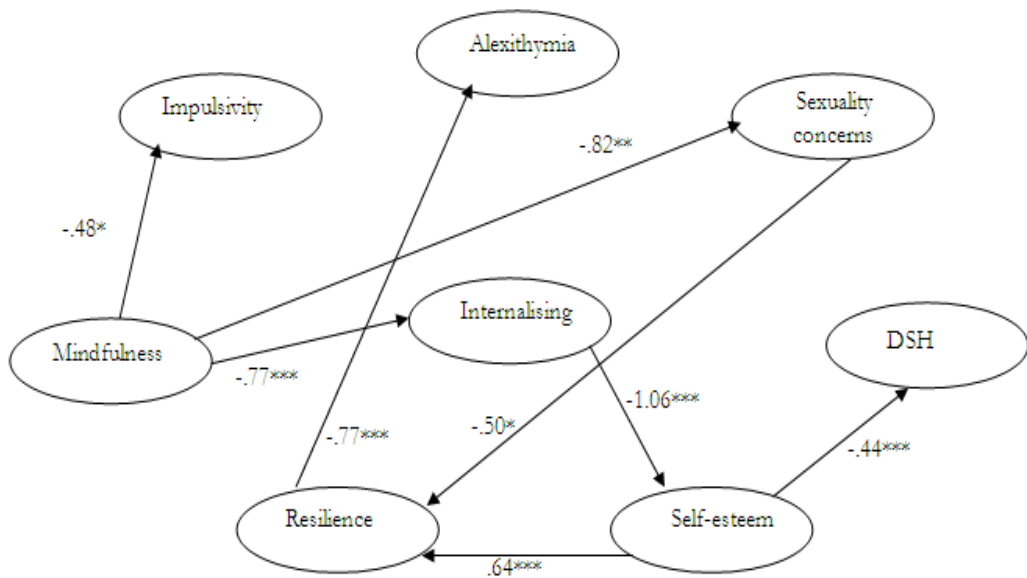
*p<.05, **p<.01, ***p<.001, +p<.10

Figure 32. University student: Longitudinal model of psychological predictors of DSH.
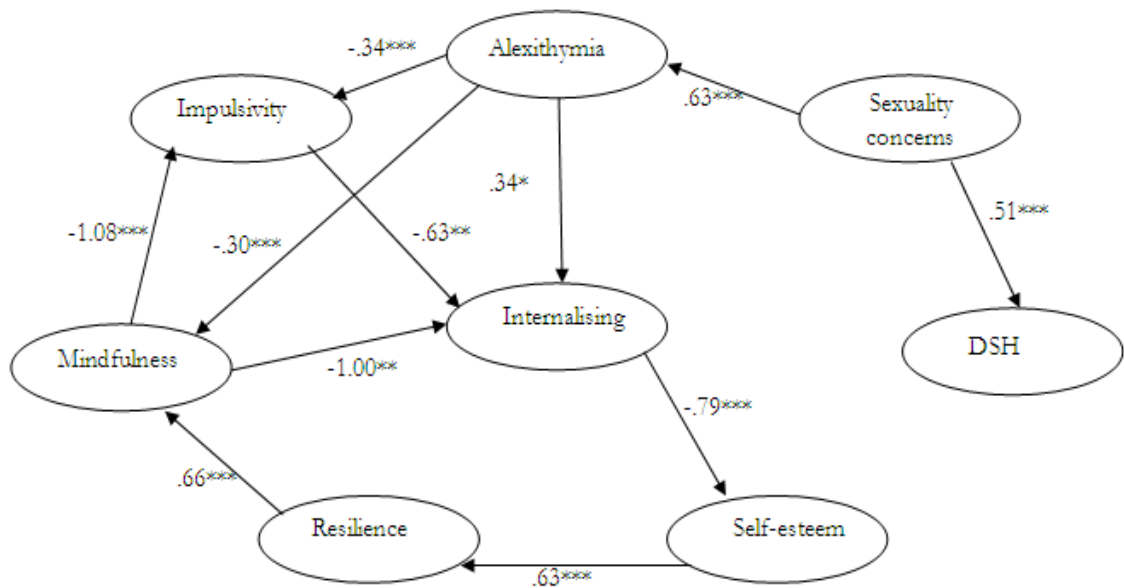
*p<.05, **p<.01, ***p<.001, +p<.10

Figure 33. Secondary school: Revised male model of psychological predictors of DSH.
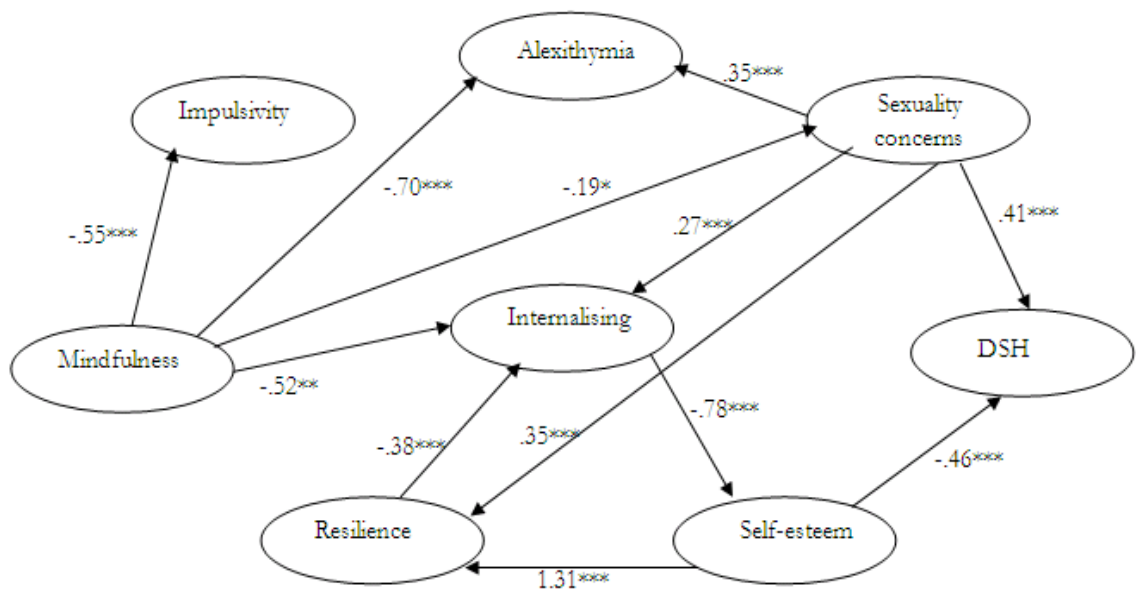
*p<.05, **p<.01, ***p<.001

Figure 34. University student: Revised male model of psychological predictors of DSH.
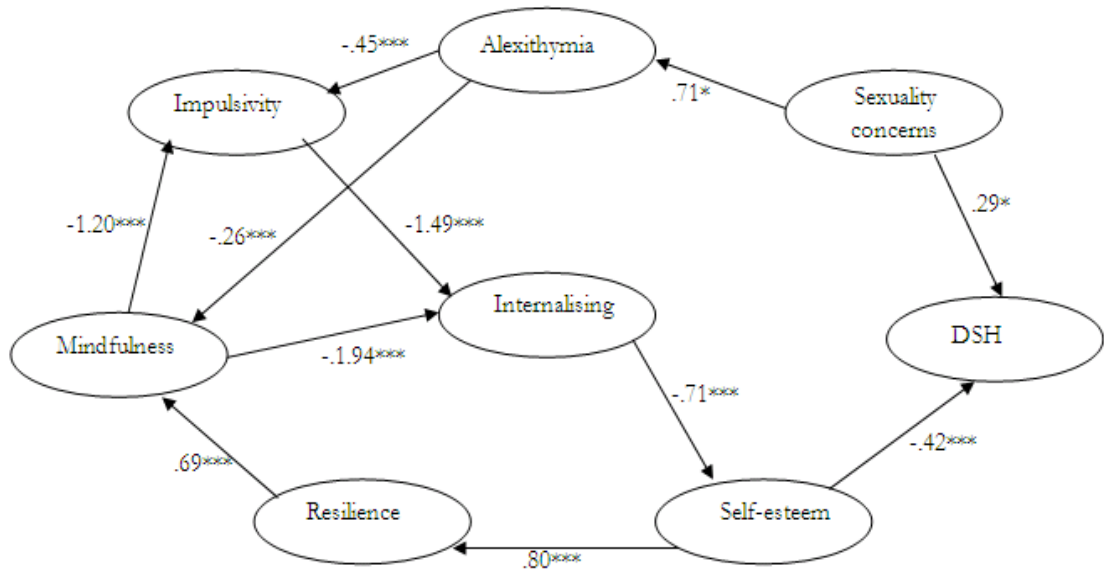
*p<.05, **p<.01, ***p<.001

Figure 35. Secondary school: Revised female model of psychological predictors of DSH.

*p<.01, ***p<.001
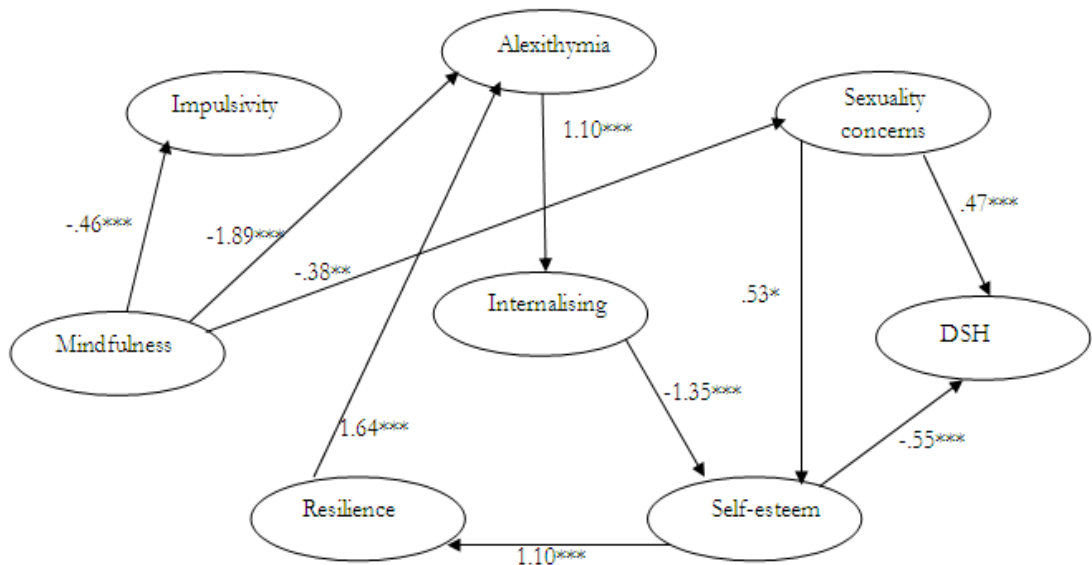
Figure 36. University student: Revised female model of psychological predictors of DSH.

*p<.05, **p<.01, ***p<.001

SEM: Psychological, Social and Behavioural Predictors of DSH

Next, behavioural and social factors were incorporated into the model, namely being bullied, substance abuse, and friends/family members' DSH for secondary school data, and abuse history and substance abuse for the university student data. Again, a proposed model based on *Figure 5* was tested (see appendices B7.f, D6. h), revised (see *Figures 37* and *38*) and assessed using secondary (T2) datasets (see appendices B7.g, D6.i). Separate models were developed by sex; the revised total T1 models were modelled on male and female data separately (see appendices B7.h, B7.j, D6.j, D6.l), and were revised (see *Figures 39 - 42*), and assessed using secondary (T2) datasets (see appendices B7.i, B7.k, D6.k, D6.m). A revised model was also modelled on the university student longitudinal dataset (see *Figure 41*), but the secondary school longitudinal dataset was too small (N=115). See Table 22 and 23 for model fit indices for secondary school and university student models respectively. Again, the fit of the secondary school student models were poor (all NFI's ≤ .73, all CFI's ≤ .82), however all the models had acceptable fit according to the RMSEA statistic (i.e. all 90% confidence intervals between .00-.10). The university student models all demonstrated good fit, especially considering their complexity (Kenny, 1998).

The psychosocial behavioural models presented here differ in the amount of variance in DSH they explain. For the secondary school student sample, the cross-sectional psychosocial behavioural model (*Figure 37*) explained 46% of the variance in DSH, while the male and female models explained 69% and 43% respectively. For the university student sample, the cross-sectional model (*Figure 38*) explained 70% of the variance in DSH, while the models assessing males (*Figure 40*) and females (*Figure 42*) separately explained 69% and 90% respectively. The longitudinal model (*Figure 43*) explained 33% of the variance in DSH. This suggests that modelling male and female DSH separately allows for better prediction of variance in DSH behaviour. The psychosocial behavioural models presented here explain a greater amount of variance in DSH in comparison to the models incorporating only psychological predictors presented in the previous section (p. 123-124). This suggests that it is important to look at both intrapersonal and interpersonal predictors of DSH to assess vulnerability.

All the models again point to an intrapersonal vulnerability whereby reduced emotional coping skills (i.e. low mindfulness and alexithymia) foster vulnerability to

internalising symptoms, which predicts lower self-esteem, which in turn predicts DSH behaviour (see *Figure 38*, *43, 39*, and *42*). The models all indicate that social and environmental factors are important, and may over-ride, or be more powerful, in the prediction of DSH. Among secondary school participants, friends and family DSH was a strong direct predictor of DSH in all the models, overshadowing the association between self-esteem and DSH (which often became non-significant in the secondary school sample models, e.g. see *Figure 37*). This is consistent with the diathesis-stress model (Nock & Cha, 2009), which suggests modelling of peer and media representations of DSH is a proximal antecedent to the behaviour (see *Figure 3*, p. 56). In the university student cross-sectional models abuse history was the strongest direct predictor of DSH. This may represent a profile of poor coping and emotion regulation associated with abuse that exists alongside DSH. The longitudinal university student model suggests the proximal predictors of DSH are more likely to be low self-esteem (stronger path coefficient than for abuse), with the underlying vulnerability of internalising symptoms, and more distal vulnerability of alexithymia and low mindfulness. This is consistent with the psychological models discussed previously.

The secondary school models suggest that male DSH is directly predicted by friends and family DSH, and impulsivity, while female DSH is also directly predicted by friends and family DSH (though to a lesser degree than males), and by poor self-esteem fostered by internalising symptoms. The university student models suggest that male DSH is directly predicted by abuse history and low self-esteem, which is consistent with the longitudinal model. In the female university student cross-sectional model DSH was only significantly directly predicted by abuse history. It may be that there is an underlying profile of abuse history and poor coping (see Yates' (2004) traumagenic hypothesis) that is especially relevant to female DSH.
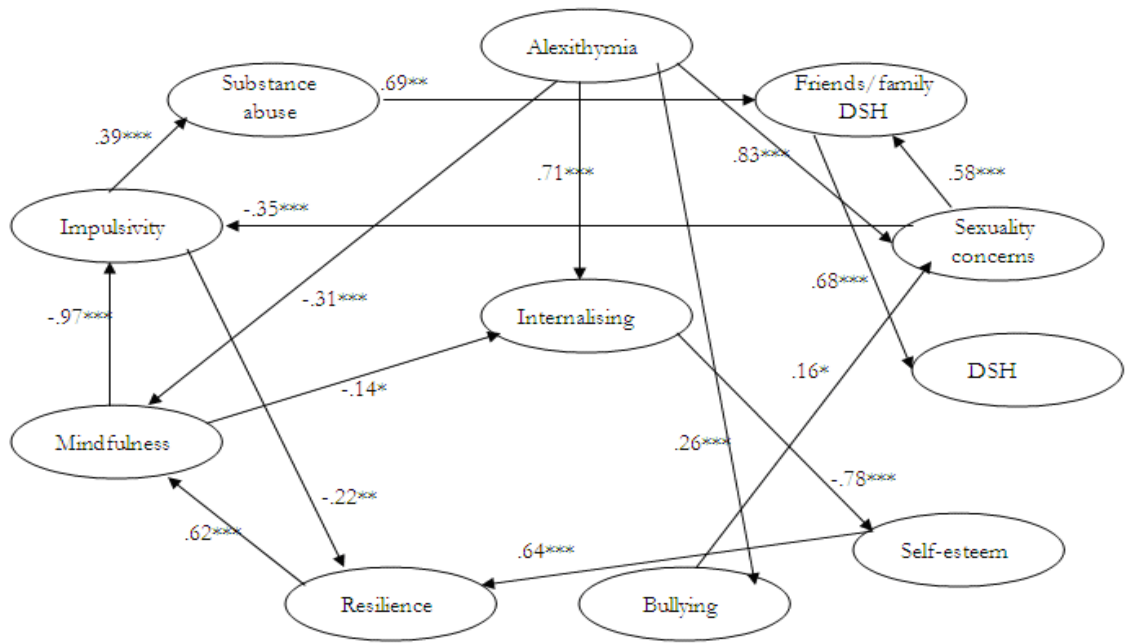
Figure 37. Secondary school: Revised psychosocial-behavioural path model for DSH.

*p<.05, **p<.01, ***p<.001
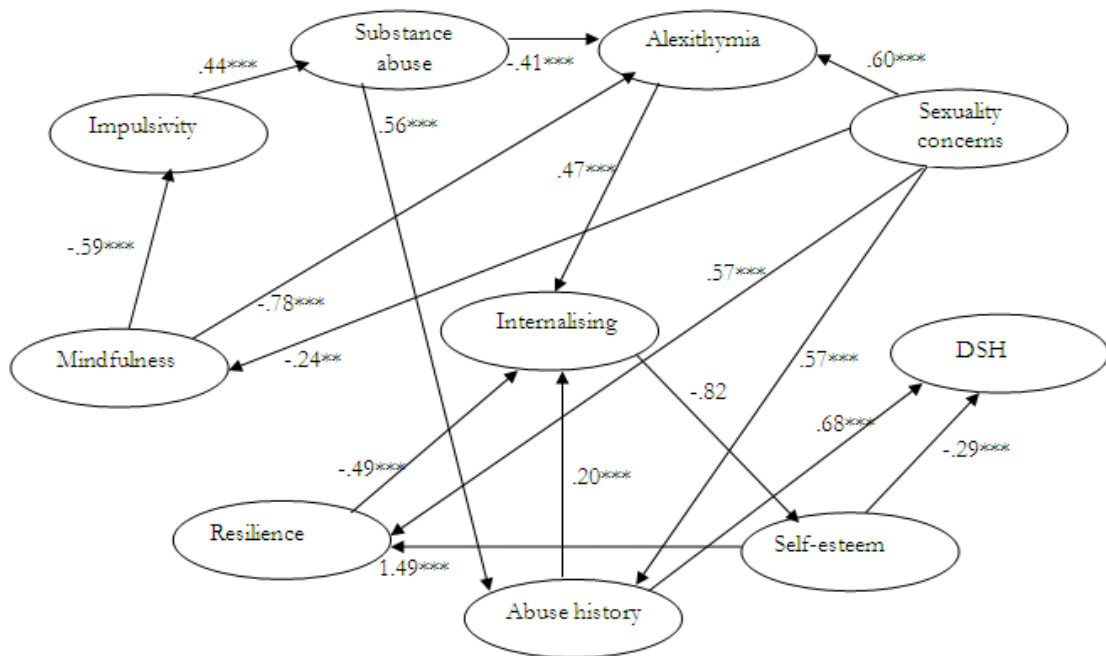
Figure 38. University students: Revised psychosocial-behavioural path model of DSH
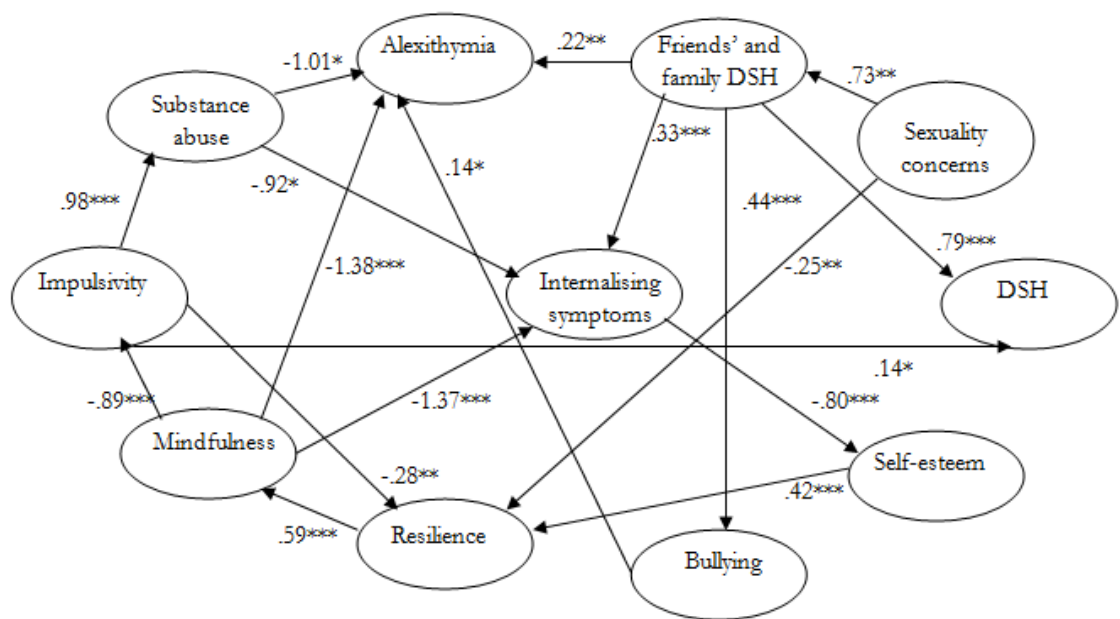
*p<.05, **p<.01, ***p<.001

Figure 39. Secondary school: Revised male psychosocial-behavioural path model of DSH.
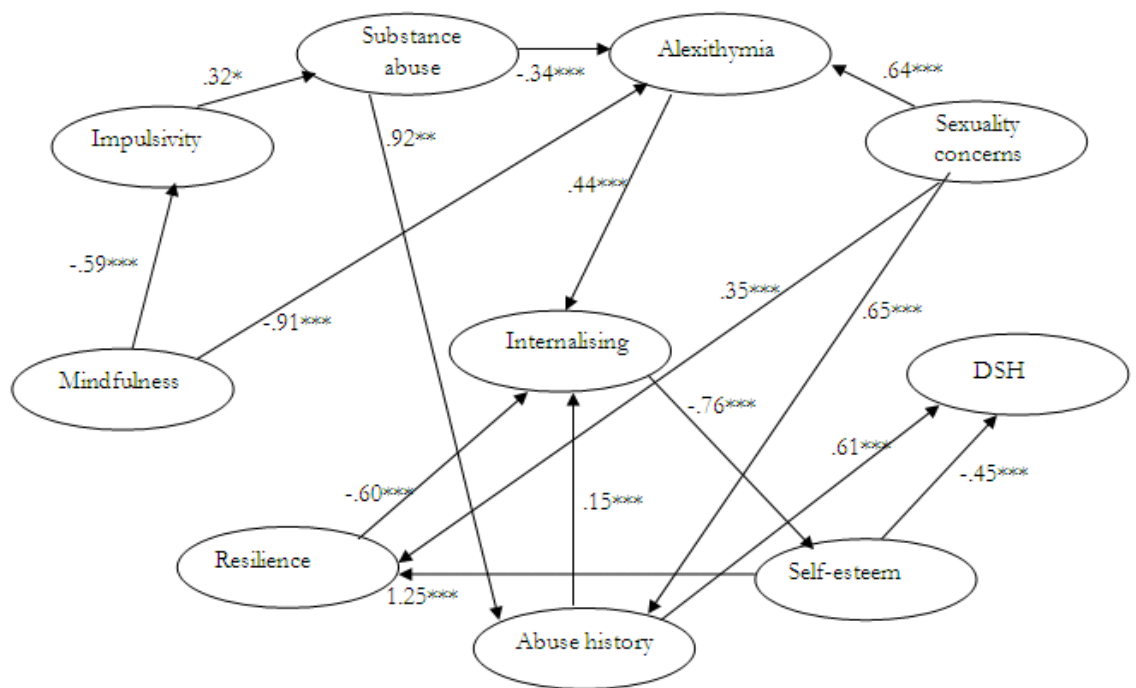
*p<.05, **p<.01, ***p<.001

Figure 40. University students: Revised male psychosocial-behavioural path model of DSH.

*p<.05, **p<.01, ***p<.001

Table 22

Secondary school: Model fit indices for psychosocial behavioural path models of DSH.

Model fit indices	Test of Proposed model (appendix B6.f) N= 470	Revised model (*Figure. 37*) N= 470	Model check of revised model (appendix B6.g) N= 354	Total revised model tested on male data (appendix B6.h) N= 263	Total revised model tested on female data (appendix B6.j) N= 209	Revised male model (*Figure 39*) N= 263	Revised female model (*Figure 41*) N= 209	Model check of male model (appendix B6.i) N= 165	Model check of female model (appendix B6.k) N= 195
X^2	2661.77***	2318.95***	2089.77***	1582.60***	1688.16***	1586.44***	1641.83***	1544.65***	1532.71***
Degrees freedom	712	686	686	686	686	684	687	684	687
X^2/df	3.74	3.38	3.05	2.31	2.46	2.32	2.39	2.26	2.23
NFI		.75	.72	.72	.66	.72	.66	.62	.68
CFI	.78	.81	.79	.82	.76	.82	.76	.74	.79
PNFI	.66	.69	.67	.67	.61	.67	.62	.57	.63
RMSEA (confidence interval)	.08 (.07-08)	.07 (.07-.07)	.08 (.07-.08)	.07 (.07-.08)	.08 (.08-.09)	.07(.07-.08)	.08 (.08-.09)	.09(.08-.09)	.08 (.07-.08)

***p<.001

Table 23

University students: Model fit indices of psychosocial behavioural path models of DSH.

Model fit indices	Proposed model (appendix D6.h) N= 1125	Revised model (*Figure 39*) N= 1114	Model check of revised model (appendix D6.i) N= 602	Revised model for longitudinal data (*Figure 42*) N= 286	Test revised model on male dataset (appendix D6.l) N= 539	Test revised model on female dataset (appendix D6.j) N= 542	Revised male model (*Figure 41*) N= 548	Revised female model (*Figure 42*) N= 545	Model check of male model (appendix D6.m) N= 332	Model check of female model (appendix D6.k) N= 270
X^2	358.08***	266.53***	318.77***	77.02(p=.13)	198.40***	195.40***	146.27***	193.77***	148.26***	167.45***
Degrees freedom	67	74	74	64	74	74	62	75	62	75
X^2/df	5.34	3.60	4.31	1.20	2.68	2.64	2.36	2.58	2.39	2.23
NFI	.93	.95	.90	.94	.93	.92	.97	.92	.92	.87
CFI	.94	.96	.92	.99	.95	.95	.95	.95	.95	.92
PNFI	.59	.67	.63	.66	.65	.65	.65	.66	.62	.62
RMSEA (confidence interval)	.06 (.06-.07)	.05 (.04-.06)	.07(.07-.08)	.03 (.00-.05)	.06 (.05-.07)	.06 (.05-.07)	.05 (.04-.06)	.05 (.05-.06)	.07 (.05-.08)	.07 (.05-.08)

***p<.001
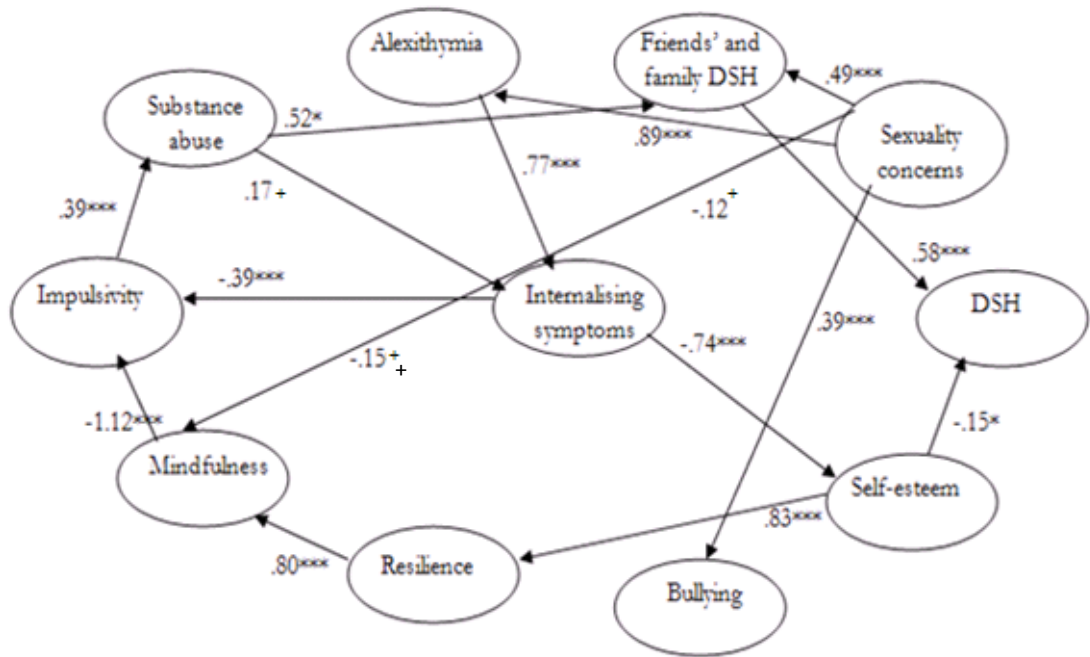
Figure 41. Secondary school: Revised female psychosocial-behavioural path model of DSH.
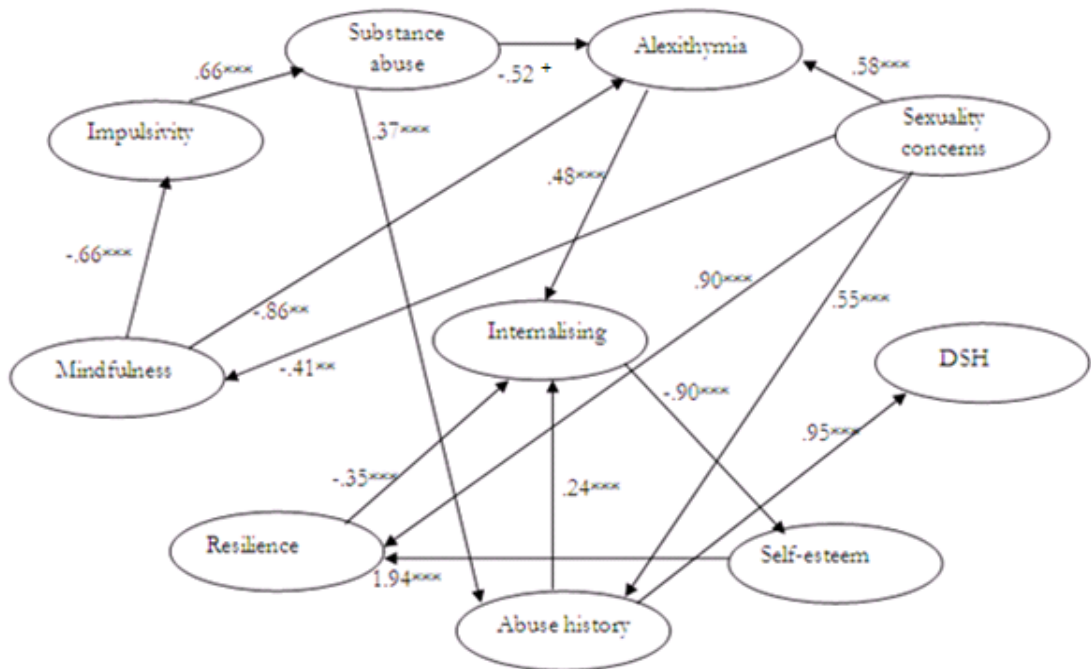
*p<.05, **p<.01, ***p<.001, ⁺p<.10

Figure 42. University students: Revised female psychosocial behavioural path model of DSH.
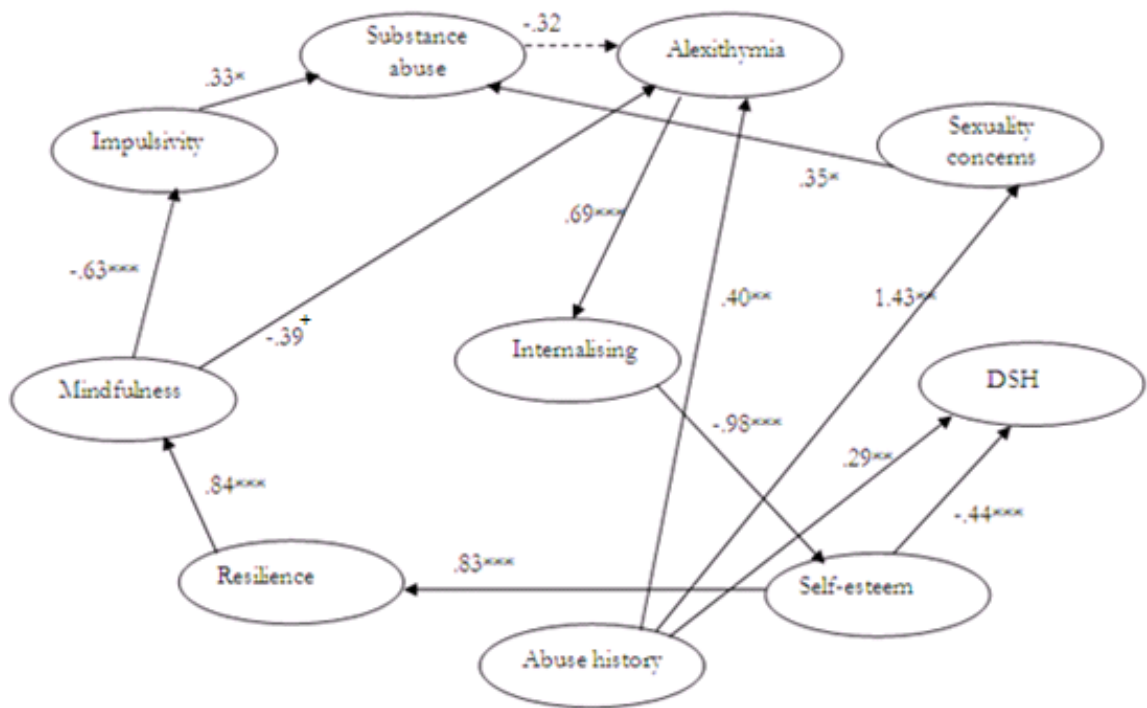
*p<.05, **p<.01, ***p<.001, + p<.10

Figure 43. University students: Longitudinal psychosocial behavioural model of DSH

*p<.05, **p<.01, ***p<.001, +p<.10 , ---▶ non-significant paths

Summary of Study 2.2

The models presented in Study 2.1 offer insight into the inter- and intra-personal context likely to foster, or exist alongside, youth DSH. The cross-lag models from both samples suggest that DSH leads to greater depression, anxiety, internalising symptoms and less adaptive use of emotions, resilience and mindfulness over time. This indicates that DSH causes decreased wellbeing, rather than poor psychological wellbeing leading to self-harm. This may explain why there are few direct predictors of DSH in the structural equation models; factors indicative of poor psychological wellbeing co-exist alongside DSH, are made worse by DSH, but do not necessarily cause DSH. For both samples, the psychological models suggested that only sexuality concerns and self-esteem were significant direct predictors of DSH, not internalising symptoms, alexithymia, or other psychological correlates.

The initial distress co-existing at the onset of DSH behaviour may become less and less manageable, or compounded by new stressors caused by engaging in DSH (e.g. anxiety, increased bullying; see *Figures 8, 9* and *28* (borders significance)). A tension-

reduction cycle begins, whereby DSH becomes the method of choice for emotional regulation of co-existing difficulties, and is reinforced by the reduction in psychological distress it provides. This is consistent with several theoretical models of DSH, including the affect regulation, tension reduction, anxiety reduction and hostility models, and the theoretical frameworks of the EAM (Chapman et al., 2006) and the diathesis-stress model (Nock & Cha, 2009) (refer to p. 55-57). This is also consistent with anecdotal reports from youth who self-harm, who cite emotional distress as common antecedents to self-harm episodes (e.g. Nixon et al., 2002).

Perhaps other factors, such as social triggers which foster curiosity or model DSH behaviour, lead to initially self-harming, and the self-harm is maintained by the relief it provides for co-existing emotional difficulties (e.g. internalising). This is indicated by the importance of the social factors of friend and family DSH and abuse history in the psycho-social behavioural models presented above. For the secondary school sample, the more complex structural equation models incorporating social and behavioural variables found friend and family members' DSH to be the only consistent direct predictor of DSH. Again, other indicators of poor psychological wellbeing existed alongside DSH (e.g. low mindfulness, low resilience), but were not predictive of DSH behaviour. Youth may choose to engage in DSH based on environmental prompts or triggers (e.g. modelling by others) and come to learn that DSH reduces the emotional distress they experience.

For the university student sample DSH was consistently predicted by low self-esteem and abuse history (using both cross-sectional and longitudinal data). Abuse history was associated with sexuality concerns and substance abuse; this may be part of a larger presentation of historical abuse, a tendency to internalise, and maladaptive coping. In the longitudinal model, abuse history significantly predicted DSH, sexuality concerns (which predicted substance abuse), and alexithymia. Abuse may lead to the inability to express and identify emotions, and associated maladaptive coping (i.e. substance abuse and DSH). Perhaps there are two avenues of vulnerability to DSH; one more pathological and invasive pattern of behaviour associated with abuse history and maladaptive coping, and another more prevalent pattern of low self-esteem and a tendency to engage in DSH during times of stress. Cross-sectionally, university student female DSH was not significantly directly predicted by self-esteem in the complex psycho-social behavioural model. This may be because the large path co-efficient (.95)

between abuse history and DSH prevented contribution of unique variance, or alternatively female DSH may be characterised by a history of abuse.

For some youth, DSH may represent a symptom of a much wider psychological syndrome associated with abuse history and emotion disregulation (e.g. alexithymia), which has led to entrenched maladaptive coping strategies (e.g. substance abuse, DSH) to manage psychological distress. This is consistent with Yates' (2004) traumagenic hypothesis, where DSH is seen as a coping mechanism developed in situations of abuse. This presentation is also consistent with Deiter et al's (2000) argument that DSH is linked to a failure to develop self-capacities post-child abuse, including the ability to regulate emotion, maintain self-esteem and develop and sustain interpersonal connections. The models presented here account for this type of presentation, especially for females.

Study 2.1 provides information on the predictors of DSH using survey data and regression modelling techniques. The explanations offered by these models do not necessarily reflect youths' own understandings of their DSH, or common explanations for DSH that exist within the community. The next section investigates youths' explanations and motives for DSH, and explanations given by school staff. Commonality in explanations are likely to represent lay-theories of DSH behaviour, and are important in determining response to DSH within youths' environment, and common stereotypes and constructions of DSH (see Study 3).

Study 2.2 Reasons for DSH

This study investigates self-reported motives for DSH (Study 2.2a), and sample differences in explanations for DSH behaviour (Study 2.2b). Using data from the secondary school survey, different profiles of DSH behaviour according to function are presented (Study 2.2a). The scores of secondary school participants with a history of DSH on the Reasons for DSH scale of the FASM were categorised into groups based on the functions of their DSH. This categorisation yielded different profiles of DSH behaviour and psychological and social wellbeing. In addition, Study 2.2b presents a quantitative analysis of coded qualitative data from secondary school student and university student participants' explanations for their DSH behaviour, and the reasons

teacher participants' gave for student DSH (taken from an opinion and stereotypes questionnaire, a focus of Study 3).

Study 2.2a   Functions of DSH: Relation to DSH behaviour and facets of wellbeing.

The analyses in this study focus on secondary school participants' self-reported reasons for their DSH based on scores on the FASM in the secondary school survey (see p. 79-82 for survey methodology). The FASM reasons for DSH scale was factor analysed in Study 1 (p. 84-7), settling on 3 factors: DSH for 'attention/understanding', 'emotional relief/control' and 'avoidance or manipulation'. The association between these factors and the predictor variables are presented in this study, followed by a cluster analysis based on participants' reported reasons for DSH. Group differences between cluster groupings are presented below. The analyses in Study 2.2a use data from participants with a history of DSH who completed the FASM section of the school survey. The T1 and T2 samples were combined to utilise all available participant data (T1: N= 524, mean age= 16.35, S.D.= .63; T2: N= 276, mean age= 16.43, S.D.= .68). Datasets were merged due to the small number of participants who completed the Reasons for DSH scale with a history of DSH (it was at the end of the 12-page questionnaire, which may have contributed to the poor response rate for this scale i.e. students may not have been motivated to complete it or may have run out of time).

First, Table 24 presents the percentage of participants (in T1 sample) who endorsed each of the 21 functions for DSH in the reasons for DSH scale of the FASM. The most highly endorsed functions were 'to punish yourself', 'to feel something, even if it is pain', and 'to stop bad feelings'. The least endorsed functions were 'to makes others angry', 'to be like someone you respect', and 'to avoid punishment or paying the consequences'. The average endorsement across the items (i.e. 75.60%; see Table 24) suggests that most items were not endorsed by participants. This may be because the functions in the scale did not resonate with participants' understanding of their motives, or the reasons behind participants' DSH may be unconscious or difficult to access, especially if the behaviour had become habitual. Also, many participants did not identify their self-harming behaviour as DSH; several participants had indicated engaging in DSH on the DSHI-s, but wrote in the margin of their surveys that they would never

Table 24

Endorsement of the various functions of DSH listed in the Functions of DSH scale of the FASM.

Item	Percentage endorsing this function of DSH		
	Never	Sometimes	Often
10. To punish yourself.	57.65	28.47	13.88
4. To feel something, even if it was pain.	58.45	28.87	12.68
14. To stop bad feelings.	58.99	29.50	11.51
2. To relieve feeling numb and empty.	61.70	26.60	11.70
21. To feel relaxed.	65.82	24.00	10.18
6. To get control of a situation.	67.97	23.49	8.54
5. To avoid doing something unpleasant you don't want to do.	72.95	20.28	6.76
7. To try to get a reaction from someone, even if it is negative.	75.44	18.15	6.41
18. To give yourself something to do when alone.	75.09	17.69	7.22
1. To avoid school, work, or other activities.	76.84	17.54	5.61
3. To get attention.	79.51	16.96	3.53
8. To receive more attention from your parents or friends.	79.79	14.89	5.32
9. To avoid being with people.	82.14	13.57	4.29
15. To let others know how desperate you are.	82.37	13.67	3.96
11. To get other people to act differently or change.	81.43	14.64	3.93
16. To feel more a part of a group.	84.29	12.14	3.57
19. To get help.	83.75	11.55	4.69
13. To avoid punishment or paying the consequences.	85.71	11.43	2.86
12. To be like someone you respect.	85.82	10.28	3.90
17. To get your parents to understand or notice you.	84.95	10.04	5.02
20. To make others angry.	87.05	9.35	3.60
Average percentage across items	75.60	17.76	6.62

hurt themselves, or that they do not hurt themselves. These participants may not have completed the FASM reasons for self-harm scale correctly because they may not consider behaviour falling within the definition of DSH in this thesis to be self-harm.

The subscale 'Emotional relief/control' had the highest percentage of participant endorsement overall (38.24%), while the other two factors where, on average, equally endorsed by participants ('attention/understanding' 18.17%, 'avoidance or manipulation' 20.04%) (see p. 84-7 for factor analysis of FASM).

Table 25 presents correlations between the subscales of the Reasons for DSH scale, DSH, and the predictor variables for DSH using the total secondary school dataset. All three subscales of the functions of DSH scale co-varied with higher scores on alexithymia, depression, anxiety, impulsivity, bullying, substance abuse (non-significant for the 'attention or understanding' subscale), sexuality concerns, sexual abuse history, physical abuse (non-significant for the 'emotional relief/control' subscale) and lower scores on self-esteem, adaptive use of emotions, resilience and mindfulness, all known correlates of DSH behaviour (refer to p. 41-46). Of interest, the subscale of 'emotional relief/control' was the most strongly associated with difficulties in emotional awareness and functioning (i.e. alexithymia, depression, anxiety and lower self-esteem); this is expected given that poor introspective awareness (i.e. alexithymia) may create a strong need to relieve emotional tension or feel in control of emotional experience; DSH appears to fulfil this need for these participants.

Differences in scores on the subscales of the FASM reasons for DSH scale were assessed according to groupings based on demographics, sexuality concerns, help-seeking, bullying history, and abuse history. Mean scores on the subscales for each group of participants are presented in Table 26.

Sex differences in subscales of Reasons for DSH scale.

There were no significant differences between male and female participants for the subscales 'attention/understanding' $F_{(1, 398)}=.38$, $p=.54$, and 'avoidance or manipulation' $F_{(1, 399)}= 1.95$, $p=.16$ but females endorsed the items in the subscale 'emotional relief/control' significantly more than males, $F_{(1, 401)}= 40.04$, $p<.001$.

Table 25

Correlations between subscale scores of Reasons for DSH and DSHI-s and predictor variables.

Scale	F1: Attention/understanding		F2: Emotional relief/control		F3: Avoidance or manipulation	
	T1 dataset	T2 dataset	T1 dataset	T2 dataset	T1 dataset	T2 dataset
DSHI-s	.18**	.21*	.46***	.36**	.32***	.32***
TAS-20	.29***	.05	.32***	.20*	.25***	.16+
Schutte	-.16**	-.29**	-.10+	-.18+	-.16**	-.39***
SDS	.31***	.28**	.43***	.37***	.36***	.30**
SAS	.40***	.26**	.50***	.44***	.42***	.27**
RSE	-.21***	-.30***	-.41***	-.44***	-.26***	-.29**
Resilience	-.31***	-.30**	-.37***	-.29***	-.37***	-.28**
CAMS-R	-.20**	-.10	-.25***	-.12	-.21***	-.11
BIS-II	.19**	.22*	.12*	.32***	.20**	.27**
Bullying	.24***	.26**	.30***	.14	.20**	.36***
Substance abuse	.11+	.08	.15**	.19*	.18**	.20*
Sexuality	.22***	.13	.31***	.19*	.22***	.18+
Physical abuse	.16	.23*	.17+	.05	.21*	.20*
Sexual abuse	.27**	.25*	.34***	.43***	.29***	.32**

*p<.05, **p<.01, ***p<.001, +p<.10; *N* range 98-121.

Ethnic group differences in subscales of Reasons for DSH scale.

A MANOVA found significant ethnic group differences in the reasons for DSH, $F(12, 383)= 3.09$, p<.001. Tests of between-subject effects found significant differences for the subscales 'attention/understanding' $F(4, 391)=5.06$, p<.01, and 'avoidance or manipulation' $F(4, 391)= 8.05$, p<.001, but not for 'emotional relief/control' $F(4, 391)= 1.89$, p=.11. Post-hoc tests revealed that items from the subscales 'attention/understanding' (F1) and 'avoidance or manipulation' (F3) were

endorsed significantly more by Pacific Island participants than other ethnic groups (see Table 26).

