

**HEALING THE WOUNDS: UNDERSTANDING INDIVIDUALS' EXPERIENCES
IN CESSATION OF NON-SUICIDAL SELF-INJURY**

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Dedication

This belongs to all those who have experienced and understood the struggle.

Abstract

The intention of this study was to investigate the cessation of non-suicidal self-injury (NSSI): How and why individuals with a past history of NSSI stopped engaging in the behaviour. To meet this aim, two comprehensive literature reviews were performed examining factors of cessation drawn from previous NSSI literature and from substance abuse and eating disorder literature. An online survey was created to ascertain which variables were endorsed by a sample population of individuals who have successfully resolved NSSI ($n = 49$). The results identified specific factors and underlying mechanisms associated with cessation, including the motivation to change, maturational factors, relational ties, natural recovery and internal strategies utilized to reduce NSSI. Recommendations for future research and treatment implications are provided. Given the high prevalence of NSSI and the scarcity of research focusing on the cessation of NSSI, the information gleaned from this thesis may assist counsellors in developing more effective assessment methods, interventions, and treatment strategies.

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Chapter 1: Introduction

Self-mutilation, deliberate self-harm, cutting, self-injury—these terms can invoke feelings of shock and repulsion from the general public and clinicians alike. How can individuals deliberately cut themselves with knives and razors, burn themselves with lighters, and even break their own bones? Why would someone ever engage in this behaviour? How can it be treated? How are some individuals able to stop self-injuring? This chapter will provide a description of the problem and will establish how the researcher seeks to contribute to the field of knowledge. Thereafter, the purpose of the thesis, an introduction to the research questions, and an overview of the thesis will be provided.

Statement of the Problem

Non-suicidal self-injury is a relatively young topic of interest among researchers and clinicians, which has been coming to the forefront of public consciousness within the last 25 years (Duffy, 2009). Previously, only recognized as a criterion of borderline personality disorder and stereotypic movement disorder (American Psychiatric Association, 2000), non-suicidal self-injury is widely gaining acceptance as a disorder in and of itself (Selby, Bender, Gordon, Nock, & Joiner, 2012). Non-suicidal self-injury, as a separate disorder, was recently included as a condition for further study in the new release of the *DSM-5* (American Psychiatric Association, 2013), after having been considered as a distinct diagnostic entry (American Psychiatric Association, 2010). Relatively little is known about non-suicidal self-injury, and although there has been a dramatic surge in research, particularly within the last five years, empirical studies remain in their infancy.

The term non-suicidal self-injury has been used interchangeably with many different terms and definitions, some of which were identified in the opening line of this chapter. For the purposes of consistency in this thesis, the term non-suicidal self-injury (NSSI) will be used throughout the thesis. NSSI will be defined as “the direct, deliberate destruction of one’s own body tissue in the absence of intent to die” (Nock, 2009, p. 78; see also Nock & Favazza, 2009, p. 9). Methods of NSSI include cutting, burning, and severe scratching on parts of the body such as the arms and wrists (Gratz, 2001).

The lack of a concrete operational definition for NSSI, as well as the focus on two distinct populations (i.e., clinical vs. nonclinical), has created numerous difficulties in research. This includes a lack of formalized assessments, an inability to generalize across study results, and a wide range in prevalence, with evidence ranging from 4% to 38% (Briere & Gil, 1998; Jacobson & Gould, 2007; Klonsky, 2011; Laye-Gindhu & Schonert-Reichl, 2005). As a result, research findings contain a great deal of variability, with little evidence to indicate effective treatment strategies.

Although prevalence rates vary, researchers have suggested NSSI is a growing concern among the nonclinical population, particularly among adolescents and university students (Craigen, Healey, Walley, Byrd, & Schuster, 2010; Klonsky & Muehlenkamp, 2007). Initially linked to psychiatric disorders and evidenced within clinical samples (Grocutt, 2009), NSSI is prevalent in high schools and universities, with an unexplained tendency to decrease as a function of age (Moran et al., 2012). Prevalence, however, may in fact be under reported, as NSSI is often a secretive and private act (Duffy, 2009). Studies have found individuals engaging in NSSI tended to have more suicidal ideation and completed suicides than the general population, providing further justification for the

importance of empirical research into NSSI (Cooper et al., 2005; Laye-Gindhu & Schonert-Reichl, 2005).

NSSI has been linked to numerous risk factors and psychological correlates, including childhood abuse and trauma, depressive symptoms, and anxiety (Gratz & Chapman, 2007; Jacobson & Gould, 2007; Nock, 2009). Individuals who engage in NSSI tend to experience more intense negative emotions on a regular basis, leading researchers to believe that one of the main functions of NSSI is emotional regulation (Klonsky & Muehlenkamp, 2007). Intra and interpersonal reinforcement processes have also been found to produce and maintain NSSI (Nock & Prinstein, 2004). NSSI develops and is maintained by a complex interaction of factors that are often unique to the individual, making the development of a single effective therapeutic intervention next to impossible. While there has been little empirical research into the treatment of NSSI (Nock, Teper, & Hollander, 2007), research has suggested that a clinician must determine the functions of the behaviour in order to determine how best to treat NSSI (Muehlenkamp, 2006).

Researchers and clinicians have reached a general consensus that additional research is needed to better understand the prevalence, risk factors, and functions of NSSI, as well as to develop standardized assessment instruments and effective treatment strategies for NSSI (Craig et al., 2010; Muehlenkamp, 2006). Investigating the experiences of those who have successfully resolved NSSI can help to inform many of these areas of research, yet limited literature is available on the subject.

Purpose and Value of the Thesis

The researcher sought to further the understanding of NSSI by answering the following three research questions. The primary research question was created to address how and why individuals with a past history of NSSI stop engaging in the NSSI, namely: What were the significant factors that influence cessation? Research objectives that evaluate the different factors that are associated with cessation are described further in Chapter 4. Second, this thesis examined significant factors contributing to cessation of NSSI as they related to the larger conceptual factors of readiness or motivation to change, maturational factors, and natural recovery. These conceptual factors were drawn from substance abuse and disordered eating literature and are discussed further within Chapter 5. A third research question examined the variable of gender on NSSI cessation among participants.

Overall, the researcher's goal was to contribute to the literature, specifically to fill the gap in the cessation of NSSI literature and provide insight into the cessation of NSSI. Uncovering individuals' motivations for cessation of NSSI and the strategies they employed during cessation has implications for counsellors, as it can help to inform more effective treatment methods and interventions.

Thesis Overview

A foundation of the thesis is provided in Chapter 2. The concept of NSSI will be introduced in greater depth and some of the significant research that has been done in the field of NSSI will be summarized. In order to further the understanding of NSSI, a discussion of characteristics, prevalence, association with suicide, risk factors,

psychological correlates, and functions of NSSI is presented. The context in which NSSI develops and is maintained is also described in Chapter 2.

The treatment of NSSI is the focus of Chapter 3. An overview of the current treatment techniques will be provided in the chapter, including a brief discussion of challenges to seeking treatment and assessment methods.

The available literature regarding cessation and NSSI is reviewed in detail in Chapter 4, providing the theoretical framework upon which the thesis is built. Significant variables associated with cessation are drawn from the research and described in this chapter, as these variables provide the basis of the methods utilized within this thesis.

In order to supplement the thesis, a review of the literature regarding recovery from substance abuse and disordered eating will be provided in Chapter 5. Justification for utilizing disordered eating and substance abuse is provided through examining the associations and similar underlying psychological mechanisms that may be present with NSSI. A discussion of readiness and motivation to change, natural recovery, and maturational factors provides the foundation for many of the variables measured within the study. The importance of the thesis and a clear statement of the research questions conclude Chapter 5.

Specific details regarding the methods utilized for the study are provided in Chapter 6. Ethical approval to engage in research involving humans was obtained, and all efforts were made to ensure the safety of participants, particularly given the distressing and sensitive nature of this study. Participants were recruited from the University of Lethbridge as well as through social media (e.g., Facebook and Tumblr) and NSSI websites to participate in an online survey. Participants were screened to

ensure their self-injury behaviour is (or was) consistent with Nock's (2009) definition of NSSI (see also Nock & Favazza, 2009). Three groups of participants were created: (a) those who have never engaged in NSSI, (b) individuals who currently engage in NSSI, and (c) those who have engaged in NSSI in the past. In order to meet the objectives for this thesis, the target population included individuals with a 1-year period of abstinence from NSSI. Survey questions were focused on a brief assessment of NSSI, the reasons for engaging in NSSI, how the individual was able to stop and why he or she stopped engaging in NSSI, what was helpful during resolution and treatment, and the participant's overall experiences in cessation.

Chapter Summary

Although research and awareness of NSSI has grown in recent years (Duffy, 2009; Selby et al., 2012), a large gap in the literature remains on the subject of the cessation of NSSI. Understanding how individuals resolve NSSI can help inform assessment, interventions, and treatment methods, and can contribute to the overall understanding of NSSI. Using a survey method approach, the researcher sought to contribute to the field of knowledge by exploring how and why individuals stop NSSI. The following chapter will offer a review the literature in order to provide the background necessary for the development of the survey questionnaire, which will be discussed at greater length in Chapter 6.