Sexuality concerns: differences in subscales of Reasons for DSH scale.

A MANOVA found a significant difference in endorsement of the subscales of the Reasons for DSH scale based on sexuality concerns, $F(9, 392)= 4.82$, $p<.001$. Participants ($N= 21$) who declined to say whether they had concerns about their sexuality (an option response to the item) were excluded. Tests of between-subjects effects indicated significant differences in all three subscales; 'attention/understanding' $F(3, 398)=6.13$, $p<.001$, 'emotional relief/control' $F(3, 398)=14.01$, $p<.001$, 'avoidance or manipulation' $F(3, 398)= 8.15$, $p<.001$. Post-hoc tests found that participants reporting 'a lot' of sexuality concerns endorsed the items in all three subscales significantly more than participants self-reporting no sexuality concerns (see Table 26).

Help seeking and reasons for DSH.

A one-way ANOVA found a significant difference between participants who did and did not seek help before their last episode of DSH on the three subscales of the reasons for DSH scale; 'attention/understanding' ($F(1, 336)=6.22$, $p<.05$) and 'emotional relief or control' ($F(1, 338)=13.98$, $p<.001$), while 'avoidance or manipulation' bordered significance ($F(1, 335)=3.55$, $p=.06$). The items from all three subscales were endorsed more by participants who had sought help before their last episode of DSH compared to those who had not. This suggests that seeking help is associated with stronger self-reported function of DSH. Several reasons may account for this. Discussing one's DSH with others may raise awareness of the functions because of the explanation involved. Alternatively, greater awareness of the functions of one's DSH may help someone feel equipped to disclose. Also, post-disclosure others may have discussed with participants why they engaged in DSH, giving the opportunity for reflection on their behaviour. Participants who disclose may also be more aware of their needs, and want to receive help to achieve these needs in pro-social ways.

Abuse history and reasons for DSH.

A one-way ANOVA found participants with abuse history (combined physical and sexual abuse) had significantly greater endorsement of the items in the subscale 'avoidance or manipulation' than participants without self-reported abuse history, $F(203,1)=5.27$, $p<.05$. Using DSH for 'manage the social environment' may represent modelling of abusers' behaviour (i.e. aggression (becomes self-directed)) to achieve personal needs or manipulate the environment). Participants with a history of abuse tended to endorse the items in the subscale 'emotional relief or control' more than participants without self-reported abuse history, $F(1, 205)=3.62$, $p=.06$; this bordered significance. There was no significant difference between participants with and without self-reported abuse history for endorsement of the items in the subscale 'attention or understanding', $F(1, 202)= 1.13$, $p=.29$. A one-way ANOVA found no significant different between participants with and without a history of physical abuse on endorsement of the three subscales (all F's $(1, 204)\leq 2.45$, p's $>.12$). A one-way ANOVA found that participants with a self-reported history of sexual abuse endorsed items on all three subscales significantly more than participants without self-reported history of sexual abuse ('attention or understanding' $F(1, 203)=11.18$, $p<.001$; 'emotional relief or control' $F(1, 206)=30.19$, $p<.001$; 'avoidance manipulation' $F(1, 204)=3.14$, $p<.001$). Perhaps the functions of DSH for those with a history of abuse are more differentiated or multifaceted that for others. In addition, the needs driving the DSH of participants with a history of abuse may be experienced as more aversive due to lack of resilience and emotional coping skills to manage distress.

Bullying history and reasons for DSH.

A one-way ANOVA found participants with a past-year history of being bullied had significantly higher endorsement of the items in a subscales ('attention and understanding' $(F(326,1)=5.66$, $p<.05$), 'avoidance and manipulation' $(F(328,1)=8.24$, $p<.01$), and 'emotional relief/control' $(F(329,1)= 3.15$, $p=.08$), though the latter bordered significance). This suggests that being bullied was associated with reporting reasons for DSH in general, and stronger endorsement of these reasons.

The differences described above suggest demographic differences exist in the endorsement of functions of DSH; female participants were more likely to engage in DSH for emotional relief or control than males, and Pacific Island participants were more likely to engage in DSH for avoidance or manipulation and attention or

Table 26

Mean scores for the subscales of Reasons for DSH scale by sex, ethnicity, help-seeking behaviour, sexuality concerns, bullying and abuse history.

		Attention/ understanding Mean (S.D.)	Emotional relief/control Mean (S.D.)	Avoidance/ manipulation Mean (S.D.)
		Subscale scores		
Sex	Male	1.23 (.40)	1.38(.49) [a]	1.24(.40)
	Female	1.25 (.40)	1.72 (.58) [a]	1.30(.43)
Ethnicity	Pakeha	1.23(.02) [a]	1.52(.03)	1.24 (.06) [a]
	Maori	1.25 (.06) [b]	1.59(.09)	1.25 (.06) [b]
	Pacific Island	1.62 (.09) [abcd]	1.82(.13)	1.74 (.09) [abcd]
	Asian	1.16(.06) [c]	1.57(.09)	1.17(.06) [c]
	Other	1.21 (.08) [d]	1.36(.12)	1.20 (.08) [d]
Sexuality concerns	No	1.20 (.35)[a]	1.45 (.52) [b]	1.22 (.36) [c]
	Yes, once	1.22(.42)	1.49(.48)	1.23(.34)
	Yes, alot	1.47 (.59) [a]	2.00 (.65) [b]	1.52 (.55) [c]
Seek help	Yes	1.38 (.46) [a]	1.85(.57) [b]	1.38 (.41) [d]
	No	1.23 (.40) [a]	1.54 (.56) [b]	1.26 (.43) [d]
Ever abused	Yes	1.27(.44)	1.63 (.56) [d]	1.36(.48)
	No	1.21(.36)	1.48 (.58) [d]	1.22(.37)
Physically abused	Yes	1.25(.40)	1.58(.53)	1.34(.46)
	No	1.23(.40)	1.53(.60)	1.25(.41)
Sexually abused	Yes	1.44 (.62) [a]	2.01 (.56) [b]	1.57 (.56) [c]
	No	1.20 (.33) [a]	1.46 (.53) [b]	1.24 (.38) [c]
Bullied in past year	Yes	1.30 (.44) [a]	1.58 (.56) [b]	1.34 (.46) [d]
	No	1.19 (.34) [a]	1.47 (.54) [b]	1.21(.35) [d]

[a, b, c] significant difference between groups. [d] borders significant difference between groups (p<.08).

understanding than participants from other ethnic groups (later requires replications given small sample size). Participants with greater psychological vulnerability (e.g. history of being bullied, sexual abuse, or concerns about sexuality) endorsed the functions of DSH more strongly than participants who were less psychologically vulnerable. Also, participants who sought help before their last episode of DSH were endorsed the functions of DSH more strongly. This suggests that youth who experience the greatest psychological difficulty, and are aware that they need help, are aware that their DSH has a functional purpose. It may be more difficult for these youth to stop self-harming, as they may consider it necessary to adequately function (and meet the needs they identify with).

Cluster analysis based on participants' scores on the subscales of Reasons for DSH scale

Participants were categorised into clusters based on their scores on the FASM subscales to discover if there were different psychological wellbeing profiles characteristic of certain reasons for DSH. Cluster analysis is a statistical technique for grouping cases based on a specified characteristic called a variate (Hair et al., 1995). Clusters are made so that cases that are most similar to each other are clustered together. Data from participants will be clustered based on their self-reported reasons for self-harm.

A Hierarchical cluster analysis was conducted using Ward's method, with a 2-5 cluster solution stipulated in the analysis. A three cluster solution proved most appropriate for further analyses of the data as the two cluster solution did not show all the variation in the data (with one group being low on all reasons, and one being high on DSH for emotional relief/control; participants with high scores for all types of reasons were not represented by a cluster grouping). The four cluster solution had groups with high, medium and low scores on all types of reasons, and one group distinguished by high scores for DSH for emotional relief/control; however the cluster with high scores on all types of reasons had a very small sample size (N=11), which precluded conducting inferential analyses. In the final three cluster solution, Cluster 1 (N=62; 32 male, 28 female, 2 missing data on sex) was characterised by higher scores on all three subscales of the FASM (reported often engaging in DSH for attention/understanding, emotional relief/control, and avoidance/manipulation),

Table 27

Cluster group differences on different variables assessed in the longitudinal survey

Variable	Cluster group 1 (High on all 3 FASM subscales)	Cluster group 2 (High on all 3 FASM subscales)	Cluster group 3 (Primarily 'emotion relief/control')
	Mean (S.D.)	Mean (S.D.)	Mean
FASM subscale: 'attention/understanding'	2.02 (.39) [a]	1.06 (.13) [a]	1.16 (.22) [a]
FASM subscale: 'emotional relief/control'	2.04 (.45) [a]	1.12 (.17) [ab]	2.09 (.40) [b]
FASM subscale: 'avoid/manipulate'	1.99 (.37) [a]	1.07 (.15) [a]	1.25 (.29) [a]
DSHI-s	1.96 (.94) [a]	1.52 (.44) [ab]	1.96 (.67) [b]
TAS	3.75 (.97) [a]	3.26 (.77) [ab]	3.75 (.88) [b]
DIF subscale	3.59 (1.51) [a]	2.60 (1.22) [ab]	3.60 (1.36) [b]
DDF subscale	3.97 (1.07) [a]	3.34 (1.15) [ab]	3.80 (1.14) [b]
EOT subscale	3.76 (.92)	3.81 (.82)	3.84 (.86)
Schutte	3.05 (.54) [ab]	3.40 (.57) [a]	3.38 (.56) [b]
F1	2.99 (.71) [a]	3.46 (.68) [ab]	3.07 (.77) [b]
F2	3.10 (.65) [ab]	3.46 (.74) [a]	3.44 (.67) [b]
F3	3.06 (.66) [a]	3.29 (.64) [a]	3.51 (.54) [a]
F4	3.09 (.82) [ab]	3.40 (.81) [a]	3.54 (.81) [b]
SDS	2.49 (.43) [a]	2.14 (.37) [ab]	2.44 (.36) [b]
SAS	2.42 (.47) [a]	1.90 (.45) [ab]	2.31 (.43) [b]
RSE	2.52 (.76) [a]	3.05 (.58) [ab]	2.40 (.66) [b]
BIS-II	2.61 (.36) [ab]	2.41 (.32) [a]	2.48 (.33) [b]
CAMS-R	2.32 (.44) [a]	2.54 (.43) [ab]	2.38 (.44) [b]
PRQ (+ electronic bullying)	1.72 (.74) [ab]	1.37 (.47) [a]	1.49 (.56) [b]
Resilience	4.16 (.1.18) [a]	5.07 (1.02) [a]	4.61 (1.25)

Substance abuse	2.19 (.72)	1.95 (.71)	2.14 (.73)
Sexuality	1.75 (.98) [a]	1.37 (.79) [ab]	1.71 (1.04) [b]
Physical abuse	2.47 (1.67) [a]	1.71 (1.05) [a]	2.02 (1.29)
Sexual abuse	1.75 (1.08) [a]	1.08 (.33) [ab]	1.64 (1.17) [b]

[a] or [b] = significant difference between groups

Cluster 2 (N=228; 148 male, 77 female, 3 missing data on sex) was characterised by low scores on all three subscales of the FASM. These participants did not identify strong reasons for their DSH. Cluster 3 (N=112; 32 male, 80 female) was characterised by primarily engaging in DSH to relieve or control their emotional experience. Descriptive statistics by cluster for FASM subscale scores, DSH, and other variables are presented in Table 27, along with an indication of significant group differences.

A one-way ANOVA found significant differences between clusters for history of DSH. Cluster 2 had a lower lifetime prevalence rate of DSH (see Table 27), than clusters 1 and 3. Participants in clusters 1 and 3 may have a history of more entrenched, long-standing DSH behaviour, where reasons for self-harming are more accessible and retrievable.

The clusters differed significantly on all the variables assessed (all Fs ≥ 4.15, p's<.05), except for the EOT subscale of the TAS-20, $F_{(2, 398)}=.15$, p=.86), and post-hoc tests found no significant difference in substance abuse (refer to Table 27 for group differences). Overall, these group differences suggest cluster 2 experienced the least psychological, behavioural and social difficulties. Cluster 1 and 3 experienced greater problems in all areas of functioning (psychological, behaviour and social), while cluster 1 had more pronounced difficulties in adaptive use of emotion, physical abuse, and bullying. This suggests cluster 1 is the most vulnerable group overall for poor outcomes. Cluster 2 participants may have engaged in DSH minimally, not had strong reasons for doing so, and function better psychologically than participants in clusters 1 and 3. It is comforting to note that the majority of participants belonged to cluster 2, rather than the more psychologically vulnerable clusters 1 and 3.

Interaction between Sex and cluster grouping on DSH history and predictor variables for DSH.

Next, a series of MANOVAs were conducted to assess the main effects and interaction of cluster grouping and sex on DSH history and the other variables assessed in the longitudinal survey. As expected given the analyses above, there was a main effect of cluster grouping on almost all the dependent variables: DSH, depression, anxiety, sex, resilience, bullying history, mindfulness, impulsivity, adaptive use of emotion, physical abuse, sexual abuse and sexuality (all Fs ≥ 5.44, p's<.01). There was also a significant main effect of cluster grouping on feeling comfortable to talk to close friends about worrying issues (F(2, 370)=3.53, p<.05), however post-hoc analyses revealed no significant difference between groups. There was a non-significant main effect of cluster grouping on substance abuse and feeling close to friends (F(2, 394)=2.22, p=.11; F(2, 370)=.75, p=.47 respectively). See Table 27 for direction of these differences.

For alexithymia, depression, self esteem, impulsivity, substance abuse and sexuality there were no significant main effects for sex (all Fs ≤ 3.02, p's>.05), and no interaction effect of cluster and sex (all Fs ≤ 1.61, p's>.05). Although there were cluster group differences on all these variables (except substance abuse), mean scores did not vary by sex among this sample, and sex did not influence the relationship between cluster grouping and these variables. This may have been influenced by the proportion of males and females in clusters 2 and 3; these clusters were male-, and female-dominated respectively (ratio approximately 2:1 for both).

There was a main effect of sex on DSH behaviour (F(1, 396)=14.55, p<.001), and an interaction of cluster and sex (F(1, 395)=5.52, p<.01). Both sexes in cluster 2 scored low on DSH compared to cluster 1 and 3 participants. Cluster 1 males scored significantly higher on mean DSH than females and had highest mean DSH scores overall, while females in cluster 1 were lower on DSH than females in cluster 3. This suggests that, among males, those in cluster 1 (high on all three reasons for DSH subscales) have highest mean DSH scores, while cluster 3 females (high scores for engaging in DSH for emotional relief/control) have highest mean DSH scores.

There was a significant main effect of sex on anxiety ($F(2, 392)=9.56$, $p<.05$; females self-reported significantly more anxiety than males in all three cluster groups), but there was no significant interaction between cluster grouping and sex on anxiety.

There was no significant main effect of sex on resilience ($F(1,116)= .71$, $p=.40$), but the interaction between cluster and sex bordered significance ($F(2, 115)=2.77$, $p=.07$). Males and females had similarly low resilience in cluster 1 (which was lower overall on resilience than clusters 2 and 3). For clusters 2 and 3, males tended to score similarly on resilience (and higher than cluster 1). Females in cluster 3 tended to score lower on resilience than cluster 2, and females in cluster 3 tended to score lower on resilience than males in cluster 3. Females in cluster 2 tended towards having greater resilience than males in cluster 2. This suggests males in both groups 2 and 3 have equal resilience (higher than males in cluster 1), but females in cluster 3 have lower resiliency than females in cluster 2 (though still higher resiliency than males in cluster 3).

There was a significant main effect of sex on mindfulness and adaptive use of emotions ($F(1, 393)= 6.69$, $p<.01$ and $F(1, 394)=5.89$, $p<.05$), with females reporting lower mindfulness (for clusters 1 and 2; sex scores were similar for cluster 3), and greater adaptive use of emotions (only apparent in cluster 1). The interaction between cluster and sex for mindfulness and adaptive use of emotions were both non-significant, $F (2, 392)=.82$, $p=.44$ and $F(2, 393)= 1.53$, $p=.22$, respectively.

As well as a significant main effect of sex on bullying experience ($F(1, 324)=14.15$, $p<.001$), with females experiencing less bullying than males, there was also a significant cluster by sex interaction ($F(2,323)= 4.64$, $p<.05$). The highest rate of bullying was experienced by cluster 1 males (high on all types of reasons for DSH). Males in cluster 1 were bullied more than males in clusters 2 and 3, while in contrast, females in cluster 1 were bullied less than females in cluster 3 (their scores feel between females in clusters 2 and 3; however females' mean bullying scores were similar across clusters). This suggests males in cluster 1 were the most vulnerable to bullying, while female vulnerability was similar across clusters.

For both feeling comfortable approaching friends with worries and feeling close to friends there was a main effect of sex ($F(1, 371)=15.23$, $p<.001$ and $F(1, 371)=15.25$, $p<.001$ respectively). For all three clusters females were significantly less comfortable in approaching friends with their problems, but females also felt closer to their friends

than males. There was no significant interaction between cluster and sex for either feeling comfortable approaching friends with problems or feeling close to friends ($F_{(2, 370)}$= 1.68, p=.19 and $F_{(2, 370)}$=.10, p=.90 respectively).

For both physical and sexual abuse history there were no main effects of sex ($F_{(1, 203)}$=.55, p=.46 and $F_{(1, 202)}$=.00, p=.98 respectively). There was a significant cluster by sex interaction for physical abuse ($F_{(2, 202)}$=3.98, p<.05), where the lowest physical abuse scores were for males in cluster 3, while the highest scores were for cluster 1 males. Whereas males in cluster 1 reported higher rates of physical abuse history than males in cluster 3, females in these two clusters reported similar rates of physical abuse. Males in cluster 3 reported lower rates than both sexes in cluster 2, while females in cluster 3 reported higher rates than males in their cluster, and in contrast to males, reported higher rates than both sexes in cluster 2. There was also a significant cluster by sex interaction for sexual abuse ($F_{(2, 201)}$=10.37, p<.001). Cluster 2 had the lowest rate of sexual abuse, with no apparent sex difference. While males in cluster 3 had similarly low scores as cluster 2 participants, for females the highest scores were among those in cluster 3. Females in cluster 3 reported higher rates of sexual abuse than females in cluster 2, and cluster 1. The opposite trend by sex was found for cluster 1 participants; males in cluster 1 had the highest reported rate of sexual abuse across all participants, while females in this cluster had rates of sexual abuse that were closest to the levels found in cluster 2 (and therefore lower than the rates reported by females in cluster 3). This suggests that, among female participants, those most likely to have a reported history of sexual abuse were in cluster 3, while among males those most likely to have reported sexual abuse were in cluster 1.

These analyses suggest different profiles according to the functions of DSH and sex. It appears cluster 2 fares better than clusters 1 and 3. Looking at sex effects, females in cluster 3 fare most poorly (i.e. highest rate of DSH, sexual abuse and bullying), while for males those in cluster 1 fare most poorly (i.e. highest rates of DSH, bullying, physical and sexual abuse, and lowest resiliency). This may be because internalising symptoms and self-esteem (includes emotional upset) are most predictive of DSH for females (see models in study 2.1a), and therefore engaging in DSH for emotional relief/control is associated with greatest vulnerability. While for males, other factors (e.g. in social environment) are important predictors of DSH, making environmental functions of DSH more likely. Hence, it makes sense that having

multiple reasons for DSH (i.e. cluster 1) is associated with the greatest difficulties among males.

In summary, Study 2.3a suggests youth engage in DSH for multiple reasons, most often related to the relief and control of emotions. This is consistent with youths' reports that they engage in DSH to end feelings of numbness, or channel emotions into a physical modality (Nixon et al., 2002), and that DSH is often precipitated by depression and loneliness (Laye-Gindhu & Schonert-Reichl, 2005; Nixon et al., 2002). Affect regulation models of DSH (e.g. the EAM, Chapman et al., 2006) are supported by the finding that the most common functions of DSH relate to emotional relief and control. Emotional reasons for DSH were endorsed more by females than males, which is consistent with the models in Study 2.1a, where female DSH was most strongly predicted by internal factors. Sexuality concerns, seeking help before one's last episode of DSH (may indicate more severe difficulties as DSH is often secretive), and greater self-reported bullying and sexual abuse were all associated with greater endorsement of all types of reasons for DSH, suggesting a more clinically vulnerable profile. This was supported by the analyses of cluster group differences, where engaging in DSH for multiple different reasons was associated with poorer psychological and social wellbeing, especially for males.

An analysis of qualitative data from secondary school students and teachers and university students was conducted (Study 2.3b) to further understand peoples' reasons for DSH. This was to assess the prevalence of different types of reasons using a different methodology, and compare the findings to those of Study 2.3a. Study 2.3b is presented below.

Study 2.2b   Qualitative Analysis of Open-Ended Responses to Reasons for DSH

Next I present a qualitative analysis of the responses participants gave for the reasons behind DSH behaviour. Firstly, university student and secondary school students' self-reported reasons for their DSH, and teacher participants' reasons given for students' DSH, were coded. Once coded and put into numerical form this information on participants' perceived reasons for DSH were assessed using descriptive statistics (i.e. to compare prevalence of reasons across groups to the prevalence of

different reasons reported in the FASM, and differences between groups). This study was designed to provide confirming evidence of the prevalence of different reasons for DSH (e.g. are the most commonly reported reasons related to emotion regulation, as suggested by findings of Study 2.2a), and to assess group differences in perceived reasons for DSH (between secondary school students, university students and secondary school teachers). Commonly held reasons for DSH may inform stereotypes and stigma (assessed in Study 3). Reasons which generate sympathy (e.g. being bullied) may be linked to less negative attitudes towards DSH in comparison to reasons which de-emphasise the severity of DSH and the difficulties self-harming youth experience (e.g. attributing DSH to attention-seeking).

A content analysis (Giles, 2002) was conducted on the reasons secondary school student and university student participants gave for their DSH behaviour, and the reasons secondary school teacher participants gave for student DSH. Only data from participants who responded to open-ended questions on reasons for DSH were included. Samples and methodology are described on pages 79-82, and see foot note on page 160 (secondary school sample, N=27), 162-3 (university student sample, N=51) and 243-4 (teacher sample, N=96). Common reasons given by participants across the samples were extracted and coded as either identified (1) or not identified (0) by each participant. A total of 21 reasons were extracted; examples from the corpus are given below:

- Attention e.g. 'I just wanted some attention to see how much people cared about me or if they did care about me enough to show some sympathy' (secondary school student diary)

- For control e.g. 'They feel that they are in control when the world outside isn't' (secondary school teacher)

- In group/ peer pressure e.g. 'To be part of a group' (secondary school teacher).

- Self-punishment e.g. 'I felt bad about myself and like I was an unworthy person and needed punishing' (university student diary).

- Low self-esteem e.g. 'Low self esteem. Feelings of worthlessness' (secondary school teacher)

- Identity issues e.g. 'unconnected ~ drifting, not sure about how they fit in and who cares about them' (secondary school teacher)

- Isolation/feeling lonely e.g. 'Feels isolated' (secondary school teacher)

- Abuse e.g. 'being abuse so [DSH] how deal with it' (secondary school teacher)

- Revenge e.g. 'Get someone back emotionally e.g. boy/girlfriend, parents' (secondary school teacher)

- Stress 'I was upset that I could not do my essay, I am very tired and have been all week…the stress has not been helping' (university student diary).

- To cope when other wise unable to e.g. 'I couldn't cope with things properly, and I "deal" with it by alcohol or cutting myself' (secondary school diary participant)

- Family problems e.g. 'Difficult home circumstance – break up perhaps' (secondary school teacher)

- Poor social relationships/support e.g. 'Lack of support/don't know who to turn to' (secondary school teacher)

- Curiosity e.g. '(more than 3 months ago) I was watching a movie & the main character cut, I wondered why, so I did (it didn't even scar). I couldn't do it, it hurt too much' (secondary school student, longitudinal survey).

- Habit e.g. 'Hitting my head was just something that I did without even thinking about until I realised what I was doing, though it didn't stop me not sure what the reason or motivation was, just happened.' (university student diary).

- Bored e.g. 'Ages ago. Was bored' (secondary school student, longitudinal survey).

- Emotional reasons.

5 sub-categories:

- Negative emotion (participant listed a negative emotion) e.g. 'When I felt lost and couldn't find any hope or when I felt nervous' (university student diary).

- DSH to escape or externalise emotion e.g. 'Some kind of transference of another pain (emotional/experiential) into this physical out..'(Secondary school teacher).

- To vent frustration/anger e.g. 'I was just venting some of the frustration I was feeling' (University student diary).

- To relieve emotional pain e.g. 'Overdose on medicine cabinet because of painful experience.' (secondary school student, longitudinal survey).

- To feel something e.g. 'As a way of 'feeling' if they are depressed & nothing seems to have any impact…'(secondary school teacher).

Table 28

University student, secondary school student and secondary school teachers' reported reasons for DSH, and presentation of group differences.

Reason	Secondary school students (% endorse; N=27)	Secondary school teachers (% endorse, N=96)	University students (% endorse; N=51)	Youth combined sample (% endorse; N=78)
Attention	7.41^c	51.04 ^{abc}	1.69 ^{a}	3.85^b
For control	.00^d	13.54^{bd}	5.88	3.85^b
In group/peer pressure	.00	11.46^{ab}	.00^a	.00^b
Self-punishment	3.70	4.17^a	9.80	7.69 ^{a}
Low self-esteem	3.70^c	32.39^{abc}	3.92^a	3.85^b
Identity issues	.00de	7.29$^{b\ de}$	.00^e	.00^b
Isolation/Lonely	.00	10.42^b	1.96	1.28^b
Abuse/bullying	.00^d	7.29$^{b\ de}$	.00^e	.00^b
Revenge	.00	2.08	.00	.00
Stress	3.70	9.38	7.84	6.41
To cope/Unable to cope	3.70	11.46^d	3.92	3.85 ^{d}
Family Problems	3.70^d	14.58^{bde}	3.92^e	3.85^b
Poor social support/friendships	3.70	5.21	1.96	2.56
Curiosity	3.70	4.17	3.92	3.85
Habit	3.70^c	.00^{ab}	17.65^{ac}	12.82^b
Bored	3.70	1.04	.00	1.28
Emotion reason	66.67	53.13	50.98	56.41
Negative emotion	33.33	34.38	25.49	28.21
Escape/externalise emotions	11.11	12.50	15.69	14.10
Vent frustration/anger	18.52^d	6.25^{bd}	15.69	16.67^b
Relieve emotional pain	3.70	2.08	1.96	2.56
To feel	.00	5.21^b	.00	.00^b

$^{a,\ b,\ c}$ Significant group differences (p<.05); $^{d,\ e}$ group differences border significance (p<.10)

Table 28 presents the frequencies of each sample group endorsing the different strategies, and indicates significant group differences.

X^2 analyses were conducted to assess significant group differences between secondary school students, university students and teachers in reasons given for DSH. There were significant group differences for attributing DSH to attention-seeking, wanting to be like an in-group or peer-pressure, DSH due to low self-esteem, isolation and habit (all X^2s $\geq$ 6.18, p<.05). Reasons of control, identity issues, abuse history, family problems, and venting frustration or releasing emotion bordered significance (all X^2s $\geq$ 4.95, p<.09). Teachers attributed DSH significantly more to attention-seeking and low self-esteem than both university and secondary school students. Teachers had a significantly higher rate of attributing DSH to in-group or peer pressure than university students, and university students attributed DSH significantly more to habit than both secondary school student and teachers (see Table 28 for group differences). There were no significant differences for all the other categorical reasons for DSH (see Table 28; all X^2's $\leq$ 4.18, p's>.05).

X^2 analyses were conducted to assess significant group differences between youth (combined secondary school and university student samples) and teachers in reasons given for DSH. Teachers were significantly more likely to attribute DSH to attention-seeking, attempts to gain control, wanting to be like an in-group/peer pressure, identity issues, isolation, abuse history, family problems, and wanting to feel something (all X^2's $\geq$ 4.18, p's<.05). Youth were more likely to give reasons of low self-esteem, habit, and venting frustration or releasing emotion (all X^2's $\geq$ 4.80, p's<.05). See Table 28 for an indication of group differences.

It may be that teachers are more attentive to the social and tangible causes of DSH (i.e. peer effects, isolation, abuse history), while youth point to internal mechanisms behind the behaviour (e.g. venting). Teachers' understanding of DSH as caused by identity issues, peer pressure and wanting to be like an in-group links with discourse of DSH as juvenile or *immature* (see study 3.1a, constructions of DSH as a *maturity issue* among secondary school teachers). When teachers did refer to emotional reasons their attributions were ambigious (e.g. 'to feel…') or they simply gave a list of negative emotions or events (e.g. 'depression, loneliness') without detailing the mechanisms leading to DSH, wheras youth went into more depth (e.g. 'when I felt lost and couldn't find any hope…').

Attributing DSH to attention, as teachers often did (51.04%), may negatively impact on youth who self-harm. Attention-seeking has a negative connotation, and has been linked to viewing DSH as less serious (e.g. Gilbertson & Wilson, 2008). Youth who DSH prefer to distance themselves from this perception of DSH behaviour (e.g. Crouch & Wright, 2004). Choosing to consider DSH attention-seeking may function to downplay the danger of the behaviour and places the onus on the student to deal with the issue rather than demand the teachers' time (i.e. attention). Viewing DSH as attention-seeking also functions to justify refusal to acknowledge or engage the issue (see discussion of avoidance, Study 3.1). In one study of American school counsellors' experiences and perception of DSH (N=122), almost half (47%) agreed with the statement "most students who self-injure want attention" (53% disagreed) (Kibler, 2009). This suggests that the perception of DSH as attention-seeking behaviour is common among staff, and may represent a division is attitudes towards DSH.

Several adolescent participants indicated that their motives did included gaining attention (suggesting a foundation for the stereotype propagated by certain youth who self-harm). The attention received from DSH may be a form of secondary gain (Levenkron, 1998). Others' responses may be reinforcing and contribute to continuation of the behaviour as the young person begins to value the support and sympathy they receive, however the initial primary intent is often to relieve emotional distress (i.e. most commonly endorsed motive, see Table 24, and Study 2.3a). If the primary motive remains unrecognised, then the cause of the behaviour (i.e. predominantly emotional distress) may not be acknowledged and treated appropriately (e.g. through understanding and effective treatment). The label of 'attention-seeker' relates to the negative stigma and stereotypes of DSH (assessed and discussed in Study 3).

It is important to understand the context in which DSH occurs, to appreciate the motive behind the behaviour. The next study investigates the lived experience of youth who self-harm through a six week diary methodology. This diary study primarily assesses emotional experience, self-defeating thoughts, coping and DSH. Given that participants' most commonly reported motive for DSH was emotional relief and control, it was considered appropriate that Study 2.3 focus on emotional experience and self-defeating thoughts over time as they pertain to DSH behaviour.

Study 2.3   Diary Study

To further understand the ongoing experience of DSH an online diary study was conducted with secondary schools students[8] and university students. Both quantitative and qualitative data was included in the diary, aimed at assessing the relationship between history (both recent and protracted) of DSH and emotional experience over a six week period.

There are several reasons for including a diary study. Primarily, the diary is aimed at assessing how internal experience relates to DSH behaviour. Many researchers suggest DSH is an externalisation of psychological pain (e.g. Alderman, 1997; Harris, 2000), and personal accounts describe DSH as a way of communicating feelings (e.g. Nixon et al., 2002; Straker, 2006). The diary will assess how the internal experiences of emotions, reflections on events over a given week, and self-defeating thoughts, relate to both a lifetime history of DSH and having engaged in DSH over the period of participation in the dairy study. Important questions the diary study aims to address include whether people with a history of DSH, or who currently engage in DSH, experience everyday life more negatively, whether they experience more negative emotions during salient events each week, and whether they have more self-defeating thoughts.

Also, all the other studies in this thesis assess DSH retrospectively (i.e. lifetime history, or DSH in the past 3-8 months), while the diary assesses DSH on a weekly basis over a 6 week period. This offers insight into the regularity of DSH among young people. At the time of writing this thesis there were no published studies investigating DSH among a community sample of young people using a diary methodology. The variables included in the diary study analyses were DSH (life-time history and over a

---

[8] Only results from the university student diary study are presented here. Due to low participation rates and high attrition for the secondary school diary study (N= 45, only 12 completed all entries) the sample size was not large enough to conduct the inferential statistics for which the study was intended. The descriptive statistics from the secondary school diary study are worth noting: Lifetime history of DSH reported each week ranged from 31.58 - 42.86%, and weekly engagement in DSH ranged from 0 (week 6 of the diary) - 21.27% (week 1). The most prevalent types of DSH were sticking sharp objects under the skin, preventing wounds from healing, and carving the skin. These results are consistent with the lifetime prevalence rates, and types of DSH most commonly engaged in by youth, reported in Study 2.1. The most utilized coping strategy among secondary school diary study participants was seeking social support, and engaging in a relaxing activity, followed by avoidance. Participants self-reported low use of proactive strategies for coping.

given week), emotional experience and events (valenced as positive, negative or neutral), strategies for making oneself feel better, self-defeating thoughts, and substance use.

Negative emotions are associated with DSH (e.g. Laye-Gindhu & Schonert-Reichl, 2005; Nixon et al, 2002;), including anxiety and depression (De Leo & Heller, 2004; Hawton et al., 2006b; Meuhlenkamp & Gutierrez, 2004), shame (Brown, Linehan, Comtois, Murray & Chapman, 2009) and guilt (Nixon et al., 2002). Several theoretical models describe DSH as an emotional coping strategy (see p. 50-1, 54-57). Diary participants were asked to rate the emotions they felt during the most salient event that occurred for them each week over a six week period. This offered insight into what emotions might characterise the experience of youth who self-harm, and helped identify any differences in their internal experience compared to non-self-harming peers.

Self-harm has been linked to negative life-events, including relationship turmoil (Adler & Adler, 2007), abuse (Hawton et al., 2006b; Walsh, 2006) and bullying (Ruiz-Veguilla et al., 2004; Coggan et al., 2003). Diary participants were asked about the most salient event to occur each week, which were coded as positive, neutral or negative. It was assessed whether self-harming youth experience daily life more negatively than youth who have not self-harmed.

DSH has been linked to poor coping strategies, or lack of coping strategies. Evans et al. (2005) investigated coping and DSH among English adolescents and found participants with a history of DSH used more emotion-focussed coping strategies (e.g. drinking alcohol, getting angry) while participants without a history of DSH used more problem-focussed coping strategies (e.g. talking to a friend). Haines and Williams (1997) found that self-harming male prison inmates had significantly more inadequate coping strategies (e.g. poor social support, problem avoidance, social withdrawal) compared to their non-self harming peers or community controls. This study will assess the types of strategies youth engage in to make themselves feel better, and whether this differs between participants with and without a history of DSH. Past research (e.g. Evans et al., 2005; Haines & Williams, 1997) indicates that diary participants with a history of DSH will engage in fewer coping strategies.

DSH is linked to lower self-esteem (Laye-Gindhu & Schonert-Reichl, 2005; Lundh, 2007) and negative emotional experiences (e.g. Hawton et al., 2006b); which are associated with self-defeating thoughts (Yelsma, 1993; Baumeister, 1997). Study 2.3

assessed whether DSH is associated with having greater self-defeating thoughts, and how this relates to emotional experience over the six week period.

As previously discussed (p. 46), DSH is associated with substance abuse (Hawton et al., 2006b). Study 2.2 will assess whether substance use over the six week period differs according to participants' history of DSH.

Methodology

Participants

Participants were 263 (213 female) introductory level psychology students from Victoria University of Wellington. Mean age was 20.05 years (S.D =4.94). 78.24% self-identified as Pakeha/New Zealand European, 5.73% as Maori, 1.91% as Pacific Islander, 10.31% as Asian, and 3.82% as belonging to another ethnic group.

Measures

Each diary entry consisted of the same questions each week. There were questions on emotions over the past week, substance abuse, and DSH (see appendix E2).

Questions on emotions began with a brief descriptor of emotional experiences, then participants were asked to describe their most intense emotional experience of the past week and rate the degree they experienced nine emotions during this experience. This scale is very similar to the PANAS (Watson, Clark & Tellegen, 1988), but is considerably shorter (9 items compared to 20). It was used in preference to the PANAS for pragmatic reasons (i.e. reduced number of items). Following this were four open-ended questions relating to emotions (developed specifically for this study): 'Describe your emotional experience over the past week. How have you been feeling emotionally?', 'Have you been having self-defeating thoughts (e.g. I am worthless) over the past week? Please describe below', 'Please list some of the specific strategies you have used over the past week to hold onto positive emotions or appreciate positive emotions more', and 'Please list some of the specific strategies you have used over the past week to cheer yourself up when things are not going well and you are feeling down.'

Substance abuse questions were: 'Have you taken party pills during the past week?', 'Have you taken illegal drugs (e.g. Cannabis, etc) during the past week?', 'Have

you smoked a cigarette during the past week?', and 'Have you drunk alcohol to excess during the past week?' There were three possible responses; 'No', 'Yes, once', and 'Yes, more than once'.

Questions on DSH began with an item assessing whether participants had ever engaged in DSH: 'Have you *ever* intentionally hurt yourself (e.g. purposely cut, burned or carved your skin, scratched yourself, bit yourself, rubbed your skin with sand paper, glass or abrasive commercial cleaners such as oven cleaner, banged your head, punched yourself, or prevented wounds from healing)?' The examples were taken from the DSHI-s. This was followed with a question on when participants' had last engaged in DSH, with response alternatives of within the last week, the last 2 weeks, the last month, the last year or over a year ago. Then participants completed the DSHI (Lundh et al., 2007) relating to behaviour over the past week. The diary ended with an open-ended question on reason or motive for DSH ('If you did harm yourself in the past week, what was your reason/motive for doing so?'). Demographic questions (age, sex and school) were included. A unique identifier was included in each diary entry to track participants' entries across time.

Procedure

Participants were recruited through a research participation programme for introductory level psychology students as partial fulfilment of a mandatory course requirement. Participants opted into the study through voluntary web-based sign-up. Once signed up, participants were sent an email directing them to the online diary website. Upon first entering the website participants were presented with an information sheet (see appendix E1), chose whether to continue with participation, and were then directed to their first diary entry. Participants signed on using their student identification number (used to track their entries across time). Every week for six weeks participants were sent a reminder email to complete their diary (a link to the diary website was included in the email). Each diary entry took no longer than ten minutes. After each entry participants were directed to a webpage of a list of contact services available if the diary raised any issues for them (see appendix E4). After their last (sixth) entry participants were directed to a debriefing sheet (see appendix E3).

Results and Discussion

Average lifetime prevalence of DSH were 38.78% at week 1, 28.81% at week 2, 29.15% at week 3, 28.64% at week 4, 30.65% at week 5, and 31.89% at week 6. These prevalence rates are similar to those reported in the university student longitudinal survey (see p 121). The percentage of participants reporting engaging in DSH each week the diary was completed was 12.02% at week 1, 5.93% at week 2, 4.93% at week 3, 4.86% at week 4, 6.03% at week 5, and 5.44% at week 6. Thus approximately 5% of university students may have a current pattern of DSH. However, this requires replication given than the sample was self-selected and primarily female. The highest self-reported prevalence rates for DSH were given in the first entry, which may be due to attrition (i.e. participants with a history of DSH may have chosen to not continue with their diary), or students with a very recent history may have been more motivated to participate given that the topic was personally relevant.

Table 29 presents the percentage of participants engaging in each behaviour each week. Consistent with the secondary school and university student longitudinal surveys, the most prevalent types of current DSH reported each week were cutting, scratching, sticking sharp objects into the skin, preventing wounds from healing and punching the self.

Strategies for 'cheering up'.

The strategies that participants used to cheer themselves up (i.e. coping strategies) were coded into seven groups: 1 = taking deliberate steps to address the problem (e.g. time or effort management, enacting plans; 40.70%), 2 = Avoidance coping (e.g. distraction; 53.10%), 3 = Seeking social support (e.g. from family, friends, romantic partner; 81.78%), 4 = giving self permission/space to feel positive emotions (e.g. engaging in a relaxing activity, laughing; 80.23%), 5 = sleeping (13.18%), 6 = reducing workload and/or taking time out to be alone (16.67%), and 7 = positive thinking, appreciating what one has in life, positive self-talk (forms of cognitive re-structuring; 17.29%). Strategies 1-6 were identified among adolescents in a demanding academic programme by Suldo, Shaunessy, Michalowski and Shaffer (2008) through focus groups and thematic analysis. These themes were considered appropriate to apply to the diary data as most participants were in later adolescents or their early 20s, and

Table 29

Percentage of university student participants engaging in the assessed behaviours each week of the diary.

Variable		Week 1	Week2	Week 3	Week 4	Week 5	Week 6
Cut	Thought about	9.13	6.78	5.83	6.80	5.53	3.78
	Did	4.18	2.12	1.35	2.43	2.01	1.62
Burn	Thought about	4.18	2.54	1.35	2.43	1.51	1.63
	Did	.76	.42	.45	.49	.50	0
Carve	Thought about	3.05	1.69	1.79	1.94	3.02	2.16
	Did	2.67	0	0	.97	0	0
Scratch	Thought about	2.67	2.54	1.35	1.94	1.01	1.08
	Did	3.44	1.69	.90	1.94	2.01	1.62
Bit	Thought about	1.52	.42	.90	1.94	0	.54
	Did	3.04	.85	.45	.49	.50	.54
Rubbed sandpaper	Thought about	.76	0	.45	.49	0	0
	Did	.38	0	0	0	0	0
Dripped acid onto skin	Thought about	.38	0	.45	.97	0	0
	Did	0	0	0	0	0	0
Scrubbed bleach/oven cleaner	Thought about	.76	0	.45	.97	.50	0
	Did	0	0	0	0	.50	0
Stuck sharp objects into skin	Thought about	1.52	2.54	.45	2.43	1.01	0
	Did	2.66	1.27	.45	.49	.50	0
Rubbed glass into skin	Thought about	.76	.42	.45	.49	.50	0
	Did	0	0	0	.49	0	0
Broken bones	Thought about	.38	0	.45	.49	0	.54
	Did	0	0	0	0	0	0
Banged head	Thought about	.38	0	.45	.49	0	.54
	Did	0	0	0	0	0	0
Punched self	Thought about	1.14	.42	0	0	.50	0
	Did	3.80	1.69	.90	.97	.50	2.16
Prevented	Thought about	1.15	.42	1.69	.97	.50	1.08

wounds Did from healing	2.31	1.27	1.35	1.94	2.01	1.08
Party pills	2.67	2.12	2.69	2.91	1.51	2.70
Illegal drugs (e.g. cannabis)	10.27	10.17	12.11	9.22	8.54	6.49
Cigarette	24.33	22.98	21.97	23.79	18.59	18.38
Druck alcohol to excess	36.12	38.14	30.04	37.58	33.17	32.61

new to university (i.e. a challenging academic environment). The themes identified by Suldo et al. (2008) were easily applied to the diary data, and are broadly encompassing of other coping strategy categorisation (e.g. avoidant versus approach coping (covered primarily in the coding categories 1 and 2). Strategy 7 was identified frequently in the dataset, and included as an addition. The most commonly endorsed strategy for 'cheering yourself up' was engaging in social activities/seeking social support, closely followed by doing a relaxing or pleasurable activity.[9]

Emotions over the week.

Descriptions of emotional experience over the past week were subject to content analysis, and coded as positive (e.g. "happy and enthusiastic. Positive and happy"), neutral (e.g. "Normal. Ups and downs."), or negative (e.g."About the same. Depressed, bored with life. Down and out fairly constant"), as were participants' descriptions of their most intense emotional experience over the past week (e.g. positive: "Positive excitement towards finically sorting out plans for my birthday", neutral: "nothing too bad or too good as happened in the past week", negative: "Relationship breakup, felt sad and angry for days"). On average over the six week period, 35.51 %, 13.42% and 48.34% of participants reported positive, neutral and negative intense emotional experiences respectively, and 37.42%, 37.72% and 24.85% reported positive, neutral and negative emotions over the week in general. Participants tended to identify more negative than positive intense emotional events during the week, however overall general emotional experience tended to be positive or neutral rather than negative. This may be because negative events are particularly salient for individuals (i.e. negativity

---

[9] This is consistent with the most prevalent strategies reported by participants in a secondary school dairy study (refer to previous footnote).

bias; Rozin & Rozman, 2001), while there is a bias to expect positive life events and construct life positively (Weinstein, 1980).

Relationship between DSH, emotional experience and self-defeating thoughts.

Analyses were conducted to assess whether groupings based on general emotional experience, specific intense emotional events, and self-defeating thoughts over the six weeks differed in weekly self-harming behaviour. A MANOVA indicated participants who experienced more negative intense emotional events (based on median split) engaged in more DSH behaviour over the six week period than those reporting more positive intense emotional events, $F(6, 178)=2.17$, $p<.05$. This was significant for each week of the diary (all F's $(1, 183)\geq6.30$, p's$<.05$), except week 1 $(F(1, 183)=3.88$, $p=.05)$ and week 5 $(F(1, 183)=3.84$, $p=.06)$, which bordered significance. This is consistent with anecdotal reports of negative emotional events (e.g. relationship stress) precipitating an episode of DSH (e.g. Nixon et al., 2002). Participants who reported more negative overall emotional experience each week during the participation period (again based on median split) did not report significantly higher rates of DSH each week than participants reporting a more positive overall emotional experience each week over the participation period, $F(6, 178)=1.61$, $p=.15$. This suggests youth DSH is related to subjectively experiencing more negative intense emotion experiences. A MANOVA found that participants who reported self-defeating thoughts over the participation period reported greater engagement in DSH each week than participants who did not report self-defeating thoughts, $F(6, 178)=2.95$, $p<.001$. This was significant for each week of the diary study (all F's$(6, 178) \geq 2.69$, p's$<.05$).

An ANOVA was conducted assessing whether engagement in DSH over the diary was associated with experiencing greater intensity of different emotions during the most intense emotional event each week. Participants who had engaged in DSH over the six week period reported experiencing significantly less positive emotions (e.g. happiness, amusement) and more negative emotions (e.g. shame, guilt) overall, $F(9, 196)= 2.90$, $p<.01$. See Table 30 for group differences. Looking at the differences between specific emotions, participants who engaged in DSH reported experiencing less happiness and enthusiasm during their intense emotion event than participants who did

Table 30

Average intensity of emotions reported across participation based on whether participants engaged in DSH during the six weeks.

Emotion	Engaged in DSH during diary study period				F-statistic
	Yes		No		
	Mean	S.D.	Mean	S.D.	
Enthusiastic	1.61	.82	1.96	.83	5.58*
Happy	1.93	.95	2.25	.80	4.69*
Joyful	1.64	.87	1.93	.83	3.80+
Amused	1.44	.90	1.59	.92	.41
Sad	2.23	.79	1.64	.75	18.66***
Angry	1.92	.88	1.34	.74	18.19***
Ashamed	1.24	.76	.74	.66	16.75***
Guilty	1.44	.78	.93	.75	14.09***
Nervous	2.07	.79	1.74	.82	5.06*

*p<.05, **p<.01, **p<.001, + p<.10

not engage in DSH over the six week period. The group differences were stronger for negative emotions, particularly sadness and anger. This is consistent with research literature citing loneliness, sadness/despair and anger (e.g. see hostility model outlined on p. 51) as common precipitants of DSH (e.g. Nixon et al., 2002; Ross and Heath, 2003).

Past research has found significant sex differences in DSH, though results of Study 1 and Study 2.1 suggest no difference in overall prevalence rates. The diary study assessed this further on a weekly basis over the short time period of six weeks. Females are reported to have more self-defeating thoughts and lower self-esteem than males, especially in youth (Polce-Lynch, Myers, Kleiwer & Kilmartin, 2000), cope with negative events differently (e.g. more social-diversion coping; Beasley, Thompson & Davidson, 2003), and report lower rates of substance abuse than males (Huselid & Cooper, 1992). These factors make it important to assess sex differences in the link between DSH and other variables included in the dairy.

A MANOVA was conducted to assess the main effects and interaction effect of sex and DSH history on most intense emotional experience reported each week. There were non-significant main effects for both sex ($F_{(6, 172)}$=.49, p=.82) and DSH history ($F_{(12, 166)}$=1.37, p=.18), and a non-significant interaction term, $F_{(12, 166)}$=.72, p=.73. Thus males and females self-reported similar rates of positive, neutral and negative emotional experiences and did not differ significantly in lifetime history of DSH (consistent with findings Study 1 and Study 2.1).

A MANOVA was conducted to assess for main effects of sex and DSH history on participants' self-defeating thoughts each week, and whether there was an interaction between sex and DSH history on self-defeating thoughts. Male and female participants were equally likely to experience self-defeating thoughts, $F_{(6, 173)}$= .58, p=.75. There was a significant main effect of DSH on self-defeating thoughts ($F_{(2, 167)}$=3.56, p<.001); tests of between subjects effects found this effect to be significant for all weeks (all F's≥ 5.01, p's<.01) except week two ($F_{(2, 177)}$=2.16, p=.07). Participants with a history of DSH (irrespective of sex) were, on average, more likely to have self-defeating thoughts each week. This is consistent with research linking DSH to lower self-esteem (e.g. Evans et al., 2004; Haines & Williams, 1997). The interaction between sex and DSH on self-defeating thoughts each week bordered significance, $F_{(12, 167)}$=1.77, p=.05. Tests of between subject effects suggested that the interaction was only significant for week 1, $F_{(2, 177)}$=5.61, p<.01. For the other five weeks there was no significant interaction (all F's$_{(2, 177)}$ ≤ 2.16, p's>.05). Perhaps with a larger sample this interaction would have reached significance. The week 1 results suggest that females (mean= .40, S.D.= .49) who DSH may be more likely to have self-defeating thoughts than males (mean= .20, S.D.= .40) who self-harm; further attesting to the importance of internalising among females as a strong vulnerability factor for engaging in DSH behaviour (as suggested by the models in Study 2.1).

Chi-squared analyses were conducted to assess whether strategies used to cheer oneself up varied significantly between the sexes, and between those with and without a history of DSH. There was no significant difference between participants with and without a history of DSH for the types of strategies they used. This suggests that self-harming youth do not differ significantly from non-self-harming youth in the types of strategies they use to cheer themselves up. This is surprising given that DSH is a type of avoidant coping (e.g. avoid emotional pain through externalising it and providing an

alternative focus), which suggests youth who self-harm may use more avoidant (i.e. strategy number 2 'avoidant coping') rather than proactive (i.e. strategy number 1 'taking deliberate steps to address the problem') coping strategies compared to youth who have not self-harmed. Females were significantly more likely to use social support (mean=.51, S.D.=.32) $(X^2(11)=42.35, p<.001)$ or reduce their workload/take time out (mean=.05, S.D. =.15) $(X^2(8)=17.19, p<.05)$ than males (mean=.22, S.D.=.25; mean=.04, S.D.=.11 respectively). There were no other significant sex differences in the strategies used.

A MANOVA was conducted to assess whether sex or DSH history had a main effect on mean drug use each week of the diary, and whether there would be an interaction between sex and DSH history on participants' engagement in drug use. There was a non-significant main effect of sex on drug use each week, $F(6, 179)=1.54$, p=.17, and a non-significant main effect of DSH history on drug use , $F(12, 173)=1.02$, p=.43. There was also no significant interaction between sex and DSH history on drug use each week, $F(12, 173)=.50$, p=.91.

Analyses Across Time

Several Repeated Measures ANOVAs were conducted to assess for differences in experiences across time between participants with a history of DSH and those with no history of DSH. A repeated measures ANOVA indicated a main effect for the type of emotion participants' experienced during their intense event each week, $F(8, 175)=87.30$, p<.001. There was weekly variation in the intensity of different emotions experienced each week. DSH history did not influence this variation; participants with and without a history of DSH had no significant difference in the variation of the intensity of their emotions during the salient event each week, $F(8, 175)= 1.45$, p=.18.

A repeated measures ANOVA indicated a main effect for strategies used, $F(6, 128)=181.38$, p<.001; participants' strategies varied from week to week. The interaction between strategy use and DSH history was not significance, $F(6, 128)=2.12$, p=.06.

A repeated measures ANOVA was conducted to assess whether the valence of the intense event participants reported each week (positive, negative or neutral) was associated with DSH history and self-defeating thoughts during the six weeks. There

was a main effect for event, $F(5, 167)=5.91$, $p<.001$; the valence of participants' intense experiences over the six weeks varied across time. There were no significant two-, or three-way interactions (F's<1.64, p's$>.15$) suggesting that the valence of participants' most intense experiences did not vary according to DSH history or self-defeating thoughts, nor an interactive effect between DSH history and self-defeating thoughts.

A repeated measures ANOVA was conducted to assess the relationship between DSH, self-defeating thoughts, and the types of emotions participants experienced during their most intense emotional experience of the week (e.g. shame, anger, etc.). Participants were placed into two groups, those who had experienced self-defeating thoughts over the six weeks of their diary and those who had not. There was a main effect for emotions across the six weeks, $F(8,170)= 72.32$, $p<.001$; participants' emotions during their most emotional experience of the week varied across the diary entries. There was a significant interaction between type of emotion (positive, neutral or negative) and self-defeating thoughts, $F(8, 170)=3.31$, $p<.01$. Participants with self defeating thoughts tended to experience more negative emotion. There was no significant interaction between emotions experienced, DSH history and self defeating thoughts, $F(8, 170)= 1.22$, $p=.29$. These analyses suggest that self-defeating thoughts are not related to the valence of most salient emotional experience (positive, negative or neutral), but these thoughts are related to experiencing more negative emotions during the salient event. It may be that how the event is experienced emotionally (i.e. responded to with shame, happiness or anger) is what fosters self-defeating thoughts (which is linked to DSH), not the type of event itself. This is consistent with cognitive therapies aimed at targeting these types of thoughts; it is the individual' emotional and cognitive reaction to the event that the therapist aims to change, not the event itself (i.e. Cognitive Behavioural Therapy; Sheldon, 1995).

A repeated measures ANOVA was conducted to assess relationships between general emotional state across the week, DSH history and self-defeating thoughts. There was a significant main effect for general emotion state, $F(5, 173)=250.94$, $p<.001$; this tended to vary for participants week to week. There were no significant interactions for general emotion state and DSH history ($F(5, 173)=.72$, $p=.61$), general emotion state each week and having had self-defeating thoughts ($F(5, 173)=.66$, $p=.65$), nor between general emotion state, self-defeating thoughts and DSH history ($F(5, 173)=.30$, $p=.91$. This suggests that although participants' general emotional experience varied week to

week, this was not significantly impacted by whether participants had a history of DSH, whether they experienced self-defeating thoughts over the six week period, or an interaction between the two.

To assess whether variation in drug use across the six weeks differed between participants with and without a history of DSH, a repeated measures ANOVA was conducted. There was a significant main effect for mean drug-taking ($F(3, 180)=49.09$, $p<.001$); participant drug taking fluctuated significantly between diary entries. There was no significant interaction with DSH history ($F(3, 180)=.19$, $p=.90$); participants' variation in their drug taking between entries did not differ significantly between participants with and without a lifetime history of DSH.

The above analyses suggest fluctuation in the intensity and type of different emotions experienced, use of coping strategies, the types of salient events experienced (positive, neutral or negative), and drug use; but the extent of fluctuation between diary entries did not differ between participants with and without a history or DSH.

Summary of Study 2.3

Both diary datasets concur with the lifetime prevalence rates, and most common types of DSH found previously in Study 1 and Study 2.1. This prevalence is significantly higher than rates reported elsewhere (e.g. 7.3% among American university students; Whitlock et al., 2006a). For both diary datasets the highest weekly prevalence rate was in week 1. This may reflect a sampling bias, with students most likely to participate when they had personal experience or interest in DSH.

DSH was not associated with coping strategies, drug use, or variation in emotional experience over time. This suggests that youth who self-harm utilise similar coping strategies to youth who do not self-harm (aside from engaging in DSH, which is itself considered a coping strategy; Nixon et al., 2002), and engage in a similar level of drug use. This is unexpected, given that DSH is associated with avoidant coping and with greater drug use (Evans et al., 2005). Perhaps the method of assessing coping was not in-depth enough (i.e. consisted of one open-ended question) to uncover group-based variation according to engagement in DSH.

Cross-sectional analyses suggested DSH was related to reporting more negative salient emotional experiences and more negative emotions (and at a higher intensity) and less positive emotions (and at lower intensity), but not the valence of general emotion experience (i.e. positive, negative or neutral). Poor emotional regulation among self-harming youth (Paivio & McCulloch, 2004) may mean that negative emotions are experienced as highly aversive (because they are unmanageable), and therefore are more salient or experienced more intensely than among youth who do not self-harm. Additionally, participants who engaged in DSH may have experienced more negative emotions due to internalisation of negative stigma and stereotypes associated with DSH.

Self-harm was more prevalent among participants reporting self-defeating thoughts, consistent with the correlation between DSH and low self-esteem (e.g. Evans et al., 2004; Haines & Williams, 1997; Studies 1 and 2.1). Also, experiencing more negative events, and negative emotions during events, is likely to foster negative cognitive schema (Beck, Freeman & Davis, 2004). These negative cognitive schemas extend to the self (i.e. self-defeating thoughts e.g. "I am useless"), the world (e.g. "the world is dangerous"), and others (e.g. "people are unsafe") (this is likely to be reinforced by negative reactions from the environment towards DSH; see Study 3), maintaining a bias towards identifying and emphasising negative events and experiences (Beck et al., 2004).

The results of Study 2.3 indicate that youth who self-harm experience the world more negatively, and judge themselves and their lives more negatively. These experiences, together with the difficulties associated with self harm identified earlier (see Study 2.1, e.g. depression, anxiety, low self-esteem, victimisation), suggest that youth who self-harm experience a myriad of problems that foster and maintain their DSH.

Summary of Study 2.1, 2.2 and 2.3

Across Study 2 self-reported lifetime history of DSH remained fairly consistent across youth samples, at 30-50%. This is considerably higher than results for community youth samples (university and secondary school students) reported internationally using other self-report measures (7- 44%; Gratz, 2006; Gratz & Chapman, 2007; Nada- Raja et al., 2004; Whitlock et al., 2006a; Young et al., 2007). However, Lundh et al. (2007) found a higher prevalence of lifetime history of DSH

(69%) among a sample of 15-year old students when piloting the DSHI-s. In Lundh et al's (2007) piloted DSHI-s the item assessing scratching did not qualify that this should have caused bleeding or scarring to meet criteria, while a later version of the DSHI-s (and the version used in this thesis) made this qualification. This difference may account for the higher prevalence of lifetime DSH found by Lundh et al (2007) compared to the prevalence rates in Study 2.

The most consistent direct predictor of DSH in the youth models (Study 2.1) was low self-esteem. This was also the only significant direct predictor of DSH in the cross-sectional model developed in my honours dissertation (Garisch & Wilson, 2009). The models in Study 2.1 suggest that low self-esteem was heavily influenced by internalising symptoms and more distally by alexithymia and low mindfulness. Internalising symptoms may only lead to DSH when an individual has low self-esteem. Perhaps for inner turmoil to lead to self-harm an individual must see themselves as deserving of punishment. Self-reported reasons for DSH in the literature (and in Study 2.2a, see Table 24) include self-punishment (Crowe, 1996; Harker-Longton & Fish, 2002). This is consistent with findings in Study 2.3, where a history of past and current DSH was associated with having self-defeating thoughts and feelings of shame and guilt. Emotions of shame and guilt are directed inwards and facilitate self-depreciation. This self-depreciation may create vulnerability to DSH.

Study 2.3 suggested DSH was related to self-defeating thoughts, more negative general emotional experience (rather than salient events), and experiencing more negative emotions during salient emotional events each week, most notably shame and guilt. This is consistent with the addiction model of DSH, where negative emotions lead to a build up of tension which self-harm reduces, giving short-term relief. However, the self-harm leads to negative feelings (e.g. guilt and shame), which leads to a build up of tension, and subsequent DSH (for a review see Alderman, 1997). Negative emotions of shame and guilt likely fuel the continuance of DSH (and hinder disclosure; much like for eating disorders; Swan & Andrews, 2003). Overall, youth who self-harm may be more prone to negative emotions but not necessarily experience a greater number of negative life events. Study 2 indicates that low self-esteem, together with proneness to internalising and experiencing negative affect, is the main predictor of DSH.

The models in Study 2.1b found sexuality concern, abuse history and friends and family DSH to be important predictors of DSH behaviour. This suggests social

experience (i.e. of stigma associated with same-sex attraction; of being victimised; being aware (and perhaps modelling) others' self-harm) impacts strongly on vulnerability to self-harm behaviour. Sexuality concerns and bullying and abuse history were associated with stronger endorsement of the reasons for DSH in general (see Study 2.2a). This suggests these risk factors were fuelling participants' attributions and understanding of their own self-harm.

Study 2 suggests emotion-related reasons for DSH are the most prevalent, however many youth engage in DSH for a range of reasons. There appears to be an important sex difference. Among secondary school participants, female DSH appears to be more driven by internal factors and emotion (see *Figure 35*), and affective motives were associated with the greatest vulnerability in terms of extent of DSH and wellbeing (see Study 2.2a). In contrast, among males environmental factors and behaviour (e.g. impulsivity) appear to be more strongly directly causal (e.g. friends and family DSH, see *Figure 39*), and engaging in DSH for both emotional and environmental or social reasons (e.g. avoidance, attention, etc.) was associated with the greatest vulnerability.

Study 2 investigated the reasons, both inter-and intra-personal, behind DSH behaviour. These reasons do not occur in a vacuum; they occur within a social context. It is important to understand how DSH is received and experienced by those within youths' social context, and consider how this impacts on youth who self-harm. The next study investigates the constructions and stereotypes of DSH within youths' social context (in secondary schools, and stereotypes among youth at university), and comments on the barriers to help-seeking that exist for youth who self-harm.

Study Three: Constructions and Stereotypes of DSH

The previous chapter presented cross-sectional and causal models of DSH suggesting how the correlates of DSH fit together to create vulnerability to the behaviour. Despite contributing unique and interesting understandings of DSH, Study 2 has left many unanswered questions, specifically related to the social context of young people and how this context receives and responds to DSH. This study serves to understand how DSH is received and understood in the context of young peoples' everyday lives. The way DSH is received in young peoples' social context potentially influences the decision to engage in DSH, the continuation of DSH behaviour, and seeking of social support for ending or managing one's DSH (Hodgson et al., 2004).

Peer influence has been implicated in the development and maintenance of DSH behaviour; homophily and contagion effects dictate that adolescents with close friends who engage in DSH are more likely to engage in DSH themselves, and are more likely to continue this behaviour (see Heilbron & Prinstein, 2008 for a review). Peer engagement in DSH offers support for DSH as valid and acceptable within one's social setting, and DSH may potentially function as a method of solidarity and peer-group acceptance. Additionally, deviant youth (e.g. risky sexual behaviour, aggression) exert strong social influence during early adolescence (i.e. are controversial, but popular and potentially leaders in peer group behaviour and ideas; Miller-Johnson et al., 2003); which means that DSH may be popularised by unconventional peers and subsequently engaged in by surrounding peer-group members.

Self-harm may also impact on the quality of social relationships over time, which may foster/maintain the behaviour (positive reinforcement), or lessen its occurrence (punishment). Hilt et al. (2007) found that in a sample of 508 youth aged 11-14 years, participants who engaged in DSH later reported better quality relationships with their fathers. Young people who engage in DSH may receive social reinforcement for their DSH (e.g. attention, concern). Alternatively, youth who engage in DSH may be scorned and ostracised by peers. Hodgson (2004) found that youth with a history of DSH felt it necessary to tell "cover stories" or engage in "passing" behaviour (e.g. hiding cuts or scars) to avoid being labelled as deviant (Hodgson, 2004, p. 174). This fear around being perceived as deviant (and having to answer uncomfortable questions regarding scars) is

a negative repercussion of DSH behaviour that may potentially act as a punisher. Thus, seeking social support may result in increased attention, concern and love (e.g. Hilt et al., 2008), and/or apprehension and management behaviours to avoid negative responses from others (Hodgson, 2004).

Seeking support from emergency staff following an episode of DSH has often been portrayed as a traumatic experience for people who engage in DSH (e.g. Harris, 2000). Harris conducted a grounded theory analysis of letters sent to her from six women with a history of DSH detailing their life-experience in relation to their DSH behaviour. The women spoke of their anger towards emergency department staff due to what they perceived as "ritual humiliation" and an "infantilising process" (Harris, 2000: 168) when they visited the emergency department to treat DSH related injury. Nursing staff were reported as attempting to embarrass participants by implying or explicitly stating that they were wasting hospital time and resources, suggesting that they where selfish, or otherwise causing participants to feel ashamed. Four of the six women in Harris' (2000) study stated in their letters that they would not visit A&E again for treatment of DSH because of these experiences.

Data assessing nurses' experiences concur with Harris' (2000) findings. Wilstrand et al.'s (2007) narrative analysis of six Swedish psychiatric nurses' experiences working with DSH patients found that participants felt frustrated, cheated, manipulated and angry towards these patients. Patient DSH was described by participants "as a forced action towards people around them" (p.75). Participants relayed accounts of staff losing control of their emotions with DSH patients and subsequently physically or verbally humiliating them. Research has also reported that many hospital staff view DSH as attention-seeking behaviour (e.g. 77% of nurses; Friedman et al., 2006). Friedman et al's (2006) focus groups reported DSH for attention had a negative connotation of manipulation, rather than appropriate help-seeking. This negative perception of DSH patients may become worse over time following continual presentation; hospital staff with more years experience in A&E have been found to hold significantly more anger towards patients presenting with self-laceration (Friedman et al., 2006). Other researchers have found more positive perceptions of DSH patients among hospital staff. Crawford et al. (2003) found that almost all (98%) of the 126 health professionals in their sample did not think youth who came to the A&E department for treatment of

DSH were a waste of time and resources, and most (78%) thought that putting effort into working with these patients had a positive influence on outcome.

Little research has been conducted to assess the social climate in secondary schools in relation to DSH. Best (2005) conducted interviews with school staff on DSH among students, and found poor knowledge and training in DSH behaviour. A 'knee-jerk' emotional response to disclosure or identification of DSH was commonly reported among teachers, which sometimes resulted in avoidance through handing over the issue to other staff members or the guidance counsellor with an unwillingness to personally engage with self-harming students. Heath et al.'s (2006) study of teachers in Canada indicated half of the participants felt they were not knowledgeable about DSH (only 20% felt knowledgeable); 78% underestimated the prevalence of DSH, while 66% correctly identified 11-15 as the most common age of onset. In terms of perceived motive, 22% viewed DSH as attention seeking while 66% did not, and 12% viewed DSH among students as manipulative, while 68% did not. Approximately half of the sample found the thought of a student self-harming horrifying. Thus it appears that teachers may be ill-equipped to successfully understand and approach DSH among students (e.g. most do not feel knowledgeable), and many may need to consider how to manage their own emotional response.

The aim of Study 3 was to investigate how DSH is received and understood by young people and people within the secondary school context. Study 3.1 assesses how secondary school students and guidance counsellors respond to the topic of DSH and to participation in this research through guidance counsellor interviews. The rationale behind collecting this feedback relates to my experience of recruiting schools. Many schools declined participation, with counsellors and principals arguing that participation would endanger their student body. A majority of the responses to this research were emotive; DSH was perceived as a threat to wellbeing, and as something not to be discussed for fear of contagion. Although contagion effects have been reported, this has generally been among 'disturbed' adolescents or on in-patient units (e.g. Rosen & Walsh, 1989; Taiminen et al., 1998). There has been minimal, if any, empirical research on contagion of DSH among community adolescents. However, the fact that one of the strongest correlates of DSH is DSH among friends and family members (De Leo & Heller, 2004) validates teachers' concerns of contagion.

DSH seemed to be perceived as both personally threatening, and as a threat to the social order (i.e. as potentially inciting widespread harming if discussed openly). This 'moral panic' or fear surrounding discussing or asking questions about DSH was investigated to understand the social context and responses to DSH. The emotionally-laden and concerned reactions of staff when approached to participate highlighted the sensitivity of the research area. Shock and anxiety when confronted with student DSH (Best, 2006), or horror at the idea of a student harming themselves (Heath et al., 2006) may account for sensitivity. These emotional reactions likely over-shadow more rational arguments for being involved in the research. School staff tend to lack (rational) knowledge and support in dealing with students' DSH (e.g. Best, 2006a, 2006b; Heath et al., 2006); if staff recognise that their knowledge falls short of what is required of their role they may be motivated to participate in research on DSH. I also wished to understand how the process of participation may have impacted on my findings and offer guidance for future research.

Response to the topic of DSH would be influenced by individuals' opinions and perceptions of DSH, and the morality and judgement they place on it. The experiences of individuals who engage in DSH suggest that DSH is considered deviant, abhorrent and inappropriate for honest discussion (e.g. Friedman et al., 2006; Harris, 2000; Hilt et al., 2008; Hodgson, 2004; Wilstrand et al., 2007). People develop their opinions and judgements based on their learned experience and the views expressed by those around them (most notably the people they respect and relate to). These opinions and judgements are portrayed in social stereotypes (Schneider, 2004). Hence stereotypes are important in understanding opinions, perceptions and judgements in relation to behaviours and groups, including DSH.

The stereotypes and opinions that are held about DSH relate directly to how counsellors and other people in the school setting (including students) would respond to DSH and participation in research on DSH. Strongly held negative stereotypes are a potential barrier to participation in this research. I have chosen to assess stereotypes as another measure of the social context surrounding DSH behaviour (Study 3.2). Over the course of carrying out my thesis I was struck by the negative comments received from participants (written and verbal) about young people who engage in DSH. These included derogatory comments written on the longitudinal survey by secondary school students, comments in the feedback interviews and comments from school staff. Study

3.2 looks at stereotypes relating to DSH held by secondary school teachers and students and university students to gain an understanding of the social consequences of DSH for individuals, and their lived experience (e.g. prejudice). Study 3.2 also looks at participants' reactions to DSH and their willingness to help people who engage in DSH. Including data from both secondary school students and university students will allow greater generalisability to young people in New Zealand, and for comparison of stereotypes and opinions of DSH among young people in these different contexts.

How participants' experience participation and their stereotypes of DSH may be related. The experience of participation is related to comfort with the underlying topic, and stereotyping is related to comfort with, and acceptance of, the stereotyped group (i.e. people who self-harm). Participants with a history of DSH may feel that their participation is beneficial (e.g. trauma survivors generally rate their participation in research positively overall; see Newman & Kaloupek, 2004), and react positively to participation; or they may feel that their privacy has been invaded, especially given the resistance to discussing DSH for fear or being labelled deviant (Hodgson, 2004). Participants with no history of DSH may find thinking about the issue abhorrent (Heath et al., 2006), and thus find participation to be distasteful (i.e. raises negative emotion of disgust, horror etc.). Less negative stereotyping of DSH has been associated with less "horror" or negative emotive reaction to thinking about DSH behaviour (Heath et al., 2006). This suggests that level of stereotyping of DSH may impact on the experience of participation in DSH research (i.e. less stereotyping may foster a more positive experience less evocative of negative emotions). Feedback on participation may be a by-proxy measure of participants' comfort with discussing issues surrounding DSH and their level of stereotyping (Study 3.1). The feedback interviews (Study 3.1), coupled with information from the stereotypes and opinions survey (Study 3.2) will provide useful information on the social context in secondary schools in relation to DSH.

Study 3.1   Guidance Counsellor Interviews

This study presents interview data from eight secondary school guidance counsellors or pastoral care providers. Thematic analysis (Braun & Clarke, 2006) was used to uncover the themes central to two research questions: *1) What primary factors of concern arise when conducting research on DSH in secondary schools?* and *2) How was DSH*

conceptualised in these interviews? These questions fit with the original aim of Study 3; to understand how DSH is received and understood within secondary schools. Answers to these research questions will offer insight into the secondary school environment, including resistance to engaging with the issue of DSH, and how adults within the school setting understand and talk about DSH. Two levels of analyses were conducted. Study 3.1a involves thematic analysis of the interview transcripts, with specific attention to themes relevant to the research questions. Study 3.1b looks at the ideological dilemmas (Billig, 1991) arising from the data, which are important for understanding alternative (and conflicting) constructions of DSH.

School guidance counsellors or pastoral care providers were involved at all stages of school participation; they were the first point of contact, the primary reference point for student and teacher participants to contact during the study, and they assisted in encouraging school staff to be involved in the research. There is limited published research on school counsellors' experiences of working with DSH among students, or school responses to, or experiences of, DSH. This study aims to fill this gap in knowledge and compliment previous findings in this thesis by providing insight into the experience of DSH within the youth environment.

The first known study of school counsellors experiences of DSH was conducted only recently by Roberts-Dobie and Donatelle (2007) in the United States. Surveys on counsellors' experiences and beliefs in working with students who DSH were sent to 1000 counsellors randomly selected from the membership listing of the 'American School Counsellor Association' (the largest organisation of its kind in the United States); 443 surveys were returned (87% of participants were females). The majority of participants reported having worked with DSH students (81%), and half of the participants (51%) had done so during the previous academic year. Later research by Kibler (2009) with school counsellors also found that the majority, if not all, school counsellors had worked with students who self-harm. On average the 122 school counsellor participants in Kibler's sample had worked with approximately 8 students with self-harm issues during their careers. This suggests school counsellors are likely to come across self-harm in their student population.

Roberts-Dobie and Donatelle's (2007) research suggests that several school guidance counsellors may feel unconfident, or unable, to work effectively with students who self-harm. Although most of the school counsellors in their sample felt

knowledgeable in their ability to work with DSH (80% or participants), and most had high or moderate self-efficacy beliefs (90%), there were some counsellors who felt they had very little knowledge at all (20%) or had little belief in their self-efficacy (10%, in terms of counselling students and their friends in relation to DSH, providing information to staff and parents, referral, etc). This suggests a need to improve knowledge among staff. Only 23% of counsellors reported an existing policy plan for DSH in their school. Lack of knowledge and a lack of school policy and readiness to respond to DSH have been highlighted by research and commentary (e.g. Best, 2005, 2006; Kibler, 2009; Shapiro, 2008). Clearly, qualitative research is lacking in this specific area. However, there has been research assessing school counsellors' experiences on working with suicidal clients, and counsellors' role and experiences in relation to other issues (e.g. adolescent achievement; Ryan, 2007). This is discussed below.

Christianson and Everall (2008, 2009) conducted research with seven guidance counsellors in Canada on their experience of student suicide. As is common, the counsellors were responsible for suicide prevention and intervention strategies in their schools, but reported feeling inadequately trained and supported in their role, and few received personal counselling to help them through the process of grieving client suicide. Post-client suicide, counsellors were concerned they would be blamed for their client's death, or that their competency would be questioned (and they questioned their own competency). All participants worked through these self-doubts and worked towards letting go of perceived control and responsibility for their client's actions. Many felt it necessary to compartmentalise their own reactions to student suicide and focus on supporting school staff and students. This reaction provided both an escape from focussing on their grief, and an opportunity to feel effective in their professional position (Christianson & Everall, 2008, 2009).

DSH is related to suicidal behaviour (Laye-Ginhu & Schonert-Reilchl, 2005), and thus may generate similar concerns for counsellors around competency (e.g. counsellors may question their ability to 'manage' the DSH behaviour of their clients). The common attribution that DSH is attention-seeking may lead to the belief that suicide following long-standing DSH is avoidable, if only the student had received the attention they were seeking. Counsellors may blame themselves, have concerns about being blamed by school staff, and question their ability for identifying and managing the DSH that occurs prior to suicidal behaviours. Although DSH and suicide are separate (see Table

1, p. 8), DSH is a known correlate of suicide. Over time DSH may no longer provide relief (e.g. from emotional distress), and the individual may turn to suicide to escape their emotional pain or psychological distress (see literature on psychache; Shneidman, 1993).

Concerns for competency, and perhaps containment given the issue of contagion with DSH, may create anxiety among counsellors in relation to DSH. Also, teachers' reactions (see Heath et al., 2006) may lead counsellors to feel unable to discuss the issue of DSH with staff and feel unsupported by their school collective (similar to suicide; Christianson & Everall, 2008; 2009). Thus, as well as aiming to understand the social environment in secondary schools in relation to DSH, Study 3.1 also aims to understand counsellors' positions within the school system in relation to DSH, and their perceptions of school support in relation to their role in cases of DSH behaviour. In addition, uncovering the experiences and perceptions of DSH among secondary school staff will help gauge whether, in New Zealand, teachers and counsellors are able to be sources of knowledge and support for parents and the wider community in the area of adolescent self-harm. Research has identified that American adults view both teachers and guidance counsellors as knowledgeable and appropriate sources of advice on child mental health issues (Pescosolido et al., 2008). The same may be true in New Zealand; parents may turn to school staff for advice in understanding their child's self-harm.

Method

Semi-structured feedback interviews were conducted with school guidance counsellors/pastoral care providers at eight of the ten schools that participated in the longitudinal survey (at one school there was a change in counsellor part-way through participation, making an interview more difficult as the new counsellor had minimal involvement in the research; at another school the counsellor did not take up the opportunity to participate). This is an 80% recruitment success rate. There is no criterion for a low rate of participation (Crosby, Salazar & DiClemente, 2006); but given the limited time school counsellors have available in general (Gibbons & Studer, 2008) this level of participation was appreciated. The interview data was qualitatively analysed using thematic analysis taken from a constructionist perspective (Potter, 1996; Braun & Clarke, 2006; see Study 3.1a), and was later analysed for ideological dilemmas (Study 3.1b). Counsellors were viewed as creating a version of their reality through their discourse.

Participants.

Participants were eight guidance counsellors or pastoral care providers (mean age = 48.14; 50% male, 2-23 years experience) from the secondary schools that participated in the longitudinal survey.

Measures.

Semi-structured interview questions (see appendix F2) were used focussing on initial reactions to being involved in the research, the school context and feedback from students or staff, and expectations from research in general and this project in particular. The rationale for these questions was based on the emotive reaction to DSH found in research (e.g. Best, 2006a) and my own experience of requesting school participation in this project. Initial reactions were important for understanding why schools chose to take part, given the fears of contagion and the 'horror' (Best, 2006a) associated with adolescent DSH. Minimal research has looked at the school context and how it relates to DSH, and Study 3.1 aimed at addressing this gap. Expectations of participation were important to assess to ensure this project considered the potential benefits schools' envisaged (and catered to these when and where possible). Considering the commitment schools were making to the project, and the nature of the topic (i.e. controversial), it was important to make participation worthwhile for the schools involved to encourage participation in research on DSH in the future.

Procedure.

Upon approval, counsellors and pastoral care providers at the schools that participated in the longitudinal survey (bar one, where the counsellor had resigned whilst the research was in progress) were contacted via email and asked if they would like to participate in a feedback interview. Counsellors were contacted after phase two of the survey had been completed at their school. The email included the semi-structured interview schedule, information sheet and consent form (see appendix F1). If counsellors did not respond they were sent a follow-up email requesting their voluntary participation. This research was voluntary; as schools act in place of caregivers they have the right to decline participation. Once a counsellor agreed to take part (all those approached agreed to participate, except one counsellor who did not respond) a meeting was arranged. The interviews ranged from 18 - 49 minutes in length (majority approximately 30 minutes). The semi-structured interview questions were used as a guide throughout, but the conversation flowed from the counsellors' responses, and

counsellors led the direction of the conversation if and when possible. The interview took place in the counsellors office (quiet and confidential), and were audio-recorded. Before each interview participants signed consent forms and were given the opportunity to ask questions. Each interview was transcribed (using Transcription Buddy 3.0; High Criteria Inc., 2008) verbatim but pauses and other non-content cues such as intonation, non-verbal behavioural cues, or detailed voice-overlap were not noted. Each counsellor was sent a copy of their individual transcript within 1-2 weeks of participation, along with debriefing information.

Qualitative methodology

In Study 3.1a the interview transcripts were analysed using thematic analysis to answer the research questions: *1) What primary factors of concern arise when conducting research on DSH in secondary schools?* and *2) How was DSH conceptualised in these interviews?* The first research question stemmed from my experience of approaching schools to participate in my research; there were several points of resistance to participate (see p. 178-179), as well as interest in the topic (i.e. ambivalence). Thematic analysis was used to identify and then sort the data into themes.

Thematic analysis is a qualitative research method aimed at organising a corpus of qualitative data into themes or patterns, and can then be used further to analyse the data in relation to the research question(s) (Braun & Clarke, 2006). I conducted a 'theoretical' thematic analysis, as the identification and development of themes were driven by the research questions and interest in understanding the social climate in secondary schools in relation to DSH (i.e. the analysis will be analyst-driven; Braun & Clarke, 2006). Data relevant to the research questions were coded while the rest was excluded from further analysis. As such, the analysis will not represent a rich description of the overall corpus, but a targeted description of parts of the corpus that directly relate to the research questions, and the overall aim of the study. The initial thematic analysis will follow a semantic approach, whereby themes will be identified in the corpus based on surface-level interpretations of the data (Braun & Clarke, 2006; no attempt will be made to interpret underlying meaning behind what participants' have said when identifying themes). However, the analysis attempts to go beyond mere description of the data to offer interpretations of what these themes mean, their implications and rhetorical function within the school setting.

Once organised into themes while maintaining the richness of the dataset (Study 3.1a), a rhetorical analysis was conducted to assess for ideological dilemmas (Study 3.1b). It was apparent throughout conducting this research that there was ambiguity around the meaning of DSH behaviour, and contradictory reactions to engaging in the topic within and between participants. This suggested ideological dilemmas (Billig, 1991) existed in relation to DSH; hence I set out to identify these dilemmas within the corpus.

When conducting a rhetorical analysis to identify ideological dilemmas present in the data a more latent-level approach will be taken compared to the thematic analysis in study 3.1a. In Study 3.1b the underlying ideologies of participants' will be theorised and discussed. Billig (1991) suggests that all discourse is aimed at creating a plausible, credible argument to promote the speaker's point of view. Within discourse, alternative ideological dilemmas arise when two arguments co-occur which create a dilemma for lived experience due to their incompatibility. Billig (1991) suggests that if there is no disagreement about an issue then nobody raises it; by extension this suggests that the ambivalence and concerns raised by schools in relation to DSH indicates disagreement. The strong reactions of resistance and support for my research indicate alternative rhetorical positions; conducting a rhetorical analysis of the ideological dilemmas surrounding DSH in secondary schools may help uncover the polarised messages about DSH young people receive in their environment.

Overall, Study 3.1 follows a contextualist approach, which takes into account how meaning is constructed by individuals to represent their perceived reality (Gergen, 2003) to acknowledge and focus on how DSH within secondary schools is created and understood (and interpersonal and intrapersonal variation in this construction). A contextual constructionist perspective also allows consideration of how the social context influences constructions of reality (and vice versa). The realities of school life and functional roles of schools will be included into the interpretations. Detailed transcription is not included in the extracts of Study 3.1 (e.g. timed pauses, non-verbal behaviour, intonation), and minimal encouragers from the researcher are condensed and placed in brackets for brevity. Counsellors' remain anonymous (they are numbered C1-8).

Study 3.1a   Analysis and Discussion

Reading and re-reading the corpus led to several revisions in theme development (see appendices F3 and F4, and *Figure 44a* and *44b*). The process of reading and re-reading the transcripts led to the development of an initial thematic map, followed by a revision, and a final map identifying themes and sub-themes. Braun and Clarke (2006) identify development and revision of thematic maps as a step in the analytic process. The final thematic maps are presented below, along with information on the process of the analysis (i.e. how the themes were selected), and discussion of the findings (data interpretation). Final themes are presented in bold font, while sub-themes are presented in italics.

In the initial thematic map (appendix F3) there was considerable overlap between themes. For example, emotive reactions to the topic of DSH spread across themes (e.g. as the sub-themes 'disgust/shock', 'gross' and 'danger/taboo'), as did issues of stigmatisation and avoidance (e.g. sub-themes 'marginalised', 'destigma/normalise', and 'fear/taboo'). Re-reading of the corpus led to further themes and sub-themes being identified, most notably around the conceptualisation of DSH or 'Explanations for DSH' (e.g. as a form of communication; as to do with relationships). At this stage a revised thematic map was developed (see appendix F4). Also, refinement of the thematic maps from appendix F3 and F4 involved differentiating between the practical issues of participation ('Factors in decision to participate', appendix F4), emotive issues around engaging in the topic of DSH (i.e. 'Fear/danger of DSH'), and explanations or constructions of DSH behaviour (i.e. 'Explanations of DSH'). Previously these issues had been spread across themes (most notably emotional reactions to the topic).

The analysis was then orientated towards the research questions to ensure the themes explored these issues. Analyses of the thematic maps thus far led to the conclusion that the first research question (*1. What primary factors of concern arise when conducting research on DSH in secondary schools?*) related to the themes 'Factors in decision to participate' and 'Fear/danger of DSH' (see appendix F4). Further re-reading of the corpus identified the themes '**Desire to help**' and '**Strong emotional reaction**' as falling under the first research question, with new sub-themes (e.g. '*Shock factor*') developed and old ones amalgamated (e.g. '*Taboo*' subsumed the previous sub-theme '*contagion*').

The second research questions *2) How was DSH conceptualised in these interviews?* related to the themes 'Explanations of DSH' and certain sub-themes of 'Fear/danger of DSH' identified in Appendix F4. Revisions to the map were necessary to differentiate between the different orientations towards DSH (i.e. constructing explanations for the behaviour vs. describing/labelling the characteristics of DSH), and refinement of the themes and sub-themes was necessary to cater to the research question. 'Explanations for DSH' in appendix F4 was revised into the theme '**Reasons for DSH**', which included the previous sub-themes '*DSH as a relationship issue*' and '*DSH as communication*', while including a further sub-theme '*coping strategy*' (which was a common explanation for DSH in the corpus). The final theme '**Generation**' was taken from the sub-theme 'generational/maturity issue' in appendix F4, and expanded to include the sub-theme '*understood by youth*' (this theme came up regularly in the corpus and represented differential understandings, knowledge and constructions of DSH among students (youth) and school staff (adults)). The theme '**Abonormal**' was generated from the previous theme 'Fear/danger of DSH' presented in appendix F4; the sub-themes of '*taboo*', '*freak*' and '*serious*' (from the previously developed sub-theme 'risky/dangerous') were also transferred from this previously generated thematic map (albeit with refinement of understanding; i.e. as representative of how DSH was constructed as abnormal through highlighting it's 'otherness' as a '*freaky*' behaviour that was beyond minimal concern (i.e. it was *serious*) and ordinary conversation (i.e. *taboo*)). *Figure 44a* and *Figure 44b* present the final thematic maps for each research question separately.

Desire to Help.

I begin by discussing the themes and sub-themes relating to the first research question (see *Figure 44a*). Counsellors expressed several ideas and concerns around their **Desire to help**; these were related to both the school environment, and the benefits of participation for their school and work as counsellors. This '**desire to help**' theme encompassed factors arising from the issue of whether or not to participate, and
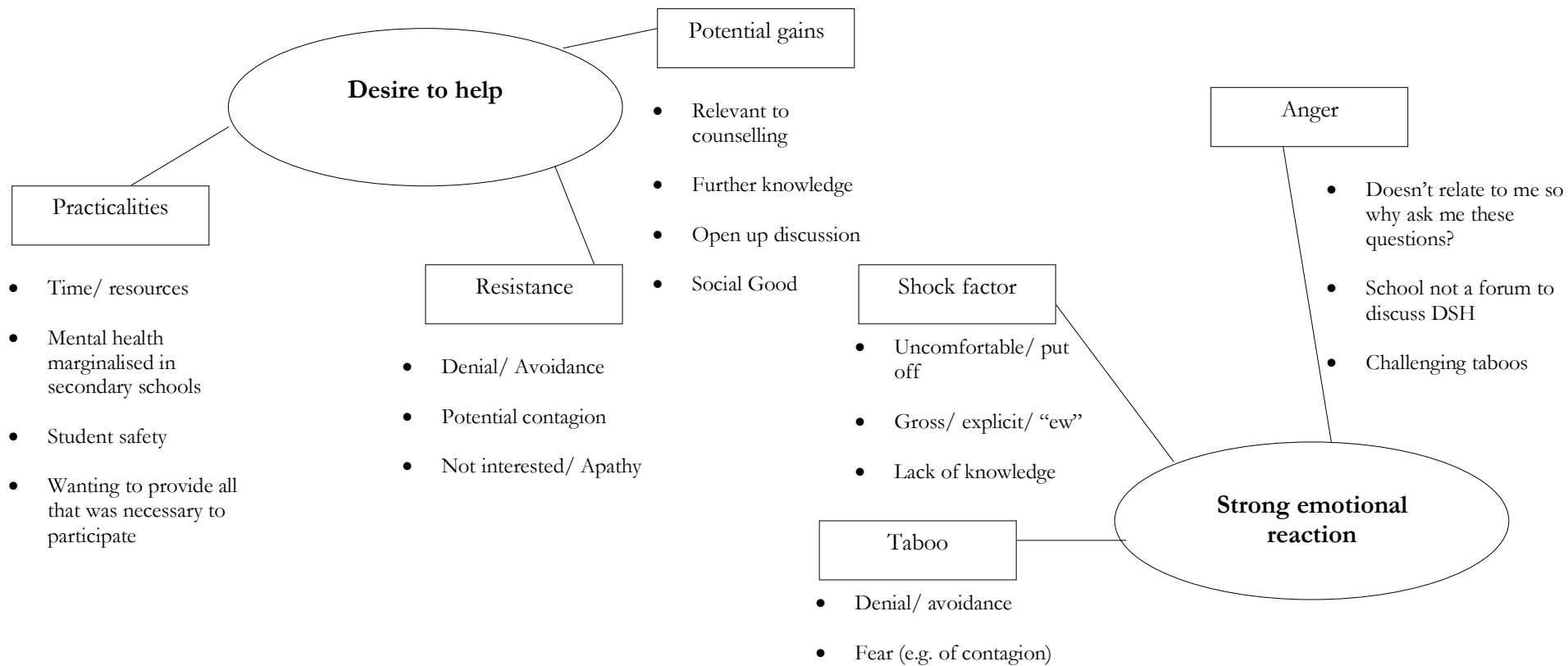
Figure 44a. Final thematic map: Q1: Primary factors arising when researching DSH in secondary schools

Freak

- Shocking
- Revolting
- "ew"
- Alone/ isolated
- misunderstood

Abnormal

Maturity issue

- DSH as weak and immature
- 'grow out of it'
- 'toughen up'/'get over it' response

Generational

Serious

Taboo

Understood by youth

- "kids get it"
- Students are aware
- Teachers as living "sheltered lives"
- Denial/lack of knowledge among older generation

- Risky
- Dangerous
- Focus on physical harm
- Related to suicide
- Requires professional help

- Unknown/ lack knowledge
- Not allowed to ask about DSH
- Denial/ avoidance

Reasons for DSH

Coping strategy

- Emotional release
- Calm down/ feel better
- As related to depression, stress, etc.

Relationship issue

- Interpersonal violence/ emotional abuse
- Marginalised/ alone/ isolated
- Contagion (relationship mechanism as precursor to/ modelling of DSH)

Communication

- Let people know you are hurting

Figure 44b. Final thematic map: Q2: Constructions of DSH in secondary schools

190

circumstances, events or thoughts about the research as it progressed that both supported and negated participation. Three sub-themes were extracted for this theme; '*practicalities*', '*resistance*' and '*potential gains*'. Each of these are discussed in turn.

Practicalities.

'*Practicalities*' concerned constraints within the school environment that needed to be negotiated to allow for participation. The practicality most often voiced by counsellors was finding the time and resources to commit to the project. This included having the time to liaise and conduct administrative tasks to allow the research to progress, and concerns about providing all that was necessary for effective school participation. Below are extracts illustrating the importance of time when considering research participation:

Extract 1

C4:   So yeah I was- I was pretty enthusiastic. I didn't- it didn't seem to b- to me to be too onerous um on- on my own time it was just you know I had to liaise and so um - it was made very clear that you were gonna do the work you would do the collecting and um the distributing and the discussi- discussing [J: Yeah] and all that sort of stuff. So That's - that's probably pretty important to me to know that because I wouldn't have had the time to have done any of that stuff. [J: Ok]But I was happy to- it was an organisation and administration role really.

J: Yeah ok I suppose it was important for you to know that um that the role wasn't gonna take too much of your time.

C4:   Yip

Extract 2

C2:   So I'm happy I'm happy to participate in research it just- sometimes when there's a cluster of research requests it gets a bit daunting because I have [J:Yeah]limited time but you know [J: mmm] um I'm happy to stretch myself a little [J: Yeah] um to help you guys out

Despite voicing concerns over time constraints participants expressed positive emotions towards the research (e.g. extract 2: "happy to participate"; extract 1:"was pretty enthusiastic"). This positive emotion was constructed as the feature over-riding concern for time (e.g. in extract 2 the concerns of *practicalities* were preceded by the disclaimer e.g. "it's just …").

Issues to do with time were also related to wanting to do all that was necessary to participate, and time commitment was sometimes weighed against potential benefits of participation:

Extract 3

C7: …biggest problem is trying to find the time and make sure that if you're doing it you're doing it properly…

Extract 4

C8: Um (coughs) initially it was like- I'm busy- so it was like ah more organising, can I- have I got the time for it? And then when I read it through and I thought no um this is very related to adolescents which is where I'm at with my work. Um and then I- obviously the principal- was important that I got his support with it. And he was happy um so yeah no it was generally positive but it was just um balancing that I had the time to sort of do to what it needed.

The factors of time, organisation, and wanting to commit to participation may be generalised to all research participation endeavours schools undertake. These extracts exemplify the types of cost/benefits analyses counsellors and staff engaged in when choosing to participate (e.g. the *practicalities* of time-constraints versus the *potential gains* of furthering knowledge and positive emotion associated with begin involved).