Chapter 2: Non-Suicidal Self-Injury Literature Review

Cutting, burning, and poking needles in my arm is a security for me because I know that if all else fails and leaves me feeling emotionless and empty, the pain and blood will always still be there for me. I am cutting myself more frequently now, and I'm losing friends. I am starting to feel desperate. I feel like I am unable to love anybody and that I am incapable of being loved by anyone. Please help me. Hope is fading fast. (18-year-old waitress, as cited in Favazza & Conterio, 1988, p. 26)

This chapter serves as a foundation for the thesis. The concept of NSSI will be introduced and a brief summary of some of the significant research that has been done in the field of NSSI will be provided. The goal in this chapter is to provide the reader with the necessary background to gain a better understanding of the characteristics, prevalence, risk factors, psychological correlates, and functions of NSSI, as well as the behaviours association with suicide.

Defining Non-Suicidal Self-Injury

Characteristics. Nock and Favazza (2009) noted NSSI was distinct from culturally sanctioned behaviours, such as body piercing and tattooing, and indirect behaviours whose harmful consequences are unintended, for example cigarette smoking. NSSI results in visible, direct bodily injury (McAllister, 2003). The literature reported considerable variation in the typology (i.e., the forms of NSSI behaviours) and severity of tissue damage (Whitlock, Muehlenkamp, & Eckenrode, 2008). NSSI includes, but is not limited to, cutting, burning, carving words or pictures into skin, severe scratching leading to scarring or bleeding, hitting oneself, bone breaking, banging one's head, wound

interference, biting oneself to the extent of breaking skin, scalding, and injurious insertion of objects into the body (Gratz, 2001; McAllister, 2003). Among a large sample of university students ($N = 2,875$), the most common areas of the body to be injured were the arms, followed by the hands, wrists, thighs, and stomach (Whitlock, Eckenrode, & Silverman, 2006).

The frequency with which individuals engage in NSSI is also highly variable, with some individuals self-injuring daily or several times throughout the week and other individuals reporting one single incidence of NSSI (Jacobson & Gould, 2007). Whitlock et al. (2008) identified three separate classes of NSSI typologies amongst university students ($N = 2,101$) dependent on frequency and severity of NSSI. Class 1 was composed largely of women who engaged in one type (or method) of NSSI, resulting in superficial tissue damage and endorsed moderate lifetime frequency (11 to 50 instances). Class 2 was comprised mostly of men who engaged in one to three forms of self-battery and light tissue damage and endorsed a low lifetime frequency (2 to 10 instances). Class 3 was made up largely of women and was the most distinct group, using several methods of self-injury with a potential for a high degree of tissue damage and endorsing moderate to high lifetime frequency rates (greater than 50 instances). Thus, variation in NSSI characteristics is inclusive of form, frequency, and severity.

Definition inconsistency. For this thesis, Nock's (2009) definition of NSSI will be used (see also Nock & Favazza, 2009). NSSI will be distinguished from indirect self-injurious behaviours that are harmful to the self, such as substance abuse, disordered eating, and reckless behaviours, but do not involve immediate and deliberate destruction of body tissue (St. Germain & Hooley, 2012). Additionally, the acronym NSSI will be

used throughout this thesis, with the exception of those studies that do not distinguish intent of the act (i.e., the absence or presence of suicidal motivation) containing pertinent results. In those situations, the term self-harm will be used to denote the inclusion behaviours irrespective of motivation.

Although NSSI has in recent years come to the attention of researchers, clinicians, and the public (Gollust, Eisenberg, & Golberstein, 2008; Laye-Gindhu & Schonert-Reichl, 2005) and the knowledge base has increased dramatically (Klonsky, 2011), much remains unknown on the topic (Heath, Ross, Toste, Charlebois, & Nedecheva, 2009; Jacobson & Gould, 2007). This may be accounted for in large part due to the wide variety of terms and definitions associated with and often used interchangeably with NSSI, including self-injurious behaviour, self-mutilation, self-injury, self-cutting, cutting, self-harm, deliberate self-harm, delicate self-cutting, self-inflicted violence, parasuicide, and autoaggression (Jacobson & Gould, 2007; Laye-Gindhu & Schonert-Reichl, 2005). Jacobson and Gould (2007) noted many of these acts involved more than just NSSI. Self-injurious behaviour is frequently used to describe the stereotypic and habitual behaviours often seen in individuals with developmental disorders. Parasuicide refers to both NSSI and suicide attempts. While the phrase deliberate self-harm is frequently used in the United States to refer to NSSI without suicidal intent, the same term in the United Kingdom is used to reference any nonlethal self-injurious behaviour either with or without suicidal intent.

The general lack of consensus in defining NSSI has several implications. Research in the area has had a difficult time systematically progressing without a shared theoretical and operational definition of NSSI (Gratz, 2001). There are few standardized

instruments of assessment available (Gratz, 2001; Jacobson & Gould, 2007), thus creating methodological differences in the research and making cross-study comparisons difficult (Laye-Gindhu & Schonert-Reichl, 2005). It is likely that different researchers are measuring different constructs and behaviours (Gratz, 2001). For example, results from self-injury studies that conceptualize the behaviour as including suicide attempts are difficult to generalize with results of studies that focus strictly on NSSI, as each behaviour may potentially be serving different psychological functions (Prinstein, 2008). Cross-study comparisons including more indirect self-harm such as substance abuse and reckless behaviour can further complicate generalizability; as St. Germain and Hooley (2012) have suggested, direct and indirect self-injury are best viewed as separate and distinct phenomena.

History of NSSI Research

The phenomenon of NSSI has only begun to become a contemporary clinical issue, with Favazza and Conterio (1988) remarking that an epidemiological study had yet to take place. At that time, Favazza and Conterio perceived that awareness of NSSI paralleled that of eating disorders 15 years prior. Based on the findings of perhaps the first instrument to gather data on NSSI in a standardized fashion, the Self-Harm Behaviour Survey, Favazza and Conterio proposed the existence of a deliberate self-harm syndrome. While NSSI is beginning to be recognized as behaviour in its own right (Duffy, 2009), NSSI has received little attention in the fourth edition text revision of the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 2000). Currently, NSSI is referenced only as one of the nine diagnostic criteria, self-mutilating behaviour, for borderline personality disorder (BPD; American

Psychiatric Association, 2000, p. 706). Selby et al. (2012) found preliminary evidence supporting NSSI as a potentially distinct disorder from BPD. The creation of NSSI as a separate diagnostic entry has implications for improved communication among clinicians and researchers, allowing for the advancement of research and development of specific therapeutic interventions (Wilkinson & Goodyer, 2011). Non-suicidal self-injury was recently included within the new *DSM-5* as a condition for further study (American Psychiatric Association, 2013), indicating it may at some point be included as a separate entry.

Sample populations. Generalizability of research findings has been limited due to differences in sample populations, specifically clinical versus community, or nonclinical, samples. Given that NSSI appeared in the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 2000) as a criterion of BPD, historically research tended to focus on individuals with major psychiatric disorders, most commonly BPD (Polk & Liss, 2007). NSSI has also been found in other clinical populations, including individuals with diagnoses of major depression, anxiety disorders, substance abuse, eating disorders, posttraumatic stress disorder, schizophrenia, and several personality disorders (Klonsky, 2007). The majority of earlier research has been conducted on individuals with a history of psychiatric treatment (Gratz, Conrad, & Roemer, 2002). Focusing on clinical and forensic populations, however, may lead to an overinflation of the association of psychiatric disorders and NSSI (Klonsky, Oltmanns, & Turkheimer, 2003) and precludes a complete understanding, including phenomenology, functions, and treatments of NSSI (Klonsky, 2007). Suyemoto (1998) noted the inpatient population is likely a more mentally unstable sample of any psychopathological

population, and solely focusing on them will create a biased profile. Suyemoto posited a population of individuals engages in NSSI and does not present in hospitals, a belief supported by Gratz and Chapman (2007) in their work with nonclinical samples. The prevalence rates of NSSI among adolescents and young adults, which are dramatically high (Jacobson & Gould, 2007; Whitlock et al., 2006), also support this belief. If estimates from 1970–1990 in the United States are correct, the rate of self-injury has grown 150% (Walsh, 2006). The following section will review the literature regarding the current rates of NSSI prevalence.

Prevalence. Due to variability in both population type and conceptualization of NSSI, prevalence has been difficult to estimate. Briere and Gil (1998) provided the most consistently reported number in the literature, finding that 4% of the general adult population, assumed to be clinical and nonclinical samples, had engaged in NSSI within the 6-month period prior to that study, with 1% reporting frequent involvement (Gollust et al., 2008; Klonsky, 2007; Nock, 2009). However, this number may be slightly outdated. Klonsky's (2011) recent survey of adults ($N = 439$) in the United States found a lifetime prevalence of 5.9%; specifically, 3.2% had self-injured between one and four times, 1.4% between five and nine times, and 1.3% ≥ 10 times. Klonsky's (2011) study was significant, as it was one of the only studies to attempt to determine lifetime prevalence of NSSI in the general population.

The difficulty in determining prevalence of NSSI is compounded by small sample sizes, which could be due to the secretive nature of NSSI, as often it is a private and unreported activity (Duffy, 2009) that does not reach the attention of mental health or professional services (McAllister, 2003). Clinical experience has suggested that

individuals who engage in NSSI may injure areas that are easily covered by clothing and may explain visible injuries as accidental (Briere & Gil, 1998). Gratz et al. (2002) suggested the majority of individuals engaging in NSSI are those who are not psychiatric inpatients and are able to function within the community, remaining largely hidden in society. Duffy (2009) asserted that despite potentially never being able to fully determine the true incidence of NSSI, evidence does suggest that NSSI is relatively common and widespread, particularly among young people. Jacobson and Gould (2007) supported this claim in their review of the literature and found a lifetime prevalence of NSSI among community samples of adolescents ranged from 13% to 23%, with the typical age of onset being 12 to 14 years old. This was consistent with other findings for NSSI; notably, 15% ($N = 424$; Laye-Gindhu & Schonert-Reichl, 2005); 16.9% ($N = 568$; Nixon, Cloutier, & Jansson, 2008) in Western Canadian youth; and 13.9% of high school students ($N = 440$; Ross & Heath, 2002) in a study from Eastern Canada. Lloyd-Richardson, Perrine, Dierker, and Kelley (2007) indicated a drastic variability in prevalence and found 46% of an adolescent community sample ($N = 633$) endorsed engaging in some type of NSSI in the past year. However, the increased prevalence in this study may be due to the inclusion of reckless behaviour, abusing pills, and eating disordered behaviour, as opposed to limiting NSSI to direct destruction of body tissue. Hilt, Cha, and Nolen-Hoeksema (2008) found a greater prevalence of NSSI among younger adolescents, aged 10 to 14 years ($N = 94$), with 56% reporting previous engagement in the behaviour and 36% having engaged in NSSI in the past year.