Also falling under *practicalities* was the marginalisation of mental health in secondary school, which related to the construction of DSH as a mental health concern (i.e. *serious*). Several participants spoke of barriers to projects involving mental health and mental health initiatives in schools due to the strong emphasis on academic learning:

Extract 5

C4: Yeah um (...) I- I guess it's interesting in the light of a conversation that we've had this morning which is around you know um it was discussing timetable constraints and um members of the staff were talking about their role is to deliver academic you know is to be academic focussed and deliver their curriculum. [J: mmm] And- and their kind of denial and refusal to acknowledge that they had a responsibility about the general well being of students as well. [J: Yeah] And I think that that's still strong and um clear in some schools with some teachers. [J: Mmm]Um so you know the more information um we get the better it's still though "well that's not my business".

Extract 6

C6: Hmm...Well the core business of a school is education...and...since the late seventies we've moved away from pastoral care of kids in the classroom um as we- we- we move towards tomorrows schools an- and sort of turning education into a commodity and my impression is that today's teachers are so focused on curriculum delivery that um...apart from the nominal form time there really is bugger all pastoral care happening in the classroom today so I would say that..al- for a lot of teachers they just want to put the kid out to the pastoral care team and say "fix it give it back to me when it's fixed"...um personally I think this a completely a- unethical way of dealing with people um but it is the fault of the ah th- the far right wing Rogernomic-type situation that we've got ourselves into.

Both C4 and C6 construct views of schools as exclusively academic as "unethical" (extract 6) in terms of role responsibility. Perhaps this plays out in interactions between counsellors and academic staff in secondary schools, with counsellors unable to successfully directly challenge at least some staff for their academic focus and marginalisation of mental health because this is the dominant position and supported by the infrastructure (i.e. schools as academic institutions). Alternatively counsellors may make generalised statements in the hope of being heard and their point getting across without challenging the status quo directly. Extract 5 constructs the teachers' roles as including the "responsibility" to care for students' wellbeing, thus placing the onus on teachers to cater to the mental health of students as an obligatory function of their position. This construction of teachers' roles also functions to imply that choosing not to engage in mental health issues endangers students' wellbeing.

The importance of mental health education was also put forward by another counsellor, who suggested that an entirely academic focus may mean that students experience mental health difficulties that are not picked up by staff:

Extract 7

C3: (°I mean°) I'd like to get more conversations going [J: Yeah] in the school at various levels about how people feel and (…) how they see things um through tutor groups and things like ah- like that because I think that's important [J: Mmm] That they have a sense that people listen (…) Um [J: That's a good idea] Otherwise if they are in trouble you know (…) nobody's actually alert to (…) what's happening in

their lives because there's just this teaching programme going and deadlines and [J: mmm] its all work

C3 constructs the focus on academia as limited ("just this teaching…"), and justifies their argument for including mental health learning by emphasising the consequences for an exclusively academic focus (i.e. that staff will miss warning signs that students are in trouble because nobody was there to "listen").

Some educators (as also indicated in the extract above) view a school as mandated to provide education, not mental health services (Herman, Reinke, Parkin, Traylor & Agarwal, 2009), despite the fact that students' social and emotional functioning impacts of their academic outcomes (Carbonell, Reinherz & Giaconia, 1998). This focus on academic learning serves to construct schools as academic centres, rather than centres for holistic learning. The New Zealand Ministry of Education's webpage for policy and strategy in primary and secondary education states that their current initiative "includes improving social and academic outcomes for all students by focusing on factors making the biggest difference to student learning; helping schools better determine their curriculum, teaching, learning and assessment; and promoting the effective use of information and communication technologies in NZ schools" (Ministry of Education, 2008). Although there is mention of 'improving social' outcomes, the focus is exclusively academic (i.e. on 'learning', 'curriculum', 'teaching' and 'assessment'). This is consistent with teachers' constructions (as portrayed by counsellor participants) of the role of school as exclusively a place of academic learning and development and offers support for counsellors' claims that schools focus on academic issues and limit involvement in students' psychological wellbeing.

Ethics was another issue of *practicalities* consistently mentioned. This centred on making sure there was a safety net for participants who may have had issues raised during participation.

Extract 8

C4:   Um (...) giving them that information at the end around what you
        know what they could do if they didn't feel great [J: Yeah] And I you
        know I think 99% of them would have ripped up those pages and
        chucked them in the rubbish but there would have been 1% that
        maybe thought "mmm that's not great, don't feel great about that"
        and that's what it's there for [J: Yeah] Um so yeah keeping them safe
        [J: Yeah exactly] And not- not bringing up a whole lot of stuff um
        that they've then gotta go and deal with themselves.

J: Yeah um what do you- what do you mean by that? Some personal stuff that's going on for them?

C4:   Yeah Yeah getting them to spill their guts out on a piece of paper and then they go off to class with no- with- with you know they can't do anything with it. [J: Yeah yeah] Um so knowing that I was involved and that they could come and see me about it afterwards um I think was quite important.

Extract 9

C8:   [And] um so yeah so I thought no for some it may trigger something. [J: Mmm]I mean I don't know if it hasn't. [J: Yeah] No but you know any other things out in the world can trigger as well and I'll never know either so I suppose it's just putting safety things in place so that there is the opportunity [J: mmm] the students know there's the opportunity for support in the school [J: Yeah] If they need it.

Counsellors' concern was focussed on "keeping them safe"; to provide support for students when bringing up potentially sensitive issues for them. The academic classroom was constructed as unsupportive in the face of personal issues and an inappropriate forum for voicing these issues (see extract 8), making it necessary to involve the counsellor. This discussion of student safety functioned to highlight the danger of raising issues of DSH in secondary schools. This danger was constructed as unpredictable (extract x: "It could trigger something…I don't know if it hasn't") and unavoidable (extract x: "…other things out in the world can trigger as well").

These *practicalities* came together with *potential gains* to form a type of cost-benefit analysis of whether schools chose to participate (e.g. time constraints), and their ongoing support for the research project (e.g. feeling that their students were supported by a 'safety net'); thus influencing their overall **Desire to help**. For example, discussion of the marginalisation of mental health in secondary schools functioned to make the researcher aware of the limits of participation in an environment prioritising academic learning, and also functioned to underscore the fact that teachers may not have prioritised participation in their classrooms.

Potential gains.

In opposition to barriers to participation (*practicalities*) were the *potential gains*, which included constructing the research as relevant to counselling, potentially furthering knowledge, and opening up healthy discussion of DSH (including giving

students a voice, raising awareness, and assisting disclosure). Almost all the counsellors mentioned that a major motivation for becoming involved was the perceived relevance to counselling:

Extract 10

C1:   It felt like you were trying to find out some information…that was gonna help us in our work in counselling

Extract 11

C2:   Look I like to be helpful um because I think research at your level is um purposeful, it's useful to ask them- particularly the subject that you've chosen is directly relevant to my work (…) my professional work so I'm always interested in (…) um furthering knowledge about young people

Extract 12

C4:   …I thought that the information that we could get um from it would be really relevant to what was- you know what was going on for us, I have personally worked with a number of students who have been sel- you know have self-harmed…

The discourse in these extracts constructs participation as aimed at gaining information relevant to participants' counselling in secondary schools, placing the onus on the researcher to deliver something useful that contributes to their practice.

Counsellors mentioned the *potential gain* of furthering knowledge of DSH for themselves (extracts 10-12 above) and school staff. Counsellors had different orientations for what they wanted to learn, but most focussed on understanding the behaviour or improving their counselling practice through increased knowledge of appropriate treatment techniques:

Extract 13

J: …what kind of things do you hope to see come out of research like this?

C4:   Um I think some greater understanding around what the issues you know what it is. [J: Mmm] Um ah some of the issues around why people do it.

Extract 14

C7:   I think i- (coughs) any form of research has got to have a- an outcome that can only advance or enhance the safety aspect of what we're doing. [J: Mmm] If there are programmes that we're doing, if there are ways we can do things differently. If there are- for me I

suppose triggers about yeah um...Identifying gaps and doing something to- to address that issue.

These extracts constructed DSH research as helpful in adding to knowledge and practice guidelines. There were examples of how increased knowledge through involvement in the study was used in counselling practice, or potential for use was identified. In C8's school participating in the diary study opened-up the idea of online counselling:

Extract 15

J: Mmm... Um have you got any feedback from staff or students about the project?

C8:   Um I haven't had feedback from the staff. I've had feedback for the principal he'd asked me you know how it went with the kids and whether they came and just numbers -wise. And um a couple of students – one of the s- one student came up to me and said that he'd I think emailed and he said "ah it's much easier for me to talk about feelings online than it is face-to-face" [J: Mmm] And so that was- that was good education for me you know just in terms of the potential for online type counselling as well.

C8 constructs DSH research as 'good education' (therefore relevant to an educational setting) with applied value. This construction was also made by C5, where awareness of types of DSH raised by participation in this research fostered targeted intervention for a student in a technology class who was engaging in DSH. The research gave an "education" to counsellors and staff of DSH "never even considered":

Extract 16

J: Yeah mmm yeah it's interesting. Um well this is kind of related to this question what- what have you found really thought-provoking about this project?

C5:   Um just looking at some of the questions like the different ways that people actually self-harm which I've- I've never even considered.

J: Mmm what kinds would you not have considered?

C5:   [Um] I think with glue and=

J: Ah ok um you mean like um- the glue one I'm not su-

C5:   This is where they burn themselves.

J: Ah ok yeah um that's actually quite common the burning=

C5:   =Yip. [J: Um] Coz we've actually since then actually picked it
        [to speak] to our um technology people so they actually picked up a
        guy who had done it for a month or so which made us focus on that
        tech class- just have a look at what- [J: Ok] what boys are doing
        there. [J: yeah] So they just actually look for boy who might be self-
        harming as well like that.

Aside from *potential gains* in counselling practice, counsellors constructed
participation as beneficial to students (i.e. by giving them a voice):

Extract 17

C2:   …And it's also giving them a voice [J: Yeah] Um because (…) I don't
        think- I don't think they recognise the value of that actually- having a
        voice in such um a (…) um °what was it° you know such an evidence-
        based (…) um way. I mean it- it °yeah° it's just such a great forum

Counsellors constructed participation as providing an opportunity to discuss
DSH rather than keeping it hidden:

Extract 18

C4:   Um but I don't know how much he took notice of what- you know
        what actually was going to be delivered. To me it's- it's all good data
        and anybody that want's- you know talks about that stuff or brings up
        those kinds of subjects it's a good- it's a good thing. I don't believe in
        um ah keeping everything quiet and the secrets an- so you know it
        was just another format- forum for me to bring those things to light.
        [J: Yeah] Um that this kind of stuff happens and there was a lot of
        "That doesn't happen at our school" kind of stuff. [J: laughs] Which
        is you know just a load of bollocks.

        Extract 19

C1:   But certainly um I think it would be good to get people…talking
        about stuff…and looking at things more positively [J: mmm] Rather
        than…hiding it

These extracts construct participation as "bringing those things to light" which
are usually shrouded in "secrets". The status quo of keeping DSH hidden is constructed
as "a load of bollocks" (i.e. lies, which is associated with having "secrets"), while
participation and engaging the issue is constructed as "looking at things more
positively". C4 suggests that participation may have assisted disclosure among
participants at her school. Thus disengaging from the dominant culture within schools
of "secrets" and "keeping everything quiet" relating to DSH is constructed as beneficial
in fostering disclosure and help-seeking (and receiving of help).

        Extract 20

C4: Um ah a couple of students who are self-harming and I think you know in the course of the conversation that stuff came up and I wonder whether it came up a lot easier because of having completed you know that survey and where they'd been asked about it.

By constructing engaging in DSH research as fostering openness and honesty (opposite to "secrets") and as "a good thing" C4 and C1 validate their own participation in this research.

Resistance.

Counsellors' spoke of the difficulties of encouraging participation among school staff and students; this *resistance* took multiple forms. Methods of resistance included a lack of interest or a general apathy, "grumpiness", denial or avoidance of DSH:

Extract 21

C4: Um ah I- I think there tends to be a general apathy. [J: Mmm] Um from some staff that- in reaction to it because it's not going to affect what they do right now. [J: Yeah] You know maybe- maybe when- when you look at the results that tends to be what people are interested in.

Extract 22

C1: Teachers on the whole were okay…um I got over some of the the grumpiness of some of them (…) By ((laughs)) putting out an email for the se- the first time round was okay [J: mmm] Um the- there was just general grumpiness…that you would expect anytime…the second lot as I say I got round it by sending out an email saying that the principal had agreed to the research at the beginning of the year this is the second half of it [J: mmm] and so it has to be done

Extract 23

C2: In terms of having to do the follow-up and especially if the survey is much the same as the first survey that kids do they tend to get a bit blasé and don't do it as thoroughly as they did the first one [J: Mmm okay] So I'm just- I'm- I- I just feel a wee bit um uncertain about how serious they did take it the second time round

Extract 24

C3: Yeah I think they looked at some of the questions and said ahh (…) you know bu- but um (…) and there were a few that were really (…) being silly (you know) [J: °mmyip°] But in a group of boys I guess um

J: It's almost to be expected

C3: Ja pretty- pretty much um (…) they um (…) they kindof look and then they um (…) they kindof joke you know [J: Yip] Um (…) especially about th ah these kindof um the acid things and you know I mean boys are very gory and [J: Yip] so I mean they find some

things- they appear to find some things funny that are actually really serious you know

Extract 25

C2:   So um you know some of them kindof sit and chew on their pen over some things they're just not gonna finish um (…) [J: Mmm] And some of them just go dulululululu (gestures quickly filling in questionnaire) [J: Yeah] Very quickly

These extracts serve to construct participation for students as potentially a "joke" and "silly", not worth effort (e.g. extract 25: "dulululululu…very quickly"). The construction of staff participation was made for research in general (e.g. extract 22: "…would expect [grumpiness] anytime…") as not important for staff at the time of participation, which was used to explain lack of staff motivation.

Other than resistance through disinterest, apathy, or not taking the research seriously, the interview data suggests teachers and students denied the importance of DSH as a valid research topic in secondary schools. Many of the counsellors mentioned that staff did not want to delve into the topic of DSH (avoidance) or felt that it "doesn't happen in our school", which functions to invalidate research into DSH in that setting. The denial and avoidance among staff may relate to the marginalisation of mental health in secondary schools, and teachers' not viewing their role as including pastoral care:

Extract 26

C4:   And- and their kind of denial and refusal to acknowledge that they had a responsibility about the general well being of students as well. [J: Yeah] And I think that that's still strong and um clear in some schools with some teachers. [J: Mmm] Um so you know the more information um we get the better it's still though "well that's not my business" [J: Yeah] You know "don't want to know" [J: Mmm] so peoples' resistance [J: Mmm] has been interesting.

Thus *resistance* among staff may function to maintain or reinforce the status-quo of an academic focus in classrooms, with *resistance* to spending academic class time on researching mental health issues.

Counsellors also indicated that DSH was a taboo topic, functioning to support the "denial" and avoidance of DSH among staff and students. Below are extracts highlighting the denial of DSH and the belief that it occurs somewhere else, at "some other school", or the hope that it "doesn't happen here":

Extract 27

C5:   …something which we constantly see is that denial factor that if you talk about problems then people say "oh this a decile ten school we will not have these problems" [J: Mmm that's just not true.]

Extract 28

C4:   An- and being um ah I guess having the conversation around well yes actually this does happen. [J: Yeah] And you know this happens to your normal average blow kid. [J: Mmm] It's not over there at some other school in some other place to some other kids this happens to us…

Extract 29

C4:   …there was a lot of "That doesn't happen at our school" kind of stuff [J: laughs] Which is you know just a load of bullocks.

Extract 30

J: What about um from the survey did you get any…did any incident like that happen to do with the surveys? Or-

C4:   Nothing nothing dramatic no there- just sort of a few little comments like oh nasty stuff to have to think about and hope we don't have anything like that here…and all that [laughs] [J: [laughs] oh dear] Yeah this is not senior management who are much more sensible.

This denial of DSH among staff was constructed as an invalid argument for resisting participation. The counter-position (advocated by counsellors) of acknowledging DSH as an issue where research is necessary was constructed as true and rational (i.e. extract 30: "much more sensible"). In cases where DSH was acknowledged by staff as an issue in secondary schools, counsellors took a more supportive stance towards *resistance* through citing taboo on DSH (e.g. as too horrifying to contemplate) as creating barriers against discussion.

Extract 31

C4:   Um that so that- that interested me um I guess the other thing that interested me was – well which opened my eyes was some of the types of self-harming that you were asking about. [J: Mmm] And I think some of the kids' reactions to that and even the staff was kind of quite horrified and you know "Why is she asking this!" kind of so it was- I was interested in the reactions of [J: [laughs]] people. [J: Mmm] To responding to that. [J: Yeah] Kind of like you're bringing up a taboo subject and we don't want to know about that.

Extract 32

C6:   Yip…um…so…essentially I would say it would have been difficult for many staff to maintain control of the students while they sensibly filled in these forms because it would have broken so many taboos.(…) [J: Ok] (…)

J: Um what are some of the taboos that you think will come through in this survey?

C6:   Well...the taboo about talking about vulnerability you know you don't- you know guys are supposed to be staunch...um there's a general sort of only Emos ah would self-harm and Emos are beneath contempt so therefore this survey's beneath contempt.

In extract 32, C6 constructs DSH as inconsistent with expectations of "guys" (males) as being 'staunch'. By default this constructs DSH as a feminine and weak. Also, the 'taboo about talking about vulnerability' constructs males as not expected to show vulnerability, and DSH as an expression of vulnerability, and therefore not an appropriate behaviour for males to engage in. This constructs *resistance* as functioning to avoid appearing weak or deviant (e.g. deviating from the male norm). Extract 32 also provides support (or sympathy) for teachers' refusal to participate, in that violation of taboo would have made it difficult to supervise students completing surveys. This constructs participation in DSH research as problematic in terms of social *resistance* to calmly approaching and engaging the topic. This type of *resistance* relates to the *practicalities* of maintaining order and a sense of normality within a school.

C6 also constructs DSH as a behaviour engaged in by Emos (a subculture originally referring to 'emotional hardcore' music, but now extended to signify groups of youth stereotyped as having black hair, long fringes, tight pants, and who are emotionally volatile and cut themselves; Greenwald, 2003). Emo's are generally viewed negatively by society, and may be used to embody moral panic around DSH behaviour (Chang, 2006). The negativity and "comtempt" surrounding Emos is constructed as being transferred to DSH behaviour (via association with being Emo), and hence the survey is "beneath contempt" (extract 32) due to the focus on DSH. This serves to construct participation as problematic in terms of potentially inviting labelling.

Resistance was also linked to a fear of normalising DSH behaviour and inciting contagion, or giving students' ideas[10] about DSH. Thus DSH is constructed by counsellors as posing a dilemma; do they engage with the issue of DSH among their student body which has the potential to lead to the appropriate help and support, or do they choose to remain quiet on the issue for fear of normalising and encouraging staff and students to think about things they otherwise would not have considered.

---

[10] This construction is supported by a feedback study with participants from Study 2.1b. This feedback study (N=15) found that many secondary school participants were surprised by the many different types of DSH, which some participants had not thought of.

Extract 33

C1:   But the concern I have with that is…that once people get out and
        start talking about things it almost normalises it [J: mmm] (…) okay
        yeah] (…) [J: mmm] And th- that wo- that would be a concern

Extract 34

J: Mmm...where- what were some of your concerns about it being
        accepted by the staff?

C6:   Well the same- the same concerns you had that it's a- it's a very
        delicate topic and do you really want to be talking about this basically
        and um you know it [J: Mmm] it concerns like you know contagion
        and this sort of thing.

 C6's use of the word "contagion" serves to construct DSH as something you
can catch, which implies that it has disease-like qualities. This construction of DSH
supports the idea that DSH (similar to disease) is something to be feared and avoided to
maintain good health. Also, the idea of 'contagion' constructs DSH as uncontrollable; if
it is present it may transfer to someone else (like a virus), unimpeded by efforts to halt
or prevent the process. Portraying DSH as uncontrollably catchy encourages panic
relating to the behaviour, and constructs participation as risky and a concern for student
safety. Alternatively, an extension of the disease metaphor suggests remaining
disconnected from the topic maintains isolation and containment, preventing the
behaviour from spreading.

Students also voiced concerns to staff that completing the survey put ideas into
their heads, which functions to validate *resistance* and counsellors' concerns expressed
above:

Extract 35

C1:   With some of ah- and this is again second hand coz it's not direct
        from the students themselves…um…but some of them
        were….saying things like…[J: mmm] Why do we have to…why do
        we have to answer questions like this [J: mmm] I have never thought
        of…killing myself now it's put that into my head [J: Oh okay
        I see what you mean] So I mean I'm just picking up the killing myself
        bit but the- there were other questions [J: mmm] ah I've never
        thought of myself like this now you've put it into my head …I'm
        starting to wonder

Extract 36

C2:   Um they didn't realise that there are so many different ways of- of
        sort of self-harming [J: Mmm] Ah and I just said well I hope it hasn't
        given them any ideas (laughs)

C1 uses the example of extreme behaviour (i.e. "killing myself", which was not in the questionnaire but is portrayed by C1 as an item assessed) to support students' concerns (and thereby validate *resistance)* and effectively counter any arguments against concerns of 'putting ideas in students heads' (i.e. as this would suggest suicidal thoughts are not a cause for concern, where traditionally suicide as been an area of moral panic within secondary schools). This discourse of research into DSH leading to contagion or "putting ideas into students' heads" functions to support avoiding participation, or to excuse lack of participation, and (according to counsellors' reports) was used by students to validate their *resistance.*

Strong Emotional Reaction

Throughout this research many participants voiced emotional reactions to participation reflecting fear, shock and anxiety surrounding the topic of DSH. **Strong emotional reaction** included three sub-themes *shock factor*, *anger* and *taboo* (see *Figure 44b*). According to the guidance counsellors surveyed, the topic of DSH made participants emotionally uncomfortable; participation incited anger in teachers and students, and a taboo on DSH was bought to the surface explicitly and implicitly as evidenced by avoidance, denial, fear and anxiety. A **strong emotional reaction** was attributed to students[11], school staff, and in some cases counsellors themselves, in all the interviews.

Shock factor.

According to counsellors accounts of participation, school students and staff were uncomfortable with, and lacked knowledge on, the topic of DSH, were shocked by the types of DSH listed in the survey, and felt the survey questions on DSH were gross, gory or explicit. These different facets of *shock factor* are inter-related; lack of knowledge may present as a fear of the unknown, leading to feelings of discomfort, and labelling the behaviour as 'gross' (i.e. abnormal). Several of the guidance counsellors mentioned that teachers and students were shocked by the DSH questions:

---

[11] This is inconsistent with the feedback study with secondary school students (N=15) participating in Study 2.1b, where the majority of participants felt comfortable answering questions, including those on DSH. However, secondary school participants in Study 2.1b opted to participate in their own time, and therefore potentially had a special interest in DSH.

Extract 37

C2: Well the first round I think they were a bit shocked actually by- by some of the questions and it was just I think the graphic nature of (…) the description

Extract 38

C4: Um quite a lot of revulsion from some of the kids "Ah my God they don't do that?" [J: laughs] sort of stuff [J: Yeah] It's like no man that's really freaky and really weird.

Extract 39

C2: =Um (…) I had some feedback from some teachers actually coz they took time to read it and they were going eeeu ((laughs)) do kids really do this? This [J: laughs] is what one teacher said and then another teacher said well the kids were a bit put off actually

Extract 40

C1: and I think there was…I got the feeling that there was a ah shock factor…wi- with both form teachers and..and students [J: mmm] Just some of the topics that were mentioned [J: mmm] that people think about topics ah occasionally with their friends but they don't actually talk about it kind of publicly

In the above extracts DSH was constructed as commonly stigmatised as **abnormal,** as unusual for discussion or thought (extract 40) by students and staff to validate their reactions of shock. The discomfort students felt was linked to the behaviour being unlikely (extract 39: "do kids really do that") and therefore not necessary to consider[12]. Constructing DSH as **abnormal** and not worthy of consideration functions to justify *resistance* to participation. C5 linked the *shock factor* among participants at his school to living "very sheltered lives" and exhibiting a form of "shadow projection" and avoidance of thinking about DSH in their environment:

Extract 41

C5: I think that what did surprise me the- the first set of questions which we did give to the boys. There was a really really big backlash which I interpreted as people being- I think a lot of our boys live very sheltered lives. [J: mmm] And a lot of them would not actually you know want to think that this might be happening and I think confronting them with that reality they felt very very- there was definitely a very very stong response from some- I would say with these things that they felt uncomfortable with I think they had almost like a shadow projection kind of thing. [J: Mmm] I think they might

---

[12] Constructing DSH as unlikely and therefore not necessary to consider is inconsistent with the high prevalence rates found in participating schools in Study 2. It is also inconsistent with the results for the feedback study involving participants from Study 2.1b; most of the feedback participants thought the topic of DSH was relevant to adolescent life.

have been aware of it but didn't want to think about it more than that- it's at some other school somewhere else

This extract constructs the *shock factor* as a defense mechanism against the "reality" of DSH. This constructs participation as a process of informing students and staff of their reality, which could lead to discomfort.

Taboo

As mentioned earlier (extract 32), counsellors identified a *taboo* for DSH. This *taboo* was related to *resistance* to participation based on revulsion and disgust (**strong emotional reaction**). The taboo was constructed as fostering reactions of denial, avoidance and fear among participants. This creates a reality were DSH is seen as highly dangerous and 'off limits' as a topic for discussion, potentially compounding the isolation and low self esteem felt by individuals who engage in DSH (De Leo & Heller, 2004). Taboos, as in the case of DSH (as constructed in these interviews) rouse significant emotion:

Extract 42

C5:   [yeah] But the fact that there was a strong emotional response tells me that there is denial. [J: Mmm] Of something which they've put themselves in a little cocoon and said "this does not exist in the world."

Extract 43

C6:   Well...the taboo about talking about vulnerability you know you don't- you know guys are supposed to be staunch...um there's a general sort of only Emos ah would self-harm and Emos are beneath contempt so therefore this survey's beneath contempt.

These extracts construct the *taboo* around DSH as a protective mechanism against a denied and feared (extract 42) and contemptuous (extract 43) behaviour, functioning to avoid negative emotion or labelling (e.g. as weak or Emo). Both *taboo,* and *shock factor* discussed previously, function to justify *resistance* to participation and avoidance of the topic of DSH.

Anger.

This denial, avoidance and fear around discussing DSH was accompanied by feelings of *anger*, the third and final sub-theme of **strong emotional reaction**. Counsellors constructed this anger as an emotional response to being asked questions considered inappropriate:

Extract 44

C7:   [No no] upset almost as in anger like "how could we be asked questions like this?" [J: Mmm mm] and- and that- why would you be that angry? [J: Mmm

J: Did you sit them down as a group to talk about that? Or how did it happen?=

C7:   =Ah no it was just they basically they came one-on-one and we could have a conversation or speak to their parents or.. [J: yeah ok mm] And it was a small number of boys but they made a lot of noise. [J: Yeah] And there was definitely an emotional not an intellectual response. Yeah when you've- when you're dealing with an emotional not an intellectual response you must say well what is the nerve that you hit?

J: Yes and there obviously must have been one.

C7:   Yip because otherwise why would they be that angry? Why would they be that upset? [J: Mmm] Because otherwise they would just "Ah that was silly" and walk around saying that was a silly interview. [J: Mmm] They didn't say those were silly questions or mock about it they were angry.

Extract 45

J: Okay um…so what about feedback from students and staff…um what kind of feedback have you gotten if any

C1:   Not a lot from actual individual students coming and talking to me about it…but in going and talking with form teachers…all of the form teachers have had feedback of some sort [J: mmm] Some was um sort of…angry wh- why do we have to do something like this this is…just not what we want to be doing…and..from some of the students and also from some of- probably three or four of the form teachers themselves (…)Questioning why [J: mmm] These sorts of questions need to asked in some research

Thus the emotional response of *anger* among staff and students was constructed by counsellors as *resistance* to doing the survey.

The two themes **desire to help** and **strong emotional reaction** that fell under research question 1: *primary factors arising when researching DSH in secondary schools* were strongly related; participants' **strong emotional reactions** to being involved influenced their **desire to help** (e.g. *shock factor* as justifying *resistance* functioned to avoid negative emotion) and their engagement in the research process. Also, the potential gains motivating schools to participate would have been influenced by the emotional response to participation (e.g. *anger* and fear would bias recall and thereby limit *potential gains*). The above discussion suggests polarisation between staff and students who value

discussion of DSH and those that do not want the issue raised. These counter-positions will be discussed further in the section on ideological dilemmas (Study 3.1b).

Abnormal

The second research question was to understand the conceptualisation of DSH in secondary schools. Counsellors mentioned that both students and staff constructed DSH as **abnormal.** This theme was related to viewing DSH as *freaky*, *taboo* and *serious* (see *Figure 44b*).

DSH as Freaky.

Counsellors suggested students and staff constructed DSH as *freaky* and unnatural (see extracts 38 and 39), and that DSH roused "freaked out" reactions in schools among parents:

Extract 46

C4:   [I] think parents totally freak out too.

J: Well I've got that feedback too and um I've had a counsellor ask if
        I can give some information that could be given to parents because
        there's this total kind of withdrawal or ah they'll get over it or-
        there's not really any kind of engagement with the issue.

C4:   Yip. [J: Yeah] Yeah yip absolutely. [J: Mmm] So some- you
        know some pretty basic information I think is what's needed we
        don't need too comp- it to be too complicated because people's
        knowledge is very [laughs] um very [J: mmm] small you know
        there's not- people don't know a lot about it.

This construction of DSH as *freaky* was portrayed by counsellors as emerging from an emotional reaction of revulsion (e.g. "eeuuu", extract 39) or lack of knowledge (extract 46). Stigmatizing and labelling a behaviour (as in *freaky*) entails distancing oneself from the 'other' (i.e. the person who engages in DSH); this may be motivated by a deep-seated emotional reaction to disrupting the body-barrier (Hewitt, 1997). C6 described DSH as 'blasphemous' and creating a "hollow" feeling inside. This serves to construct DSH as rousing a deep-seated reaction in people, perhaps related to primal fear of engaging in something dangerous or potentially life threatening (in extreme cases):

Extract 47

C6:   I don't know how but it does. My reaction- when I first saw her
        cutting was- my rea- my reaction was a really hollow feeling in the pit

of the stomach...and a feeling that this is blasphemy this beautiful child is being damaged and this is just blasphemous and it took me a long time to think well actually she heals...um...you know you're- the most obvious thing it- the most obvious way a person is damaged is physically...and so my natural reaction is to- to 'stop doing that' [laughs you know] 'stop it!'um...and I think she actually has that reaction where other people are concerned...

This view of DSH as *freaky* behaviour is linked to the feelings of disgust and revulsion discussed under the theme **strong emotional reaction**. Socially constructing a reality where DSH is ostracised as "freak" behaviour, disgusting and revolting functions to justify withdrawal and avoidance of the issue and it's taboo status. This construction of DSH may also function to validate *resistance* to participation.

DSH as Taboo.

The second sub-theme of DSH as taboo is related to the sub-theme *freaky*; both serve to identify DSH as an unacceptable, abnormal behaviour to be avoided or denied. The construction of DSH as *taboo* serves to validate avoidance and denial of the issue (and maintains the status-quo):

Extract 48

C4:   And I think some of the kids' reactions to that and even the staff was kind of quite horrified and you know "Why is she asking this!" kind of so it was- I was interested in the reactions of [J: laughs] people. [J: Mmm] To responding to that. [J: Yeah] Kind of like you're bringing up a taboo subject and we don't want to know about that.

This sub-theme of DSH as *taboo* is linked to the *taboo* sub-theme of **strong emotional reaction** (see 255-256). While the *taboo* sub-theme of **strong emotional reaction** functioned to justify resistance based on revulsion and disgust, the *taboo* sub-theme of **abnormal** functioned to distance DSH from the 'normal' and construct it as alien within the school context (also justifying resistance to participation by questioning the validity of DSH as a relevant area for adolescent school research).

DSH as serious.

The third sub-theme of **Abnormal** is DSH as *serious*, which includes the idea of DSH as risky, dangerous, focused on physical harm, related to suicide, and requiring professional help. In the extracts below C4 and C3 describe DSH as dangerous and unpredictable:

Extract 49

C4:   =I- I tend to think the same thing you know it's about releasing um ah an tension or about um about feelings you know wanting to feel something and um yeah. It's a- it's a- to me it's [J: Mmm] a strategy for coping. [J: Yeah] And not a very effective one [laughs] [J:[laughs] no] Pretty damn dangerous.

Extract 50

C3:   (I mean) it's like- it's like depression you know it's unpredictable [J: Yeah] from day to day [J: Yeah] (…)

J: So it's like an intermediate thing I think [C3: Yeah] Um and then you can work towards improving on that but maybe for the meanwhile it might be a good strategy

C3:   Ja WELL for me the only thing is t- to talk to someone communicate with someone [J: Mmyeah] Especially when you think they're gonna do something that's really dangerous [Yeah]

In these extracts, DSH is constructed as dangerous and unpredictable; a perspective likely to contribute to fear associated with DSH in the school context. In several extracts, C3 relates DSH to suicide, serving to accentuate the seriousness of the behaviour:

Extract 51

C3:   And in combination with other (…) research I guess on different issues [J: Yeah] I mean how much of this picks up suicidal behaviour?[J: Um] Or is it- is it more just um- [J: Well it's the self-harm] (…) Is linked

Extract 52

C3:   =(I mean) I did it once before with a guy who was self- self-harming I'd only been here about a week [J: Yeah] This guy came rolling in and you know (…) an- and he- he was a lot closer to being suicidal

Relating DSH to suicide functions to highlight the extreme end of DSH behaviour and construct DSH as a highly dangerous life-threatening behaviour. This exaggerates the consequences of DSH as DSH rarely leads to suicide (Walsh, 1996). Focussing on the extreme end of self-harm behaviour makes it appear less relatable, more **abnormal**, and more deviant. This myth of equating DSH to suicide is widespread (Kibler, 2009), and may contribute to poor recognition of the extent of DSH in secondary schools (i.e. as far more prevalent than suicidal behaviours), especially if perpetuated or supported by professionals (i.e. school counsellors).

Reasons for DSH

Counsellors constructed several **reasons for DSH** including DSH as a *coping strategy*, as a form of *communication*, and as a *relationship issue*. These **reasons for DSH** provided a framework for how DSH was understood within participating secondary schools.

DSH as a coping strategy.

The first sub-theme, DSH as a *coping strategy*, was extracted from almost all the interviews, and was a common explanation for DSH among the counsellors surveyed:

Extract 53

C1:   =and so that was the direction we went in. Over the last…five probably more than that years…it's almost become…this is *just how we deal with things when we're not feeling very well* or [J: mmm] we get an- a knife out and cut ourselves or we scratch ourselves with a…a compass or [J: mmm] um..so it's- its different [J: ºmmmº](…) And the whole…anxiety self-harm…de-depression is…[J: mmm] The whole of that area is um…is different (emphasis added)

Extract 54

C2:   So um (…) you know how do you help him (…) not make the wrong (…) kindof choice when he's feeling [J: Yeah] desperate enough to start hurting himself again? [J: Mmm] I mean he's- he's actually quite articulate and he's explained (…) what happens that he- he knows [J: Mmm] what he wants to do *because he'll feel better* you know and the question is well (…) how do you empower people when they don't have a lot of other support systems (emphasis added)

These two extracts present different constructions of DSH as a *coping mechanism*. C1's construction of "…just how we deal with things…" functions to normalise, destigmatise and downplay the seriousness of the behaviour as "just" happening regularly in the last "five probably more than that years". In contrast, C2's construction of DSH is based on a client's description of his motive for DSH ("he'll feel better") and constructs the behaviour as "desperate" and "the wrong kind of choice", which validates the **abnormal** and deviant stigma of DSH and invalidates it as an acceptable form of coping. The idea of DSH as a "choice" contradicts the idea of contagion, and suggests DSH is active and controllable rather than passive and uncontrollable. This construction of DSH reflects moral value placed on life and wellbeing; DSH is a threat

to (most obviously physical) wellbeing and therefore a threat to the value people place on life (especially the lives of youth).

Several counsellors pointed to DSH as a coping strategy utilised in times of stress, depression, or emotional upset (extract 56). This functions to create a sympathetic understanding of DSH (i.e. as understandable within the realms of normal human suffering):

Extract 55

C4: Um how can we dev- you know help develop other skills for copin- you know if you base self-harm on the premise that it's a coping mechanism- not a very effective one- so how can we- what can we do to help them develop more effective ways of coping with stress or depression or=

Extract 56

C6: Ah it- it's bizarre behaviour…I think I'm absolutely guessing here and a lot of this goes on sheer gut re- gut feeling for me. She cuts because the sight of her blood calms her down.

Experiences of stress and depression are fairly normative among adolescents (Carr, 1999), which normalises the experiences of those who self-harm, and constructs DSH as an understandable, albeit ultimately ineffective, coping strategy.

DSH as communication

The next sub-theme falling under **reasons for DSH** was DSH as *communication*, which constructed DSH as geared towards being heard and getting others to see one's emotional pain:

Extract 57

C3: Because when he comes here he roles up his sleeves [J: Yeah] Because he wants to talk you see °and it's° (…) it's a very visible um (…) [J: °mmm°] way of connecting (…) We've actually established a really good supportive relationship [J: °Yeah°]

Extract 58

J: Yeah and I mean the other side as well is that if it's for attention seeking well why? Why do they need that kind of attention and what's going on?

C4: Well exactly. Exactly I mean you know I- I don't- I just say yeah yeah they do they need lots of attention they have got lots of needs. [J: Yes [laughs]] [laughs][J: Yeah that's a good way to approach it] You know what's the message they're trying to give us? [J: Yeah]

Extract 59

C5:   And then over a period of time though they s- the themes came out
       that there was no-one at home listening to them and so on and I
       think just the whole fact that people could listen to them they then
       started talking about their feelings.

J: And how do you think that fits in with self-harm?

C5:   I think self-harm might be sometimes a case of people wanting to- to
       actually show themselves or other people that they are hurting. [J:
       Mmm] And it- if you sit in a group and you can actually talk about
       your hurt people are already seeing it.

Thus counsellors constructed DSH as *communicating* emotional pain to establish a
connection with someone (extract 57), tell others something (extract 58), or give voice
to their feelings where otherwise there is no opportunity to do so (extract 59). This
functions to construct DSH as a valid and useful social act of connection for the person
within their social world. Also, the counsellors' constructions imply that staff should be
aware of these messages, or of DSH as an attempt to voice hurt, as this could lead to
appropriate help-seeking and recognition of students' wellbeing needs. Unfortunately, if
teachers and peers fear and avoid the issue of DSH, distance themselves, and construct
the behaviour as **abnormal** and *taboo* they are unlikely to be open to identifying and
appreciating these messages within DSH behaviours or be accessible sources of help
and support.

DSH as a relationship issue.

The third and final sub-theme of **reasons for DSH** was DSH as a *relationship
issue*; which includes the concepts of DSH as stemming from interpersonal violence and
abuse, DSH as stemming from feelings of being alone or isolated, and DSH as a group
phenomena (i.e. contagion). Several counsellors linked DSH to unhealthy family
environments (e.g. emotionally unavailable parents; abusive situations):

Extract 60

C5:   And busy with their own lives and not involved enough ah something
       that comes through quite often is that kids say that they can't discuss
       things at home. [J: Mmm] They can't speak at home or they're not
       being listened to or- [J: Mmm] A- and then they come out of really
       stable kind of families. Families that- where mum and dad are still
       together and so on but they just feel left out. [J: mmm] Yeah.(...)

J: Um how do you think that fits into the topics that we're looking at?

C5:   That's an emotional hurt because there's an emotional need. There's-
        theres a [J: Mmm]   (...) how do I care about other people if I
        don't see other people care about me? [J: Mmm]

Extract 61

C6:   And of course this comes back to the- to... the deliberate self-harm
         because I've- I've yet to find anyone deliberately self-harming who
         cannot trace that back to crap relationships...usually family.

Extract 62

J: What do you think drives it?(...)

C6:   Well I- it- it- it does come back to relationships. It's definitely driven
        by- by breakdown in critical relationships particularly parental
        particularly where um a child has been emotionally abused. Um the
        number of times that I've found a kid whose ah who- whose cutting
        themselves has a parent who is um swearing at them, belittling them,
        putting them down, telling them they're now good is- is time and
        again.

These extracts construct DSH as related to family environment, which
externalises reasons for DSH and an associated blaming of the student, but could
encourage inappropriate parental guilt and blame in circumstances where it is not
warranted. This construction destigmatises DSH to a degree by making it more
understandable within a student's social context; countering the rhetoric of DSH as
abnormal (or re-framing it by suggesting that the person's environment is the source of
deviancy, not the person themselves). However, the construction of DSH as *taboo* may
still continue under this construction of DSH, as family violence (especially sexual
abuse) is still generally considered a *taboo* topic (Krug, Mercy, Dahlberg & Zwi, 2002).

In terms of relationships, several counsellors mentioned DSH as occurring
within the context of a breakdown in relationships or relationship losses. For example,
in the extract below C3 discusses DSH by one of his students as occurring in the
context of a "series of losses":

Extract 63

C3:   And I guess with the self-harm thing I kindof wondered. Like with
        the one- the one guy I said to him well you know (…) who you gonna
        talk to because (…) he's had a series of losses [J: Mmm] In his life.
        He's had a series of losses [J: Mmm] Um (…) Someone in the family
        a dog (…) a friend who got killed on a bicycle (…) two of his friends
        who've left school his closest friends and I ssa- he says well he's just-
        everybody's going you know [J: Mmm] And I said well what are you
        going to do in the holidays and how are you going to cope and (…)
        who will you talk to [J: Yeah] And he's got (…) very difficult family
        situation

Again, extract 63 constructs DSH as understandable within the context of the student's lived experience (i.e. DSH as a product of their circumstance). Unfortunately, externalising the source of DSH behaviour constructs the self-harming student as a victim, which may impact negatively on their self-efficacy and de-motivate them to change when they are denied personal responsibility for their actions. DSH as a *relationship issue* was also constructed as an in-group behaviour:

Extract 64

C6:   ... There is a contagion factor...um...kids will try it...um I have even come across a case where a friend of a girl who was cutting said that if the friend didn't stop she'd start...thereby moving the responsibility for herself onto her friend...that was pretty horrible actually...um...[laughs] it's quite extraordinary to see how someone is a absolutely- you know covered in scars jumps up and down an- and shouts at people to stop the- other people doing it.

Extract 65

J: What do you think bought on that change in thinking about self-harm…um so maybe five years ag-

C1:   [mmm…you almo- ah I don't know but you almost get little groups of people…working together…ah this is what our group does [J: mmm] and I'm not sure if that's where your emos come from [J: mmm] mmm [J: I'm not sure either] (…) But certainly…it goes in…phases…and ah groups of friends who almost collaborate [J: mmm] with that and the same with some of the…I guess vomiting binge-vomit type stuff as well

The idea of contagion functions to construct DSH as group behaviour (e.g. extract C1: "working together…collaborate") used to define group identity (e.g. "where your Emos come from", extract 65) and manipulate others (e.g. "moving the responsibility for herself onto her friend", extract 64). C6 places a value judgement on the manipulative use of DSH in extract 64 as "pretty horrible", which functions to suggest deviance in this type of DSH. This indicates that different types of DSH are recognised within secondary schools, and are constructed differently. Group-based, manipulative DSH may be constructed negatively in comparison to isolated, intra-personally focussed DSH (constructed as a form of *communication*, or *coping mechanism* (see below)). DSH as a *coping mechanism* or form of *communication* was constructed as understandable within the adolescents' experience (e.g. having nobody to talk to about emotional pain; being depressed or having a "series of losses"). Group-based DSH was constructed as deviant (e.g. as Emo, and therefore "beneath contempt"), while DSH associated with manipulation was constructed as "horrible" (see extract 64).

Secondary school student, university student, and teacher participants' perceptions of the functions of DSH included reference to DSH as a *coping mechanism*, form of *communication,* and *relationship issue* (refer to Table 28, p. 157, 'to cope', 'to vent frustration' and 'family problems' respectively). The concordance of functions reported in Study 2.3b with the functions in **reasons for DSH** adds validity to counsellors' constructions of DSH, and suggests reflection and insight. It is unknown whether students would demonstrate similar insight into their peers' (or indeed their own) DSH behaviour. According to the constructions of DSH as a *generational issue* outlined below, youth contain special knowledge of DSH.

Generational

Counsellors identified **Generational** issues in their construction of DSH within secondary schools, in which DSH was constructed as both a *maturity issue* and *understood by youth* (see *Figure 44b*). The **generational** theme was voiced by the majority of counsellors, who saw DSH as a relatively new phenomenon to occur at the rate it does currently (i.e. a behaviour of recent generations). Within the sub-theme *maturity issue* was the idea that DSH is something that people 'get over' or overcome with age and maturity (i.e. DSH as immature behaviour), and that DSH does not occur among older adolescents to the same degree. The sub-theme *understood by youth* constructed DSH as understood by the younger generation, but not by the older generation (e.g. greater awareness of DSH among youth).

The extract below taken from the interview with C3 exemplifies the sub-theme *maturity issue*; C3 suggests that DSH is primarily a problem among younger students, and states that it was not such an issue among his older cohort. C3 suggests DSH is a "really stupid" behaviour and occurs while youth are still developing an identity, serving to suggest that DSH is a maturity issue that can be outgrown:

Extract 66

J: Yeah (…) Um (…) and what yo- you said maybe you were curious and what other things did you find thought provoking about the project?

C3:   Um (…) just in terms of boys and how they reflect on their emotions I thought that was(…) interesting to know whether they actually think about things [J: yeah mmm] And um (…) and particularly though the self-harm issues [J: Mmm] Um (…) because the th- the kids that have

come here with those kinds of issues have generally been younger (…) so I kindof wondered to what extent that would happen in older groups [J: Yeah] [wh]ere they're beginning to develop a more clear identity as individuals (…) ah there is peer pressure and they do some really stupid things as boys [J: Mmm] Following each other you know bu- but um (…) I kindof surmised that um (…) it wouldn't be quite as common amongst the older ones [J: °No°] That was my kindof gut feeling thing without any evidence at all

Extract 67

C7:   Um another *young lass* who I worked with on and off for...ah yeah basically for about three or four years is one who is involved in it so I've been pleased with that [J: Mmm] Um with her I think one of the things that has been good is that as she's got older her- her ability to understand her own behaviour has increased greatly. Great cudos to her. [J: Mmm] A couple of years ago I was greatly concerned about her mental state.[J: Yeah] Um [knocking stop recording for a couple of minutes while counsellor spoke to a student] [J: Ok] Yeah so I suppose with her, watching her um I've seen some real growth. (Emphasis added).

This construction places the student and their immaturity as the cause of the behaviour, and the students as accountable for its resolution (through maturation), and constructs failure to stop as a failure to mature. The student's youth is also emphasised by referring to her as a "young lass".

The extracts below suggest that adults view DSH as a *maturity issue* that students will 'get over', which is constructed by counsellors as an explanation among parents and teachers used to justify avoidance:

Extract 68

C5:   The- the other thing that I would like is literature that I can give to parents because quite often- we've had one case of a boy who is self-busy with self-harm. Mum was concerned about it and dad was like [shakes head] [J: Mmm] No it's not a problem [J: Mmm] at all he'll get over it.

J: There's really good resources from places like England or Scotland. I can look some up for you and I'll see if there are some New Zealand ones because it is [C5: ok] a big government initiative at the moment is suicide and so

C5:   That's the problem that we have especially with dads' who say that "Nope it's not a..."

J: Mmm why do you think that is?

C5:   I think that's it- it's a similar kind of thing that we don't want to accept that we might have a problem. [J: Yeah] And so if we say it's not a problem then there's not a problem.

J: And why do you think it's with dads and not mums?

C5:   Um at th- because we've only had that one experience which [J: Ah ok] It's [laughs] that's why I say [J: [lauhgs] yeah] and dad was more tha- the archetypical male ah yip [J: Mmm] it's not a problem he must just toughen up. [J: Ok yeah] And- and he sort of as in an easy sort of "just toughen up there's no problem" [J: Mmm] And I think that that- that is an excuse for "I don't know how to deal with this."

Extract 69

C4:   [laughs] um I mean that's- yeah that's interesting I- I think um a lot of um behaviour that is anti-social is seen as attention seeking therefore not worthy and not appropriate and [J: Yeah] therefore you know it needs to be stopped. [J: Yeah] That- that's- that tends to be a- um a view that a lot of staff- well not a lot but some- some staff have. [J: Mmm] Um that all bad behaviour is just about attention seeking and that really if these kids bucked up their ideas and- and if you tell them enough then they'll do it. [J: Yeah] We assume that we will you know we'll tell them!

The attitudes of "just toughen up" (extract 68) and "buck up their ideas" (Extract 69) are constructed by counsellors as being used by parents and teachers to disengage from the issue by placing the onus on the youth to manage *their* problem. In schools this construction of DSH as a *maturity issue* that is easily overcome with age and development allows teachers and school staff to disengage from the issue and belittle or undermine the behaviour as an unnecessary hindrance. Counsellors constructed this stance among parents and staff as a result of poor knowledge (e.g. "an excuse for "I don't know how to deal with this"", extract 68).

DSH as understood by youth.

Several extracts point to the fact that DSH is poorly understood by teachers and staff, while students (i.e. youth) may be more open in their understanding or have a greater awareness of DSH. C6 points outs out that it is "relatively new" and poorly understood by teachers (and himself as a guidance counsellor):

Extract 70

J: Do you think that fits in with um teachers maybe feeling like they don't know a lot about the topic and the comments that you got like um this is really nasty I don't really want to deal with it [C6: Mmm] Those two things fit together?

C6:   Yes except that self-harm is ah relatively new on the spectrum of things that we're sort of aware of. [J: Yip] Um so I mean if- if- if I'm

supposed to be the- the guidance counsellor who knows about this stuff and I'm admitting I don't why the hell should the teachers.

Several of the extracts point to a greater understanding or knowledge potentially among students than among secondary school staff:

Extract 71

J: Um just kind of the idea that self-harm is for attention seeking and is quite negative there's mo- actually stronger among staff than it is among students.

C4: Yeah well I think you know *they get it – kids get it* [J: Mmm] [laughs] um I mean that's- yeah that's interesting I- I think um a lot of um behaviour that is anti-social is seen as attention seeking therefore not worthy and not appropriate and [J: Yeah] therefore you know it needs to be stopped. (emphasis added)

Extract 72

J: What about your initial reactions to being asked to participate in this overall project? Um=

C5: = Um yes I was quite pleased to be involved we've got a number of students who have self-harmed in the past and ah before I took this position when I was just a normal classroom teacher um I did see kids harming themselves and *other kids pointing it out to me* which is not initially sure like what to do with it you know. (emphasis added)

Extract 73

C7: So I think relevancy if- if kids can relate to the topic, if they're aware of it. Yeah. (quiet: I think that'd be a big 'un')

J: So do you think the topic of self-harm fits those criteria?

C7: Yeah absolutely yeah.

This construction of DSH functions to place youth as potential sources of knowledge for staff (e.g. extract 72: "kids pointing it out to me"), and justifies why teachers and counsellors might not notice DSH among their students. Perhaps opening up communication between staff and students on this topic will allow attitude changes to dispel or reduce stigma and encourage the giving and receiving of support for students who self-harm. Similarly, contracting HIV has traditionally been considered a youth issue, with little education for older adults in topics of safer sex and drug use, relevant to HIV prevention (Tessama, Frederick, Denelsbeck, Angel & Markosky, 2009). The construction that HIV risk is not relevant to older adults has the potential to ostracise this age-group from help services, and further stigmatise the elderly with HIV (i.e. as especially deviant).

In the case of DSH, these generational differences may pose barriers to staff relating and empathising with students. C4 suggests that teachers "don't give a shit" about overcoming generational issues, suggesting a barrier in understanding between school staff and students that extends to DSH and potentially many youth-relevant issues:

Extract 74

J: What about things that have kind of got you thinking about the topic? Has anything like that come up? Um=

C4:   =Um yeah particularly the one that you- the survey that you did on the staff which was um ah using um some kids- well you know some youth descriptors of various different people. [J: Mmm] And how um [laughs] how generations and poles apart the staff- some of the staff are to the people that they're working with [J: Mmm] A- that stunned me. Um how a lot of the people that will- are working with these kids don't actually know anything about their world whatsoever and quite frankly probably don't give a shit.

J: Well it's really interesting you say that because I've- I've heard that from other people as well that I've done that with. [C4: Ah]Um from other counsellors they've said to me um they're really quite surprised and um it's almost like there's this big wall in kind of perception and experience that's really hard to get through. Yeah.

C4:   And it feels generational. [J: Mmm] You know and I don't know whether that' whe- you know um you look at the demographics of our staff um and it would be interesting to look at the- I don- I don't know if you collected data on the age of the staff who were doing the survey? [J: Um I think I did] You did? [J: Yeah] Well that would be really interesting to look at. [J: Mmm] Whether is it a generational thing or whether it's just part of that structure but they just you know they didn't know what an Emo was.

This generational gap in knowledge is constructed as shockingly unexpected (i.e. "that stunned me…") and impeding on the ability of teachers to fulfil their role (e.g. "people [teachers]…working with these kids don't actually know anything about their world whatsoever…", extract 74).

These extracts suggest lack of awareness of DSH in secondary schools is disguised by staff labelling the behaviour as immature, "attention seeking", "unworthy" or "inappropriate". This labelling serves to invalidate the behaviour as a topic to be taken seriously and undermines prevention and intervention against student DSH (e.g. because the behaviour is a maturity issue likely to be overcome with age; DSH is attention seeking and students need to "buck up their ideas").

Summary of Study 3.1a

Many issues to do with participation and the perception of DSH within secondary schools were raised during the interviews. Schools engaged in a cost-benefit analysis of *potential gains* and *practicalities* when initially considering participation. However, as involvement progressed *resistance* and a **strong emotional reaction** from students and staff may have undermined or stalled participation efforts and clouded the positive emotions counsellors initially felt towards being involved. The **strong emotional reactions** of fear, *anger* and denial portrayed as occurring among students and staff was constructed by counsellors as understandable given the *taboo* and "secrets", and attitude of "keeping things quiet" in relation to DSH within secondary schools. Also, these reactions were constructed as demonstrating poor knowledge of DSH behaviour, and as a means of distancing oneself from deviancy.

Constructions of DSH often served to generate a sympathetic stance by acknowledging the difficulties students face psychologically and/or environmentally. The construction of DSH as a *coping mechanism* acknowledged the depression or anxiety felt by students who engage in DSH and constructed the behaviour as an act of desperation that required intervention, or normalised it as a reaction to common adolescent stresses. The construction of DSH as a *relationship issue* externalised the source of DSH and constructed students who engage in DSH as needing emotional support and someone to listen to them (while home-life was emotionally barren with nobody to talk to). DSH as a form of *communication* also functioned to imply that students who engage in DSH need to be given the emotional support and space to discuss their problems; while suggesting that teachers and peers should be aware of the possible function of DSH for voicing emotional pain.

The **generational** issues surrounding DSH were constructed as creating a barrier in understanding between students who engage in DSH and the adults in their lives, most notably teachers and parents, but also counsellors. The "toughen up" or "buck up ideas" attitude constructed as existing among teachers and parents may function to discourage youth who self-harm from seeking support from adults, foster a sense of ostracism, and compound their feelings of isolation. Counsellors constructed this attitude as originating from a lack of knowledge, or avoidance of the issue. Perhaps educating school staff and parents about the realities of self-harm, and the help they can

offer young people who engage in the behaviour, will increase their sense of self-efficacy in the area and decrease the **strong emotional reaction** that is likely to be contributing to avoidance and denial.

It is important to remember to note that my role as a researcher and interviewer may have impacted on the course of the interactions in the interviews. For example, counsellors may have felt obliged to comment on *potential gains* of participation. Also, my research interests may have influenced the path of the conversations. These considerations will be mentioned again in the section outlining limitations of this thesis.

Study 3.1b   Identification and Discussion of Ideological Dilemmas

As the thematic analysis progressed several ideological dilemmas were identified (e.g. between simultaneously wanting to discuss DSH while wanting it to be kept hidden) which appear central to understanding DSH in Wellington secondary schools. To investigate these further, the interviews were analysed from a rhetorical perspective of discourse, which is based on the idea that discourse is used to create a plausible, credible and convincing argument to assert one's point of view (Billig, 1991). In discourse there are often conflicting points of view; when these lead to multiple incompatible plausible arguments to explain a concept or situation this is called an ideological dilemma (Billig, 1991). Four ideological dilemmas were identified in the corpus. The first dilemma is that DSH is understood by youth and not by adults (as identified in the **generational** theme, p. 216), with the counter-rhetoric that DSH is an immature behaviour requiring maturity to understand, overcome or avoid. The second ideological dilemma warns against raising awareness of DSH for fear of increasing its occurrence or normalising the behaviour (related to *resistance* to potential contagion, and denial and avoidance due to *taboo*), while the conflicting viewpoint (sometimes utilised in the same interview) suggests keeping DSH hidden is dangerous and not helpful to students (see *potential gains* of raising awareness, p. 195). The third ideological dilemma is the conceptualisation of DSH as a *freaky*/**abnormal** behaviour versus the behaviour of an 'average blow kid' (see construction of DSH as **abnormal**, p. 208). The fourth is the idea that DSH exists somewhere else in another school 'over there' versus here in our school (see denial and avoidance under *resistance*, p. 199). Thus while some school staff

may argue that DSH does not occur at their school, other may argue that DSH is relatively normative among students. These are elaborated upon below.

Table 31

Arguments for avoidance and approach behaviours towards DSH in secondary schools.

Avoidance/distancing behaviours	Approach/ engaging behaviours
Practicalities	**Potential gains** of exploring DSH
Limited time/resources	Relevant to counselling
Mental health marginalised in secondary schools	Further knowledge
	Student safety
Strong emotional reaction used to justify distancing	Discussion provides a form for students to discuss their concerns and disclose DSH
Shock factor (poor knowledge and awareness of DSH and preference not to think about such behaviour)	Raising awareness makes students more aware of avenues for help seeking
Taboo (e.g. avoid topics exposing vulnerability etc).	Conceptualising **reasons for DSH** in terms that makes it understandable/normalise the behaviour
Anger (argued that inappropriate to raise the	*Coping strategy* when stress, depressed etc.
issue at school)	*Communication* strategy
DSH as **abnormal** (and therefore not understandable)	*Relationship issue* (i.e. as a function of abuse or
DSH as **maturity issue** (students should "buck up their ideas" or "toughen up").	neglectful parenting and therefore understandable within the students' circumstances)
Resistance	DSH engaged in by 'average blow kid'
Denial/avoidance (DSH occurs somewhere else, at some other school)	Normalise and localise the behaviour so cannot be ignored
Student safety	
Fear of contagion (discussing/engaging with the topic of DSH may make it worse)	
Fear of putting ideas in students' heads	

All four ideological dilemmas can be linked to avoidance behaviour. Identifying DSH as immature serves to invalidate it and supports avoidance of the issue.

Arguments against raising awareness function to justify avoidance. The conceptualisation of DSH as **abnormal** suggests DSH is not rationally understandable, which justifies avoidance. Viewing DSH as 'over there', occurring in another school, serves to justify denial and avoidance of DSH by constructing it as having very little importance locally. Table 31 presents a summary of arguments for avoidance and approach behaviours identified in the thematic analysis. These themes are utilised within the ideological dilemmas to support arguments for and against avoidance of DSH within secondary schools (e.g. the third ideological dilemma that DSH is *freaky* or **abnormal** versus the behaviour of the "average blow kid" is supported by the themes **abnormal**, and **reasons for DSH**, respectively).

DSH is understood by youth vs. maturity is needed to understand it

The ideological dilemma of maturity and DSH is based on the conflicting arguments that DSH is due to immaturity (i.e. DSH is found mainly among young people, and is overcome with self-knowledge and awareness through maturity and growth) and the counter rhetoric that DSH is understood by young people while the older generation lacks awareness and understanding of DSH. This ideological dilemma is problematic because on the one hand young people are denied the maturity to understand the issue of DSH, while the counter-argument suggests young people understand DSH and the older generation has limited knowledge and may choose to deny or avoid the issue (refer back to the discussion of maturity, p. 216-218, see extracts 66 and 67). In his argument (extract 66) C3 draws upon his professional experience to give weight to his construction of reality where DSH is a problem found among less mature youth. In constructing his argument C3 implicitly identifies the possibility of counter-rhetoric based on factual evidence (see last line); however C3's "gut feeling" is supported by his professional position as a school counsellor. C7 (extract 67) also constructed the cessation of DSH as due to maturity; and gives weight to this construction by the extent of his knowledge (i.e. has been working with the client "for about three or four years…" and "watching her" i.e. first hand account). The two extracts suggest DSH is a problem found among young people who haven't had the "real growth" necessary to overcome or avoid DSH. This reality is validated by the speakers' position (i.e. an expert on youth psychology; their maturity means their argument implicitly constructs them as knowledgeable on DSH). Other extracts suggest

that some school staff perceive DSH as simply another area requiring discipline or cognitive change (e.g. "he'll get over it...") to overcome (see extracts 68 and 69). The phrase "toughen up" functions to construct DSH as a weakness easily overcome through mental and/or physical strength. C5 (extract 68) suggests that this "toughen up" attitude among parents is an avoidance behaviour based on poor knowledge of DSH and a denial or unwillingness to accept DSH as occurring. The counsellor positions himself as arguing that DSH is an important youth issue understood by youth, while positioning parents as viewing DSH as a maturity issue (and invalidates this position by suggesting it lacks knowledge). DSH as immature justifies refusal to engage with the issue, to remain withdrawn from it, and deny the true extent of DSH in secondary schools (i.e. because people adhering to this position do not make themselves aware of the facts under the presumption that the issue is one of immaturity and that youth will grow out of it). Pescosolido et al. (2008) found that one-third of their sample of American adults (N=1393) believed childhood ADHD would improve without treatment (i.e. the child would grow out of behaviours or psychological symptoms). Pescosolido et al. (2008) concluded that adults may be biased towards considering childhood or adolescent disorders as more transitory than adult-onset problems, and hence de-value the important of appropriate support and intervention.

Several counsellors constructed teachers, school staff and parents as having poor knowledge of DSH. Counsellors suggested that poor knowledge led parents to "freak out" (extract 74). This reaction supports the argument that DSH is understood poorly by adults:

Extract 74

C4: [I] think parents totally freak out too.

J: Well I've got that feedback too and um I've had a counsellor ask if I can give some information that could be given to parents because there's this total kind of withdrawal or ah they'll get over it or-there's not really any kind of engagement with the issue.

C4: Yip. [J: Yeah] Yeah yip absolutely [J: Mmm] So some- you know some pretty basic information I think is what's needed we don't need too comp- it to be too complicated [J: mmm] because people's knowledge is very [laughs] um very small you know there's not- people don't know a lot about it.

Counsellors' construction of their own knowledge as poor (e.g. "I'm supposed to be the guidance counsellor who knows about this stuff and I'm admitting I don't...", extact 70) was positioned with a disclaimer that DSH is "quite new" (extract 75), implying that lack of knowledge is through no fault of their own (allowing them to maintain their position of authority on student mental health issues), but rather a function of lack of time and exposure. Students were constructed as being able to identify the behaviour and relate to it ("they get it", extract 71; "kids can relate to the topic", extract 73), and make teachers aware of it (extract 72).

Extract 75

C3: Um (…) is to have some kindof person that you know you can communicate with (…) I mean that's the best that I can offer these kindof (…) kids °I mean° I'd have to go and do a lot more reading to figure out (…) new um (…) kindof strategies I mean it's- it's (…) it's quite new really this kindof (…) widespread harming (…) o- or has it just been hidden? Wh- what's- [J: Um] I mean we're more aware of it now

There appears to be a disjunction where DSH is viewed as an immature behaviour engaged in by adolescents who do not know any better (and need to "buck up their ideas"), or who engage in DSH because they are weak (need to "toughen up"). Juxtaposed alongside this argument is the idea that DSH is understood by youth and youth are aware of the behaviour, while adults lack this knowledge. These ideas are dilemmatic; implying that DSH is a maturity issue suggests that being mature (i.e. an adult) will allow an individual to understand the behaviour more fully and 'get over it'. However, the conflicting view of DSH as poorly understood by adults suggests that maturity does not lead to an understanding of DSH. Consequently, adults remain poorly informed about the issue of DSH (as an adolescent issue), while youth who self-harm may feel unable to turn to adults for help because they do not receive a supportive response (rather they may be told to "toughen up"), or fear being labelled immature. Youth who self-harm often keep their DSH hidden to avoid being labelled (Hodgson, 2004); the construction of DSH as immature is associated with the connotations (and labels) 'antisocial', 'attention-seeking', 'weak' and 'Emo'.

Dangerous to raise awareness vs. dangerous not to

The second ideological dilemma is the argument that it is dangerous to raise awareness of DSH and discuss it for fear of increasing incidence of DSH or 'putting ideas in students heads', while at the same time counsellors argued that it is dangerous to hide the issue of DSH for fear that students will not have anyone to talk to about important issues or will not access support. These competing arguments often occurred in the same interview (e.g. C2: extract 17 and 36). There were competing desires to normalise DSH (e.g. extract 18) and generate discussion about the topic, while alternatively counsellors' expressed concern that raising awareness of DSH could increase the behaviour and thus constructed increasing awareness as dangerous (e.g. extract 36). Both positions appeal to the value of students' safety (i.e. the role of counsellors), which validates the counsellors' opinions in this setting. Arguments in support of discussion were framed as beneficial for select students (e.g. made it easier to discuss DSH; extract 20), while the counter-argument was framed as a generalized concern for the majority (e.g. extract 33 "Once people get out and start talking…"). By engaging in both positions the counsellor balances their concerns for the few who are constructed as benefiting (i.e. those already confronted by the issue) and those constructed as potentially being harmed.

Counsellor participants managed this conflict by emphasising the importance of making sure students had somewhere to go for help if the survey raised any issues for them (see extract 8 and 9). The school management chose to manage the dilemma by identifying students at risk and choosing to exclude them from participation or monitor their involvement. For example, one participating school (S4, see Table 6, p. 81) chose to exclude a particular class from participating because it included a student known to regularly self-harm.

The idea of increasing awareness raised concerns at all schools surveyed; these concerns included fear of increasing DSH within their student body, of putting ideas into students' heads (see extract 35), or inciting contagion (see extract 34) of DSH. The value of student safety is especially important in schools, where staff have a duty to care and protect students. The rhetoric to not raise awareness suggests schools should protect students from harm, has a paternalistic quality catering to the guardianship role of schools, and appeals to *fear* reactions by suggesting awareness of DSH endangers the

mental (i.e. "ideas in their heads") and physical (i.e. "contagion" of the disease DSH) safety of students. The position of choosing to not raise awareness of DSH was given validity by arguing that DSH did not occur at the school (see extracts 27 and 29) which negates the necessity to discuss it.

The counter argument that keeping DSH hidden is destructive and not appropriate was discussed by several counsellors. Similar to the rhetoric used to support avoidance of the issue, rhetoric of students' safety (e.g. extract 16 and 14) and prevalence of DSH (e.g. extract 18) was mobilised in support of opening up discussion and awareness (incompatible with the counter-rhetoric suggesting DSH does not occur locally, or is unsafe to discuss). Some counsellors identify both poles of the dilemma within their discourse (e.g. C1, see extracts 19 and 33).

Refusing to raise awareness was constructed as hindering the giving and receiving of help and support from peers (extract 76 below: "…especially for students who want to support their friends"), and as encouraging marginalisation of youth who self-harm (see extract 77 below).

Extract 76

C8:   Yeah no yeah I was just thinking health classes. [J: Mmm] They're taught from- well they're taught at seven and eight but sort of year nine and ten up they're learning a lot about issues that young people face and [J: Mmm] Um in the past there hasn't been much time spent on self-harming. [J: Yeah] Um but I don't think it would hurt to touch on that area. [J: Mmm] Um and not pretend it doesn't exist. [J: Yeah] But to- especially for students who want to support their friends. [J: Yeah] And often they feel quite lost and feel like they're betraying their friend if they tell anyone. [J: Mmm] So yeah just um yeah opening up that area a bit more in a healthy type of way.

Extract 77

C2:   =Mmm and I think that's good- that's good for them to know that they're not the only ones [J: Mmm yeah] yeah [J: Feel less alone] Yeah well just feeling marginalised you know that- yeah [J: mmm] Or feeling deeply deeply troubled that there's something really serious when in fact (…) i- you know it can- someone can actually help them through that [J: Yeah definitely] Mmm

Both arguments utilised concern for student safety and wellbeing to justify their position. The mobilisation of commonsense notions to support both positions is a

common feature in rhetoric (Billig, 1991). The persuasiveness of the argument is augmented by the position of authority of the speaker. School counsellors are an authority on student mental health, thus making the positioning of these participants convincing to staff and students. It is important to uncover common rhetoric among counsellors on this issue because their arguments will be given authority in schools, and potentially impact on intervention efforts and the seriousness attributed to student DSH by members of the school community. Of note, counsellors also suggested that mental health was not a privileged function within secondary schools, suggesting that other (academic) concerns may override rhetoric based on concerns for student mental health.

DSH as abnormal vs. normal within the experience of adolescents

Young people who engaged in DSH were described as **abnormal** and *freaky*, and dilemmatically also as normal and experiencing common adolescent issues. The construction of DSH as **abnormal** (see p. 208-9) was supported by **strong emotional reactions** among students and counsellors (p. 204). C6's (see extract 47) negative emotional response is powerful given that his role would necessitate exposure and intervention in cases of student DSH (and presumably he has had opportunities to desensitize to the issue given his role). The construction of DSH by C6 makes a qualitative distinction between abnormal (blasphemous) and normal ("she heals"); the distinction was constructed by counsellors as qualitative rather than extreme positions on a continuum of behaviour.

Countering this was normalisation of DSH as within the context of usual adolescent difficulties. This also relates to DSH as a *maturity issue* by suggesting that DSH is common to the adolescent phase of development. C2 below implies that DSH is a fairly normal adolescent experience (i.e. "they're [not] the only ones..."). This normalisation is constructed as encouraging help seeking (see emphasis in extract 78 below), which mobilises rhetoric of enhancing student safety.

Extract 78

C2:   Um I think I would like ah students probably to be more aware that um- of their issues and um (…) *feeling okay about accessing help* [J: Mmm °mmm°] And feel like they don't have to ah you know they're- there's something wrong with them [J: °mmm°] Or they're- they're the only ones experiencing these [J: mmm] um you know these issues. So I think- I think just generating more awareness that um you know

adolescence is (…) is quite a troubled time really [J: Yeah yeah]
(emphasis added)

Rhetoric of DSH as **abnormal** and *freaky* tended to coincide with resistance to engaging in discussion of DSH and research participation, while normalising rhetoric tended to support opening up the area of DSH for discussion to encourage destigmatisation and help seeking behaviour. In contexts where students are labelled "freaky" or **abnormal** they are likely to have little opportunity to discuss their issues and receive help (i.e. as the issue will be viewed as inappropriate for discussion or as unimportant).

DSH occurs locally vs. at 'some other school'

The fourth dilemma suggests DSH occurs locally at schools in Wellington, while counter-rhetoric suggests DSH occurs somewhere else, at some other school. Both the third and fourth ideological dilemma clearly illustrate conflicting attitudes of acceptance/denial of DSH in secondary schools. On the one hand DSH is treated as **abnormal** and as occurring somewhere else "at some other school" (which functions to deny the legitimacy of the behaviour and it's occurrence, and therefore justifies not engaging the issue), while counter-rhetoric identifies DSH as a normal behaviour when faced with adolescent adversity, and as locally performed by your "average blow kid" (see extract 28) (which functions to encourage engagement with the issue by indicating local importance).

Counsellors suggested school staff and students commonly thought DSH was an outside issue and were shocked by being confronted with questions on DSH (e.g. extracts 18 and 30). Students were portrayed as sheltering themselves (see extract 42) or being sheltered (see extract 41) from DSH. Counsellors refuted that DSH was not a local issue, labelling this argument "a load of bollocks" (extract 18) and not "sensible" (extract 30). Their position as counsellors validates this rhetoric given their role includes privileged knowledge of student mental health within their school. Also, the counsellors' counter-rhetoric mobilises common-sense to support their position (i.e. alternative position labelled as not "sensible"). The position of these teachers and students was constructed as based on **strong emotional reactions** of *fear* and *shock* (e.g. "they felt uncomfortable", extract 40) and avoidance (e.g. "nasty stuff to have to think about", extract 30), not knowledge (e.g. "don't want to know", extract 25). Positioning

one's argument as rational (i.e. factual) and the counter-argument as emotional (which implies irrationality) is a common strategy in rhetoric (Billig, 1996). Appealing to rationality is supportive of the counsellors' rhetorical position, and suggesting irrationality based on over-riding emotional concerns invalidates the counter-position.

Statistics of DSH in secondary schools serve to invalidate rhetoric of DSH as **abnormal**. Best (2005) argues that "if thought of as pathological, abnormal and rare, self-harm appears as a sleeping dog best left to lie....On average, there is no secondary school class in the country without self-harmers in it, so rarity is not a valid ground for ignoring this issue." (p. 9). This indicates that treating DSH as rare and **abnormal** is counter-productive to dealing with the issue given it is highly prevalence (for international statistics see p. 16-26). Also results from a feedback study (N=15) with participants from Study 2.3 found that questions in Study 2.3 (including those on DSH) were perceived as relevant to adolescent life. This (along with the high prevalence rates in Study 2.1) suggests DSH occurs locally, and is a pertinent issue among Wellington youth.

Summary of Study 3.1b

The constructions of DSH among counsellor participants involved several ideological dilemmas, which all appeared to originate from two competing approaches to DSH; a preference (both individual and institutional) for avoidance and "denial" versus a preference for engagement and normalising. Arguments supporting avoidance or denial of DSH and the conceptualisation of DSH as **abnormal**, *freaky*, *immature* and weak, and as occurring elsewhere, suggested raising awareness of DSH would increase the behaviour (e.g. put "ideas into students' heads"; incite contagion). Rhetoric supporting DSH discussion and normalisation conceptualised the behaviour as normative (e.g. "happens to your average blow kid") and common (i.e. occurring locally), and suggested choosing not to raise awareness was dangerous (i.e. kept the behaviour hidden) and not helpful to students (e.g. marginalised students who self-harm and did not allow them the opportunity to discuss their DSH and seek help; prevented friends from learning how to provide support and seek help). Both arguments used emotive language and were predicated on the commonsense notion of students' safety (e.g. both arguments claimed that their position would prevent increased student DSH),

which served to validate their position (i.e. as concerned and paternalistic in a setting with a duty of care).

These ideological dilemmas are not independent. One over-arching dilemmatic position supported distancing from DSH behaviour (e.g. avoidance, denial, emphasis of DSH as an out-group behaviour) by arguing that DSH is immature, *freaky* and **abnormal** (therefore an 'other' behaviour of marginalised stereotyped adolescents), that raising awareness is dangerous (e.g. will cause contagion), and that DSH occurs elsewhere rather than locally. The counter-position advocated approaching and engaging the issue of DSH by constructing DSH as understandable (i.e. not a maturity issue), occurring locally at their school (thus requiring engagement and recognition of the problem, and anticipating counter-argument that DSH occurs elsewhere), an important issue to raise awareness of (e.g. to foster help-seeking and prevent marginalisation), and as a behaviour of your "average blow kid" (anticipating counter-arguments of DSH as **abnormal** and *freaky*).

Perhaps different realities of DSH are constructed to support an individual's role within the secondary school context. The role of guidance counsellors is to address mental health issues and ensure pastoral care; it is their prerogative to identify and work with psychological problems, including DSH, as they arise. Thus it is in the interests of their role to raise the issue of DSH and bring it out into the open where it can be identified, addressed appropriately, and support structures put in place. It is also in the interests of their role to normalise the behaviour and make it understandable (to themselves and others), to allow the behaviour to be discussed openly and honestly, and not avoided as **abnormal** or *taboo*. Creating such a reality of DSH fosters disclosure, which allows counsellors to perform their role more easily.

It is important not to push aside concerns against being open about DSH as there may be risk associated with raising the profile of DSH for students who are vulnerable. Contagion of DSH has been reported in institutional settings (e.g. Taiminen et al., 1998), and one of the strongest correlates of community adolescent DSH is DSH among friends and family members (De Leo & Heller, 2004). This suggests that vulnerable secondary school students may demonstrate contagion or model their peers' DSH. Concern for contagion of DSH in schools is common in the literature, and is perceived as a real threat by school staff internationally. In her survey research with American school counsellors Kibler (2009) found that 66% agreed with the statement

"self-injurious behaviours are contagious", while 30% disagreed. Despite this fear of DSH as contagious, 80% of the counsellors in Kibler's (2009) research thought it beneficial to educate students about DSH and its causes. This suggests a conundrum where counsellors want students to be aware of the issue, but fear awareness prompts contagion. The dual concern of raising awareness of DSH to facilitate disclosure and discouraging discussion of DSH for fear of contagion was communicated in the interviews in tandem. Counsellors identified the dilemma of their situation, constructing both policies (of openness and of secrecy) as having the potential to negatively affect certain students whom they have a duty to care for.

In contract to counsellors, school teachers have a duty to teach an academic curriculum, and were constructed as highly focused on academic achievement while potentially marginalising mental health issues (which are not seen as the primary role of teaching institutions; see sub-theme *practicalities* under **desire to help**). It is in teaching staffs' best interests to downplay DSH and avoid it so they can focus their time and energy on academic issues. Also, with their focus on academic work teachers are less likely to see incidents of DSH, allowing them to deny its existence in their classrooms. Thus teaching staff may commonly subscribe to the construction of DSH as **abnormal**, occurring at "some other school". Students are almost exclusively supervised by teaching staff, and therefore have little opportunity to discuss mental health issues; they expect the school environment to be focussed on academic learning. This expectation may have contributed to the *shock factor* and **strong emotional reaction** occurring among students; content of the questionnaire was out of place in an academic setting and perhaps shocked students' expectations of what was open to discuss in class.

Several researchers have suggested a school-wide response is needed to combat DSH, where the school counsellor, nurse or social worker acts as an administrator and co-ordinator in bringing together various components of the student's life in assessment and treatment (e.g. Roberts-Dobie & Donatelle, 2007; Shapiro, 2008). Improving counsellors' and school nurses' knowledge of DSH, and then providing them with resources to educate staff and parents on the issue is recommended. These authors also suggest that students should be educated on identifying signs of stress, effective coping strategies, and informing a trusted adult of peer DSH (e.g. Roberts-Dobie & Donatelle, 2007; Shapiro, 2008). Robinson, Gook, Yuen, McGorry and Yung (2008) present assessment of a 1-2 day workshop for school welfare staff on managing DSH.

Participants had improved confidence and knowledge in working with DSH post-programme, and this positive effect was maintained at six month follow-up. This suggests that a brief education programme on DSH can be effective in improving counsellors' ability to respond effectively in cases of self-harm. However, Study 3.1 suggests barriers to establishing a school-wide approach to DSH, considering the denial and avoidance of the topic, and the **strong emotional response** of *anger*. Combating negative attitudes and *resistance* may be the first step towards improving schools' response to DSH. Encouraging consistency in approach and construction of student DSH will also be important, to ensure ideological dilemmas do not arise which send mixed messages to students.

Overall summary of Study 3.1

The interviews provided useful insight into the constructions of DSH in secondary schools. Study 3.1b suggests competing constructions exist which highlight certain ideological dilemmas associated with DSH. Thus DSH is understood in various incompatible ways which hinders a shared understanding within school communities of what DSH is, and what to do about it. The constructions of DSH may either foster or prohibit open discussion and consideration of DSH behaviour among the student body. Counsellors' encountered a 'moral panic' among teachers and students when eliciting support for the research, and getting feedback from them about the experience of participation (e.g. nasty stuff to have to think about"). Counsellors also indicated having to fight against their own initial automatic reactions to DSH (e.g. as "blasphemous") to counsel effectively and non-judgementally. The initial negative reactions of staff, students and indeed counsellors, suggest that students who engage in DSH are faced with an environment where their behaviour is avoided and feared. This avoidance and fear is likely to fuel social exclusion or ostracism. These issues of school climate and culture and their impact on the wellbeing of students who self-harm will be considered further in the discussion section, incorporating the findings from Study 2, Study 3.1 and the stereotypes and opinions survey outlined below in Study 3.2.

Study 3.2   Stereotypes of DSH

The constructions of DSH in the interviews with counsellors stigmatised the behaviour as **abnormal**, and something to be *feared* and avoided. Stigma is a form of stereotyping. Stereotypes are 'qualities perceived to be associated with particular groups or categories of people' (Schneider, 2004; p. 24). In the case of DSH, stereotypes are overwhelmingly negative (e.g. manipulative, attention-seeking, Friedman et al., 2006). Aside from associating certain qualities with a group of people, stereotypes also often serve to uphold the social status-quo by glorifying dominant groups and vilifying or denigrating minorities or groups that deviate from culturally accepted norms (Pickering, 2001). Youth who self-harm often perceive that they are considered deviant (Hodgson, 2004), and the construction of DSH as **abnormal** and *taboo* in counsellors' interviews suggests DSH is considered unacceptable in society. DSH is self-inflicted, and related to a history of hospital admission, both factors likely to increase prejudice against people with mental health difficulties (Byrne, 2000).

In forming stereotypes individuals tend not to acknowledge heterogeneity in the out-group; the group members are lumped together in a homogeneous category that denies individual difference. This effect is compounded by the fact that individuals who endorse stereotypes pay more attention to situations or events that model or confirm the stereotyped trait or behaviour (Wetherell & Potter, 1992). In the case of self-harm, disclosure itself may be taken as confirmation of the attention-seeking stereotype, while secret DSH, by its very nature, is unlikely to come to light to challenge this belief.

Cognitive psychology, sociology and numerous other academic fields have claimed that stereotypes are necessary for organising our lives and the meanings placed on facets of our reality (Pickering, 2001). However, Pickering (2001) argues that stereotypes are not necessary for perceptual and cognitive organisation of one's worldview. Instead, Pickering (2001) delegates this role to categories, which are distinguishable from stereotypes. Categories are flexible cognitive maps used to navigate social relationships and everyday behaviours. Categories can be changed and modified through interactions with others and learned experience. In contrast, stereotypes are inflexible and are used to assert and promote existing power relations to maintain social order, dominance and feelings of security among the dominant group (Pickering, 2001). The stereotypes associated with DSH may be maintaining the status quo of preference for secrecy and avoidance (consistent with the common approach to mental health issues; Byrne, 2000); and these stereotypes may be fairly inflexible (especially if there are

few opportunities for counter-information, given that DSH is often kept secret). Alternatively, if viewed as a 'category' of 'self-harmer', the constructions in Study 3.1 may be used to organise social relationships and responses to DSH, while being open to change (e.g. through exposure to friend or family members' DSH). Study 3.2 assesses individual differences in the attributions participants associated with DSH based on exposure to DSH and comfort with engaging the issue.

Research has been conducted assessing stereotypes and stigma associated with mental illness. In a large (N=1393) representative sample of American adults, participants were found to have a preference for distancing themselves from children and adolescents with mental health problems, especially youth labelled with a mental health diagnosis (in comparison to physical illness and less severe mental health difficulties; Martin, Pescosolido, Olafsdottir & McLeod, 2007). This preference for distance was most apparent in response to vignettes of adolescents with mental health problems rather than children (Martin et al., 2007). This suggests that stigma associated with DSH is likely to be especially problematic for adolescents.

Stigma has been identified towards Anorexia Nervosa (AN) patients among 80 female undergraduate students (Stewart, Schiavo, Herzog & Franko, 2008). This is pertinent to stigma of DSH given that some researchers consider anorexia to be a form of self-harm (e.g. Sansone et al., 2008; includes eating pathology in scale of DSH behaviour), and eating disorder symtomotology positively co-vary with DSH behaviours (Favaro et al., 2008). Stewart et al (2008) assessed stigma towards four patient groups; AN, depression, schizophrenia and mononucleosis patients. Participants rated the AN patient as having more serious mental health problems, attributed the AN patient's condition to lack of social support, poor parenting and poor self-control (more so than for the other patient groups), attributed less positive characteristics to the AN patient, and reported anticipating feeling the least positive towards the AN patient. Participants also reported that they would feel least socially comfortable with the AN patient (though not significantly different from the anticipated social discomfort with the hypothetical patient with schizophrenia). Participants who had previous contact with a person experiencing AN reported significantly less anticipated discomfort with the hypothetical patient than participants with no previous contact with an AN individual (Stewart et al., 2008). Considering the similarities between AN and DSH, similar stigma

may exist towards individual who self-harm, and contact with peers with a history of DSH may help dispel discomfort or stereotypes.

Link, Cullen, Struening, Shrout and Dohrenwend (1989) propose a model of stigmatization of the mentally ill; Modified Labelling Theory (MLT). Link et al. (1989) drew on Scheff's (1984, 1996, cited in Link et al., 1989) labelling model in developing the MLT. The labelling model suggests that once a person is labelled (e.g. with a mental illness) they receive consistent constrained responses from the environment that set up certain expectations of their behaviour and these expectations and beliefs are internalised by the labelled individual. Link et al.'s (2008) MLT incorporates the idea that the label of mental illness is internalised.

In the MLT the internalisation of stigma associated with mental illness is seen as universal, and if a person is labelled as mentally ill they will apply this negative stigma or stereotype to themselves. The extent to which a labelled individual will devalue themselves in accordance with stigma is dependent on the level of discrimination they perceive as existing in the community. Link et al. (2008) identify three possible reactions to perceived threat of stigmatisation; secrecy (hiding mental illness from employers, family, peers etc), withdrawal (only interacting with those known to accept illness), and educating others (telling others about illness to attempt to pre-empt negative attitudes). Subsequent research (e.g. Link, Mirotznik & Cullen, 1991) found that none of these reactive strategies alleviated the negative effects of labelling (e.g. psychological distress and unemployment) among 164 mental health patients, and withdrawal was associated with experiencing stronger negative effects. Research suggests that facets of stigmatisation identified in the MLT (experience of discrimination, internalising the stigma associated with mental illness, and avoidance behavioural reactions (i.e. secrecy and withdrawal)) positively co-vary, and these facets are related to higher depression, lower self-esteem, and poorer social and economic integration (Moses, 2009).

Moses (2009) conducted a study with 12-18 year old mental health consumers to assess facets of MLT. He found that a low number of participants saw themselves as devalued by society (which he attributed to the frequency of mental health problems among adolescents and mental health destigmatisation campaigns), but that 55% felt disrespected by their peers due to their mental illness (Moses, 2009). Greater perceived public stigma (i.e. discrimination and rejection) and greater self/internalised stigma were associated with higher scores on depression and lower self-esteem. Older adolescents

and those with longer involvement in mental health services experienced higher self-stigma (internalisation of the label and associated psychological problems), more perceived discrimination, and greater actual rejection (Moses, 2009). This indicates internalisation of the label and stigma has more negative effects over time, making it important to challenge stigma and stereotypes as early as possible.

Stereotypes are used discursively to construct social groups (Pickering, 2001). I would argue that stereotypes of DSH (i.e. as **abnormal,** *freaky, immature* behaviour) were implicitly present in the discursive arguments presented by counsellors in Study 3.1 against participation and discussing DSH. Stereotypes of DSH were imbedded in the rhetorical arguments of school staff to promote avoidance of the topic of DSH in secondary schools. The rhetorical positions of avoidance (e.g. DSH as *immature*, arguments against raising awareness, DSH as **abnormal,** DSH as occurring elsewhere) were predicated on fear and lack of knowledge. Fear and inadequate knowledge (or exposure) foster stereotypes to promote feelings of security within the dominant group by emphasising their position of power (e.g. to control potential contagion) and the 'otherness' of the out-group (Pickering, 2001). In the case of DSH it is necessary to combat stereotypes to promote help-seeking and limit ostracism of youth with a past or current history of DSH.

Characteristics commonly found among people who self-harm, such as a need for validation and fear of rejection (Adams et al., 2005; Lindgren et al., 2004), make disclosure of self-harm especially problematic. This may be further compounded by stereotypes and stigma. Stereotypes may make disclosure less likely due to anticipated rejection, mockery, or fear of being misunderstood. Qualitative studies suggest that other peoples' points of view are highly important to people who engage in DSH, and others' points of view are considered to be more truthful than one's own (e.g. Adams et al., 2005). Thus stereotypes of DSH voiced by others may be taken as a reflection of the truth, and potentially internalised (e.g. a stereotype of people who engage in DSH as manipulative may lead to the internalisation of the thought 'I am a bad manipulative person'). Indeed, these stereotypes do not even need to be voiced; merely being aware that they exist may over-sensitize youth who self-harm to how their DSH behaviour (and by extension their person) is viewed by others.

It is important to understand the stereotypes and stigma surrounding DSH to help dispel unhelpful and potentially damaging perceptions of the behaviour. The first

step to changing stigma is to identify it and acknowledge the problems it creates (Eliason, Donelan & Randall, 1992). Stereotypes and stigma may be limiting the giving and receiving of help and intervention for individuals who engage in DSH and maintaining feelings of isolation, loneliness and negative affect (precursors of DSH; stigma is associated with feelings of shame among stigmatised groups (Byrne, 2000)). Study 3.2 aimed to identify stereotypes associated with DSH and further understand how DSH is responded to. After a preliminary study identified descriptors to measure stereotypes, an opinions and stereotypes questionnaire was administered to three sample groups; secondary school teachers, secondary school students, and university students (Study 3.2b).

Stereotypes were assessed using the semantic differential technique (also referred to as an Osgood scale). The semantic differential technique was designed by Osgood (1952) to measure the meaning attributed to concepts. The participant indicates on a binary scale where they position themselves on a topic, concepts or groups between two bipolar adjectives (e.g. good-evil). The technique is now widely used to measure attitudes, and it is versatile and bipolar pairs can be used with many different targets. In New Zealand, this procedure has been used to measure stereotypes of mentally ill people and mental health practitioners (e.g. Green, McCormick, Walkey & Taylor, 1987), and stereotypes of Chinese and Europeans among secondary school students (Walkey & Chung, 1996).

Study 3.2a   Preliminary semantic differential study with university students

A preliminary study was conducted gathering stereotypes on DSH from the (mainly qualitative) literature, and ascertaining polar opposites of these stereotype descriptors in research with university students. This preliminary study is described below.

Methodology

This preliminary study began with examination of the literature for common characteristics assigned to individuals who engage in DSH. I drew primarily upon

qualitative studies detailing participants' opinions about DSH. Commonly cited descriptors of people who self-harm were collected from a corpus of the literature (17 papers on DSH) following a saturation-type approach (see Table 32). The research papers used to identify descriptors were primarily interview studies with individuals who engage in DSH (e.g. Adams et al., 2005), and studies on hospital staffs' attitudes and opinions of DSH (e.g. Bancroft & Hawton, 1983). Opposites of these descriptors were then taken from antonym dictionaries or from lists generated in previous literature on the semantic differential (e.g. Osgood, Suci & Tannebaum, 1957). A preliminary survey was given to university students to check whether the bipolar adjectives were recognised as opposites.

Participants

Participants were 50 students surveyed on campus at Victoria University of Wellington. No demographic information was collected.

Measures

The survey included 24 opposite descriptors (e.g. rash - cautious) taken from the literature on DSH (see Table 32); participants ticked a box next to each descriptive pair if they thought the pair represented polar opposites. If participants did not consider a pair to be opposite descriptors, a space was provided for participants to write an alternative opposite match for the first descriptor in the pair. The survey also included the question 'Is English your first language?' with a yes/no response format, and a follow-up question of whether or not the participant was fluent in English. Surveys completed by participants not fluent in English were excluded from analyses.

Procedure

Participants were recruited from various seating areas around the university campus (either in their social groups or on their own). Participation was voluntary and confidential, and no identifying information was sought. Participants were first given an information sheet, followed by the one-page survey (see appendices G1 and G2). Upon completion of the survey participants were given a debriefing sheet (see appendix G3) and a small chocolate bar as a thank-you for their time. Participation took approximately five minutes.

Results

The percentage of participants who agreed that each semantic pair were opposite descriptors was calculated (see Table 32). A cut-off score of 80% agreement was used (because a more stringent criteria meant that there were few consistent alternatives offered by participants in disagreement with the semantic pair (e.g. N=0 for manipulative – not manipulative)); any descriptors that did not reach this cut-off were considered for revision. Of the 24 semantic pairs, seven did not reach the 80% threshold of acceptability (see Table 32). Of these seven pairs, three remained as they were for the final survey as their acceptability approached 80% (i.e. 72.92-79.59%) and there was no consistent alternative pairing offered by participants. These were the pairs manipulative – not manipulative (79.59% of participants agreed this was a bipolar pair), self loathing – values self (76.60% agreed) and suicidal – nonsuicidal (72.92% agreed). The other four pairs that did not reach acceptability were changed based on the alternative pairings offered by participants. The pair 'cared for – rejected' was changed to 'cared for – not cared for' as recommended by 7 out of the 19 alternative pairings offered by participants (participants offered a variant of 'not cared for' as an alternative pairing e.g. 'uncared for' and 'unloved'). The pair 'good – evil' was changed to 'good – bad'; 'bad' was the alternative indicated by all participants who disagreed with the pairing who offered an alternative (16 participants). The pair 'attention-seeking – avoids attention' was changed to 'attention-seeking – shy', as 'shy' was the alternative given by 14 of the 19 participants who suggested an alternative pairing. The pair 'emotional – rational' was changed to 'emotional – unemotional' as seven out of the 13 alternatives offered by participants either was 'unemotional' or a variant of it (e.g. "emotionless", "not emotional"). The original 20 bipolar adjectives and the four revised pairs were used to assess stereotypes among teachers, secondary school students and university students in Study 3.2b presented below.