Relevant to this thesis, recent research has found the prevalence of NSSI among university students to be widespread, but variable. Gollust et al. (2008) reported 7% of

students ($N = 2,843$) had engaged in NSSI in 4 weeks prior to that study. This was consistent with Heath et al.'s (2009) finding of 11.7% of students ($N = 728$) who had reported engaging in NSSI. One study of university students ($N = 133$) found 38% of the sample reporting a history of NSSI, with 18% having harmed themselves more than 10 times in the past, and 10% reporting having harmed themselves more than 100 times in the past (Gratz et al., 2002). Another university sample ($N = 319$) reported 29.5% engagement in at least one act of NSSI (Goldstein, Flett, Wekerle, & Wall, 2009), and Polk and Liss (2007) reported 20% of university students ($N = 220$) studied had engaged in NSSI at some point in their lives. In a large-scale study ($N = 5,689$), Serras, Saules, Cranford, and Eisenberg (2010) found overall past-year prevalence for NSSI to be 14.3%, with interesting differences between undergraduates at 16% ($n = 595$) prevalence and graduate students at 10% ($n = 176$). While results in university samples have proved somewhat inconsistent, the prevalence rates are nevertheless dramatically high overall.

One gap in the literature, as previously mentioned, is the prevalence of NSSI among nonclinical adult populations (Klonsky, 2011). More specifically, previous studies examining prevalence demonstrate an interesting trend, with a large percentage of 10- to 14-year-olds engaging in NSSI (56%; Hilt et al., 2008), a significant amount of adolescents (ranging from 13–46%; e.g., Jacobson & Gould, 2007; Laye-Gindhu & Schonert-Reichl, 2005; Nixon et al., 2008), university undergraduate students (ranging from 7–38%; e.g., Gollust et al., 2008; Gratz et al., 2002), and graduate students (10%; Serras et al., 2010). It appears that the rate of NSSI may decrease with age, and further research with nonclinical adult populations is needed to determine both the pervasiveness of the behaviour and the factors that may be associated with a drop in prevalence.

In their review of literature, Jacobson and Gould (2007) found only one study that addressed the prospective course of NSSI in adults, specifically amongst a group of participants meeting the criteria for BPD. Initially, 81% of participants reported engagement in NSSI within the 2 years prior to the study; at the 6-year follow-up survey that number was only at 26%. Jacobson and Gould suggested future research ought to include examining the course of NSSI in adults, particularly with respect to risk factors. Moran et al.'s (2012) recent population-based cohort study ($N = 1,943$) provided new insight into the course of self-harming behaviour, finding that while 8% of the sample initially reported engaging in self-harm from 14 to 19 years of age, a substantial reduction was reported as adolescents got older. Moran et al. found by age 20 prevalence dropped to 1.7%, at age 24 it decreased to 1.2%, and by age 30 prevalence was 0.5%. Moran et al. suggested that most adolescent self-harming behaviour resolves spontaneously, although the findings may be difficult to generalize, as the study included a broad definition of self-harm, inclusive of suicidal intention and risk taking in which serious injury could occur.

The following section will address the perceived link between NSSI and suicide. This is an area that should be discussed, as it may prevent clinicians from assuming all NSSI are seeking suicide, while at the same time urges clinicians to assess for suicide when NSSI is present.

Association with suicide. Given that numerous definitions of self-harm or self-injury include suicide attempts, suicidal ideation and completion is linked to NSSI. This highlights the importance of further research into NSSI, as there is inherent risk involved to those who engage in the behaviour. Among adolescent psychiatric inpatients engaging

in NSSI, 70% reported a lifetime suicide attempt, and 55% reported multiple attempts ($N = 89$; Nock, Joiner, Gordon, Lloyd-Richardson, & Prinstein, 2006). Nock et al. (2006) reported that a longer history of NSSI, use of a greater number of methods to injure, and absence of physical pain while engaging in NSSI were associated with suicide attempts. In their 4-year longitudinal study ($N = 7,968$), Cooper et al. (2005) found individuals who presented to the emergency department after an episode of self-harm, which included self-poisoning or injury irrespective of motivation, were 30 times more likely to have completed suicides compared to the general population. Risk for suicide, in Cooper et al.'s study, appeared highest during the first six months following an episode of self-harm. Other factors, including not living with a close relative, alcohol misuse, avoiding discovery at the time of the initial self-harm act, previous psychiatric treatment, physical health problems, and cutting as a method of self-harm, also increased the risk for completed suicide (Cooper et al., 2005). In a similar longitudinal study ($N = 11,583$) over a 20-year span, Hawton, Zahl, and Weatherall (2003) found that the risk of completed suicide during the first year following an act of self-harm, including self-poisoning or injury irrespective of motivation, was 66 times the annual risk of suicide in the general population. Independent risk factors in Hawton et al.'s (2003) study included male gender and increasing age.

While these two longitudinal studies included acts of self-harm irrespective of motivation (i.e., intent to die or not), they nevertheless shed light on the extremely elevated risk for suicide following an act of self-harm (Cooper et al., 2005; Hawton et al., 2003). The implications for clinical practice include the need to evaluate the presence of suicidal thoughts and behaviours in those engaging in NSSI and vice versa (Nock et al.,

2006). NSSI and suicide attempts are clearly distinct behaviours; however, they frequently co-occur (Nock et al., 2006). Some research has suggested individuals who self-injure may also attempt suicide at times when they are not actively engaging in NSSI (Gratz, 2003).

Self-harm is shown to be a strong predictor of completed suicide (Cooper et al., 2005), and suicide is the most common cause of premature death for individuals who self-harm (Skegg, 2005). Laye-Gindhu and Schonert-Reichl (2005) found that adolescents in a nonclinical sample ($N = 424$) who engaged in NSSI were more likely to report suicidal ideation compared to individuals who did not engage in NSSI (83% vs. 29%). Those who engage in NSSI were also more likely to have made a suicide plan (40% vs. 3%) and to have actually attempted suicide (26% vs. 6%); comparatively, 89% of individuals who attempted suicide had also engaged in NSSI (Laye-Gindhu & Schonert-Reichl, 2005). Some research supported that adolescents who engage in both NSSI and suicide attempts may be more impaired than those who only engage in one or the other, thus requiring more intensive treatment (Jacobson & Gould, 2007).

Kakhnovets, Young, Purnell, Huebner, and Bishop (2010) reported university students ($n = 79$) who self-injured multiple times were more likely to report suicidal ideation than those who only engaged in the behaviour once. This supported Whitlock et al.'s (2008) finding on NSSI typologies; they reported suicidality in all three classes of NSSI, with the highest suicidality being reported in the class with the highest severity NSSI. Further research to investigate the relationship between suicide attempts and NSSI is necessary to provide effective interventions and treatments to decrease the risk of completed suicides. Clinical implications for these findings mean that it is essential to routinely assess the

underlying motivation and intent behind NSSI and to pay close attention to the psychiatric symptoms reported throughout treatment (Klonsky & Muehlenkamp, 2007).

Risk Factors, Psychological Correlates, and Functions of NSSI

The risk factors linked to NSSI along with the associated psychological correlates of NSSI will be reviewed in this foundational section of the chapter. This section also will provide a review of the functions of NSSI. Specifically, in order of discussion, they are gender differences, sexual orientation, distal and proximal factors, psychological correlates and psychiatric comorbidities, and the functions of NSSI.

Gender differences. NSSI statistics with respect to gender differences, particularly regarding prevalence, have been inconsistent and inconclusive (Jacobson & Gould, 2007). Historically, research has tended largely to underestimate the importance of NSSI among men (Gratz & Chapman, 2007). While conventional wisdom dictates that women engage in NSSI more than men, some studies have found overall rates to be similar across genders (Briere & Gil, 1998; Klonsky et al., 2003). However, Bakken and Gunter (2012) found significant differences in a sample of adolescents ($N = 2,639$), with 17% females reporting NSSI compared to 9% of males engaging in NSSI. In a recent study ($N = 14,372$), Whitlock et al. (2011) found 15.3% of participants endorsed NSSI, with female college students twice as likely to report lifetime NSSI incidents than males; however, males were equally as likely to report self-injury in the past year.

The main gender differences are found in method of NSSI, with women more likely to engage in cutting behaviours and men more likely to hit themselves (Laye-Gindhu & Schonert-Reichl, 2005). Whitlock et al.'s (2008) research supported gender differences and found men were more likely to engage in moderate to high severity forms

of NSSI, but for relatively shorter periods or very infrequently over a long period.