Study 3.2b   Stereotypes and Opinions Survey

This study presents data on stereotypes and opinions towards DSH using three data sets; secondary school teachers, secondary school students, and university students. Individual differences (e.g. by sex, experience of DSH) and sample comparisons were made for participants' stereotypes, and opinions, as well as confidence and willingness to give help to youth who self-harm, were assessed across groups.

Table 32

Semantic pairs of descriptors taken from the literature of people who engage in DSH

Descriptor pair (italicised descriptor taken from DSH literature)	Literature where descriptor cited (Note: see key at the bottom for references)	Percentage of participants considering the bipolar adjective to be opposites.
Understood – Misunderstood	11	100.00
Normal – Abnormal	1, 2, 3, 7, 8	98.00
Lawful – Unlawful	2	98.00
Pleasant – Unpleasant	9	98.00
Sane – Insane	1, 2, 3, 6, 7, 9	97.96
Tense – Relaxed	6	96.00
Dangerous – Safe	2	96.00
Vengeful – Forgiving	3, 5	95.92
Complaint – Defiant	2, 8, 9	95.83
In control – Out of control	2, 7, 9, 10, 13	94.00
Sociable – Unsociable	1, 2, 11	91.67
Ashamed – Unashamed	2, 3, 7, 10, 11	90.00
Copes well – Copes poorly	2, 10	89.80
Aggravating – Soothing	6, 9, 14	89.36
Rash - Cautious	2, 3, 4	85.42
Happy – Unhappy	3, 11, 13	84.00
Isolated – Connected	1, 2, 11	83.67
Manipulative – Not manipulative	4, 5, 6, 9, 10, 14	79.59
Self-loathing – Values self	1, 3, 6, 10, 13	76.60
Suicidal – Nonsuicidal	2, 6, 9, 10	72.92
Emotional - Rational	8, 10	68.00
Good – Evil	2, 3, 7, 12	67.35
Attention-seeking – Avoids attention	4, 6, 10	59.18
Cared for - Rejected	11, 12	58.33

For papers: 1= Adams et al., 2005; 2= Adler & Adler, 2007; 3= Anderson & Standen, 2007; 4= Anderson, Standen & Noon, 2003; 5= Bancroft & Hawton, 1983; 6= Friedman et al., 2006; 7= Harris, 2000; 8= Hodgson, 2004; 9= Huband & Tantum, 2000; 10= Ireland & Quinn, 2007; 11= Lindgren et al., 2004; 12= Norbergh et al.,; 13= Shaw, 2006; 14= Wilstrand et al., 2007.

Methodology

This study was conducted in 2008, near the end of data collection for Study 2.1a. Of the schools that agreed to have their teachers participate, some had participated in Study 2, while one was newly involved in this research project. One large mixed-sex secondary school in the Wellington region agreed to allow four classes of their students to participate in this study (see S4, Table 6, p. 81). The university sample was made up of introductory level psychology students who participated for credit towards a mandatory research participation requirement.

Participants.

Secondary school teacher sample.

Participants were 109 (39 male) secondary school teachers, with a mean age of 43.65 years (S.D. = 12.34). 90.65% self-identified as Pakeha/New Zealand European, 6.54% as Maori, 0.93% as Pacific Island, and 1.87% as from another ethinic group.

Secondary school student sample.

Participants were 72 (22 male, 48 female, 2 missing data; mean age = 16.35, S.D.= 1.04) students from a large Wellington secondary school. 65.28% self-identified as Pakeha/New Zealand European, 13.89% as Maori, 1.39% as Pacific Island, 1.39% as Asian and 16.67% as from another ethnic group.

University student sample.

Participants were 186 (38 male, 145 female, 3 missing data; mean age = 20.46, S.D. = 5.71) introductory level psychology students at Victoria University of Wellington. 73.12% self-identified as Pakeha/New Zealand European, 5.38% as Maori, 2.69% as Pacific Islander, 13.98% as Asian, and 4.30% as from another ethnic group.

Measures.

For all participants the survey included a semantic differential stereotype section (development of bipolar pairs described on p. 239-241) that asked participants to rate different target groups on 24 bipolar adjectives using a 7-point scale. The targets were 'myself', 'the average man', 'the average woman', 'the average teenager', 'the average individual who engages in DSH' (a description of DSH was given), 'the average Punk', 'the average Emo', and 'the average Goth'. These categories were chosen to give

normative comparison groups (i.e. average man, woman and teenager), a self-comparison (i.e. 'myself'), comparison groups of widely known youth sub-cultures (i.e. 'Punk' and 'Goth'), and a comparison group of the youth subculture most strongly associated with DSH (i.e. 'Emo'). After the stereotypes section using the semantic differential technique, further questions on exposure and opinions around DSH were asked. For teacher participants this included several questions taken from a previous study on perceptions of DSH among secondary school teachers by Heath et al. (2006). These questions asked about comfort, confidence and knowledge around issues of DSH (e.g. 'I would feel comfortable if a student spoke to me about deliberate self-harm') on a 5-point scale where 1 was 'strongly agree' and 5 was 'strongly disagree'. All participants were asked if they had known anyone who had engaged in DSH using a yes/no format, followed by a list to indicate type of relationship (e.g. work colleague, friend). Teachers were also asked two open-ended questions: 'Why do you think a high school student would deliberately self-harm?' and 'As a high school teacher or professional, is there anything you want us, as researchers in this area, to know about your experiences with self-harming behaviour?' and teaching history (subject area, how long participants had taught for and year group they taught). Secondary school and university student participants were asked two questions on willingness to help someone who engages in DSH and feeling able to help someone who engages in DSH; both were rated on a seven-point likert scale with 1 as 'very willing to help' and 7 as 'not willing to help at all'. For all participants the survey ended with the DSHI-7 outlined in Study 1, and a follow-up question of how long ago participants had self-harmed. The survey included demographic questions on age and sex.

Procedure.

The procedure varied slightly between sample groups as outlined below.

In Secondary schools.

Secondary schools in the Wellington region were approached to take part in an opinions survey; they could agree to partake in either or both the student survey and the teacher survey. All the secondary schools in the wider Wellington region were contacted through their school guidance counsellor, and were initially sent an email with information sheets and a copy of both the teacher and student surveys.

Procedure for survey with teachers.

The researcher came to a staff meeting to inform staff about the study and answer any questions. Information sheets (see appendix J1), surveys (see appendix J2), and a secure return box were placed in staff rooms at each school that participated, and staff completed the survey at their own convenience or were given time during the staff meeting to complete the survey. When participants completed the survey during the staff meeting, the researcher gave participants two small chocolate bars once they had completed the survey as a thank you for their time. Where participants completed the survey in their own time chocolate was placed next to the return box and participants collected their chocolate once they had completed and returned their survey. After 1-3 weeks the survey boxes were collected from each school and debriefing sheets (see appendix J3) sent to staff. At one school only the guidance counsellor participated; they were posted the information sheet and survey to complete and return to the researcher, and were later sent a debriefing sheet and a summary of the results. Participation was voluntary and anonymous.

Procedure for secondary school students.

Upon school approval the surveys (see appendix H2) were sent out in separate envelopes for each participating class. Each envelope had instructions on it for teachers to read out before distributing the surveys. Students were informed that the survey was voluntary and anonymous (see appendix H1). Participation took place during class time and was supervised by the class teacher. Students were given approximately 20 minutes to complete the survey. Returning the survey indicated consent. Teachers returned the surveys to the guidance counsellor, and the researcher later collected them from the school. Debriefing information was sent to the school to disseminate to participating students (see appendix H3).

Procedure for University students.

Participants enrolled in the experiment over web-based sign-up. Several times were allotted for participation. Participants completed the survey in groups of up to 15 students, in a quiet room at desks. Participants read the information sheet, signed a consent form (see appendix I1), and were given the opportunity to ask any questions before completing the survey (see appendix I2). Upon completion, participants were given a debriefing sheet (see appendix I3), and the opportunity to ask any questions. Participation took no more than half an hour, was voluntary and confidential, and

counted as partial completion of a mandatory course requirement for research participation.

Results and Discussion

Analyses of participants' willingness and belief in their ability to help someone with issues around DSH are presented first, followed by participants' stereotypes. This information is important for identifying the ease or difficulty youth may feel in giving and receiving help for DSH, and the social climate surrounding DSH among youth (i.e. how youth who engage in DSH are perceived).

Feeling willing and able to help someone who engages in DSH was assessed for the secondary school sample and the university student sample. On average, the majority of youth participants were willing to help someone with issues of DSH (secondary school students: mean= 2.12, S.D.= 1.47; university students mean= 1.73, S.D.= 1.06, where 1 = 'very willing to help' and 7= 'not willing to help at all). Despite this willingness, the average for feeling *able* to help someone with issues of DSH approached neutral on the 7-point continuum (secondary school students: mean= 3.30, S.D.= 1.77; university students mean= 3.01, S.D.= 1.27). This suggests that although many participants felt willing to help several may have felt unable to do so. Next 'willingness' and 'feeling able' to help was divided into feeling willing/not willing and able/not able. Paired sample t-tests found youth participants felt significantly more willing to help than competent in their ability to help (Secondary school students: t(62)=-6.72, p<.001; University students: t(185)= -13.37, p<.001).

Male and female youth did not differ in willingness and feeling able to give help (t's(60-181)<1.61), p's>.05), except female university students (mean=2.89, S.D.=1.26) felt significantly more able to give help than male university students (mean=3.34, S.D.=1.17), t(181)=2.09, p<.05. Youth participants who knew and did not know someone with a history of DSH did not differ on willingness or feeling able to give help (all t's (59-184)<1.62, p's>.05), except university students who knew someone with a history of DSH (mean=2.91, S.D.=1.30) felt significantly more able to help than those who did not (mean=3.34, S.D.=1.10), t(184)=-2.18, p<.05. It may be that having knowledge of someone with a history of DSH lessens the **strong emotional reactions** to the behaviour (see Study 3.1), making it easier to approach. Also, DSH may be

perceived as less **abnormal** when someone knows somebody who engages in it. The secondary school sample is quite small which may limit the power of the tests.

Next it was assessed if secondary school and university student participants with and without a history of DSH differed on willingness and feeling able to give help for DSH. Independent samples t-tests suggested that in both youth samples participants who had engaged in DSH did not differ significantly from those who had not for feeling willing and able to help (t's (59/183)<1.75, p's>.05). This suggests that experience of DSH among youth does not improve self-efficacy in helping peers manage similar difficulties. High heterogeneity in the predictors and presentation of DSH may account for this, with youth viewing each case of DSH and the circumstances surrounding it as unique, leading to the perception that experience may not assist in understanding others' DSH and being able to offer support. Also, youth who do not have a history of DSH may be equally pessimistic of perceived effectiveness of help-seeking as youth who have self-harmed. Alternatively, youth who self-harm may not wish to help peers with similar behaviour to avoid being triggered.

The teacher survey asked different questions to the secondary school student or university student surveys, including questions on confidence, knowledge and comfort with DSH. In terms of comfort with student DSH, 59.63% of teachers agreed that they would feel comfortable if a student approached them with issues of DSH; 17.43% were neutral, and 20.18% did not agree with this statement (i.e. they would not be comfortable). For the statement "I would feel confident in knowing how to respond" if a student appeared to be self-harming 46.79% agreed (i.e. were confident in knowing how to respond), 20.18% were neutral, and 33.09% disagreed (were not confident). Responding to the statement "I feel knowledgeable about the area of DSH", 16.51% agreed, 30.28% were neutral, and 53.21 disagreed. Responding to "I believe I would know how to identify DSH behaviours" 23.85% said yes, 30.28% were neutral, and 45.87% disagreed (i.e. did not think they would know how to identify DSH behaviours). This suggests a need to educate teachers about DSH and the appropriate response to DSH among their students. For the statement "I find the idea of a student cutting or burning their skin horrifying", 53.70% agreed (consistent with Heath et al., 2006), 25.00% were neutral, and 21.29 disagreed. This confirms that many teachers experience **strong emotional reactions** to DSH; this discomfort may feed into avoidance of the

behaviour and poor knowledge (i.e. preference for distance from an aversive ("horrifying") stimulus).

There were no significant sex differences in teachers' comfort with DSH, confidence with dealing with student DSH, perceived knowledge of, and ability to identify, DSH, or finding the thought of student DSH horrifying (refer to Table 33 for details of items assessing comfort and knowledge of DSH), $(F(5, 99)=.19, p=.97)$. This is inconsistent with previous research suggesting male teachers feel more knowledgeable about DSH, while female teachers have more positive attitudes towards the behaviour (Health et al., 2006).

There was a significant overall difference in scores on comfort and knowledge of DSH between teachers who knew someone who engaged in DSH and those that did not, $F(5, 102)=2.45, p<.05$. Teachers who knew someone with a history of DSH reported feeling more knowledgeable (mean=3.34, S.D.=.96), more able to identify DSH (mean=3.13, S.D.=.95), and less horrified by student DSH (mean=2.67, S.D.=1.10) than those who did not report knowing someone with a history of DSH (mean=3.87, S.D.=.84; mean=3.62, S.D.-.70; mean=2.10, S.D.=.96 respectively), all

Table 33

Teachers' group differences in DSH behaviour according to attitudes and confidence towards DSH

Details of items	Teachers with a history of DSH		Teachers with no history of DSH	
	Mean	S.D.	Mean	S.D.
Feeling confident in responding to student DSH	2.60	1.27	2.84	1.12
Feeling comfortable if a student spoke to them about DSH	2.25	1.16	2.55	1.11
Feeling knowledgeable about DSH	3.00[a]	.97	3.60 [a]	.94
Belief that would know how to identify DSH behaviours	2.75 [a]	.93	3.36 [a]	.87
Find the though of cutting/burning horrifying	3.15 [a]	1.27	2.38 [a]	.98

[a]= significant difference between groups

F's(1, 107) ≥ 5.66, p's<.05. This suggests **strong emotional reactions** to DSH are curbed, though not truncated entirely, by prior experience of the behaviour in others; a prior experience also adds to knowledge which can be utilised in later interactions with people who self-harm.

There was a significant overall difference between teachers with and without a personal history of DSH in overall comfort with DSH, F(5, 92)=6.46, p<.05 (see Table 33 for group differences). Tests of between subject effects suggested that teachers with a history of DSH felt significantly more knowledgeable, able to identify DSH behaviours, and less horrified by the thought of student DSH (all F's(1, 97) ≥ 6.46, p's<.05) than teachers who had never engaged in DSH. There was no significant

difference for confidence in discussing DSH with students (all F's (1, 96) < 1.16, p's>.05). This suggests that although personal experience of DSH helped teachers feel more knowledgeable and less horrified by DSH, this experience did not lead to greater confidence or comfort in discussing DSH with the students themselves. Next, group differences in stereotypes of DSH were assessed based on comfort with DSH. Youth participants (combined secondary school and university student samples) feeling willing or not willing, and able or not able to give help to someone with DSH issues did not significantly differ on mean valence of their stereotypes for 'average person who engages in DSH' (t(235)=.99, p=.32 and t(212)=.36, p=.72, respectively). Teachers who did/did not feel comfortable talking to a student about DSH, confident in responding to student DSH, knowledgeable about DSH, able to identify DSH, or horror at the thought of student DSH did not differ in the valence of their stereotypes for 'average person who engages in DSH' (all t's(76)=<1.74, p's>.05). This suggests that comfort and willingness to help people who engage in DSH does not predict the negativity (or positivity) of stereotypes held against those who self-harm.

In order to understand the common stereotypes held by participants for the target groups correspondence analyses were conducted. A correspondence analysis is a pictorial representation of the descriptors participants attach to certain concepts, objects
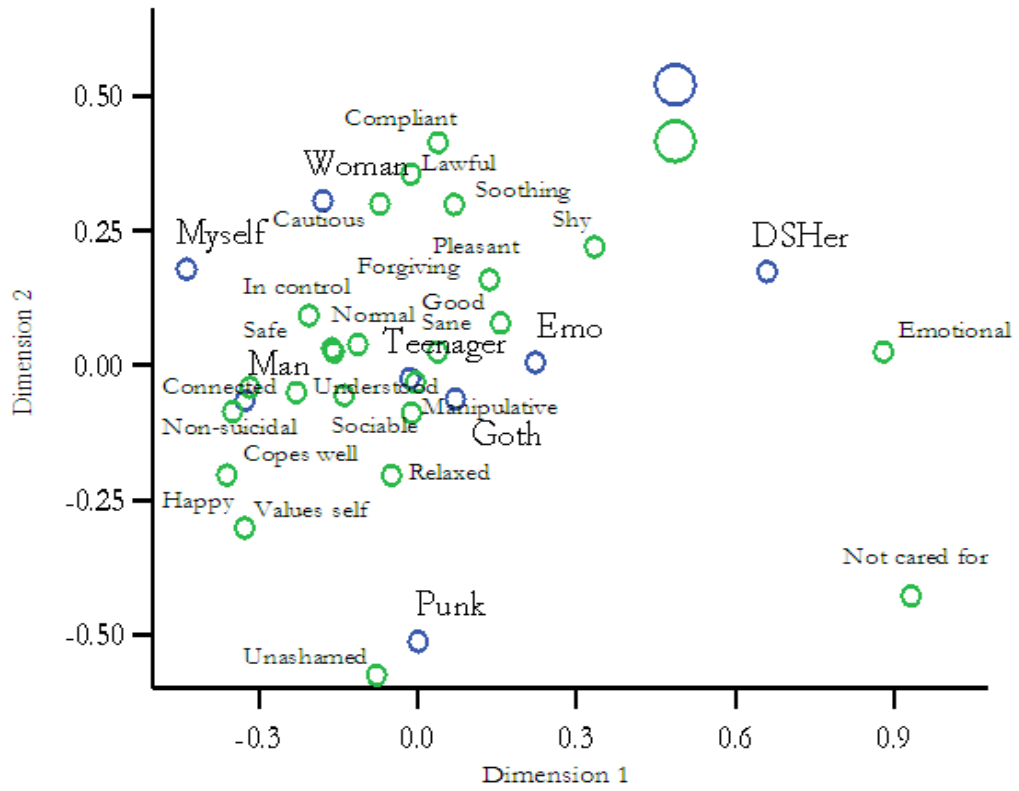
*Figure 45.* Correspondence matrix of secondary school teacher stereotypes.
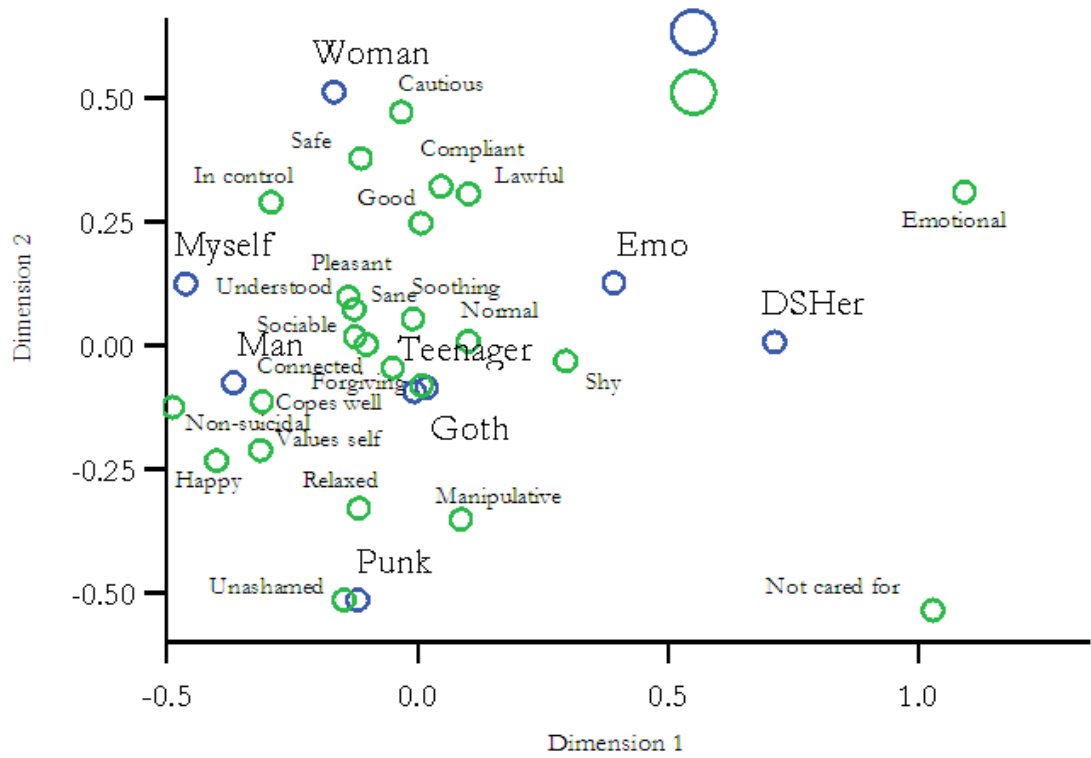
Figure 46. Correspondence matrix of secondary school student stereotypes.
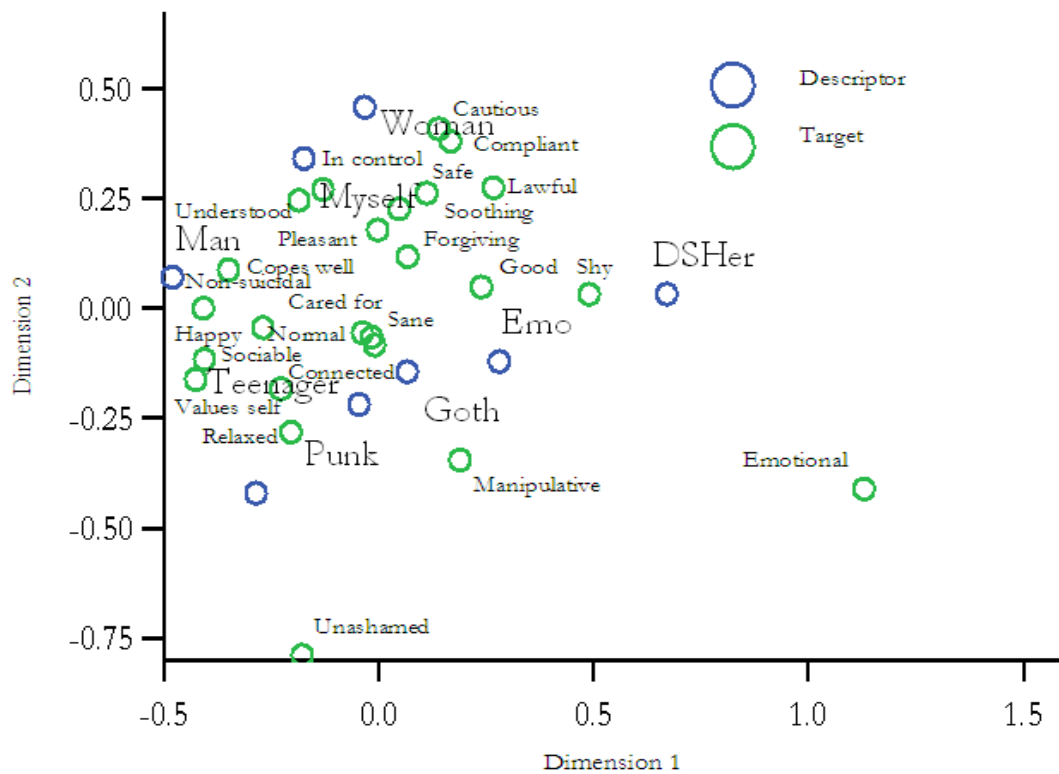
Figure 47. Correspondence matrix of university student stereotypes.

or groups. The distance between descriptors and targets (in this case between descriptors and groups of people) indicates the extent to which participants associate a particular descriptor with a particular target (descriptors closer to a target are considered more descriptive of that target). The distance between targets on a correspondence analysis plot indicates how alike participants' view the targets; the closer the targets are together on the graph the more they are considered alike (Hair et al., 1995). As can be seen in *Figure 45, 46* and *47*, people who self-harm were placed far off to the right of the graph away from any other target group, perhaps reflecting that this group is considered to be very different from the 'normal' (see theme **abnormal** in Study 3.1a). The normative categories of 'me', 'man', 'woman', and 'teenager' were likely to be seen as more good, in control, understood, sane, cared for and relaxed (while the person who self-harms was furtherest away from these positive descriptors).

Differences between samples for overall negative stereotype for each target group were assessed. The bipolar descriptors (rated from 1-7) for each target were scored and averaged so that lower scores represented a more negative stereotype, and higher scores a more positive stereotype. Average scores ranged from one to seven,

where one is a very negative stereotype and seven a very positive stereotype; four represents the neutral point (see Table 34 for group differences; the statistics report average valence scores).

Table 34

Overall valence of mean stereotype scores for each target by sample group.

Target	Teachers' mean score (S.D.)	Secondary school students' mean score (S.D.)	University students' mean score (S.D.)	F statistic*
Myself	5.17 (.65) [a]	4.72 (.69)[ab]	5.12 (.72) [b]	10.83***
Average Woman	4.60 (.57) [a]	4.48 (.64) [b]	5.00 (.49) [ab]	32.01***
Average Man	4.42 (.58) [a]	4.32 (.66) [b]	4.58 (.51) [ab]	6.57**
Average Teenager	3.99 (.56) [a]	3.70 (.63) [a]	3.88 (.51)	5.40**
Average Goth	3.87 (.66) [a]	3.84 (.55) [b]	3.61 (.64) [ab]	6.93**
Average Punk	3.65 (.66)	3.70 (.61)	3.75 (.60)	.76
Average Emo	3.63 (.70) [a]	3.17 (.68) [ab]	3.51 (.70) [b]	7.03**
Average person who engages in DSH	3.01 (.50) [ab]	2.71 (.62) [a]	2.81 (.56) [b]	6.62**

*N range 322-366, **p<.01, ***p<.001, [a] [b] significant group differences.

As shown in Table 34, the three sample groups differed significantly in their overall stereotype score for all target groups except the 'average Punk'. Of particular note, post-hoc analyses indicated that for 'myself', 'average Emo' and 'average teenager' secondary school students had significantly less positive stereotypes than both the teacher sample and the university sample who did not differ significantly; the difference between secondary school and university students for 'average teenager' bordered significance (p=.06), indicating some bias ('average teenager') associated with youth (i.e. 'Emo' and people who self-harm) among secondary school students. For 'average person who engages in DSH' teachers' stereotypes were significantly less negative than those held by secondary school students and university participants (who did not differ significantly). 'Average teenager', 'average person who engages in DSH', 'average Punk',
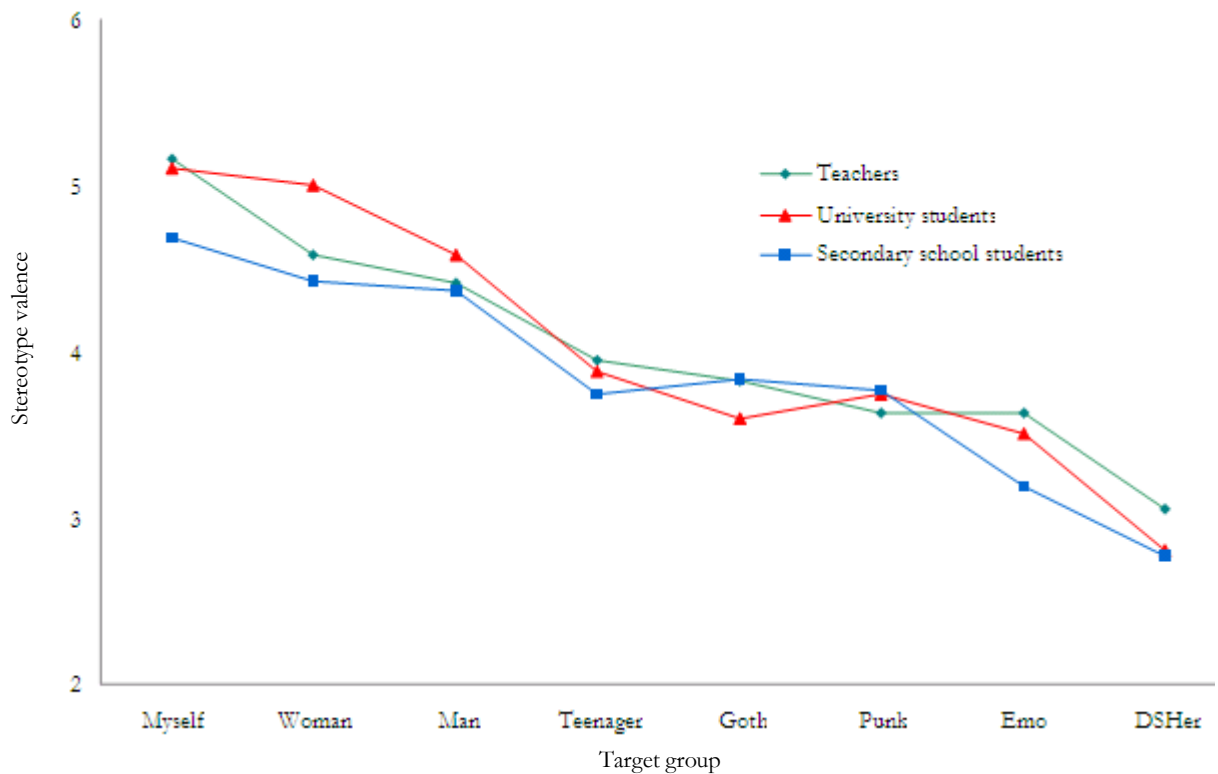
Figure 48. Plot of overall target stereotype valence for each sample

'average Goth' and 'average Emo' were all rated negatively overall, while 'myself',
'average man' and 'average woman' were rated positively. Overall, participants
(combined sample) had significantly different mean stereotype valence for the targets, F
$(7, 310) = 322.73$, p<.001. Pairwise comparisons found that all targets had significantly
different stereotype valence, except 'average Goth' and 'average Punk' which were
similarly negatively. A repeated measures MANOVA found a significant target x
sample interaction, $F(14, 303)=236.85$, p<.001. The sample groups differed in the
variation in valence between target groups. Post-hoc tests indicated that teacher
participants and university participants did not differ significantly in the variation
between their mean target valence scores (mean difference= .00, S.E= .05, p=1.00),
while secondary school students differed significantly from both teacher participants
(mean difference= .19, S.E.= .06, p<.01) and university student participants (mean
difference =.19, S.E.= .06, p<.01). The variation in target valence scores within and
between sample groups is represented in *Figure 48*. Of particular note are the more
negative stereotypes held by secondary school student participants for 'myself' and
'Emo' in comparison to the teacher and university student sample groups.

It was assessed whether participants within the different samples differed on the valence of their stereotypes for different targets according to whether or not they had ever engaged in DSH. A MANOVA was conducted to assess history of DSH x valence for different targets (7 in total, excludes 'myself'). For teacher and secondary school student participants there was non-significant difference in stereotype valence between those with and without a history of DSH ($F(7, 84)=.24$, $p=.98$ and $F(7, 41)=1.21$, $p=.32$ respectively). For university student participants there was a significant difference between groups, $F(1, 183)=5.22$, $p<.001$. Participants with a history of DSH had significantly more negative stereotypes for 'average woman' and 'average teenager' and a significantly more positive stereotype for 'average person who engages in DSH' (all F's $(1, 183)>6.80$, p's $<.01$). Perhaps participants did not identify with their in-group of women (most university participants were female) and youth (most were young, mean age=20.46) or feel disengaged or ostracised and therefore less positively towards their in-group, while identifying with the group of DSH (and therefore holding less negative views of this group). When combining all three samples, participants who had engaged in DSH and those who had not differed significantly in overall target valence scores, $F(7, 309)=4.30$, $p<.001$. Overall, tests of between subject effects found that participants who had engaged in DSH had more negative stereotypes of 'average teenager' (mean=3.73, S.D.=.51) and more positive stereotypes of 'average person who engages in DSH' (mean=2.99, S.D.=.52) than participants who had not engaged in DSH (mean=3.93, S.D.=.58; mean=2.78, S.D.=.57 respectively), $F(1, 316)=8.98$, $p<.01$ and $F(1, 316)=9.13$, $p<.01$ respectively. For other targets there were no significant differences in stereotype valence between participants who had and had not engaged in DSH (all F's$(1, 316)<1.97$, ns). This suggests people who self-harm will experience the least stigma from others with a history of DSH. Perhaps those with a history of DSH have more negative views of 'average teenagers' due to experiencing a negative adolescence themselves (e.g. victimisation and isolation from peers, both correlates of DSH (Hawton et al., 2006)).

Group differences in stereotypes for 'myself' were assessed for participants with and without a history of DSH. For teacher participants there was no significant difference between those with (mean=5.01, S.D.=.55) and without (mean=5.21, S.D.=.66) a history of DSH in their stereotype valence for 'myself', $t(107)=1.34$, $p=.19$. Among both secondary school student and university student participants, those with a history of DSH (mean=4.43, S.D.=.66; mean=4.77, S.D.=.74 respectively) held more

negative stereotypes of 'myself' than those without a history of DSH (mean=4.87, S.D.=.66; mean=5.38, S.D.=.58 respectively), t(70)=2.67, p<.01 and t(184)=6.25, p<.001 respectively. Youth who self-harm have more negative views of themselves compared to youth who have not engaged in self-harm. This was not the case for teachers. DSH in younger participants is likely to be more recent (Whitlock, 2006b). Youth participants' DSH is therefore likely to be more recent than teacher participants' DSH, including associated low self-esteem (Evans et al., 2004). The link between youth DSH and negative self-stereotypes is consistent with the significant negative correlation between DSH and low self-esteem (e.g. Evans et al., 2004; Haines & Williams, 1997; Study 1 and 2).

General Discussion of Study 3.2

Understanding how people who self-harm are perceived enables appreciation of possible barriers to help-seeking and social factors which may be compounding self-harm or furthering isolation and loneliness. Study 3.2 identified a negative stereotype of DSH and assessed comfort level and responses to DSH among various sample groups. This negative stereotype creates an environment unsupportive of DSH disclosure; youth may fear the reaction of teachers and peers to DSH behaviour (e.g. as attention-seeking, manipulative or bad). Within this context of stereotypes and stigma fears of disclosing DSH are justifiable.

Although engaging in DSH was fairly normative (e.g. over one third of the secondary school population in Study 2.1 reported a history of DSH) it was viewed highly negatively. This indicates that youth who self-harm also hold a stereotype. This may relate to internalisation of stigma as hypothesised by MLT (Link et al., 2006). Also, people who self-harm are likely to believe others' points of view are more true than their own (Adams et al., 2005), and therefore may internalise common negative stereotypes as true and begin to hold these beliefs themselves.

Negative stereotypes of DSH (and the associated target 'Emo') may serve to create an us/them boundary which isolates students who DSH from the help they need. It is important to remind people that youth who self-harm are often experiencing emotional turmoil, and need support and understanding, rather than fear and apprehension fostered by a lack of knowledge (as indicated by the finding that participants with experience of DSH, either their own or someone elses, felt more

knowledgeable and less horrified by the behaviour). As self-harm gets worse, students' self-esteem declines, they become more anxious, they are bullied more, and they begin to understand their own emotional experience less (see results from Study 2.1). This downward spiral will only be exacerbated by lack of understanding and isolation from others. Self-harm is a real problem in secondary schools in Wellington (see Study 2.1 prevalence rates) and more knowledge and resources may help foster a better (less stigmatising) response to the behaviour.

Considering that friends are often who youth disclose to about DSH (De Leo & Heller, 2004), it is important that peers of youth who self-harm (i.e. peers in general) feel comfortable and confident to give help. Educating students about avenues for helping friends with DSH issues is one possibility (as advocated by C8, extract 76 p. 228). The youth in Study 3.2 felt significantly more willing than able to help with issues of DSH. This suggests youth may give help when they feel unable to do so, which is likely to increase stress and decrease self-efficacy in seeking to help peers. Feeling able to help was significantly stronger for those who had known someone with a history of DSH (only significant for university student sample), suggesting experience with DSH is associated with greater perceived knowledge and self-efficacy in dealing with disclosure of DSH behaviour. Feeling knowledgeable about DSH, able to identify DSH behaviour, and feeling less emotional about student DSH was significantly greater among teachers who had known someone who engaged in DSH. Thus, similar to youth, having known someone who engaged in DSH seemed to provide teachers with a useful lesson in how to understand DSH behaviour, and made it a less scary topic to engage. Unfortunately, this increased understanding did not appear to increase teachers' confidence in providing help to students who self-harm.

Youth and teacher differences in comfort and knowledge of DSH did not relate to more positive or negative stereotypes of DSH. This suggests that even if someone feels comfortable about helping people who self-harm, and knowledgeable or able in doing so, they are likely to still hold the negative stereotypes of DSH common across samples. This is consistent with patients' reports of help-seeking (as often negative and feeling misunderstood by professionals; Harris, 2000).

The target group of 'average person who engages in DSH' was described most negatively by all sample groups, and was distinctly characterised as different from the other targets (see correspondence analyses; *Figures 45- 47*). This is consistent with

reports of youth who self-harm, who describe feeling different and wanting to be seen for who they are separate from their self-harming behaviour (Hodgson, 2004). The implication of this is that youth may choose not to disclose their DSH, because they do not want to be stereotyped as different, but would rather be treated separately from their self-harming behaviour.

Summary of Study 3

Study 3 aimed to identify how DSH is received and understood given strong resistance to participation, and identifying stereotypes and attitudes towards DSH. DSH was viewed negatively among all sample groups. In Study 3.1 teachers and students were constructed as having **strong emotional reactions** of *anger* and shock to DSH. This was supported by the large proportion (53%) of teachers who self-reported that student DSH horrified them. Counsellors indicated that teachers feared "putting ideas in students heads" or inciting contagion by participating in the research. Although research indicates the possibility for contagion (Taiminen et al., 1998) and modelling of peer DSH, the high prevalence of the behaviour (see Study 2) and the fact that in was considered relevant to youth among youth participants themselves (as found in feedback study of participants involved in Study 2.2a) suggests that the topic is already widely known and acknowledged among young people.

Despite its relative normality, DSH was constructed as **abnormal** and *taboo*. This is consistent with Study 3.2 findings of poor knowledge of DSH among teachers, and the willingness but perceived inability to help among youth. Helplessness may be fostered by unknown avenues for support. Open engagement of the issue may increase youths' sense of being able to help peers who self-harm, as suggested by C8 (extract 76). C8 would like to start group discussion of DSH in a safe environment so youth feel informed and knowledgeable about helping peers. Open discussion will also be important for countering stigma and stereotypes.

The strongest negative stereotype for DSH was among secondary school students. This is strange considering that DSH was fairly normative in this population. Perhaps voicing strong stereotypes was adopted as a strategy to avoid being associated with such behaviour and labelled with the stigma of DSH. Students may be engaging in the response behaviour of 'secrecy' and 'withdrawal' identified in the MLT; a common response to stigma associated with mental health problems (Link et al., 1989, 1991).

This reaction is associated with deceases in self-esteem and increases in depression symptomology. These negative effects of secrecy and withdrawal promote DSH as potential causal and maintaining factors (see models of Study 2.1).

The negative stereotypes of DSH may be influenced by lack of knowledge. This is supported by the fact that teachers and youth participants with exposure to DSH had less negative reactions and were more willing to give support in cases of DSH, and held less negative stereotypes. It may be that demystifying DSH could reduce the stigma and encourage disclosure and help-seeking behaviour. Consistent with this rationale, in Study 3.1 counsellors' suggested avoidance of DSH was linked to lack of knowledge, and that providing knowledge could improve teachers' and parents' responses to youth DSH.

However, it will take more than knowledge to shift the negative stereotypes and attitudes towards DSH. The negativity of stereotypes towards DSH did not differ between participants based on their comfort with the topic, and having known someone with a history of DSH; the only group differences were between participants with and without a personal history of DSH. Those who had engaged in DSH had significantly less negative stereotypes. Perhaps empathy, and not knowledge alone, is needed to combat stereotypes. Developing empathy goes beyond basic knowledge to include understanding of the lived experience of DSH. Approaching the human distress and push to survive emotional pain (i.e. DSH as an act to sustain life in the face of otherwise unbearable emotion; Nixon et al., 2002) that underpins DSH will assist in developing this empathy, and perhaps undermine harmful stereotypes.

Overall findings: Contributing to the understanding of youth DSH

This research aimed to understand the interpersonal and intrapersonal predictors of youth DSH, and how these factors foster vulnerability, and the lived experience of youth who self-harm. Developing an understanding of the social consequences and reception of DSH behaviour in young peoples' environment, and in secondary schools in particular was also an aim of this thesis. These aims have been accomplished via a triangulation of research methods, both quantitative and qualitative, drawing on multiple sample groups (secondary school students, teachers and guidance counsellors, and university students).

This section begins by focussing on overall findings, including prevalence rates, understanding antecedents of DSH, individual differences, social environment, and the construction of DSH. Following this, implications and applications will be discussed, and limitations and strengths of this research. Ideas for future research are suggested including furthering understanding of the causes of DSH, and possibilities for prevention and intervention.

Prevalence of DSH across studies

Prevalence for lifetime history of DSH among youth in the samples (university and secondary school student) have been consistently in the range of 39-49%. This suggests that up to one in two young New Zealanders have engaged in DSH at some point. This prevalence rate is higher than that generally found internationally. Prevalence rates for young adult and university student populations range from 7.1% to 44% (Gratz, 2006; Gratz & Chapman, 2007; Nada- Raja et al., 2004; Whitlock et al., 2006a; Young et al., 2007), and among community adolescents from 7.2% to 15% (De Leo & Heller, 2004; Evans et al. 2005; Hawton et al., 2006b; Laye-Gindhu & Schonert-Reichl, 2005; Ross & Heath, 2002). However, most of these studies have used measures of DSH less comprehensive than the DSHI-s. Lundh and colleagues (Lundh et al., 2007; Lundh & Bjarehed, 2008) found lifetime prevalence rates of 36.5 - 65.9% among

14 and 15-year old participants using the DSHI-s, comparable (albeit slightly higher) to the range found among adolescents assessed in this research. This suggests that method of assessment is important in uncovering accurate prevalence rates of the range of different types of DSH youth engage in.

Despite the high prevalence of DSH students label DSH as **abnormal** and *freaky* (reported in counsellor interviews) and had a **strong emotional reaction**. Thus students distanced themselves from a behaviour that is in fact prevalent (though not quite normative) within their group, perhaps to avoid associated stigma and labelling (e.g. as Emo). Similarly, the counsellors in Study 3 suggested teachers view DSH as **abnormal** and not existing locally, indicating that teachers allow themselves to be seen as out of touch with the realities of their student body and the true prevalence and importance of DSH as a mental health issue among adolescents. This view functions to justify avoidance of DSH, to excuse non-interaction, and may be influenced by the marginalisation of mental health in secondary schools.

Adolescents with mental health issues tend not to relate or ascribe to the category membership of their mental illness (Moses, 2009). Perhaps many youth who self-harm do not categorise themselves as a 'deliberate self-harmer', or identify with the behaviour, despite having engaged in it. This came across in the survey research with youth; some youth participants who indicated that they had engaged in DSH later said in open-ended items that they would never self-harm, or "no, I'm not Emo". This disjuncture suggests that the high prevalence of DSH has not consequently normalised the behaviour, even for those who engage in it. This may also represent a fundamental attribution bias, where youth fail to identify and acknowledge their own undesirable behaviour whilst being able to identify it in peers.

Researchers and commentators suggest that DSH currently occurring among adolescents is qualitatively and quantitatively different from previous generations. They propose that many self-harming youth today do not have diagnosable pathology and seem to function relatively well, but use DSH as a coping mechanism in times of stress (Shapiro, 2008). DSH in previous generations was predominantly documented in cases of diagnosable mental illness (Kilber, 2009; Shapiro, 2008). The suggestion that DSH is engaged in by relatively well-functioning 'normal' adolescents (e.g. Shapiro, 2008) is in direct opposition to the constructions of DSH as **abnormal**, *freaky* and *serious* found in the counsellor interviews. However, this suggestion is supported by the counter-

position that constructs DSH as normal and understandable within the context of adolescent stressors, and this position is supported by the high prevalence rate, and feedback from secondary school diary study participants who indicated that DSH was an issue relevant to adolescents. The ideological dilemma of DSH as **abnormal** versus normal may also reflect **generational** differences. Teachers and adults of an older generation may know DSH as a pathological behaviour linked to diagnosable mental illness (as generally reflected in the literature of previous decades; Kilber, 2009; Shaprio, 2008), whereas younger generations may understand DSH as more normative.

The gap in understanding and experience between adults and youth is reflected in the group differences in reasons for DSH suggested by youth and secondary school teachers (see Study 2.2). Approximately half of the teachers included attention seeking in their attributions for students' DSH; while very few youth participants made this attribution for their self-harm. However, most teachers recognised the emotion regulation function of DSH; this was the most common reason given by secondary school and university students who self-harm.

Connecting theory and empirical data to understand DSH

This research lends support for existing theoretical models of DSH as a mechanism to cope with emotional upheaval or stress, including the affect regulation model (Nixon et al., 2002), the tension reduction model (Haines et al., 1995), and EAM (Chapman et al., 2006). The models developed in Study 2.1b suggest that internalising emotional problems have second- or third-order effects on vulnerability to DSH (e.g. by lowering self-esteem which fosters DSH). Participants in the diary study reported emotional reasons for DSH, including relief of frustration and anger (supporting the hostility model and tension reduction model of DSH), relief of negative affect and externalisation of emotional pain (supporting emotion regulation models of DSH). Of the items in the reasons for DSH scale in the secondary school longitudinal survey, the most endorsed were those in the 'emotional relief/control' subscale, suggesting that this is a common motive for engaging in DSH among adolescents. The EAM suggests that DSH begins as a means of alleviating emotional distress, and is thus negatively reinforced. Over time negative stimuli that illicit negative emotions trigger DSH as an automatic coping reaction (Chapman et al., 2006). Results from Study 2.3 suggest that

youth who self-harm experience regular life-events more negatively; perhaps their threshold for emotional reactivity is lower, making DSH more likely.

Social and/or environmental factors are important for understanding vulnerability. This points to a limitation in focussing on emotions; important environmental factors may not be given the weight they deserve (especially in the case of male self-harm, see Study 2.1b). Important environmental factors to consider are DSH among friends and family, and victimisation (peer bullying, family abuse history). This was indicated by the triangulation in research methodology; these factors were predictive of DSH in Study 2.1b, and related to self-reported functions of DSH (see Study 2.3).

The results from this thesis support operant conditioning and contagion models of DSH. The predictive power of DSH among friends and family members' for participant DSH in the comprehensive models presented in Study 2.1a (especially for males, where this was a consistent, strong, direct predictor) suggests a strong modelling, homophily, or contagion effect for DSH behaviour. Unfortunately, the data from this thesis cannot distinguish which mechanism is at play. Secondary school participants endorsed items on the reasons for DSH scale that assessed modelling or contagion-like effects; both the items 'wanting to be like someone you respect' and 'wanting to be a part of a group' were endorsed by approximately 1 in 6 participants with a history of DSH who completed this scale. Also, teachers cited peer pressure and wanting to be like an in-group as motives for student DSH. Constructions of DSH as contagious, and concern for "putting ideas in students' heads" (see Study 3.1) is illustrative of the common conception of DSH as a group-influenced behaviour (Walsh, 2006).

Biological models were not directly tested by this research. However characteristics of DSH associated with biological mechanisms were mentioned in Study 2.2. A couple of participants mentioned that their DSH was habitual, or had addictive qualities, though only among the university student cohort not secondary school students. For the habitual and addictive qualities to noticeably take hold, more long-term self-harm behaviour may need to have occurred; this is more likely among the older cohorts, who have had more time to establish the reinforcement pattern of addiction.

The diathesis-stress model of DSH presented by Nock and Cha (2009) is consistent with the results of this thesis. DSH is seen as a mechanism for regulating emotion in times of stress, and managing intrapersonal and interpersonal experience. This model presents self-esteem and modelling influences as proximal to DSH (Nock & Cha, 2009). This is consistent with the primary role of DSH as an emotion regulation strategy identified within multiple samples in this thesis, the heterogeneity in functions of DSH (see Study 2.2), and with the consistent direct prediction of DSH by self-esteem and family and friends' DSH (see Study 2.1b). Although the data from this thesis is consistent with many models of DSH, the diathesis stress model is the most reflective of the research findings overall. This model encapsulates both the interpersonal and intrapersonal vulnerability factors found in Study 2.1, and differentiates between distal and proximal predictors of the behaviour, and accounts for both the emotional and social functions of DSH identified in Study 2.2.

This research offers unique insight into how different mechanisms potentially leading to DSH feed into each other directly, indirectly, and interactively, serving to highlight the complex and alternate paths to DSH (e.g. via abuse history and/or low self-esteem). Perhaps different models are more applicable in different cases. For example, emotion-focussed models may be more relevant to female DSH (see female models in Study 2.1b) where internalising factors and self-esteem appear most directly predictive of DSH. In contrast, among males (see male models in Study 2.1b) environmental factors of victimisation and (most notably) DSH among friends and family members may be more relevant or proximal to DSH, consistent with social environment-focused theoretical models of DSH.

Individual differences: Demographic factors and sexuality

This research presents new findings on how individual characteristics are associated with variance in antecedents of DSH, with different DSH motives, and with different types of DSH. Next demographic differences in DSH will be discussed, and differences based on sexuality, along with implications of these differences for the social environment, commonly-held views of DSH, and the lived experience of youth who engage in DSH.

Sex

No sex differences in prevalence were found in any sample, which contradicts the stereotype that DSH is more common among females than males (D'Onofrio, 2007). Failure to assess for multiple types of DSH is likely to account for the higher rates of DSH among females in previous research (e.g. Hawton et al., 2006). Many previous studies have focussed on cutting, which biases the results towards finding higher prevalence rates among females (cutting was significantly more common among females than males in this research). Thus it is important to ask about multiple types of DSH to avoid erroneous sex differences. Additionally, overdose is the most common form of self-harm among females (Hawton et al., 2006), and was excluded in the definition of DSH in this thesis. This may have impacted on the lack of sex differences compared to previous research (e.g. Hawton et al., 2006).

In understanding the interplay between the antecedents of DSH it is important to consider sex differences. Study 2.1 found that among women DSH was directly predicted by self-esteem, while for males the strongest direct (and consistent) predictor was friends and family members' DSH. Thus the social environment appears more important for male DSH, while internalising problems and self-esteem appear more important among females. Also, motives interacted with sex to impact on wellbeing. Among females who self-harmed, those with the poorest wellbeing engaged in DSH to relieve emotional tension or distress. Among self-harming males, those with the poorest wellbeing engaged in DSH for multiple reasons (i.e. for emotional relief or control, to gain understanding or attention from others, and for avoidance or manipulation).

The results of the research suggest potential sex differences in feeling able to help someone with DSH, and in being approached for DSH-related problems. Results of the stereotypes and opinions survey found female university students felt more able to help someone with problems relating to DSH than males. In that study, female teachers were also significantly more likely to have known a student who had engaged in DSH than male teachers. Perhaps this is because students are more likely to disclose DSH to female teachers than male teachers. Both these results may be partly due to stereotypes of women as more nurturing and sympathetic than males, and more likely to take on the role of carer (Arnold, Martin & Parker, 1988). Female university students may feel more able to help people with DSH difficulties because their role-stereotype as women encourages caring (and therefore providing help may validate their gender identity). Similarly, secondary school students who self-harm may be more willing to

disclose to female teachers because they are perceived as more nurturing and caring than male teachers. Aside from this, DSH has been stereotyped as a female behaviour; as weak and illustrating a lack of masculine traits (e.g. being staunch, see extract, p 284). Students may view female teachers as more understanding (i.e. because their sex stereotype includes traits constructed as characterising DSH) and sympathetic, while male teachers may be seen as more likely to take on a 'staunch' masculine attitude and tell them to "toughen up". Thus female teachers may appear more approachable to students.

In Study 2.1b the relationship between DSH among friends and family and secondary school participant DSH varied by sex. DSH among friends and family predicted internalising symptoms and bullying among males, but not females. Among females internalising symptoms were strongly predicted by alexithymia. Perhaps males' affective states are more strongly influenced by social context, modelling and homophily effects, while female affective states are more strongly influenced by capacity to identify and express (regulate) emotion. For males, having friends and family members who self-harm may lead to ridicule, more so than for females who have friends or family who self harm. Alternatively, males may be more likely to stand up to others who are stigmatising or bullying their friends or family who self-harm, and as a result become targets of bullying themselves. Perhaps the social context associated with DSH (e.g. having friends who also self-harm, experiencing bullying) has the greatest detrimental influence on males who self-harm; while among females intrapersonal issues (e.g. alexithymia, mindfulness) are associated with the greatest vulnerability. This is consistent with the different wellbeing profiles generated in Study 2.2 for males and females who self-harm.

Ethnicity

Ethnic differences were found in the types of DSH participants engaged in and motives for DSH. The most notable ethnic differences were for Pacific Island participants. These participants engaged in more extreme forms of DSH (e.g. higher prevalence of breaking bones) and were more likely to engage in DSH for attention or understanding, and for avoidance or manipulation than other ethnic groups. No consistent ethnic group differences have been reported in the literature; however Caucasians may be more likely to self-harm (e.g. over-represented in school counselling

statistics; Kibler, 2009). Small sample sizes prevented in-depth analyses of ethnic group differences.

Age

For many participants reporting a history of DSH, their DSH behaviour was historic (i.e. during their early adolescence). This suggests that youth in their late adolescence or young adulthood may have engaged in DSH, but no longer do so. Research suggests that DSH usually begins in early adolescence; most commonly around age thirteen (see Kibler, 2009). This fact, as supported by the historical nature of most adolescent participants' DSH, may be taken as evidence to support DSH as a *maturity issue* identified in the counsellor interviews. The rates of weekly DSH reported in the diary study were higher among secondary school students than university students, indicating that current DSH is more prevalent among adolescents than young adults. This also supports the idea that DSH predominantly occurs among young people.

The addictive properties of DSH may be most strongly felt by older youth who have been engaging in DSH for some time, and now do so habitually. When diary participants were asked the reasons for their DSH, only those in the university student sample reported reasons relating to habit, "doing it without thinking", and addiction (e.g. "I went back to what I knew would relieve the pain. I lost my self control…"); no secondary school student[13] attributed their DSH to habit or an addictive element. In fact, when reporting reasons for DSH secondary school and university students only differed significantly on the number of participants who attributed their DSH to habit (see p. 157); all other reasons were reported at similar rates in the two youth samples. This indicates that it is important to identify DSH behaviour among youth and intervene before the behaviour takes on an addictive and habitual quality and becomes engrained as a dominant coping response.

Sexuality

Sexuality concerns was a direct predictor of DSH (see Study 2.1b), and was identified by teachers in the stereotypes and opinions questionnaire as a reason for students' DSH. Experiencing both the stigma of same-sex attraction and the stigma of

---

[13] From the secondary school diary study not reported in depth in this thesis; refer to footnote on page 190

engaging in DSH may make students especially vulnerable to poor outcomes. Having both labels of deviancy may have synergistic negative effects. Among males the label of 'gay' or 'bisexual' and label of 'self-harmer' are traditionally considered feminine (Brickman, 2004) and may challenge gender identity. Focus group research has found that gay, lesbian, bisexual and transgender youth who self-harm may do so in reaction to homophobia in their environment and associated emotional upheaval (Scourfield, Roen & McDermott, 2008). The highest levels of sexual prejudice against gay, lesbian and bisexual peers has been found among middle adolescents (age 14-16) and declines during later adolescence and adulthood (Horn, 2006). Early to mid-adolescence is also the time when DSH is likely to develop; sexuality concerns during this period may make DSH more likely.

Sexuality concerns were predictive of both male and female DSH. Among male participants sexuality concerns were predicted by DSH among friends and family, but not for females. DSH was constructed in interviews as an un-masculine behaviour, and having male friends who engage in DSH (close friends during adolescence are often of the same sex; Reisman, 1990) may have led male participants to question their gender identify, which has potential repercussions for sexuality. Sexuality concerns predicted higher alexithymic symptomology in both sexes. Youth may avoid identifying and discussing how they are feeling if this would warrant disclosure of confusion around sexuality or acknowledging a sexuality that does not conform to their perceived or ideal identity. DSH may be a way of coping with poor emotion recognition and communication by offering a medium for emotional expression. DSH may serve to communicate turmoil associated with sexual identity concerns and emotional pain, as suggested in the theme *DSH as communication* found in the counsellor interviews. Sexuality concerns also predicted lower mindfulness among females, which suggests an avoidance of internal experience (e.g. being present to emotional experience).

Sexuality may also be associated with issues around disgust. Disgust is a gauge of social morality (Panksepp, 2007), and deviant sexuality has traditionally been constructed as immoral within society (Hubbard, 2000). The immorality associated with sexuality may lead young people to feel disgusted at themselves, and may relate to the function of DSH as self-punishment. Focus group and interview research with young people who identify as gay, lesbian, bisexual or transgender has found these groups to

turn to self-harm as a means of self-punishment due to being unhappy about their sexual orientation (Scourfield et al., 2008).

Importance of social environment

There are many factors in the social environment that potentially impact on vulnerability to DSH. The pertinent factors in the school environment, peer environment, and home environment that have been identified in this research as important protective or vulnerability factors for DSH are discussed below. Different facets of these environmental contexts (i.e. schools, peer group, home) may come together to have a synergistic or compound effect on each other in terms of fostering risk towards, or protection against, DSH.

School environment

The school environment is where adolescents spend most of their time during the week; as such it is an important site for fostering wellbeing and establishing preventative and intervention measures in cases of mental health problems. Unfortunately, this research, and other sources from the literature (e.g. Murray-Harvey & Slee, 2007), suggest barriers to fostering well-being and resilience against DSH among secondary school students, or providing support for those currently self-harming. Approximately half of the teacher participants in Study 3.2 reported finding the thought of student DSH horrifying, and counsellors reported that teachers denied DSH as a problem in schools, and saw it as attention-seeking (consistent with 51.04% attributing DSH to attention-seeking in Study 3.2). Teachers provide a role model for students, and their reactions and attitudes towards DSH may be internalised and displayed by the student body. These reactions to DSH among school staff and students are likely to cultivate a school environment that discourages disclosure, and leads to feelings of isolation and being misunderstood among students who engage in self-harm.

Murray-Harvey and Slee (2007) conducted research with 888 Australian school students on their peer, family and teacher relationships, social and emotional wellbeing, academic achievement and experience of school. Teachers strongly influenced students' experience of school, and more positive teacher-student relationships were associated with better social and emotional functioning and less stress in relationships in general.

Thus poor teacher-student relationships are likely to have detrimental effects on wellbeing (Murray-Harvey & Slee, 2007). Teachers' lack of confidence and disgust or stigmatising reactions to student DSH may foster negative relationships between teachers and students known to self-harm. Murray-Harvey and Slee (2007) found that students in secondary school felt the least supported by teachers and reported the most stress in their relationships with their teachers. Youth are most likely to self-harm when secondary school-aged. Secondary school students who self-harm may experience negative stigma or avoidance from teachers who lack confidence or knowledge of DSH, in addition to the normative decline in positive student-teacher relations.

Teachers may be ill-prepared to identify students who self-harm. Research has found that teachers tend to focus on overt and direct problem behaviours among students (e.g. apathy, bullying), and may overlook less obvious cases of poor adjustment (Murray-Harvey & Slee, 2007). As DSH is often a secretive behaviour (Walsh, 2006), teachers may need to respond to subtle signs (e.g. low self-esteem, sexuality concerns) of vulnerability to engaging in DSH, or current DSH behaviour. This research suggests that it may be especially important for teachers to attend to students with emotional difficulties, friends or family members who self-harm, abuse history, and sexuality concerns.

Peers

One's peer group becomes more and more influential during adolescents, and is an influential part of identity formation and sense of belonging. Peer group may represent risk for DSH (e.g. if they engage in DSH) or protection against DSH (e.g. if they model self-esteem, adaptive use of emotions, and provide protection against bullying). Internalising the traits and attitudes of one's peer group represents homophily effects (i.e. tendency to associate with people that are similar to us, and tendency to take on or adopt characteristics from our social group over time), observational learning and modelling.

When peers self-harm, attempts to identify with the group and develop or reinforce a sense of belonging may lead to contagion effects. Items in the Reasons for DSH scale in the Study 2.1a survey relating to contagion were endorsed by participants, and DSH among friends and family members was predictive of DSH (especially for males). School staff constructed DSH as a group behaviour and contagious in the

counsellor interviews (Study 3.1) and written responses to what causes student DSH (Study 3.2). Once established in a social friendship group DSH may become entrenched and normalised within the subculture of the clique.

Alternatively, self-harm may lead to friendship groups becoming less close-knit. Self-harm was linked to less cohesion in social networks over time in Study 2.1a; secondary school students who engaged in DSH were likely to have less close friends who knew each other from the first to the second administration of the survey. Perhaps only a small number of friends are willing to remain close to an adolescent when they are actively self-harming, due to stigma, fear of being labelled 'Emo', and feeling unable or unwilling to help. Associating with peers who self-harm may lead to ostracism from other social cliques, even if an individual does not self-harm. The negative stigma against DSH may become associated not just with the self-harming adolescent, but all members of their social group. Some adolescents may choose to end their friendships with peers who self-harm, or decrease their interactions with them. This ostracism or change in social groupings is likely to maintain the low self-esteem of adolescents who self-harm (direct predictor of DSH in Study 2.1), and increase internalising symptoms and vulnerability to being bullied (i.e. because friends are unavailable or unwilling to come to their aid).

Peers are an important source of support for all adolescents. Study 2.2b participants' most common coping mechanism in times of difficulty was to seek social support. Self-harming youth are no different. Youth who self-harm are most likely to disclose their self-harm to friends (see Study 2.1a; De Leo & Heller, 2004). Unfortunately, many of the youth participants in Study 3.2 felt unable to help someone with issues of DSH. This may be due to lack of knowledge, or the stigma associated with DSH. The stigma around DSH may propagate fear and **strong emotional reactions** from peers, making it difficult for friends to lend support, even if they want to (and most youth participants reported willingness to help, despite feeling unable to, see Study 3.2).

Home life

This research found that household composition (i.e. living in a single- or two-parent household, having siblings or a step-parent) did not significantly differ between youth with and without a history of DSH (see p. 92). Young peoples' home life, as with

adults, is important in promoting healthy functioning. A factor which was consistent linked to DSH was historical abuse. This supports the trauma-related models of DSH outlined in the introduction (see p. 53); adolescents may engage in DSH as an emotional coping mechanism when they have not developed the skills to cope with stress (e.g. due to abuse being detrimental to the development of self-soothing capacities).

It is important to acknowledge that if the lived social experience of youth who engage in DSH is characterised by stigma, depersonalisation (e.g. as *freaky* and **abnormal**), lack of knowledge and understanding from others, a break-down in relationships (i.e. linked to decreased cohesiveness of friendship groups), and a history of abuse and being bullied, youth who self-harm are likely to be wary of others and sceptical of their intentions. This is likely to have detrimental effects on their help-seeking behaviour and likelihood of recovery.

Stigma in the environment

Stigma effects may be especially important during adolescence when individuals are establishing their identity. Stigmatisation challenges sense of self, self-efficacy and self-worth (Link et al., 1991). The behavioural response of secrecy and withdrawal to stigmatisation in relation to mental health issues is associated with decreased self-esteem and increased depressive symptoms (Link et al., 1989, 1991); this is unfortunate given that self-esteem and depression were found to be antecedents of DSH (see Study 2.1). Stigma has also been linked to bullying (Link et al., 1991), another direct predictor of DSH (although borders significance; see *Figure 28*, p 146). Stigma may be compounding adolescents' existing vulnerability and maintaining their self-harm behaviour.

Aside from the stigma of DSH, youth that self-harm may experience a **strong emotional response** of *anger* and disgust from peers and adults towards their DSH (see Study 3). Disgust may be reflexive and hard not to show in initial disclosure (Panksepp, 2007), even by those who want to help. Negative emotional responses from the environment are likely to discourage help-seeking and foster anxiety, poor self-esteem, and feelings of isolation among youth who self-harm. One context where this emotional reaction may not be experienced is within cliques where DSH is common and accepted. The relative acceptance and support for the behaviour among peers who also self-harm may encourage isolation within this peer group. Outside support may be necessary to

overcome self-harm, but this outside support, if requiring exposure to stigma and negative reaction, may be unappealing in comparison to the support and belonging experienced within the self-harming peer group. Aside from contagion discussed earlier, youth who DSH may be more likely to have friends who self-harm because they may feel accepted and comfortable to disclose among these peers.

Constructions of DSH

Results from Study 3 suggest DSH is constructed negatively by youth and adults alike, which may foster reactions of secrecy and withdrawal among young people who self-harm. This is consistent with the low rates of disclosure in Study 2.1.

Participants' constructions of DSH were influenced by their experience of DSH either through someone that they know or personal DSH behaviour. In the stereotypes and opinions survey youth participants and teacher participants with a history of DSH had more negative constructions of 'average teenager' and more positive constructions of 'average self-harmer' than those with no history of DSH. Among youth, the more negative stereotype of 'average teenager' may relate to lack of identification with their in-group considering peer victimisation, isolation and stigmatisation (as found in all data sources). Teachers may have a more negative construction of 'average teenager' due to their own negative experience of adolescence given their DSH behaviour.

There were contradictions (i.e. ideological dilemmas) in the construction of DSH, likely contributing to lack of understanding, confusion, and consequently **strong emotional reactions** (i.e. encouraged by ambivalence and ambiguity). DSH was constructed as a contagious, disgusting, horrifying, disease-like behaviour to be shut away and avoided. Constructing DSH as attention seeking and a *maturity issue* also facilitated avoiding the issue. Alternative constructions of DSH normalised it as a coping mechanism in the face of adversity (e.g. abuse), and behaviour of the 'average blow kid'. A shared understanding and approach to DSH is lacking among mental health professionals (Bosman & van Meijel, 2008), thus it is hardly surprising that perceptions of, and approaches to, DSH are characterised by ambivalence among untrained school staff and students.

Implications

The high prevalence of DSH among community youth samples in this research suggests that DSH should be routinely assessed among youth experiencing mental health difficulties, and also suggests a need for school staff training and school response plans. Any attempt to query youths' DSH should be made with special attention to concerns of stigmatisation leading to secrecy and withdrawal (Link et al., 1989, 1991). Youth may choose not to disclose even if directly asked if they self-harm.

Teachers and school staff need to be aware of known vulnerability factors, and attend to students with these risk factors, as lack of disclosure and secretive behaviours (e.g. hidden site of DSH) mean that few people (if any) may be aware of which students are engaging in DSH. This research also suggests that it is important to help friends (peers) cope with disclosure, as youth are most likely to disclose to their friends rather than professionals. Educating youth on available services they can easily access for help, and cultivating a school environment that acknowledges and is responsive to mental health issues, will likely improve the experience of help-seeking (and recovery) for self-harming youth.

This research suggest that it is important to consider sex differences in the motives behind DSH as an indicator of vulnerability (i.e. females more vulnerable if motive is for emotional relief, males more vulnerable if engage in DSH for multiple reasons). Sex differences in terms of antecedents to DSH are also important to consider in identifying youth at risk of DSH (i.e. self-esteem issues appear central to vulnerability among females, while environmental factors of family and friend DSH and victimisation have direct predictive power for DSH among males). The results provide evidence against the myth that DSH is more common among females, and suggest females and males engage in different types of DSH. DSH is a symptom of an underlying need(s) (e.g. for emotion regulation; Nixon et al., 2002) or psychological or (e.g. low self-esteem) social difficulty (e.g. victimisation). It is best to target these needs (e.g. through fostering emotion regulation skills and self-esteem), which will provide resilience against DSH or improved alternative coping, rather than stop the DSH directly. Cessation of DSH without catering to the underlying cause and providing alternative coping strategies will likely mean that DSH is simply replaced by other maladaptive behaviours or symptoms of psychological distress (Yates, 2004).

The generational differences in experience and knowledge of DSH, and the construction of DSH as **generational** and a *maturity issue* may be limiting open discussion between youth and adults in their social environment. Lack of understanding among adults may foster feelings of isolation and being misunderstood among youth who self-harm. Potential social support from adults may be lacking or perceived as inaccessible. Also, the construction of DSH as attention-seeking and a *maturity issue* may be causing students to feel less connected to their school and family. School connectedness is positively associated with psychological functioning (Skues et al., 2005) and youths' sense of disconnection may contribute to vulnerability. In addition, the construction of DSH as a **generational** and *maturity issue* may impact on how youth who self-harm feel about themselves (e.g. as (in)competent individuals approaching adulthood).

Applications

This research suggests several avenues for managing DSH in secondary schools. Increasing emotional awareness and regulation may be an appropriate means of decreasing, or perhaps ending, DSH through protecting against negative emotional experience and low self-esteem (precipitants of DSH) and fostering effective social skills. Researchers suggest that it is best not to educate students directly about DSH (to avoid contagion effects), but to focus on providing skills for effective coping, and teaching about warning signs for stress and how to instigate coping strategies early (e.g. Kibler, 2009). The results suggest that establishing school programmes to increase adaptive use of emotions, self-esteem and resiliency may protect against DSH, as well as having other positive influences on students' wellbeing.

Given the importance of victimisation and sexuality concerns in vulnerability to DSH, the results of the this research suggest it would be helpful to implement (or continue) anti-bullying campaigns in secondary schools, and to de-stigmatize sexual minorities, or create peer-support groups for both bullying victims and students experiencing sexuality concerns; while being alert for homophily effects for depression and DSH within these groups. The 'It's not OK' campaign and 'Unique' groups in New Zealand secondary schools may help fulfil this role. Peer support groups have known success with anti-bullying and homophobia (e.g. Smith & Ananiadou, 2004).

In schools it is important to acknowledge DSH stereotypes and reactions among staff and students, and how these may be impeding a healthy and supportive environment for student disclosure and help-seeking. Staff comfort and willingness to support students with DSH issues should be promoted by providing training on DSH and appropriate responses to student disclosure. Research has shown programmes can improve knowledge and self-efficacy (e.g. Robinson et al., 2008). However, workshops on DSH have not been shown to improve participants' attitudes towards DSH behaviour (e.g. Robinson et al., 2008). Individuals' attitudes may be harder to shift (i.e. stereotypes are inflexible; Pickering, 2001). In the case of racism, Wetherell and Potter (1992) suggest three ways to counter stereotypes; encouraging people to purposely take note of cases of the stereotyped group that challenge the stereotype, presenting strong and vivid evidence against the stereotype, and encouraging people to have sub-division within their stereotype to allow for variation and individual difference (e.g. youth who disclose self-harm may be attention-seeking, but may be a valid cry for help requiring a supportive response). These three strategies could be applied in schools by suggesting to staff that they note the variation in students presenting with the issue, by educating staff on the heterogeneity of DSH and presenting cases that challenge stereotypes, and by encouraging staff to form many different constructions of DSH to account for heterogeneity.

The strong link between DSH among friends and family and participant DSH suggests it is important to provide support and counselling for friends and family members of people known to engage in DSH. Mental health workers of young clients who self-harm may be wise to screen for DSH among other family members, or individuals within the clients peer group. This could help establish motives for self-harm (e.g. to be like a respected family member or peer, to feel part of a group), which are important to address in providing alternatives to the behaviour and identifying underlying need (e.g. in the case of modelled DSH underlying need may be for respect, or a sense of belonging).

The findings are also applicable to therapeutic practice; focusing on psychological functioning and self-esteem may be especially important among adolescent female clients, while working through environmental issues of victimisation, may be especially important among adolescent male clients. For highly at risk DSH clients, perhaps the advocated treatment of Dialectical Behaviour Therapy (Miller,

Rathus & Linehan, 2007), which has a strong focus on emotion, may be more appropriate for females rather than males (who may respond better to more behavioural interventions geared towards environmental change).

Limitations of this research

There are several limitations to this research, including methodology (i.e. mostly self-report and cross-sectional), limitations of generalisability, sampling bias, lack of independent coders, and experimenter bias. These will be discussed in turn. This research is exploratory, albeit based on robust factors consistently linked to DSH in empirical research. The findings reported in this research require replication to verify their reliability.

The research is entirely self-report based, which raises the issue of biased responding. Participants may have chosen not to disclose DSH because of the stigma associated with the behaviour, or chosen to censor their disclosure. Disclosure of abuse history and sexuality concerns may also have been censored given that these topics are taboo and emotive (Hubbard, 2000; Krug et al., 2002). The anonymity of the surveys was designed to encourage open and honest disclosure; however the fact that the youth surveys were completed in groups may have led some participants to doubt the privacy of their responses. Some participants may have felt that their responses were observable by their peers. Social desirability pressures in the Study 3 interviews may have influenced counsellors' disclosure.

There are limitations to the structural equation models presented in Study 2.1. The models were mostly cross-sectional, which does not allow for reliable statements about causality. The method of using different samples to create the model and later verify it was used to cater to this concern. Several university student models used data collected over two time-points, which allows for inferences of causality, however these models did not control for T1 DSH or T2 predictor variable scores. In addition, the majority of the models have poor fit indices, especially those for the secondary school sample. This may be due to error associated with dishonest responses (e.g. some secondary school student participants treated the research as a "joke"). Alternatively, it may be that youth DSH is too heterogeneous to develop a comprehensive model inclusive of numerous predictor variables. The models developed with the university student sample showed better fit for the data. This may be because university

psychology students are more accustomed to completing psychometric scales, and therefore found the task of appropriate and honest survey completion less tiresome. Alternatively, the university psychology student population is likely to be more homogenous than a large secondary school population taken from schools of varying demographics and locations throughout Wellington. The prevalence of DSH among the secondary school samples also points to heterogeneity; with up to half of students having a history of DSH there is likely to be wide variation in presentation. Homogeneity of the university student sample may mean greater consistency in the relationship between the predictor variables and DSH, facilitating a better model fit. Both the longitudinal models using university student data were well-fitting. Despite these limitations, the models indicate the primary importance of self-esteem in prediction of DSH behaviour among youth. Other associations in the models were less consistent across samples, and require replication.

The findings may have limited generalisability. Truants and students who have left school early would not have participated. These groups of youth have higher rates of DSH (Bjarnasson & Thorlindsson, 1994 as cited in Evans et al., 2005). In addition, participants were only taken from the wider Wellington region and were primarily Pakeha/New Zealand European, which may mean that the results are not generalisable to populations in other regions both nationally and internationally, or to other ethnic groups. However, the secondary school survey sample in particular is made up of participants from different types of schools (i.e., mixed-sex, single-sex, public and private, and low and high decile), of different ethnic backgrounds, and has a sex ratio generally representative of secondary schools. The findings may not be applicable to younger cohorts as all participants were aged sixteen or older. DSH typically begins at age thirteen or fourteen (Muehlenkamp & Gerierrez, 2004; Whitlock et al., 2006a) rather than in late adolescents. Factors that foster vulnerability and resilience to DSH may vary across development and into adulthood.

There may also be a sampling bias throughout the different studies, reflective of participants' comfort, knowledge, interest, and willingness to discuss DSH. When I initially contacted school to request participation, several declined participation on the grounds that DSH did not occur in their school. It is highly unlikely given the prevalence of DSH reported across the ten secondary schools assessed in this research and rates reported among youth internationally (e.g. Lundh et al., 2007), that DSH does

not occur at the schools that declined participation. However, participating schools may have had higher rates of DSH. Schools that chose to participate may have a special interest in DSH; perhaps the pastoral care providers at participating schools were more interested in the topic, or an event (e.g. contagion of DSH) had made staff aware of their lack of knowledge in the area of DSH. Constructions of DSH may have differed significantly between schools that chose to participate and those that declined participation. For example, constructions of DSH that support avoidance of the topic (e.g. DSH as **abnormal**, a *maturity issue*, *taboo* and fostering a **strong emotional reaction**) are likely to have been more prevalent among schools that declined participation, as it was this type of construction (i.e. "doesn't happen at our school/not a problem here", see construction of DSH as occurring elsewhere rather than locally, p. 230) that was used to justify refusal to be involved. Sampling bias may have also limited the generalisability of the results for Study 2.3. Participants in the diary study self-selected to participate, and the fact that the highest rate of current DSH over the six week period was in week 1 suggests that participants (current) personal experience of DSH may have influenced their decision to participate. Personal interest in, or experience of, DSH may have influenced participants' investment in the participation process in all the studies of this thesis.

Most reported DSH behaviour was historical rather than recent, which means that recall of motive and behaviour may be poor. This may have impacted on prevalence rates. Participants may have discounted historical events of DSH because of failure to remember that the harm was intentional. Alternatively, participants may have counted historical accidental injuries as self-harm behaviour. In addition, the functions of historical DSH may not be reliably accessed in autobiographical memory, which may have influenced accurate reporting of motives of DSH in the FASM reasons for DSH scale (see Study 2.2a). This is particularly likely given that people who self-harm are known to have autobiographical memory deficits (Sinclair et al., 2007). However, the large secondary school sample size (total N= 1992) is likely to limit the influence of autobiographical memory deficits in Study 2.2a (N=800), and in the studies involving this sample across the thesis in general. The fact that most reported DSH was historical may have influenced the relationship between predictor variables and DSH. Internalising symptomology reported at the time of survey completion may be qualitatively different to the symptoms experienced at the life-phase when DSH occurred. Thus linking current symptomology to historical DSH in cross sectional

correlational research is limiting. However, the triangulation of research methodology, and incorporating analyses across time (e.g. in Study 2.1 and 2.3), both lend support to associations between DSH and DSH predictor variables replicated across studies.

Due to limited resources an independent coder could not be employed to provide inter-rater reliability (i.e. in Study 2.2b, 2.3, 3.1 and 3.2a). An independent coder may have coded the dataset slightly differently, and would have allowed for alterations to be made to ensure consistency throughout the coding process (Joffe & Yardley, 2004). Experimenter bias may have influenced which aspects of data I attended to most (e.g. according to my theoretical orientation and interests). To limit the influence of experimenter bias in coding data, I re-read the corpus several times when identifying themes (e.g. multiple revisions in theme development in Study 3.1a, see p 223-224) and descriptors (i.e. in Study 3.2a). As with the results from this thesis in general, the results of studies necessitating coding require replication.

Strengths of this research

There are several strengths to this research, including sample size and characteristics, triangulation of methodology, and assessment of multiple types of DSH. These factors are discussed in turn below. Also, this thesis approaches DSH from multiple perspectives within youths' social environment by investigating the lived experience of self-harming youth, perceptions of DSH among the peers of self-harming youth, teachers' responses and perceptions of DSH, and pastoral care providers' constructions and understandings of the behaviour.

The validity and reliability of the research findings are strengthened by the large and heterogeneous sample of secondary school students. The sample size for the longitudinal survey totalled 1992 participants, who came from a diverse range of schools (i.e. single and mix-sexed schools, central and wider Wellington region, government-only and partially-private funded, religious and secular). This large sample size allowed gave the studies large statistical power, which allowed for comprehensive inferential analyses (e.g. the complex models presented in Study 2.1). The results of this research were also strengthened by the use of multiple samples. Consistency across samples added reliability to the research findings (e.g. the importance of emotion

regulation as a motive for DSH was found among all three samples of participants in Study 2.2b).

Triangulation in research method made the results of this thesis more robust. Both quantitative survey methods (cross sectional and longitudinal) were used, along with qualitative methodologies (e.g. thematic analysis and identification of ideological dilemmas). All these results were brought together to understand predictors of DSH and the experience of DSH within young people's environment. Consistencies across research methodologies (e.g. **strong emotional reactions** to DSH in Study 3.1 and 3.2) suggest that the findings of this thesis are replicable.

Conducting analyses across time (e.g. Study 2.1 and 2.3) is an important unique strength to this research. Currently there are no comprehensive analyses of the predictors of DSH across time using the range of variable assessed in this thesis. These analyses across time reinforced the importance of low self-esteem in predicting DSH behaviour (see Study 2.1b), and ongoing negative emotional experience as potentially fostering and maintaining an intrapersonal context of vulnerability to DSH behaviour.

The results of this thesis are strengthened by the assessment for multiple types of DSH, ensuring a more accurate prevalence of DSH. Querying DSH with one or two items (e.g. De Leo & Heller, 2004), is likely to under-report the rate of DSH among youth, and may generate inaccurate findings of higher DSH among females than males. Also, in-depth assessment of the different types of DSH allows a more accurate reflection of the association between DSH and correlates of the behaviour.

Future directions

There are numerous future avenues of research suggested by the findings of this thesis. The dilemmas and stigma experienced in secondary schools in relation to DSH suggests that establishing programmes to address negative stereotypes and staff concerns relating to DSH may prove beneficial to the mental health of the school community and the emotion climate in secondary schools as it is experienced by youth who self-harm. Action research to increase staff awareness, confidence and comfort in addressing student DSH may produce fruitful results in terms of staff self-efficacy for helping youth who self-harm.

Future directions could also include assessing the effectiveness of emotion skills training programmes among students in early adolescence to help them cope with social pressures (e.g. victimisation) and potential psychological issues (e.g. sexuality concerns), and promote adaptive use of emotions and skills to counter alexithymia (i.e. fostering accurate identification of emotion and the ability to communicate emotional experience) to protect against DSH. In the early stage of this thesis I developed a template for a pilot emotion skills training programme, however schools in the region did not have the time to commit to such a project (see appendices for a copy of the skills training booklet). Perhaps if such a programme was integrated into student health classes it would be easier to implement (rather than making a special time for students to be involved).

The models of DSH developed in Study 2.1 require replication. In addition, future research could look at developing separate models of DSH based on motive; motive appears to influence participants' experience of the antecedents of DSH and the factors pertinent to vulnerability. Separate models for different ethnic groups may also uncover important differences.

Conclusions

DSH is characterised by heterogeneity in behaviour, motives, antecedents (between individuals and within individuals at different times) and constructions, and is a highly prevalent phenomenon among youth in New Zealand. DSH is likely to be more prevalent than most people would expect, given that it was constructed as **abnormal** and as occurring elsewhere, and rates of DSH were lower among older samples. It is important to address the issue of DSH and cater to the needs of self-harming youth for support and understanding (rather than rejection and stigma) while being mindful of the secondary gain attention might represent. DSH can become an ingrained habitual behaviour, making it especially important to identify those engaging in self-harm early, to prevent the behaviour from escalating and becoming entrenched.

There are multiple potential antecedents of DSH, but generalisations from the models in Study 2.1 and functions of DSH in Study 2.2 may help identify those most at risk. Among males, social factors, including DSH among friends and family, appear central to vulnerability; among females self-esteem and emotional deregulation appears central (and DSH among friends and family, but this appears to impact via internalising

symptoms and self-esteem rather than directly as for males). DSH also was linked to a more negative general overall emotional experience and negative emotions (see Study 2.2), suggesting that negative emotional experience may precipitate DSH (consistent with Nixon, 2002), and potentially foster a downward spiral of low affect (consistent with emotion regulation models of DSH, see p. 50-1, 54-7).

The results of this thesis suggest that secondary schools are experiencing dilemmas in relation to student DSH; many staff are unsure how (or if) to approach DSH. It is important to educate and create school policy for student DSH (especially given the high prevalence of this behaviour among youth). Several authors offer suggestions for educating school staff on DSH and possible templates for policy (e.g. Robinson et al., 2008; Shapiro, 2008; Roberts-Dobie & Donatelle, 2007).

It is important to acknowledge that DSH does not discriminate; DSH is found among males and females, among all ethnic groups, people from all socio-economic backgrounds, and people of all sexual orientations. This heterogeneity highlights that different intervention styles and treatment strategies will suit different people who self-harm. It is important for schools, social workers, and all professionals involved in the wellbeing of youth to cater to this variation in their response.

References

Adams, J., Rodham, K., & Gavin, J. (2005). Investigating the "self" in deliberate self-harm. *Qualitative Health Research, 15*, 1293-1309.

Adler, P. A., & Adler, P. (2007). The demedicalization of self-injury: from psychopathology to sociological deviance, *Journal of Contemporary Ethnography, 36*, 537-570.

Alcohol Advisory Council of New Zealand (2008). *NZ Statistics.* Accessed 5th February, 2010 http://www.alcohol.org.nz/NZStatistic.aspx?PostingID=16709

Alderman, T. (1997). *The scarred soul. Understanding and ending self-inflicted violence.* New Harbinger Publications: California.

American Psychiatric Assocation (2000). *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., revised). Washington DC: Author.

Anderson, M., & Standen, P. (2007). Attitudes towards suicide among nurses and doctors working with children and young people who self harm. *Journal of Psychiatric and Mental Health Nursing, 14*, 470-477.

Anderson, M., Standen, P., & Noon, J. (2003). Nurses' and doctors' perceptions of young people who engage in suicidal behaviour: a contemporary grounded theory analysis. *International Journal of Nursing Studies, 40*, 597-597.

Arbuckle, J. L. (2006). *Amos 16.0.* Chicago: SPSS inc.

Arnold, R. M., Martin, S. C., & Parker, R. M. (1988). Taking care of patients – does it matter whether the physician in a woman? *Western Journal of Medicine, 149*, 729-733.

Austin, E. J., Saklofse, D. H., & Egan, V. (2005). Personality, well-being and health correlates of trait emotional intelligence. *Personality and Individual Difference, 38*, 547-558.

Ayton, A., Rasool, H, & Cottrell, D. (2003). Deliberate self-harm in children and adolescents: Association with social deprivation. *European Child and Adolescent Psychiatry, 12*, 303-307.

Baer, R. A., Smith, G. T., & Allen, K. B. (2004). Assessment of mindfulness by self-report. The Kentucky Inverntory of Mindfulness Skills. *Assessment, 11*, 191-206.

Baldry, A. C. (2004). The impact of direct and indirect bullying on the mental and physical health of Italian youngsters. *Aggressive Behavior, 30*, 343-355.

Bancroft, J., & Hawton, K. (1983). Why people take overdoses: A study of psychiatrists' judgements. *British Journal of Medical Psychology, 56*, 197-204.

Baumeister, R. F. (1997). Esteem threat, self-regulatory breakdown, and emotional distress as factors in self-defeating behaviour. *Review of General Psychology, 1*(2), 145-174.

Baumgardner, A. H. (1990). To know oneself is to like oneself. Self-certainty and self-affect. *Journal of Personality and Social Psychology, 58*, 1062-1072.

Beasley, M., Thompson, B. L., & Davidson, J. (2003). Resilience in response to life stress: the effects of coping style and cognitive hardiness. *Personality and Individual Differences, 34*, 77-95.

Beck, A. T., Freeman, A., & Davis, D. D. (2004). *Cognitive Therapy of personality Disorders*. New York: Guilford Press.

Bennun, I. (1984). Psychological models of self-mutilation. *Suicide & Life-Threatening Behavior. 14*(3), 166-186.

Bergen, H. A., Martin, G., Richardson, A. S., Allison, S., & Roeger, L. (2003). Sexual abuse and suicidal behaviour: A model constructed from a large community sample of adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 42*, 1301-1309.

Bernstein, D. P., Stein, J. A., Newcomb, M. D., Walker, E., Pogge, D., Ahluvalia, T. et al. (2003). Development and validation of a brief screening version of the Childhood Trauma Questionnaire. *Child Abuse & Neglect, 27*, 169-190.

Best, R. (2004). *Deliberate self-harm in adolescence: an educational response*. Annual conference of the British Educational Research Association.

Best, R. (2005). Self-harm: A challenge for pastoral care. *Pastoral Care, 23* (3), 3-11.

Best, R. (2006a) *Deliberate self-harm in adolescence: report of a research project in some English schools*. European Conference on Educational Research, 13-16 September, 2006. Roehampton University: Geneva.

Best, R. (2006b). Deliberate self-harm in adolescents: a challenge for schools. *British Journal of Guidance & Counselling, 34*, 161-175.

Billig, M. (1991). *Ideology and Opinions: Studies in Rhetorical Psychology*. Sage Publishing: United Kingdom.

Bishop, S. R., Lau, M., Segal, Z., Anderson, N., Abbey, S., Devins, G., et al. (2003). *Development and validation of the Toronto Mindfulness Scale*. Unpublished work.

Bjarehed, J., & Lundh, L. G. (2008). Deliberate self-harm in 14 year old adolescents: How frequent is it, and how is it associated with psychopathology, relationship variables, and styles of emotional regulation? *Cognitive Behaviour Therapy, 37*(1), 26-37.

Bosman, M., & van Meijel, B. (2008). Perspectives of mental health professionals and patients on self-injury in psychiatry: A literature review. *Archives of Psychiatric Nursing, 22*, 180-189.

Boyce, P., Carter, G., Penrose-Wall, J., & Goldney, R. (2003). Summary Australian and New Zealand clinical guidelines for the management of adult deliberate self-harm (2003). *Australian Psychiatry, 11*, 150-155.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*, 77-101.

Brazier, K. J. (2000). *Suicides in Wellington 1986-1995*. Master in Psychology, School of Psychology, Victoria University of Wellington: Wellington.

Brickman, B. J. (2004). 'Delicate cutters: Gendered self-mutilation and attractive flesh in medical discourse. *Body Society, 10*, 87-111.

Briere, J., & Gil, E. (1998). Self-mutilation in clinical and general population samples: Prevalence, correlates, and functions. *American Journal of Orthopsychiatry, 68*, 609-620.

Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology, 84*, 822-848.

Brown, M. Z., Comtois, K. A., & Linehan, M. M. (2002). Reasons for suicide attempts and nonsuicidal self-injury in women with Borderline Personality Disorder. *Journal of Abnormal Psychology, 111*, 198-202.

Brown, M. Z., Linehan, M. M., Comtois, K. A., Murray, C., & Chapman, A. L. (2009). Shame as a prospective predictor of self-inflicted injury in borderline personality disorder: A multi-modal analysis. *Behaviour Research and Therapy, 47*, 815-822.

Byrne, P. (2000). Stigma of mental illness and ways of diminishing it. *Advances in Psychiatric Treatment, 6*, 65-72.

Canterbury Suicide Project. (2006). *Bullying*. Christchurch School of Medicine and Health Sciences. Accessed January 23 2008 at http://www.chmeds.ac.nz

Canterbury Suicide Project. (2006). *Music, Youth Subculture and Self-Harm.* Christchurch School of Medicine and Health Sciences. Accessed February 12 2009 at http://www.chmeds.ac.nz/research/suicide/music_youth_subculture_aug_2006_2.pdf

Career Services (2010). *Get job information*. Accessed February 20 2009 at http://www2.careers.govt.nz/get_job_info.html

Carr, A. (1999). *The handbook of child and adolescent clinical psychology. A contextual approach.* Routledge: London.

Carr, A., & McNulty, M. (2006). *The handbook of adult clinical psychology: an evidence based practice approach.* London: Routledge.

Chabane, N., leboyer, M., Mouren-Simeoni, M. C. (2000). Opiate antagonists in children and adolescents. *European Child and Adolescent Psychiatry, 9*, 144-150.

Chang., G. H. (2002). The cause and cure of China's widening income disparity. *China Economic Review, 13*, 335-340.

Chang, V. Y., Palesh, O., Caldwell, R., Glasgow,N., Abramson, M., Luskin, F., Gill, M., Burke, A., & Koopman, C. (2004). The effects of a mindfulness-based redulction programme on stress, mindfulness self-efficacy, and positive states of mind. *Stress and Health, 20*, 141-147.

Chang, W. (2006). *Doc given green light for emo culling*. Stuffed, electronic news article, accessed January 23, 2008 at www.stuffed.co.nz

Chapman, A. L., Gratz, K. L., & Brown, M. Z. (2006). Solving the puzzle of delibearate self-harm: The experiential avoidance model. *Behaviour Research and Therapy, 44*, 371-394.

Christianson, C. L., & Everall, R. D. (2008). Constructing bridges of support: School counsellors' experiences of student suicide. *Canadian Journal of Counselling, 42*, 209-221.

Christianson, C. L., & Everall, R. D. (2009). Breaking the silence: School counsellors' experiences of client suicide. *British Journal of Guidance and Counselling, 37*, 157-168.

Ciarrochi, J., Chan, A. Y. C., & Bajgar, J. (2001). Measuring emotional intelligene in adolescents. *Personality and Individual Difference, 31*, 1105-1119.

Ciarrochi, J., Deane, F., P., & Wilson, C. J. (2002). Adolescents who need help the most are the least likely to seek it: the relationship between low emotional competence and low intention to seek help. *British Journal of Guidance and Counselling, 30*, 173-188.

Claasen, C. A., & Trivedi, M. H. (2006). Rates of nonfatal intentional self-harm in nine states, 2001. *Psychiatric Services, 57*, 313.

Claes, L.,Vandereycken, W., Vertommen, H. (2001). Self-injurious behaviours in eating-disordered patients. *Eating Behaviors, 2*, 263-272.

Claes, L., Vandereycken, W., & Vertommen, H. (2005). Self-care versus self-harm: Piercing, tattooing, and self-injuring in eating disorders. *European Eating Disorders Review, 13*, 11-18.

Cleary, S. D. (2000). Adolescence victimisation and associated suicidal and violent behaviours. *Adolescence, 35*, 671-682.

Coggan, C., Bennett, S., Hooper, R., & Dickinson, P. (2003). Association between bullying and mental health status in New Zealand adolescents. *International Journal of Mental Health Promotion, 5*, 16-21.

Cohen, J. (1960). A coefficient of agreement for nominal scales. *Educational and Psychological Measurement, 20*, 37-46.