Whitlock et al. (2011) found females were more likely to injure their wrists, arms, and thighs, whereas males tended to report their hands as the primary wound location. Moran et al. (2012) also found a greater continuity in self-harm from adolescence to adulthood in females than males. Further research is needed to develop a better understanding of the differences, if any, between male and female NSSI. Given the inconsistencies found in previous research, the role of gender in the cessation of NSSI was investigated as a research question.

Sexual orientation. Preliminary research has provided evidence into a higher likelihood of NSSI amongst students who identify as gay and bisexual (Gollust et al., 2008; Serras et al., 2010). Whitlock et al. (2011) found a strong connection between sexual orientation and NSSI, particularly noting nonheterosexual women were at a much greater risk for NSSI when compared to heterosexual women. Within the sample of those who engaged in NSSI ($N = 1,776$), bisexual and mostly gay females were 6.2 and 5.5 times more likely to report NSSI, with lesbians 2.4 times more likely. Heterosexual women were 1.5 times more likely to report any NSSI in comparison to male counterparts. However, as women in all sexual orientation categories were significantly more likely to report NSSI than males, Whitlock et al. (2011) speculated this finding was a result owing perhaps to the variable of gender rather than sexual orientation. Further research into the link between sexual orientation and NSSI is needed to determine the extent of the association.

Distal and proximal factors. Goldstein et al. (2009) speculated NSSI results from an interaction between distal and proximal factors. Research suggested that certain

risk factors, such as intra or interpersonal vulnerabilities, may predispose individuals to respond to challenging or stressful events with affective or social dysregulation, creating a need to use NSSI as a way of modulating their experiences (Nock, 2009). Some of these vulnerabilities may be due to distal factors such as childhood abuse and maltreatment (Nock, 2009), history of sexual abuse, and negative life events (Jacobson & Gould, 2007). Other risk factors affecting NSSI may be more proximal, including depressive symptoms and illicit drug use (Goldstein et al., 2009). Among university students ($N = 319$), survey data found psychological correlates of NSSI include depressive symptoms, physical neglect, emotional abuse, openness, sensation seeking, and past-year illicit drug use (Goldstein et al., 2009).

Gratz and Chapman (2007) found both environmental and individual risk factors played roles in the development of NSSI; these authors suggested that while adverse life events may be critical to the initial development of NSSI, difficulties with emotional regulation were more central to the maintenance of the behaviour over time. In a sample of nonclinical male university students ($N = 97$) emotional dysregulation and childhood physical abuse were the only factors to reliably distinguish those who engaged in NSSI as opposed to those who did not (Gratz & Chapman, 2007). In another study of university students ($N = 133$), Gratz et al. (2002) found childhood separation to be the most significant predictor of NSSI in males, with dissociation also having a strong predictive effect. Gratz et al. (2002) found similar predictors within the female sample, with dissociation being the most significant predictor, followed by insecure parental attachment, childhood sexual abuse, and parental emotional neglect. It should be noted that Gratz and Chapman (2007) found comparable rates of NSSI among female

undergraduate students at the same institution, supporting similar evidence of limited gender differences in NSSI (e.g., Goldstein et al., 2009; Gollust et al., 2008; Gratz et al., 2002). In a sample of adolescents ($N = 64$), Deliberto and Nock (2008) found other distal factors and reported those who engaged in NSSI were significantly more likely to have a family history of alcoholism, drug abuse, violence, and suicidal ideation. It is important to note that while childhood abuse, particularly childhood sexual abuse, can lead to the development of NSSI, numerous individuals who have experienced abuse do not go on to self-injure and many who self-injure have not been abused (Klonsky & Muehlenkamp, 2007).

Recent research indicated NSSI could develop through various other proximal and distal factors. Wilcox et al. (2012) found varying independent predictors of lifetime NSSI compared to past-year NSSI among university students ($N = 1,081$). Wilcox et al. found lifetime NSSI was associated with paternal depression, female sex, nonheterosexual orientation, and a diagnosis of depression. Wilcox et al. also found maternal depression, nonheterosexual orientation, a diagnosis of depression, and affective dysregulation to predict past-year NSSI. In their 2.5-year longitudinal study, Hankin and Abela (2011) found negative cognitive style, recent depressive symptoms, lack of support, and onset of maternal depression predicted the onset of NSSI in adolescents ($N = 103$). However, Glenn and Klonsky (2011) found only past NSSI (specifically, lifetime NSSI frequency, lifetime NSSI methods, and recency of last NSSI episode) uniquely predicted future NSSI, while past variables such as depression, impulsivity, anxiety, bulimia, and alcohol abuse were all nonsignificant predictors of NSSI course ($N = 81$).

Drug use. Recent research found illicit drug use, cigarette smoking, gambling, and undergraduate status were all associated with increased risk of NSSI (Serras et al., 2010). Interestingly, illicit drug use alone was significantly associated with higher rates of NSSI among both undergraduate and graduate students ($N = 595$; Serras et al., 2010). The association between NSSI and drug use will be explored further in Chapter 5.

Emotional regulation. A review of the literature found individuals who engage in NSSI experience more negative emotions in their daily lives than individuals who do not engage in NSSI; individuals engaging in NSSI also find it more difficult to identify or understand and express their emotions (Fliege, Lee, Grimm, & Klapp, 2009). The inability of those who engage in NSSI to appropriately process high levels of negative affect may be related to experiences of emotional neglect in childhood; parents who do not model proper emotional behaviour may have children who do not know how to regulate their feelings (Polk & Liss, 2007). These findings were supported by evidence that suggests negative emotionality to be one of the most prominent features among individuals who engage in NSSI, with those engaging in the behaviours experiencing more frequent and intense negative emotions (Klonsky & Muehlenkamp, 2007).

Psychological correlates. Gollust et al. (2008) found co-occurring mental health conditions to be significantly related to NSSI in a population of university students ($N = 2,843$). On a subclinical level, Jacobson and Gould (2007) identified psychosocial correlates, such as depression, anxiety, negative self-esteem, and antisocial behaviour, as risk factors for NSSI. Individuals who engage in NSSI seem particularly prone to be self-critical or experience intense self-directed anger, often citing reasons for NSSI as self-punishment (Klonsky & Muehlenkamp, 2007). In evaluating a self-punitive model for

NSSI, Flett, Goldstein, Hewitt, and Wekerle (2012) found evidence of an association between overgeneralization (predictive of depression), high evaluative standards in terms of socially prescribed perfectionism, self-criticism, and shame. Evidence for proximal factors supported anxiety, aggression, and depression as the main indicators of general psychopathology among those who engage in NSSI (Fliege et al., 2009). This was supported by findings that higher degrees of depressive symptoms are associated with a stronger intent to self-injure and are partially governed by favourable attitudes towards NSSI and lack of perceived control at the time of NSSI (Lewis, Rosenrot, & Santor, 2011). Nixon et al. (2008) reported strong associations between depressive mood symptoms and NSSI and impulsiveness and NSSI among a nonclinical group of adolescents ($N = 568$).

Jacobson and Gould (2007) noted that a proportion of adolescents engaging in NSSI meet the criteria for a formal psychiatric diagnosis, the most common being major depressive disorder, but also included diagnoses for posttraumatic stress disorder, anxiety disorder, substance use disorder, eating disorders, and BPD. Klonsky and Muehlenkamp (2007) posited the link between BPD and NSSI is not surprising given both have core elements of emotional dysregulation and negative emotionality. Recent research has demonstrated a link between eating disorder symptoms and NSSI among university students ($N = 3,069$; Whitlock et al., 2006). Substance abuse and NSSI are also closely linked; perhaps because both involve physiological harm, suggesting similar psychological processes may be at work (Klonsky & Muehlenkamp, 2007). The association between NSSI, substance abuse, and disordered eating will be explored in greater depth in Chapter 5.

Although psychiatric diagnoses are often present in individuals who engage in NSSI, the existence of NSSI alone does not imply the presence of any particular psychiatric condition (Klonsky & Muehlenkamp, 2007). Individuals may experience a range of psychological disorders and, as such, are diagnostically heterogeneous (Klonsky & Muehlenkamp, 2007). Identifying and understanding risk factors of NSSI is imperative in order to determine effective interventions, as well as preventative measures. Gratz (2003) suggested providing a therapeutic context for the historical factors that contributed to the development of NSSI could assist clients in learning self-acceptance and gaining empathy for themselves—factors that could promote cessation of the behaviour.

As this thesis focused on the cessation of NSSI, risk factors and psychological correlates associated with NSSI were not directly investigated. However, as these issues may play a role in cessation, they were measured indirectly in this inquiry.

Functions. Individuals' motives for engaging in NSSI are varied, and recent research has sought to investigate the need or function NSSI serves or fulfills for those who employ this strategy. Appropriate treatment and interventions can be designed if research can determine what is driving the behaviour. Suyemoto (1998) proposed that NSSI likely serves more than one function and posited reasons for NSSI are interrelated. Gratz (2003) summarized several functions described in the clinical literature, which were generally based on self-reports. According to Gratz (2003), the literature indicated NSSI may function in one or more of the following ways: (a) to relieve anxiety; (b) to release anger; (c) to relieve unpleasant thoughts and feelings; (d) to release tension; (e) to relieve feelings of guilt, loneliness, alienation, self-hatred, and depression; (f) to

externalize and concretize emotional pain; (g) to provide an escape from emotional pain; (h) to provide a sense of security; (i) to provide a sense of control; (j) to self-punish; (k) to set boundaries with others; (l) to terminate depersonalization and derealization; (m) to end flashbacks; and (n) to stop racing thoughts.

These functions are supported by findings that the most common reasons for NSSI among a nonclinical adolescent population included depression, loneliness, negative feelings towards self (i.e., anger, self-dislike, inadequacy), distraction, and feeling a need to hurt oneself (Laye-Gindhu & Schonert-Reichl, 2005). Adolescents reported predominantly negative emotional states prior to an act of self-injury. Negative emotions were subsequently reduced during and following self-injury and were often replaced by positive emotions such as relief. However, emotions such as guilt, shame, and disgust increased substantially following the act (Laye-Gindhu & Schonert-Reichl, 2005). This was consistent with findings among university students who reported feeling depressed, angry, stressed, and out of control prior to NSSI and relief, ashamed, depressed, and afraid following NSSI (Kakhnovets et al., 2010). NSSI can be viewed as functioning as a coping mechanism to alleviate intense, overwhelming negative emotions in an attempt to regulate affect (Kakhnovets et al., 2010; Klonsky & Muehlenkamp, 2007). In another sample of nonclinical adolescents ($N = 440$), Ross and Heath (2002) found significantly more anxiety and depressive symptomatology in those who engaged in NSSI, suggesting more socioemotional difficulties in those adolescents than their peers.

Recent research has shown support for Nock and Prinstein's (2004) functional approach to NSSI, which examined the processes that produce and maintain the

behaviour (see also Nock, 2009). Nock and Prinstein proposed that several reinforcement processes maintain NSSI: (a) intrapersonal negative reinforcement (i.e., NSSI decreases or distracts aversive thoughts or feelings, e.g., “to stop bad feelings”); (b) intrapersonal positive reinforcement (i.e., NSSI generates desired feelings or stimulation, e.g., “to feel something, even if it was pain”); (c) interpersonal positive reinforcement (i.e., NSSI facilitates help-seeking, e.g., “to let others know how unhappy I am”); and (d) interpersonal negative reinforcement (i.e., NSSI facilitates escape from undesired social situations, e.g., “to avoid punishment from others”). Intrapersonal reinforcement, interpersonal reinforcement, and temporary coping mechanisms will be elaborated upon in the following subsections.

Intrapersonal reinforcement. NSSI may serve to evoke or stop dissociation tendencies, regulate emotions, or entail a form of self-punishment. These issues will be addressed under the heading intrapersonal reinforcement, which essentially means the NSSI is motivated and maintained by internal processes.

Klonsky and Muehlenkamp (2007) described how intrapersonal positive reinforcement has been linked to dissociation, in which individuals state they feel nothing at all or feel unreal. NSSI may be used to interrupt dissociative episodes and assist the individual in regaining a sense of self (e.g., to feel real again). In these situations, the function of NSSI has been described in terms of “feeling generation” or antidissociation. Klonsky and Muehlenkamp suggested the antidissociation function of NSSI might overlap with and affect regulation functions (i.e., intrapersonal negative reinforcement), as intense emotions may be the cause of the dissociative episode in the first place. These intense emotions may also contribute to suicidal ideation, leading some individuals to

endorse engaging in NSSI as a means of resisting the urge to attempt suicide, which is recognized as an intrapersonal negative reinforcement (Klonsky & Muehlenkamp, 2007). This further complicates the relationship between NSSI and suicide. Feeling generation functions have also been found to be associated with a lack of emotional clarity and difficulty inhibiting impulsivity (Turner, Chapman, & Layden, 2012).

In a sample of psychiatric adolescent inpatients ($N = 108$), Nock and Prinstein (2004) found reasons related to intrapersonal reinforcement were endorsed more frequently, suggesting a primary purpose of NSSI is the regulation, both decrease and increase, of emotional and physiological experiences. For example, 52.9% of Nock and Prinstein's participants reported engaging in NSSI "to stop bad feelings" (p. 888). Overall, NSSI is often regarded as a strategy to alleviate intense, overwhelming, negative emotions (Klonsky & Muehlenkamp, 2007). Further evidence supported this claim. For example, in a study of young adults ($N = 39$), Klonsky's (2009) found that nearly all participants indicated they self-injured with the primary intent of alleviating acute negative affect, which was consistent with intrapersonal negative reinforcement (Nock & Prinstein, 2004). Individuals reported feeling "relieved" (Klonsky, 2009, p. 264) or "calm" (p. 264) following NSSI, and they appeared motivated to alleviate high arousal negative affect states such as feeling "overwhelmed" (p. 264) and "anxious" (p. 264). Individuals who experienced the greatest affective benefits were those who engaged in NSSI more frequently, predicting a greater lifetime frequency of NSSI (Klonsky, 2009). These findings were consistent with Laye-Gindhu and Schonert-Reichl's (2005) suggestion that NSSI is an emotion-focused coping strategy that often functions to regulate affect. As NSSI becomes more enduring and chronic, individuals find it

increasingly difficult to manage negative emotions, and suicide becomes a more likely option (Laye-Gindhu & Schonert-Reichl, 2005).

Additionally, while NSSI may appear to be an effective coping mechanism in the short term, over time it increases negative feelings about oneself, which then serves to aggravate the initial symptoms of distress (Jacobson & Gould, 2007). Lloyd-Richardson et al. (2007) proposed that the meaning of NSSI and its functions may change over time with increased repetition. Further, emotional relief functions are associated with not only intense negative affect and difficulties in emotion regulation, but also with expressive suppression, increasing the difficulty in relieving the aversive emotional state.

Consequently, Turner et al. (2012) posited the individual may repeat a cycle in which he or she seeks relief from increasingly overwhelming emotions but is unable to effectively express or regulate these emotions, making the individual more likely to engage in NSSI.

Research has found NSSI serves as a form of self-punishment, with 100% of Turner et al.'s (2012) participants endorsing this reason ($N = 162$). Self-punishment functions were similar to emotion relief, with an emphasis on emotions such as shame and guilt rather than general emotions such as sadness or anxiety. Similar to emotion relief, self-punishment has been associated with difficulty regulating emotions, greater affective intensity, and expressive suppression.

Interpersonal reinforcement. Unlike the previous section that examined motivation from within, in this section will present the concept of NSSI as a function of interpersonal reinforcement. Two issues will be explored: addressing the interpersonal reinforcement and social factors that motivate and maintain NSSI. This will provide

support that NSSI functions as a means of communicating with others, influencing others, or both (Nock, 2009).

In a sample of 108 psychiatric adolescent inpatients who had a history of NSSI, Nock and Prinstein (2004) found interpersonal or social reinforcement was endorsed less frequently than intrapersonal reinforcement; however, interpersonal reinforcement was still reported as a reason for NSSI in a significant portion of adolescents. Nock (2008) found numerous individuals who engage in NSSI reported using self-injury as a means of social influence, particularly as it often elicits caregiver behaviour in another individual. However, Nock emphatically stressed not all NSSI was performed for the purpose of influencing others, which was a prevailing opinion among many clinicians and members of the public. Beliefs surrounding those who engage in NSSI as attention seekers and manipulators are extremely detrimental and often contribute to the negative experiences felt by individuals who present to hospital (McHale & Felton, 2010; Warm, Murray, & Fox, 2002).

In fact, NSSI could be regarded as a display of either strength (i.e., able to withstand the resulting injury) or stress (i.e., creating a signal of distress) when language and less intense forms of behaviour fail to produce a desired outcome (Nock, 2008). Social coping functions could also be viewed in terms of positive reinforcement (PR) and negative reinforcement (NR). Signals of strength (PR) could include punching walls or smashing beer cans on one's head, whereas NSSI as strength (NR) could be scars from self-injury that indicate resilience. Signals of distress (PR) would be the inclusion of NSSI for attention from others, while distress (NR) would be, for example, to escape task demands or distract from family conflict (Nock, 2008). Like other functions of NSSI, the

type of reinforcement social influences exert appears to vary among ages, genders, and populations. For example, younger age was both associated with social PR and NR, although the latter was also associated with social perfectionism (Jacobson & Gould, 2007).

Social factors appear to play a small but important role in the development, function, and maintenance of NSSI. In a sample of university students ($N = 728$), 86% of students knew someone who engaged in NSSI (Heath et al., 2009). In another sample of nonclinical adolescents ($N = 274$), 70% of participants reported they had told someone about their NSSI; most often this was a friend (Muehlenkamp, Walsh, & McDade, 2010). Numerous (44.3%) adolescents also reported that they had up to three friends who engaged in NSSI (Muehlenkamp et al., 2010).

Heath et al. (2009) reported in a sample of university students, approximately 44% ($N = 728$) indicated NSSI stemmed from learning these behaviours from their friends or other social means such as the media. Over half of the sample reported using the same type of method as their friends to injure themselves, providing some support for a social component of NSSI. Heath et al. suggested that affiliation with peers who engage in NSSI might be related to increases in NSSI among individuals with poor coping skills and emotional regulation difficulties. However, when compared to individuals who did not self-injure, participants who engaged in the behaviour tended to have lower levels of peer support. In some cases, NSSI may provide a way to bond with friends who also engage in NSSI (Klonsky & Muehlenkamp, 2007). In a nonclinical sample of adolescent girls ($N = 94$), Hilt et al. (2008) found those with lower peer

communication were likely to engage in NSSI for social reinforcement when experiencing interpersonal distress such as peer victimization.

Turner et al. (2012) found social functions to be endorsed less frequently than emotional functions, such as feeling generation, emotional relief, and self-punishment. Interpersonal influence functions were associated with a domineering or controlling interpersonal style and an intrusive or needy interpersonal style, with a desire to exert control over one's environment (Turner et al., 2012). Individuals would seek to make their distress known through their behaviour. According to Turner et al., interpersonal communication functions were associated with a vindictive or self-centred interpersonal style and a higher willingness to outwardly communicate distress.