Cohen, S. C. (1987). *Folk devils and moral panics: the creation of the Mods and Rockers*. London: Routledge.

Colman, I., Ploubidis, G. B., Wadsworth, M. E. J., Jones, P. B., Croudace, T. J. (2007). A longitudinal typology of symptoms of depression and anxiety over the life course. *Biological Psychiatry, 62*, 1265-1271.

Collins, S. (2005). Yellow Ribbon trust to close down. New Zealand Herald, Friday February 11.

Conterio, K., Lader, W., & Bloom, J. K. (1998). *Bodily Harm. The breakthrough healing program for self-injurers*. Hyperion: New York.

Conner, K. R., Langley, J., Tomaszewski, K. J., & Conwell, Y. (2003). Injury hospitalisation and risks for subsequent self-injury and suicide: A national study from New Zealand. *American Journal of Public Health, 93*, 1128-1131.

Cooper, J., Kapur, N., Webb, R., Lawlor, M., Guthrie, E., Mackway-Jones, K., & Appleby, L. (2005). Suicide and deliberate self-harm: A 4-year cohort study. *The American Journal of Psychiatry, 162*, 297-303.

Cowie, H., & Berdondini, L. (2002). The expression of emotion in response to bullying. *Emotional and Behavioural Difficulties, 7*, 207-214.

Crawford, T., Geraghty, W., Street, K., & Simonoff, E. (2003). Staff knowledge and attitudes towards deliberate self-harm in adolescents. *Journal of Adolescence, 26*, 619-629.

Crouch, W., & Wright, J. (2004). Deliberate self-harm at an adolescent unit: A qualitative investigation. *Clinical Child Psychology and Psychiatry, 9*, 185-204.

Crosby, R. A., Salazar, L. F., & DiClemente, R. J. (2006). Conducting Observational Research. In *Research methods on health promotion*, R. A. Crosby, R. J. DiClemente and L. F. Salazar (eds). (p. 107-128).Wiley: United States.

Crowe, M. (1996). Cutting up: Signifying the unspeakable. *Australian and New Zealand Journal of Mental Health Nursing, 5*, 103-111.

Crowell, S. E., Beauchaine, T. P., McCauley, E., Vasilev, C. A., & Stevens, A. L. (2008). Parent-child interactions, peripheral serotonin, and self-inflicted injury in adolescents. *Journal of Consulting and Clinical Psychology, 76*, 15-21.

Davidson, L. M., & Demaray, M. K. (2007). Social support as a moderator between victimisation and internalising/externalising behaviours from bullying. *School Psychology Review, 36,* 383-405.

De Leo, D., & Heller, C. (2004). Who are the kids who self-harm? An Australian self-report survey. *Medical Journal of Australia, 181*, 140-144.

De Man, A. F. (1999). Correlates of suicide ideation in high school students: The importance of depression. *The Journal of Genetic Psychology, 160*, 105-114.

Deiter, P. J., Nicholls, S. S., & Pearlman, L. A. (2000). Self-injury and self-capacities: Assisting an individual in crisis. *Journal of Clinical Psychology, 56* (9), 1173-1191.

Derouin, A., & Bravender. T. (2004). Living on the edge: the current phenomenon of self-mutilation in adolescents. *The American Journal of Maternal/Child Nursing, 29*, 12-18.

D'Onofrio, A. A. (2007). *Adolescent self-injury. A comprehensive guide for counsellors and health care professionals.* Springer Publishing Company: New York.

Eliason, M., Donelan, C., & Randall, C. (1992). Lesbian Stereotypes. *Health Care for Woman International, 13*, 131-144.

Erisman, S. M., Salters-Pedneault, K., & Roemer, L. (2005). *Emotion regulation and mindfulness.* Accessed January 12 2008 at

http://psych.umb.edu/faculty/roemer/(AABT%202005)%20ER%20&%20Mindfulness%20Poster%20Handout%203.pdf

Evans, E., Hawton, K., & Rodham, K. (2004). Factors associated with suicidal phenomena in adolescents: A systematic review of population based studies. *Clinical Psychology Review, 24*, 957-979.

Evans, E., Hawton, K., & Rodham, K. (2005). In what ways are adolescents who engage in self-harm or experience thoughts of self-harm different in terms of help-seeking, communication and coping strategies? *Journal of Adolescence, 28*, 573-587.

Evans, W. P., Marte, R. M., Betts, S., & Silliman, B. (2001). Adolescent suicide risk and peer-related violent behaviours and victimisation. Journal of Interpersonal Violence, 16, 1330-1348.

Everall, R. D., Altrows, K. J., & Paulson, B. L. (2006). Creating a future: a study of resilience in suicidal female adolescents. *Journal of Counselling & Development, 84*, 461-470.

Evren, C., & Evren, B. (2005). Self-mutilation in substance-dependent patients and relationship with child abuse and neglect, alexithymia and temperament and character dimensions of personality. *Drug and Alcohol Dependence, 80*(1), 15-22.

Fabian, S. (1986). *The last taboo. Suicide among children and adolescents*. Penguin Books: Victoria, Australia.

Favaro, A., Santonastaso, P., Monteleone, P., Bellodi, L., Mauri, M., Rotondo, A., Erzegovesi, S., & Maj, M. (2008). Self-injurious behaviour and attempted suicide in purging bulimia nervosa. Associations with psychiatric comorbidity. *Journal of Affective Disorders, 105*(1-3), 285-289.

Favazza, A. R. (1996). *Bodies under siage. Self-mutilation and body modification in culture and psychiatry*. The John Hopkins University Press: Maryland.

Feldman, G., Hayes, A., Kumar, S., Gresson, J., & Laurenceau, J. (2007). Mindfulness and emotion regulation: the development and initial validation of the Cognitive and Affective Mindfulness Scale-Revised (CAMS-R). *Journal of Psychopathology and Behaviour Assessment, 29*, 177-190.

Firestone, R. W., & Seiden, R. H. (1990). Suicide and the continuum of self-destructive behaviour. *Journal of American College Health, 38*, 207-213.

Forman-Hoffman, V. L., & Cunningham, C. L. (2008). Geographical clustering of eating disordered behaviours in U.S. high school students. *International Journal of Eating Disorders, 41*, 209-214.

Fortune, S. (2006). An examination of cutting and other methods of DSH among children and adolescents presenting to an outpatient psychiatric clinic in New Zealand. *Clinical Child Psychology and Psychiatry, 11*, 407-416.

Fortune, S., Sinclair, J., & Hawton, K. (2005). *Adolescents' views on prevention of self-harm, barriers to help-seeking for self-harm and how quality of life might be improved: A qualitative and quantitative study of school pupils in England.* Centre of Suicide Research: Oxford University.

Fortune, S., Sinclair, J., & Hawton, K. (2007). Adolescents' views in preventing self-harm. A large community study. *Social Psychiatry and Psychiatric Epidemiology, 43*(2), 96-104.

Fox, C. L., & Hawton, K. (2004). *Deliberate self-harm in adolescence*. Jessica Kingsley Publishers: London.

Friedman, T., Newton, C., Coggan, C., Hooley, S., Patel, R., Pickard, M., & Mitchell, A. J. (2006). Predictors of A&E staff attitudes to self-harm patients who use self-laceration: Influence of previous training and experience. *Journal of Psychosomatic Research, 60*, 273-277.

Garisch, J. A., & Wilson, M. S. (2009). Vulnerabilities to deliberate self-harm among adolescents: The role of alexithymia and victimisation. *British Journal of Clinical Psychology*, available online May 18th.

Gergen, K. J. (2003). *Knowledge as socially constructed. In Social Construction: A reader*, M. Gergen and K. J. Gergen (eds.) (p. 15-17), Sage Publications: London

Germer, C. K. (2005). Mindfulness. What is it? What does it matter? From an edited series. C. K. Germer, R. R. Siegal and P. R. Fulton (eds.), *Mindfulness and Psychotherapy*, pp. 3-27, Guilford Press: New York.

Gibbons, M. M., & Studer, J. R. (2008). Suicide awareness training for faculty and staff: A training model for school counsellors. *Professional School Counselling, 11*, 272-276.

Giedd, J. N., Blumenthal, J., Jeffries, N. O., Castellanos, F. X., Liu, H., Zijdenbos, A., Paus, T., Evans, A. C., & Rapoport, J. L. (1999). Brain development during childhood and adolescence: a longitudinal MRI study. *Nature Neuroscience, 2*, 861-871.

Gilbertson, T. J., & Wilson., M. S. (2008). *Doing it seriously and trivialising it. A discursive analysis of students' and counsellors' interview accounts of self-harm.* Australasian Social Psychology Conference, Wellington, New Zealand.

Giles, D. C. (2002). *Advanced research methods in psychology.* New York: Routledge.

Gonzalez-Forteza, Alvarez-Ruiz, Saldana-Hernandez, Carreno-Garcia, Chevez, Hernandez, Perez-Hernandez, (2005). Prevalence of deliberate self-harm in teenage students in the state of Guanajuato, Mexico: 2003. *Social Behavior and Personality: an International Journal, 33*(8), 777-792.

Gould, M., Jamieson, P., & Romer, D. (2003). Media contagion and suicide among the young. *American Behavioural Scientist, 46*, 1269-1284.

Gould, M. S., Marrocca, F. A., Kleinman, M., Thomas, J. G., Mostkoff, K., Cote, J., & Davies, M. (2005). Evaluating iatrogenic risk of youth suicide screening programs. *Journal of the American Medical Association, 293*, 1635-1643.

Grano, N., Keltikangas-Jarvinen, L., Kouvonen, A., Virtanen, M., Elovainio, M., Vahtera, J., & Kivimaki, M. (2007). Impulsivity as a predictor of newly diagnosed depression. *Scandinavian Journal of Psychology, 38*, 173-179.

Gratz, K. L. (2001). Measurement of deliberate self-harm: Preliminary data on the Deliberate Self-Harm Inventory. *Journal of Psychopathology and Behavioural Assessment, 23*, 253-263.

Gratz, K. L. (2006). Risk factors for deliberate self-harm among female college students: the role and interaction of childhood maltreatment, emotional inexpressivity, and affect intensity/reactivity. *American Journal of Orthopsychiatry, 76*, 238-250.

Gratz, K. L., & Chapman, A. L. (2007). The role of emotional responding and childhood maltreatment in the development and maintenance of deliberate self-harm among amle undergraduates. *Psychology of Men & Masculinity, 8*, 1-14.

Green, D. E., McCormick, I. A., Walkey, F. H., & Taylor, A. J. (1987). Community attitudes to mental illness in New Zealand twenty-two years on. *Social Science and Medicine, 24*, 417-422.

Greenwald, A. (2003). *Nothing Feels Good: Punk Rock, Teenagers and Emo*. New York: St Martin's Press.

Haines, J., & Williams, C. L. (1997). Coping and problem solving of self-mutilators. *Journal of Clinical Psychology, 53*, 177-186.

Haines, J., Williams, C. L., Brain, K. L., & Wilson, G. V. (1995). The psychophysiology of self-mutilation. *Journal of Abnormal Psychology, 104*(3), 471-489.

Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1995). *Multivariate Data Analysis with Readings*. (4th ed.). Prentice Hall: New Jersey.

Halmi, K. A., Sunday, S. R., Klump, K. L., Strober, M., Leckman, J. F., Fichter, M. et al. (2003). Obsessions and compulsions in anorexia nervosa subtypes. *International Journal of eating Disorders, 33*, 308-319.

Harker-Longton, W., & Fish, R. (2002). 'Cutting doesn't make you die.' One woman's view of the treatment of her self-injurious behaviour. *Journal of Learning Disability, 6*(2), 137-151.

Harrington, R. (2001). Depression, suicide and deliberate self-harm in adolescence. *British Medical Bulletin, 57*, 47-60.

Harris, J. (2000). Self-harm: cutting the bad out of me. *Qualitative Health Research, 10*, 164-173.

Hawton, K., Bale, L., Casey, D., Shepard, A., Simkin, S., & Harriss, L. (2006a). Monitering deliberate self-harm presentations to general hospitals. *Crisis, 27*, 157-163.

Hawton, K., Fagg, J., Simkin, S., Bale, E., & Bond, A. (2000). Deliberate self-harm in adolescents in Oxford, 1985-1995. *Journal of Adolescence, 23*, 47-55.

Hawton, K., Harriss, L., Simkin, S., Bale, E., & Bond, A. (2001). Social class and cuicidal behaviour: the associations between social class and the characteristics of deliberate self-harm patients and the treatment they are offered. *Social Psychiatry and Psychiatric Epidemiology, 36*, 437-443.

Hawton, K., Rodham, K., & Evans, E. (2006b). *By their own young hand. Deliberate self-harm and suicidal ideas in adolescents*. Jessica Kingsley Publishing: London.

Hawton, K., Simkin, S., Deeks, J. J., O'Connor, S., Keen, A., Altman, D. G., Philo, G., & Bulstrode, C. (1999b). Effects of a drug overdose on a television drama on presentation to hospital for self-poisoning: time series and questionnaires study. *British Medical Journal, 318*, 972-977.

Heath, N., Toste, J. R., & Beettam, E. L. (2006). "I am not well equipped": High school teachers' perceptions of self-injury. *Canadian Journal of School Psychology, 21*, 73-92.

Heilbron, N., & Prinstein, M. J. (2008). Peer influence and adolescent nonsuicidal self-injury: A theoretical review of mechanisms and moderators. *Applied and Preventive Psychology, 12*, 169-177.

Herman, K. C., Reinke, W. M., Parkin, J., Traylor, K. B., Agarwal, G. (2009). Childhood depression: Rethinking the role of the school. *Psychology in the School, 46,* 433-446.

High Criteria Inc (2009). *Transcription Buddy 4.0.* Downloaded March 15 2009 at http://download.cnet.com/Transcription-Buddy/3000-2064_4-10221579.html

Hilt, L. M., Nock, M. N., Lloyd-Richardson, E. E., & Prinstein, M. J. (2008). Longitudinal study of nonsuicidal self-injury among young adolescents: Rates, correlates, and preliminary test of an interpersonal model. *The Journal of Early Adolescence, 28*, 455-469.

Hintikka, J., Honkalampi, K., Koivumma-Honkanen, H., Antikainen, R., Tanskenan, A., Haatainen, K., & Viinamaki, H. (2004). Alexithymia and suicidal ideation: A 12-month follow-up study in a general population. *Comprehensive Psychiatry, 45*, 340-345.

Hjemdal, O., Aune, T., Reinfjell, T., Stiles, T. C., & Friborg, O. (2007). Resilience as a predictor of depressive symptoms: A correlational study with young adolescents. *Clinical Child Psychology and Psychiatry, 12*, 91-104.

Hodges, E. V. E., Malone, M. J., & Perry, D. G. (1997). Individual risk and social risk as interacting determinants of victimisation in the peer group. *Developmental Psychology, 33*, 1032-1039.

Hodgson, S. (2004). Cutting through the silence: A sociological construction of self-injury. *Sociological Inquiry, 74*, 162-179.

Horn, S. S. (2006). Heterosexual adolescents' and young adults' beliefs and attitudes about homosexuality and gay and lesbian peers. *Cognitive Development, 21*, 420-440.

Huband, N., & Tantum, D. (2000). Attitudes to self-injury within a group of mental health staff. *British Journal of Medical Psychology, 73*, 495-504.

Hudson, J. (1984). Psychosis in anorexia-nervosa and bulimia. *The British Journal of Psychiatry, 145*, 420-423.

Hu, L., & Bentler, P. M. (1999). Cuttoff criteria for fit indices in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1-55.

Hume, M., & Platt, S. (2007). Appropriate interventions for the prevention and management of self-harm: a qualitative exploration of service-users' views. *BMC Public Health, 7*:9.

Hurry (2000). Deliberate self-harm in children and adolescents. International Review of Psychiatry, 12, 31-36.

Huselid, R. F., & Cooper, M. L. (1992). Gender roles as mediators of sex differences in adolescent alcohol use and abuse. *Journal of Health and Social Behavior, 33*, 348-362.

Ireland, J. L., & Quinn, K. (2007). Officer attitudes towards adult male prisoners who self-harm: Development of an attitudinal measure and investigation of sex. *Aggressive Behavior, 33*, 63-72.

Izard, C. E. (2001). Emotional intelligence or adaptive emotions? *Emotion, 1*, 249-257.

Joffe, H., & Yardley, L. (2004). Content and Thematic analysis. In *Research methods for clinical and health psychology*, David F. Marks and Lucy Yardley (eds.), pp. 54. Sage Publications: London.

Johnston, A., Cooper, J., Webb, R., & Kapur, N. (2006). Individual- and area-level predictors of self-harm repetition. *British Journal of Psychiatry, 189*, 416-421.

Johnson, M. F., Hays, R. D., Hui, K. K. (2009). Evidence-based effect size estimation: An illustration using the case of acupuncture for cancer-related fatigue. *BMC Complementary and Alternative Medicine, 9*, 1-9.

Joreskog, K. G. (1999). How large can a standardised coefficient be? Accessed October 2009 at http://www.ssicentral.com/lisrel/techdocs/HowLargeCanaStandardizedCoefficientbe.pdf

Kabat-Zinn, J. (1995). *Wherever you go, there you are: Mindfulness meditation in everyday life.* New York: Hyperion Books

Kassam-Adams, N., & Newman, E. (2002). The reactions to research participation questionnaires for children and for parents (RRPQ-C and RRPQ-P). *General Hospital Psychiatry, 24*, 336-342.

Kasser, T. (2003). *The high price of materialism.* MIT Press: Cambridge, United States of America.

Kenny, D. (1975). Cross-lag panel correlations: A test for spuriousness. *Psychological Bulletin, 82,* 887-903.

Kenny, D. A. (2008, January). Measuring Model Fit. Accessed April 15 2009 at http://davidakenny.net/cm/fit.htm

Kibler, J. (2009). Self-injury in the schools: An exploratory analysis of Midwest school counsellors" knowledge and experience. *North American Journal of Psychology, 11*(2), 309-322.

Klonsky, E. D., & Glenn, C. R. (2009). Assessing the Functions of non-suicidal self-injury: Psychometric properties of the Inventory of statements about self-injury (ISAS). *Journal of Psychopathology and Behavioral Assessment, 31*, 215-219.

Klonsky, E. D., Oltmanns, T. F., & Turkheimer, E. (2003). Deliberate self-harm in a nonclinical population: Prevalence and psychological correlates. *American Journal of Psychiatry, 160*, 1501-1508.

Klonsky, E. D., & Moyer, A. (2008). Childhood sexual abuse and non-suicidal self-injury: meta-analysis. *The British Journal of Psychiatry, 192*(3), 166-170.

Knight, R. G., Waal-Manning, H. J., & Spears, G. F. (1983). Scale norms and reliability data for the State-Trait Anxiety Inventory and the Zung Self-Rating Depression Scale. *British Journal of Clinical Psychology, 22,* 245-249.

Krug, E. G., Marcy, J. A., Dahlberg, L. L., Zwi, A. B. (2002). The world report on violence and health. *The Lancet, 360*, 1083-1088.

Lau, M.A., Bishop, S. R., Segal, Z. V., Buis, T., Anderson, N. D., Carlson, L., Shapiro, S., & Carmody, J. (2006). The Toronto Mindfulness Scale: development and validation. *Journal of Clinical Psychology, 62*, 1445-1467.

Laukkanen, E., Rissanen, M. L., Honkalampi, K., Kylma, J., Tolmunen, T., & Hintikka, J. (2009). The prevalence of self-cutting and other self-harm among 13- to 18-year-old Finnish adolescents. *Social Psychiatry and Psychiatric Epidemiology, 44*, 23-28.

Law, G. U., Rostill-Brookes, H., & Goodman, D. (2009). Public stigma in health and non-healthcare students: Attributions, emotions and willingness to help with adolescent self-harm. *International Journal of Nursing Studies, 46*, 108-119.

Laye-Gindhu, Schonert-Reichl (2005). Nonsuicidal self-harm among community adolescents: Understanding the "whats" and "whys" of self-harm. *Journal of Youth and Adolescence, 34,* 447-457.

Leible, T. L., & Snell, W. E. (2004). Borderline personality disorder and multiple aspects of emotional intelligence. *Personality and Individual Differences, 37*, 393-404.

Levenkron, S. (1998). *Cutting: Understanding and overcoming self-mutilation.* New York: W. W. Norton.

Lindgren, B. M., Wilstrand, C., Gilje, F., & Olofsson, B. (2004). Struggling for hopefulness: a qualitative study of Swedish women who self-harm. *Journal of Psychiatric and Mental Health Nursing, 11*, 284-291.

Link, B. G., Cullen, F. T., Struening, E., Shrout, P. E., Dohrenwend, B. P. (1989). A modified labelling theory approach to mental disorders: An empirical assessment. *American Sociological Review, 54,* 400-423.

Link, B. G., Mirotznik, J., & Cullen, F. T. (1991). The effectiveness of stigma coping orientations: can negative consequences of mental illness labelling be avoided? *Journal of Health and Social Behaviour, 32,* 302-320.

Liu, C. Multi-Item Measures. Retrieved 14th November 2009 from http://stat.gamma.rug.nl/MultilevelAnalysis.pdf

Liu, J. H., Ikeda, K., & Wilson, M. S. (1998). Interpersonal environment effects on political preferences. The "middle path" for conceptualizing social structure in New Zealand and Japan. *Political Behavior, 20*, 183-212.

Lloyd, E., Kelley, M. L., & Hope, T. (1997). *Self-mutilation in a community sample of adolescents: Descriptive characteristics and provisional prevalence rates.* Paper presented at the Annual meeting of the Society for Behavioural medicine, New Orleans, Louisiana.

Lovheim, H., Sandman, P., Karlsson, S., & Gustafson, Y. (2009). Sex differences in the prevalence of behavioural and psychological symptoms of dementia. *International Psychogeriatrics, 21*(3), 469-475.

Lumley, M. A., Ovies, T., Stettner, L., Wehmer, F., Lakey, B. (1996). Alexithymia, social support and health problems. *Journal of Psychosomatic Research, 41*, 519-530.

Lundh, L., Karim, J., & Quilish, E. (2007). Deliberate self-harm in 15-year-old adolescents: A pilot study with a modified version of the deliberate self-harm inventory. *Scandinavian Journal of Psychology, 48*, 33-41.

Luther, S. S., & Latendresse, S. J. (2003). Children of the affluent. Challenges to well-being. *Current Directions in Psychological Science, 14*, 49-53.

Lynch, J., Due, P., Muntaner, C., & Davey Smith, G. (2000). Social capital – is it a good investment strategy for public health? *Journal of Epidemiological Public Health, 54*, 404-408.

Maisel, R., Epston, D., & Borden, A. (2004). B*iting the hand that starves you: Inspiring resistance to anorexia/bulimia.* New York: W. W. Norton & Co.

Manning, F. J. & Marlowe, D. H. (1990). The legitimation of combat for the soldier. In T. C. Wyatt & R. Gal (1990) *Legitimacy and commitment in the military. Contributions in military studies*, No. 100 (pp. 69-89). New York: Greenward Press.

Mash, E. J., & Wolfe, D. A. (2002). *Abnormal Child Psychology.* Wadsworth: California.

Martin, J. K., Pescosolido, B. A., Olafsdottir, S., & McLeod, J. D. (2007). The construction of fear: Americans' preferences for social distance from children and adolescents with mental health problems. *Journal of Health and Social Behaviour, 48*, 50-67.

McCloskey, M. S., Berman, M. E. (2003). Alcohol intoxication and self-aggressive behaviour. *Journal of Abnormal Psychology, 112*, 306-311.

McGee, R., Williams, S., & Nada-Raja, S. (2001). Low self-esteem and hopelessness in children and suicidal ideation in early adulthood. *Journal of Abnormal Child Psychology, 29*, 281-291.

McMichael, A. J., & Beaglehole, R. (2000). The changing global context of public health. *Lancet, 356*, 495-499.

Messer, J. M., & Fremouw, W. J. (2008). A critical review of explanatory models for self-mutilating behaviours in adolescents. *Clinical Psychology Review, 28* (1), 162-178.

Miller, A., Rathus, J. H., & Linehan, M. (2007). *Dialiectical Behavior Therapy with Suicidal Adolescents.* Guilford: London.

Miller-Johnson, S., Costanzo, P. R., Coie, J. D., Rose, M. R., Browne, D. C., Johnson, C. (2003). Peer social structure and risk-taking behaviours among African American early adolescents. *Journal of Youth and Adolescence, 32*, 375-384.

Ministry of Education (2008). *Primary and Seconday Education: Policy and Strategy.* Accessed 24th June 2009 at http://www.minedu.govt.nz/educationSectors/Schools/PolicyAndStrategy.aspx

Ministry of Education (2010). Student numbers. Accessed 10th November 2010 http://www.educationcounts.govt.nz/statistics/schooling/july_school_roll_returns/6028

Ministry of Health (1999). *Suicide and the media. The reporting and portrayal of suicide in the media. The New Zealand Youth Suicide Prevention Strategy.* New Zealand Ministry of Health: Wellington.

Modestin,J., Furrer, R., & Malti, T. (2004). Study on alexithymia in adult non-patients. *Journal of Psychosomatic Research, 56*, 707-709.

Moses, T. (2009). Stigma and self-concept among adolescents receiving mental health treatment. *American Journal of Orthopsychiatry, 79*, 261-274.

Motz, A. (2001). *The psychology of female violence. Crimes against the body.* Brunner-Routledge: East Sussex.

Muehlenkamp, J. J., & Gutierrez, P. M. (2004). An investigation of differences between self-injurious behaviour and suicide attempts between self-injurious behaviour and suicide attempts in a sample of adolescents. *Suicide and Life-Threatening Behavior, 34*, 12-23.

Murray-Harvey, R., & Slee, P. T. (2007). Supportive and stressful relationships with teachers, peers and family and their influence on students' social/emotional and academic experience of school. *Australian Journal of Guidance and Counseling, 17*, 126-147.

Nada-Raja, S., Morrison, S., & Skegg, K. (2003). A population-based study of help-seeking in young adults. *Australian and New Zealand Journal of Psychiatry, 37*, 600-605.

Nada-Raja, S., Skregg, Langley, Morrison, Sowerby. (2004). Self-harmful behaviours in a population-based sample of young adults. *Suicide and Life-Threatening Behavior, 34,* 177-186.

Nader, K., Dubrow, N., & Stamm, H. (1999). *Honoring differences: cultural issues in the treatment of trauma and loss.* Psychology Press: United States.

Najmi, S., Wegner, D. M., & Nock, M. K. (2007). Thought suppression and self-injurious thoughts and behaviors. *Behaviour Research and Therapy, 45*, 1957-1965.

Newman, E., & Kaloupek, D. G. (2004). The risks and benefits of participating in trauma-focused research studies, *Journal of Trauma Stress, 17*, 383-394.

Newstalk (2007, March). *Teens indulging in self-harm on the rise.* Retrieved April 6, 2007, from http://newstalk.co.nz

Nixon, M. K., Cloutier, P. F., & Aggarwal, S. (2002). Affect regulation and addictive aspects of repetitive self-injury in hospitalised adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 41*, 1333-1341.

Nixon, M. K., Cloutier, P., Jansson, S. M. (2008). Nonsuicidal self-harm in youth: a population-based survey. *CMAJ, 178*(3), 306-312.

Nock, M. K., & Cha, C. B. (2009). Psychological Models of Non-suicidal Self-Injury. In *Understanding non-suicidal self-injury: Origins, assessment, and treatment*. M. K. Nock (ed.). pp 65-78. American Psychological Association: Washington.

Nock, M. K., Holmberg, E. B., Photos, V. I., & Michel, B. D. (2007). Self-Injurious Thoughts and Behaviors Interview: Development, Reliability, and Validity in an Adolescent Sample. *Psychological Assessment, 19*(3), 309-317.

Nock, M. K., & Prinstein, M. J. (2004). A functional approach to the assessment of self-mutilative behaviour. *Journal of Consulting and Clinical Psychology, 72*, 885-890.

Nock, M. K., & Prinstein, M. J. (2005). Contextual features and behavioural functions of self-mutilation among adolescents. *Journal of Abnormal Psychology, 114*, 140-146.

Norbergh, K. G., Helin, Y., Dahl, A., Hellzen, O., & Asplund, K. (2006). Nurses' attitudes towards people with dementia: the semantic differential technique. *Nursing Ethics, 13,* 264-274.

O'Connor, R., Rasmussen, S., Miles, J., & Hawton, K. (2009). Self-harm in adolescents: self-report survey in schools in Scotland. *The British Journal of Psychiatry, 194*, 68-72.

Oguz-Duran, N., & Tezer, E. (2009). Wellness and self-esteem among Turkish university students. *International Journal of Advanced Counselling, 31*, 32-44.

O'Moore, M., & Kirkham, C. (2001). Self-esteem and its relationship to bullying behaviour. *Aggressive Behavior, 27*, 269-283.

Olfson, M., Gameroff, M. J., Marcus, S. C., Greenberg, T., & Shaffer, D. (2005). National trends in hospitalisation of youth with intentional self-inflicted injuries. *American Journal of Psychiatry, 162*, 1328-1335.

O'Loughlin, S., & Sherwood, J. (2005). A 20-year review of trends in deliberate self-harm in a British town, 1981-2000. *Social Psychiatry and Psychiatric Epidemiology, 40*, 446-453.

Osgood, C. E. (1952). The nature and measurement of meaning. *Psychological Bulletin, 49*, 197-237.

Osgood, C. E., Suci, G., & Tannenbaum, P. H. (1957). *The measurement of meaning*. United States of America: University of Illinios

Paivio, S. C., & McCulloch, C. R. (2004). Alexithymia as a mediator between childhood trauma and self-injurious behaviours. *Child Abuse & Neglect, 28*, 339-354.

Panksepp, J. (2007). Criteria for basic emotions: Is DISGUST a primary "emotion"? *Cognition and Emotion, 21*, 1819-1828.

Pattison, E. M., & Kahan, J. (1983). The deliberate self-harm syndrome. *American Journal of Psychiatry, 140*(7), 867-872.

Patton, J. H., Stanford, M. S., & Barrett, E. S. (1995). Factor structure of the Barrett impulsiveness scale. *Journal of Clinical Psychology, 51*, 768-774.

Pepler, D. J., Craig, W. M., Connolly, J. A., Yuile, A., McMaster, L., & Jiang, D. (2006). A developmental perspective on bullying. *Aggressive Behavior, 32*, 376-384.

Pescosolido, B. A., Jensen, P. S., Martin, J. K., Perry, B. L., Olafsdottir, S., & Fettes, D. (2008). Public knowledge and assessment of child mental health problems: Findings from the national Stigma Study Children. *Journal of the American Academy of Child and Adolescent Psychiatry, 47,* 339-349.

Picardo, A., Toni, A., & Caroppo, E. (2005). Stability of alexithymia and its relationship with the 'Big Five' factors, temperament, character, and attachment style. *Psychotherapy and Psychosomatics, 74*, 371-378.

Pickering, M. (2001). *Stereotyping: The Politics of Representations*. Palgrave: New York.

Polce-Lynch, M., Myers, B. J., Kliewer, W., Kilmartin, C. (2001). Adolescent self-esteem and gender: Exploring relations to sexual harassment, body image, media influence, and emotional expression. *Journal of Youth and Adolescence, 30*, 225-244.

Potter, J. (1996). *Representing reality: Discourse, rhetoric and social construction*. London: Sage.

Renner, W., & Salem, I. (2009). Post-traumatic stress in asylum seekers and refugees from Chechnya, Afghanistan, and West Africa: Gender differences in symptom atiology and coping. *International Journal of Social Psychology, 55*(2), 99-108.

Reisman, J. M. (1990). Intimacy in same-sex friendships. *Sex Roles, 23*, 65-82.

Rigby, K. (2003). Consequences of bullying in school. *Canadian Journal of Psychiatry, 48*, 583-590.

Rigby, K. (1998). The relationship between reported health and involvement in bully/victim problems among male and female secondary school children. *Journal of Health Psychology, 3*, 465-476.

Roberts-Dobie, S., & Donatelle, R. J. (2007). School counsellors and students self-injury. *The Journal of School Health, 77*(5), 257-264.

Robinson, J., Gook, S., Yuen, H. P., McGorry, P. D., & Yung, A. R. (2008). Managing deliberate self-harm in young people: An evaluation of a training programme developed for school welfare staff using a longitudinal research design. *BMC Psychiatry, 8*(75), 1-11.

Rosen, P. M., & Walsh, B.W. (1989). Patterns of contagion in self-mutilating epidemics. *The American Journal of Psychiatry, 146*, 656-568.

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton University Press: New Jersey.

Ross, S., & Heath, N. (2002). A study of the frequency of self-mutilation in a community sample of adolescents. *Journal of Youth and Adolescence, 31*, 67-77.

Ross, S., & Heath, N. L. (2003). Two models of adolescent self-mutilation. *Suicide and Life-Threatening Behavior, 33*(3), 277-287.

Rouse, K. A. G., Ingersoll, G. M., & Orr, D. P. (1998). Longitudinal health endangering behaviour risk among resilient and nonresilient early adolescents. *Journal of Adolescent Health, 23*, 297-302.

Rozin, P., & Rozman, E. B. (2001). Negativity bias, negativity dominance, and contagion. *Personality and Social Psychology Review, 5*(4), 296-320.

Ruiz-Veguilla, M., Diaz, F., & Prados, M. (2004). Bullying, depression, suicidal ideation and deliberate self-harm in Spanish adolescents. *European Psychiatry, 19*, 78s-115s.

Saklofske, D. H., Austin, E. J., & Minski, P. S. (2003). Factor structure and validity of a trait emotional intelligence measure. *Personality and Individual differences, 34*, 707-721.

Salters-Pedneault, K., Roemer, L., Tull., M. T., Rucker, L., & Mennin, D. S. (2006). Evidence of broad deficits in emotion regulation associated with chronic worry and generalized anxiety disorder. *Cognitive Therapy and Research, 30*, 469-480.

Sampson, Mukherjee, Ukoumunne, Mullan, Bullock. (2004). History of deliberate self-harm and its association with mood fluctuation. *Journal of Affective Disorders, 79*, 223-227.

Sansone, L. A., Gaither, Songer. (2002). Self-harm across the lifecycle: a pilot study of inpatients with borderline personality disorder. *Comprehensive Psychiatry, 43*, 215-218.

Sansone, R. A., Wiederman, M. W., Sansone, L. A. (1998). The self-harm inventory (SHI): Development of a scale for identifying self-destructive behaviours and borderline personality disorder. *Journal of Clinical Psychology, 54*, 973-983.

Schneider, D. J. (2004). *The Psychology of Stereotyping.* The Guilford Press: New York.

Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences, 25*, 167-177.

Schutte, N. S., Mallouff, J. M., Thorsteinsson, E. B., Bhullar, N., & Rooke, S. E. (2007). A meta-analytic investigation of the relationship between emotional intelligence and health. *Personality and Individual Differences, 42*, 921-933.

Scourfield, J., Roen, K., & McDermott, L. (2008). Lesbian, gay, bisexual and transgender young people's experiences of distress: resilience, ambivalence and self-destructive behaviour. *Health and Social Care in the Community, 16*, 329-336.

Shapiro, S. (2008). Addressing self-injury in the school setting. *The Journal of School Nursing, 24*(3), 124-130.

Shaw, S. N. (2006). Certainty, revision, and ambivalence: A qualitative investigation into womens' journeys to stop self-injuring. *Woman & Therapy, 29*, 153-176.

Sheldon, B (1995). *Cognitive Behavioural Therapy. Research, practice and philosophy*. London: Routledge.

Shen, Y., Zhu, M., Wang, D., Hao, C., Ma, J., Cao, Y., et al. (2008). Passive event-related potentials by single tone in personality disorders. *Social Behavior and Personality, 36*, 985-998.

Sher, L., & Stanley, B. (2009). Biological models of nonsuicidal self-injury. In *Understanding nonsuicidal self-injury: Origins, assessment, and treatment*. M. K. Nock (ed.) pp. 99-116. American Psychological Association: Washington.

Shneidman, E. S. (1993). *Suicide as psychache: a clinical approach to self-destructive behaviour*. Rowman & Littlefield Publishers: Maryland, USA.

Sifneous, P. E. (1972). *Short-term Psychotherapy and Emotional Crisis*. Harvard University Press: Cambridge.

Sim, L., Adrian, M., Zeman, J., Cassano, M., & Friedrich, M. N. (2009). Adolescent deliberate self-harm: Linkages to emotion regulation and family emotional climate. *Journal of Research on Adolescence, 19*(1), 75-91.

Sinclair, J., & Green, J. (2005). Understanding resolution of deliberate self-harm: qualitative interview study of patients' experiences. *British Medical Journal, 330*, 1112-1116.

Sinclair, J., Crane, C., Hawton, K., & Williams, J., Mark, G. (2007). The role of autobiographical memory specificity in deliberate self-harm: correlates and consequences. *Journal of Affective Disorders, 102* (1-3), 11-18.

Sivam, S. P., Pugazhenthi, S., Pugazhenthi,V., & Brown, H. (2008). The role of autobiographical memory specificity in deliberate self-harm: correlates and consequences. *Journal of Affective Disorders, 102*, 11-18.

Skegg, K., Nada-Raja, S., Dickinson, P., Williams, P. (2003). Sexual Orientation and self-harm in men and women. *The American Journal of Pscyhiatry, 160*, 541-546.

Skegg, K., Nada-Raja, S., & Moffitt, T. E. (2004). Minor self-harm and psychiatris disorder: A population-based study. *Suicide and Life-Threatening Behavior, 34*, 187-197.

Skues, J. L., Cunningham, E. G., & Pokharel, T. (2005). The influences of bullying behaviours on sense of school connectedness, motivation and self-esteem. *Australian Journal of Guidance and Counselling, 15,* 17-26.

Smith, P., K., & Ananaidou, K. (2004). The nature of school bullying and the effectiveness of school-based interventions. *Journal of Applied Psychoanalytic Studies, 5,* 189-209.

Sourander, A., Aromma, M., Pihlakoski, L., Haavisto, P., Rautava, P., Helenius, H., & Sillapaa, M. (2006). Early predictors of deliberate self-harm among adolescents. A prospective follow-up study from age 3 to age 13. *Journal of Affective Disorders, 93*, 87-96.

Spinella, M. (2007). Normative data and a short form of the Barrett Impulsiveness Scale. *International Journal of Neuroscience, 117*, 359-368.

Stanford, M. S., Mathias, C. W., Dougherty, D. M., Lake, S. L., Anderson, N. E., & Patton, J. H. (2009). Fifty years of the Barratt Impulsivity Scale: An update and review. *Personality and Individual Differences, 47*, 385-395.

Stanley, B., Winchel, R., Molcho, A., Simeon, D., & Stanley, M. (1992). Suicide and the self-harm continuum: Phenomenological and biochemical evidence. *International Review of Psychiatry, 4*, 149-155.

Stewart, M. C., Schiavo, R. S., Herzog, D. B., & Franko, D. L. (2008). Stereotypes, prejudice and discrimination of women with anorexia nervosa. *European Eating Disorders Review, 16*, 311-318.

Stough, C. (2006). *Emotional Intelligence*. Conference on emotional intelligence in secondary schools. Swinbourne University of technology, Australia.

Straker, G. (2006). Signing with a scar – Understanding self-harm. *Psychoanalytic Dialogues, 16*(1), 93-112.

Stone, M. H. (1990). Treatment of borderline patients: A pragmatic approach. *Psychiatric Clinics of North America, 13*(2), 265-285.

Strong, M. (1998). *A bright red scream: Self-mutilation and the language of pain*. Virago Press: London.

Suldo, S. M., Shaunessy, E., Michalowski, J., & Shaffer, E. J. (2008). Coping stategies of high school students in an International Baccalaureate program. *Psychology in Schools, 45*, 960-977.

Suyemoto, Y. (1998). The functions of self-mutilation. *Clinical Psychology Review, 18*, 531-554.

Swan, S., & Andrews, B. (2003). The relationship between shame, eating disorders and disclosure in treatment. *British Journal of Clinical Psychology, 42*, 367-378.

Taiminen, T. J., Kallio-Soukainen, K., Nokso-Koivisto, H., Kaljonen, A., & Helenius, H. (1998). Contagion of deliberate self-harm among adolescent inpatients. *Journal of the American Academy of Child and Adolescent Psychiatry, 37*, 211-217.

Tajfel, H., & Turner, J. C. (1986). The social identity theory of inter-group behaviour. In S. Worchel and L. W. Austin (eds.), *Psychology of Intergroup Relations*. Chigago: Nelson-Hall.

Tanaka, J. S. (1993). Multifaceted conceptions of fit in structural equation models. In K. A. Bollen, & J. S. Long (eds.), *Testing structural equation models*. Newbury Park, CA: Sage.

Taylor, G. J., Ryan, D., & Bagby, M. R. (1986). Toward the development of a new self-report alexithymia scale. *Psychotherapy and Pscyhosomatics, 44*, 191-199.

Tessama, H., Frederick, L., Denelsbeck, J., Angel, C., & Markosky, K. (2009). *Older adults training. Stories from the Front Lines*. Accessed 5th of February, 2010 from http://www.thebody.com/content/art54790.html

Thombs, B. D., Bernstein, D. P., Ziegelstein, R. C., Bennett, W., Walker, E. A. (2007). A brief two-item screener for detecting a history of physical or sexual abuse in childhood. *General Hospital Psychiatry, 29*, 8-13.

Tull, M. T., Medaglia, E., & Roemer, L. (2005). An investigation of the construct of the 20-item Toronto Alexithymia Scale through the use of a verbalisation task. *Journal of Psychosomatic Research, 59,* 77-84.

Turp, M. (2003). *Hidden self-harm narrative from Psychotherapy.* Jessica Kingsley Publishers: London.

Van Heeringen, C., & Vincke, J. (2000). Suicidal acts and ideation in homosexual and bisexual young people: a study of prevalence and risk factors. *Social Psychiatry Psychiatric Epidemiology, 35*, 494-499.

Vaughan, R. (2006, October). Emos. *Salient.* Accessed November 12 2008 at http://www.salient.org.nz

Vogel, D., L., Wade, N., G., & Haake, S. (2006). Measuring the self-stigma associated with seeking psychological help. *Journal of Counseling Psychology, 53*(3), 325-337.

Von Diemen, L., Szobot, C. M., Kessler, F., & Pechansky, F. (2006). Adaptation and construct validation of the Barratt Impulsiveness Scale (BIS II) to Brazilian Portuguese for use in adolescents. *Revista Brasileira de Psiquiatria, 29,* 153-156.

Wagnild, G. M., & Young, H. M. (1993). Development and psychometric evaluation of the Resilience Scale. *Journal of Nursing Measurement, 1*, 165-178.

Walker, P. (2006). Under the lid. *Father & Child, 34*, 8-9.

Walkey, F. H., & Chung, R. Y. (1996). An examination of stereotypes of Chinese and Europeans held by some New Zealand secondary school pupils. *Journal of Cross-Cultural Psychology, 27*, 283-292.

Wallenstein, M. B., & Nock, M. K. (2007). Physical exercise as a treatment for nonsuicidal self-injury: Evidence from a single-case study. *The American Journal of Psychiatry, 164*, 350-351.

Walsh, B. W. (2006). *Treating self-injury: a practical guide.* The Guilford Press: New York.

Walsh, B. W., & Rosen, P. M. (1988). *Self-mutilation. Theory, research, and treatment.* The Guilford Press: New York.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scale. *Journal of Personality and Social Psychology, 54*, 106-1070.

Weierich, M. R., & Nock, M. K. (2008). Posttraumatic Stress Syndrome mediates the relation between childhood sexual abuse and nonsuicidal self-injury. *Journal of Consulting and Clinical Psychology, 76*, 39-44.

Weinstein, N. D. (1980). Unrealistic optimism about future life events. Journal of Personality and Social Psychology, 39(1), 806-820.

Wetherell, M., & Potter, J. (1992). *Mapping the Language of Racism: Discourse and the Legitimation of Exploitation*. Harvester Wheatsheaf: United Kingdom.

Whitlock, J., Eckenrode, J., & Silverman, D. (2006a). Self-injurious behaviours in a college population. *Paediatrics, 117*, 1939-1948.

Whitlock, J. L., Powers, J. L., & Eckenrode, J. (2006b). The virtual cutting edge: The internet and adolescent self-injury. *Developmental Psychology, 42*, 407-417.

Williams, M. (1997). *Suicide and attempted suicide*. Penguin Books: London.

Wilstrand, C., Lindgren, B. M., Gilje, F., & Olofsson, B. (2007). Being burdened and balancing boundaries: a qualitative study of nurses' experiences caring for patients who self-harm. *Journal of Psychiatric and Mental Health Nursing, 14*, 72-78.

World Health Organisation (2000). *Preventing Suicide: A resource for media professionals*. Accessed 23rd November 2009 at http://www.who.int/mental_health/media/en/426.pdf

Yates. (2004). The developmental psychopathology of self-injurious behaviour: compensatory regulation of posttraumatic adaptation. *Clinical Psychology Review, 24*, 35-74.

Yelsma, P. (1993). Correlations between self-defeating personality and self-esteem. *Psychological Reports, 72*(3), 1084-1086.

Yelsma, P. (1995). Self-esteem and alexithymia. *Psychological Reports, 77,* 735-738.

Yip, P. S. F., Fu, K. W., Yang, K. C. T., Ip, B. Y. T., Chan, C. L. W., Chen, E. Y. H., Lee, D. T. S., Law, F. Y. W., & Hawton, K. (2006). The effects of celebrity suicide on suicide rates in Hong Kong. *Journal of Affective Disorders, 93*, 245-252.

Young, R., Sweeting, H., & West, P. (2008). Prevalence of deliberate self-harm and attempted suicide with contemporary Goth youth subculture: Longitudinal cohort study. *British Medical Journal, 332*, 1058-1061.

Young, R., van Beinum, M., Sweeting, H., & West, P. (2007). Young people who self-harm. *British Journal of Psychiatry, 191*, 44-49.

Ystgaard, M., Hestetun, I., Loeb, M., & Mehlum, L. (2004). Is there a specific relationship between childhood sexual abuse and physical abuse and repeated suicidal behaviour? *Child Abuse & Neglect, 28*, 863-875.

Zimmerman, G., Rossier, J., de Stadelhofen, F. M., & Gaillard, F. (2005). Alexithymia assessment and relations with dimension of personality. *European Journal of Psychological Assessment, 21*, 23-33.

Zlotnick, C., Shea, M. T., Pearlstein, T., Simpson, E., Costello, E., & Begin, A. (1996). The relationship between dissociative symptoms. Alexithymia, impulsivity, sexual abuse, and self-mutilation. *Comprehensive Psychiatry, 37*, 12-16.

Zung, W. W. K. (1965). A self-rating depression scale. *Archives of General Psychiatry, 12,* 63-70.

Zung, W. W. K. (1971a). A rating instrument for anxiety disorders. *Psychosomatics, 12*(6), 371-379.

Zung, W. W. K. (1971b). The differentiation of anxiety and depressive disorders: A biometric approach. *Psychosomatics, 12*, 380-384.