Temporary coping mechanism. Given that NSSI serves numerous functions and different purposes at different times in an individual's life, two of which have been reviewed so far in this thesis, a third function might be that NSSI acts as a temporary coping mechanism for individuals. The idea that NSSI is utilized as a means for temporarily coping with stressful events is presented in this section.

Research has suggested that NSSI may act as a way for some individuals to negotiate a difficult adolescence (Suyemoto, 1998). Several studies have supported the idea that NSSI provides individuals with a temporary coping mechanism for dealing with stressful circumstances. Ross and Heath (2002) found a considerable portion (64%) of nonclinical adolescents ($N = 440$) stated they no longer engaged in NSSI, suggesting perhaps that NSSI represented a temporary behaviour that is engaged in for a limited period. Ross and Heath hypothesized that adolescents experimented with NSSI as a way to cope with specific stressful life events, and once the situations were resolved, the

behaviour was no longer needed. One study found 70% of female outpatients ($N = 44$) stopped cutting completely at an average age of 18.8 years old after an average length of NSSI of 3.6 years during their teenage years (Suyemoto & MacDonald, 1995). Moran et al. (2012) also found a substantial reduction of frequency of self-harm during late adolescence, which led them to speculate most adolescent self-harm resolved spontaneously. Serras et al.'s (2010) findings that graduate students reported lower levels of NSSI than undergraduate students provided support for Suyemoto's (1998) theory that NSSI may be a temporary coping mechanism. Serras et al. hypothesized that the effect of age on NSSI could be a result of individuals maturing out of the behaviour, which, as Pietrusza and Whitlock (2010) noted, could be as a result of some individuals feeling too old to engage in NSSI anymore.

To provide support that for some adolescents NSSI is an isolated incident, Laye-Gindhu and Schonert-Reichl (2005) reported 24% of nonclinical adolescent participants ($N = 424$) only had one episode of NSSI or engaged in NSSI for a short period of time. However, the study also found a considerable portion of participants persisted in the behaviour for longer than 1 year and provided support for the chronic and repetitive nature of the behaviour (Laye-Gindhu & Schonert-Reichl, 2005). Research is needed to distinguish individuals who engage in NSSI temporarily as a coping mechanism as opposed to those who persist in the behaviour (Laye-Gindhu & Schonert-Reichl, 2005; Ross & Heath, 2002). Jacobson and Gould (2007) suggested that a complex relationship of psychological, biological, and physiological characteristics may lead some adolescents to come to rely on NSSI as a coping mechanism, while others may only engage in the behaviour once. However, this relationship has not been evaluated in the literature.

Evidence that different individuals engage in NSSI for multiple different and overlapping reasons may be interpreted to mean that different functions may distinguish different subgroups of self-injurers. Further, multiple functions for NSSI may occur within the same individual and may evolve over time (Klonsky, 2007). This is consistent with the findings from a European child and adolescent self-harm study in which participants endorsed more than one reason for engaging in NSSI ($N = 30,477$; Scoliers et al., 2009). Thus, because NSSI serves multiple psychological functions, identifying those functions specific to a particular individual will inform treatment strategies (Klonsky & Muehlenkamp, 2007). Effective treatment and intervention must take all these factors into consideration. Klonsky and Muehlenkamp (2007) suggested one of the most promising ways of approaching psychotherapy with individuals who engage in NSSI is to understand the behaviour from the client's perspective. Conducting a careful analysis of the functions NSSI serves, the psychiatric symptoms underlying the behaviour, and the interpersonal dynamics will provide an insightful guide to treatment (Klonsky & Muehlenkamp, 2007).

In summary, the different functions that NSSI can serve for an individual were reviewed in this section, including intra and interpersonal reinforcement. Researchers have proposed that NSSI may also function for some as a temporary coping mechanism needed to assist with in managing distress (Suyemoto, 1998). Understanding the functions of NSSI informs effective treatment as therapeutic interventions can then be designed to address what is driving the behaviour. Given the variability in functions of NSSI endorsed by individuals and the critical role of understanding what is driving the behaviour plays in effective treatment, an objective of the thesis was to examine the

functions of NSSI as it pertained to cessation. The researcher sought to determine if a relationship exists between the self-endorsed functions of NSSI by participants and reasons for the cessation of NSSI.

Chapter Summary

As this review of the literature sought to demonstrate, NSSI has become an area of clinical interest in recent years. Past research into self-injury has been limited by difficulties in generalizing study findings due to inconsistencies in defining what constitutes the act of self-injury and differences in sample populations. For this thesis, the researcher utilized Nock's (2009) definition of NSSI as "the direct, deliberate destruction of one's own body tissue in the absence of intent to die" (p. 78; see also Nock & Favazza, 2009), distinct from culturally sanctioned behaviours (such as piercing and tattooing) and separate from indirect harmful behaviours such as substance abuse and disordered eating. This chapter provided a description of the various characteristics of NSSI and the history of NSSI research, including the tendency of earlier research to focus on clinical samples. The association of suicide and NSSI was also explored, as individuals who engage in NSSI may be at an increased risk for suicide, although the act of NSSI should not be viewed as an attempt at suicide.

Current prevalence rates of NSSI among university students have been found to be widespread but variable, with findings ranging from 7% to 38% engagement in NSSI in undergraduate students (e.g., Gollust et al., 2008; Gratz et al., 2002) and 10% in graduate students (Serras et al., 2010). As illustrated in this chapter, the rates of NSSI may decrease with age; however, further research is needed to determine the pervasiveness of the behaviour and the factors associated with the drop in prevalence. A

gap in the literature is the prevalence of NSSI among nonclinical adult populations (Klonsky, 2011).

Several risk factors and psychological correlates associated with NSSI were reviewed in this chapter. Numerous distal risk factors, such as adverse life events, childhood maltreatment, dissociation, and negative cognitive style may interact in the development of NSSI initially, while difficulties with emotional regulation may be central to the maintenance of the behaviour over time (Gratz & Chapman, 2007; Hankin & Abela, 2011). Proximal risk factors include illicit drug use and depressive symptoms (Goldstein et al., 2009), as well as co-occurring mental health conditions at subclinical levels (Gollust et al., 2008). Sexual orientation was also noted to be a risk factor for increased NSSI; however, one study found women in all sexual orientation categories to be significantly more likely to report NSSI than males (Whitlock et al., 2011). As such, the findings on NSSI and gender differences have been inconclusive, with some studies indicating males and females report similar rates of NSSI engagement (Klonsky et al., 2003). Given the discrepancies in the literature, the researcher sought to address gender as a research question by examining if males and females endorse different rates of NSSI prevalence regarding cessation.

This chapter also provided a description of the various functions NSSI serves for individuals engaging in the behaviour. Intrapersonal reinforcement functions were described as the NSSI being motivated by internal processes. The individual utilizes NSSI to evoke feelings, interrupt dissociative episodes, regulate emotions, or act as a form of self-punishment. NSSI may also be used as a means of resisting the urge to attempt suicide (Klonsky & Muehlenkamp, 2007). Interpersonal reinforcement

represents the notion that NSSI functions as a means to communicate or influence others; for example, NSSI may be used to make others aware of emotional distress or to avoid punishment (Nock, 2009; Nock & Prinstein, 2004). Interpersonal reinforcement was less frequently endorsed than intrapersonal reinforcement functions (Nock & Prinstein, 2004; Turner et al., 2012). NSSI may also function as a temporary coping mechanism that serves to assist the individual in dealing with difficult life circumstances; once the stressful situation was resolved, the behaviour was no longer needed (Ross & Heath, 2002). However, it is important to note that individuals may endorse multiple reasons for NSSI, and these reasons may evolve over time (Klonsky, 2007). As the researcher sought to answer the question of how and why individuals stop engaging in self-injury, participants were asked questions via survey in order to examine if the self-reported functionality of NSSI is associated with the eventual cessation of NSSI.

The treatment of NSSI will be examined in Chapter 3. In order to provide further background for the thesis, the challenges individuals may encounter when seeking treatment and a review two assessment instruments will be discussed. In order to provide a rationale for questions used during the survey questionnaire, a review of the current approaches being utilized in the treatment of NSSI will be examined.

Chapter 3: The Treatment of Non-Suicidal Self-Injury

Factors influential in the cessation of NSSI will be further investigated in this chapter by examining the current approaches utilized in the treatment of NSSI. This chapter will also provide an overview of the current approaches to the treatment of NSSI, beginning with a brief summary on assessment methods, including two assessment instruments. Thereafter, several types of treatments and interventions will be presented after a discussion on why seeking treatment may be so difficult for those who self-injure. The following treatments will be addressed: the working alliance, emotional regulation, dialectical behavioural therapy, psychodynamic therapy, replacement skills training, problem-solving therapy, cognitive behavioural therapy, and a multimodal therapeutic model for treating NSSI that is based on Muehlenkamp's (2006) recommendations for effective treatment.

Providing a summary of the treatment of NSSI is relevant at this time, as the understanding of effective treatment methods may allow for potential insight into possible reasons for cessation and help establish greater background information surrounding cessation from NSSI. The primary research question of how and why individuals are able to successfully resolve NSSI sought to examine those factors that assist individuals in the cessation of the behaviour, one of which may be treatment for NSSI. This summary provides the foundation for survey questions that are utilized within the thesis.

Assessment

Relatively little has been written on formal assessments of NSSI (Walsh, 2007). The development of NSSI inventories only began in the early 1990s, and while

inventories are continuously being developed, many have not been submitted to rigorous testing to determine their validity, reliability, and consistency (Craig et al., 2010).

There is a great need for a standardized instrument that is empirically valid and comprehensive both in its assessment of NSSI as well as for the functions of NSSI (Klonsky, 2009). Further, most of the formal instruments available seem to be for research purposes rather than for clinical applications, yet a thorough assessment of NSSI is critical for the understanding and treatment of NSSI (Washburn et al., 2012). Two instruments that have been evaluated for use in the assessment of NSSI will be subsequently reviewed.

The self-injurious thoughts and behaviours interview. The self-injurious thoughts and behaviours interview (SITBI) was developed as a means to provide a more comprehensive picture of self-injury related constructs, including suicidal thoughts and behaviours (i.e., deliberate self-harm; see Nock, Holmberg, Photos, & Michel, 2007). The SITBI is a structured interview comprised of 169 items assessing the presence, characteristics, and frequency (e.g., lifetime, yearly, monthly) of five types of self-injurious thoughts and behaviours (SITB): (a) suicidal ideation, (b) suicide plans, (c) suicide gestures, (d) suicide attempts, and (e) NSSI. Age of onset, methods, severity, functions, precipitants, experience of pain, use of alcohol and drugs during SITB, impulsiveness, peer influences, and self-reported future probabilities for each type of SITB are also assessed (Nock, Holmberg, et al., 2007). Each type of SITB is separated into its own module, beginning with a screening question regarding lifetime presence of that thought or behaviour. If the individual denies the initial screening item, questions from that module can be skipped. While many of the questions are structured to garner

quantitative data (e.g., on a scale of 0 to 4 intensity of thoughts of suicide), the interview allows some flexibility for qualitative responses, as elicited through open-ended questions (e.g., type of method used to self-injure). The SITBI must be administered word for word, although there is some flexibility for clarifying follow-up questions.

Nock, Holmberg, et al. (2007) found the SITBI overall to have good construct validity, when administered to adolescents and young adults ($N = 94$); the SITBI demonstrated strong interrater reliability (average $\kappa = .99$, $r = 1.0$) and test-retest reliability (average $\kappa = .70$, intraclass correlation coefficient = .44). In respect to NSSI in particular, concurrent validity was demonstrated via strong correspondence between the instrument and other measures of NSSI (average $\kappa = .87$). The SITBI is lengthy and may not be practical for use in all settings (Craig et al., 2010). Nock, Holmberg, et al. (2007) acknowledged the SITBI may be better conceptualized and administered as an initial screening measure that provides basic data on each type of SITB prior to administering more in-depth measures.

Inventory of statements about self-injury. While the SITBI assesses for the presence of NSSI, the Inventory of Statements about Self-Injury (ISAS) was developed to additionally assess the functions of NSSI. Klonsky and Glenn (2009) administered their measure to 235 college students in order to determine its psychometric properties. The ISAS assesses 13 functions of NSSI, as well as the frequency of 12 NSSI behaviours. Contextual and descriptive factors are measured through five multiple-choice-format questions: age of onset, frequency, experience of pain, whether NSSI is performed alone or with others, and whether the individual wants to stop NSSI. Individuals are asked to rate each functions of NSSI on a scale of “0-not relevant,” “1-somewhat relevant,” to “2-

very relevant.” The 13 potential functions of NSSI assessed include affect regulation, antidissociation, antisuicide, autonomy, interpersonal boundaries, interpersonal influence, marking distress, peer-bonding, self-care, self-punishment, revenge, sensation seeking, and toughness.

Klonsky and Glenn (2009) found the ISAS has excellent internal consistency for interpersonal and intrapersonal functions of NSSI (with coefficient alphas of .88 and .80 respectively). The instrument also demonstrated expected correlations with clinical constructs (e.g., BPD, suicidality, depression, and anxiety) and contextual variables, supporting the reliability and validity of the ISAS. The ISAS was also found to have good internal consistency ($\alpha = .84$) on the assessment of NSSI behaviour (Glenn & Klonsky, 2011). In order to determine test-retest reliability, 81 undergraduates were recruited to participate in a one-year follow-up study of the ISAS (Glenn & Klonsky, 2011). Test-retest correlations for the 12 NSSI behaviours averaged at .68 (with all $ps < .001$). Test-retest correlations for all functional subscales were positive and statistically significant, with a median of .59 (all $ps < .02$). Glenn and Klonsky (2011) concluded the ISAS had good test-retest reliability after one year. The ISAS has potential utility in both clinical and research contexts and has been utilized within nine studies known to date.

Unique thesis contribution. As the assessment of NSSI provides a deeper understanding of the behaviour (Walsh, 2007) and offers potential insights into reasons for cessation, the assessment of NSSI is closely linked to this thesis. However, as reflected in the aforementioned instruments, assessments have typically focused on the problem of NSSI rather than how individuals have overcome self-injury. The researcher

designed a survey that focused on how individuals were able to successfully find solutions to resolve NSSI, thus answering the primary research question of how and why individuals are able to stop NSSI. To this researcher's knowledge, very few instruments or surveys have addressed this issue, allowing the study to fill a critical gap in the literature. While instruments used for assessment can be used in both a research and clinical setting, individuals who engage in NSSI may face difficulties in seeking and staying in treatment, which will be reviewed in the following section.

Challenges to Seeking Treatment

Although rates of NSSI among nonclinical samples of adolescents and university students appear to be increasing, individuals who engage in NSSI may face several challenges to seeking treatment. Individuals may not be seeking treatment for NSSI, and when they do, they may experience negative attitudes and/or discontinue from treatment. These issues will be reviewed in the following section.

Rates of seeking treatment. One challenge to seeking treatment may be that treatment is not being readily sought. One study ($N = 2,843$; Gollust et al., 2008) reported that only 26% of university students who engaged in NSSI sought help, despite all surveyed students being at risk for experiencing significant anxiety, distress, and suicidal thoughts. Likewise, Whitlock et al. (2006) found high rates of NSSI among university students ($N = 3,069$) who had never been in therapy for any reason and who rarely disclosed their engagement in NSSI to anyone.

When contrasted to university students, adolescents reported slightly higher rates of seeking treatment, with just over half (56%) of a nonclinical sample ($N = 568$; Nixon et al., 2008) seeking help through friends or less often through a psychiatrist or

psychologist. Youth who reported more frequent engagement in NSSI were more likely to seek help (Nixon et al., 2008). However, Deliberto and Nock (2008) found less than half of adolescents ($N = 64$) presently engaging in NSSI were receiving psychological (43.2%) or pharmacological (45.7%) treatment. Nixon et al. (2008) asserted that whether an adolescent sought help was dependent on several factors, including attitudes toward NSSI and seeking mental health services, the availability and accessibility of professional services, and the thoroughness and attention paid to assessing for NSSI in youth by professionals. Other factors included whether the adolescent was willing to disclose and to whom they might disclose, as youth may choose to disclose to friends rather than professionals. Given their findings of a strong association of shame and NSSI, Flett et al. (2012) posited an overgeneralized sense of shame could decrease the likelihood of help-seeking behaviour despite experiencing distress, thus nurturing the secretive nature of NSSI. This finding could account for the low rates of treatment seeking demonstrated by those who engage in NSSI.

Attitudes towards seeking treatment. Low levels of help seeking among those who engage in NSSI may be partially accounted for by findings that suggest individuals who self-injure experience overall dissatisfaction in the care provided by health professionals (Warm et al., 2002). Evidence has suggested individuals who engage in NSSI may experience unhelpful, even derogatory, attitudes from health professionals (McHale & Felton, 2010). While psychiatrists, counsellors, and psychologists were consulted most frequently for NSSI, in one study, these professionals were also given the lowest rating of satisfaction among respondents ($N = 243$; Warm et al., 2002). Voluntary organizations, such as self-injury volunteer support groups, and self-injury specialists

received the most favourable rating among respondents who self-injured. While experiences in seeking help were most often rated as unsatisfactory, Warm et al. (2002) reported the majority of respondents indicated they had periods in which they wanted to stop engaging in NSSI. No further details were supplied about why participants found experiences satisfactory or unsatisfactory, nor was insight provided into why they wanted to stop NSSI. These questions are addressed in the thesis by asking participants about the potentially helpful or unhelpful therapeutic interactions they encountered if they sought help for NSSI. Furthermore, examining the motivations individuals endorsed for wanting to stop NSSI was a primary goal of the researcher.

Treatment disengagement. Among those who do initially seek treatment for NSSI, a literature review meta-analysis by Ougrin and Latif (2011) cited evidence from six studies that the vast majority of adolescents (50-77%) disengage from follow-up outpatient treatment. The authors found that around 25-50% of adolescents who engage in self-harm, inclusive of NSSI and attempted suicides, are unlikely to attend follow-up sessions. In a meta-analysis of adolescents engaging in self-harm, Ougrin and Latif found no evidence supporting any specific psychotherapeutic treatment that led to better continued treatment engagement than treatment as usual (i.e., the current interventions being offered). Thus, adolescents were found to drop out of treatment regardless of type of treatment. Ougrin and Latif felt poor engagement in treatment was a particular concern given the prevalence of self-harm and findings that disengagement is a marker of poor psychosocial outcomes in adolescents. Thus, future attention needs to be paid in addressing how to keep individuals engaged in the treatment process.

Types of Treatment and Interventions

Despite empirical evidence suggesting high rates of NSSI prevalence in both clinical and nonclinical population, increased awareness among researchers and clinicians, and the potential lethality of NSSI due to suicide, there are little empirical data offering treatment guidelines for NSSI (Muehlenkamp, 2006). As recently as Nock's 2009 paper, there were currently no evidence-based treatments for NSSI. Randomized clinical trials measuring the effectiveness of psychological treatments for NSSI are rare (Nock, Teper, et al., 2007). Even less work has been done on treatments for adolescent NSSI (Hilt et al., 2008). The lack of standardized assessment instruments and overall research into assessment of NSSI (Craig et al., 2010) has likely contributed to the dearth of therapeutic interventions for NSSI. Many therapeutic approaches used to treat NSSI were initially designed to treat specific mental disorders associated with NSSI, such as BPD (Klonsky & Muehlenkamp, 2007). However, these approaches have shown utility in treating NSSI, while also leaving room for the clinician to be flexible and adaptive to the specific individual functions of the behaviour. The current treatment approaches most often cited in the literature in the treatment of NSSI will be reviewed in this section.

Working alliance. While there are varying theoretical directions from which clinicians can approach NSSI, the working alliance between clinician and client is essential to treatment of NSSI. The clinician at times may experience strong negative reactions in dealing with those engaging in NSSI (Walsh, 2006), as mentioned previously in the dissatisfactory experiences of individuals with health care professionals (McHale & Felton, 2010; Warm et al., 2002). It becomes imperative that the clinician be able to

empathize with the client's pain and attempt to understand that NSSI may be the only option the client feels is available to him or her at that time, as an effective, albeit self-destructive, coping mechanism (Muehlenkamp, 2006). Conveying nonjudgmental compassion that communicates acceptance, empathy, and respectful curiosity is essential, particularly when assessing NSSI (Walsh, 2006).

Qualitative research in a clinical population has provided additional insight into the power of the working alliance when helping those who self-injure. Weber (2002) had women in a mental health hospital describe interventions they found most effective during times of distress in which they wanted to self-injure. Participants identified being able to talk with staff and be listened to; engaging in distraction; and the basic comforting techniques of support, reassurance, and respect to be beneficial in avoiding an act of NSSI (Weber, 2002). The participants stressed the significance of the use and importance of the nurse-client relationship.

Emotional regulation. Research has indicated that the identification and remediation of skill deficits, such as emotion regulation skills, is a key component for reducing NSSI (Muehlenkamp, 2006). Treatment would not be focused on the avoidance or suppression of emotions; rather, it encourages the conceptualization of both the positive and negative functions of emotions and fosters the awareness, understanding, and acceptance of all emotions (Gratz, 2007). Emotional regulation requires a willingness to experience emotion and acceptance that emotions are part of a meaningful life. In addition, emotional regulation involves the ability to both engage in goal-directed behaviours and inhibit impulsive behaviours to modulate the intensity, duration, or both intensity and duration of emotional responses (Gratz, 2007). The premise is that

regulating emotions decreases the need for maladaptive coping strategies such as NSSI (Gratz, 2007).

Given the numerous functions endorsed for engaging in NSSI, interventions and treatment must adapt and similarly address the different functions presented by the individual. As mentioned previously, Jacobson and Gould's (2007) review of the literature found that, among adolescents, emotional regulation was the most commonly endorsed reason for engaging in NSSI. Klonsky's (2007) review of the literature supported this statement, finding affect regulation was apparent in every study reviewed.

Interventions may be more effective if aimed at replacing the maladaptive coping strategy of NSSI with a functionally equivalent behaviour (Nock & Prinstein, 2004). For example, an individual whose NSSI is maintained by intrapersonal reinforcement (i.e., affect regulation) would likely benefit from treatment that focuses on enhancing alternative affect regulation skills (Nock & Prinstein, 2004). Turner et al. (2012) recommended individuals who use NSSI and endorse emotional relief and self-punishment would likely benefit from interventions tailored to address better tolerating, expressing, and regulating emotions. Lloyd-Richardson et al. (2007) suggested interventions aimed at stress management, communication, and development of alternative skills for positive coping may be most beneficial for NSSI.

Dialectical behavioural therapy. Dialectical behavioural therapy (DBT) is a formalized, manualized treatment approach that targets emotional dysregulation. It is the combination of cognitive-behavioural treatments with acceptance and mindfulness-based approaches derived from Eastern philosophies like Zen (Gratz, 2007). DBT teaches four particular sets of skills: (a) emotion regulation, including learning to identify and label

emotions and their functions; (b) distress tolerance, accepting and tolerating emotional distress; (c) mindfulness, an awareness of self and context without judgement; and (d) interpersonal effectiveness skills (Feigenbaum, 2008; Gratz, 2007). As DBT was originally developed to treat individuals with BPD, the assumption is that it also has significant therapeutic value in the treatment of NSSI due to the need for those who engage in the behaviour to regulate their emotions. DBT seeks to reduce NSSI by implementing new coping skill sets and encourages individuals to reduce NSSI prior to going further into therapy (Muehlenkamp, 2006).

The limited empirical evidence on the subject appears to support the effectiveness of DBT in the treatment of NSSI (Moorey, 2010; Muehlenkamp, 2006); however, it is unclear what therapeutic mechanisms are at work. An empathetic and collaborative therapeutic alliance may be one of the key components contributing to the success of DBT, along with skills that enhance a client's coping mechanisms and awareness of self (Muehlenkamp, 2006). DBT has demonstrated effectiveness at reducing suicide attempts and parasuicide behaviours among adolescent inpatients with BPD when compared to treatment as usual ($N = 62$; Katz, Cox, Gunasekara, & Miller, 2004). Linehan et al. (2006) found DBT to be more effective in preventing suicide attempts among participants with BPD ($N = 101$) than treatment by community experts. However, when controlling solely for NSSI, the authors found no differences between the community treatment groups and DBT groups. As DBT has been utilized in the treatment of BPD, with NSSI being a primary symptom, it is not valid to simply generalize findings to individuals without BPD. It is possible that interventions target aspects of NSSI other than those of emotion regulation, making it unclear exactly what skills are helpful in the reduction of

the behaviour (Gratz, 2007). Nock, Teper, et al. (2007) argued there is a need for randomized clinical trials to demonstrate reductions in NSSI are significantly better than those seen through other types of treatment.

Psychodynamic therapy. Common therapeutic elements of psychodynamic therapy are the processing of past relationships and the building of new, positive interpersonal relationships; increasing awareness of affect; and focusing on developing the client's self-image (Klonsky & Muehlenkamp, 2007). The client is encouraged to understand the origins of his or her behaviour in the unconscious and to verbalize his or her feelings (Crowe & Bunclark, 2000).

A psychodynamic approach has been one form of therapy utilized in the treatment of self-injury (Crowe & Bunclark, 2000; Klonsky & Muehlenkamp, 2007). However, research has traditionally focused utilizing participants with a diagnosis of BPD. In an 18-month follow-up of patients with BPD ($N = 44$; Bateman & Fonagy, 2001), significant improvements on outcome measures of reduced self-harm and lowered hospital admission rates were attributed to gains made through treatment with individual and group psychoanalytic psychotherapy. In a study amongst BPD participants ($N = 60$; Korner, Gerull, Meares, & Stevenson, 2006), those assigned to psychodynamic treatment conditions showed marked reductions in self-harm episodes over a 12-month period, while participants assigned to treatment as usual actually demonstrated an increase in self-harming behaviour. The authors hypothesized the reductions in self-harming behaviour were a result of the therapeutic relationship rather than any specific interventions utilized during treatment. Thus, similar to studies measuring the effectiveness of DBT, the mechanisms behind the therapeutic change within the

psychodynamic framework as it pertains to NSSI have yet to be identified (Klonsky & Muehlenkamp, 2007).

Replacement skills training. Walsh (2006) suggested anecdotal evidence has pointed to replacement skills training as having clinical utility in treating NSSI. Replacement skills training focuses on having the individual learn to engage in other, pre-selected activities rather than engaging in NSSI. Replacement skills are selected that are relevant and effective to the individual, meaning the therapist and client collaborate on selecting skills the client might find helpful, and the client practices to determine which skills he or she finds actually work for him or her. Selecting individual, specific skills will increase the likelihood they will be used during a time of distress, as will repetition of skills during periods of calm.

Walsh (2006) identified nine types of replacement skills found to be particularly effective in dealing with emotional distress: (a) negative replacement behaviours, behaviours that resemble NSSI such as colouring on oneself with a red marker or snapping an elastic band on one's wrist; (b) mindful breathing skills, allowing the individual to become calm and focused; (c) visualization techniques, identifying and retrieving pleasant and relaxing scenes; (d) physical exercise or movement, walking meditation can be especially useful; (e) writing, such as journaling; (f) playing or listening to music; (g) communicating with others, which could include calling crisis hot lines; (h) diversion techniques, engaging in a variety of behaviours such as watching TV, cleaning, reading, and cooking to deflect attention from the thoughts, plans, and urges to self-injure; and (i) artistic expression (e.g., painting, drawing, etc.). The goal is for the replacement skills, rather than the NSSI, to be used as a temporary coping mechanism in

order to manage emotional distress until more sophisticated forms of coping can be established.

Wester and Trepal (2005) noted that similar to replacement skills training, providing clients with alternatives to NSSI might help minimize the severity of behaviour and assist during the counselling process, although they cautioned it was not a cure. The authors suggested it was important to match the type of alternative to the specific function NSSI provides for the client (e.g., a similar feeling or sensation without creating tissue damage). In order to provide a relevant alternative, the counsellor would need to assess at what point the NSSI has served its purpose for the client, and has helped him or her cope, and the reason or purpose of the behaviour. Although providing alternatives does not provide treatment for NSSI, Wester and Trepal suggested it could provide temporary relief and be a safer option while the client begins to address the core underlying issues.

Identifying ways of resisting urges to self-injure could help to improve treatment of NSSI, particularly as a therapeutic goal is often delaying the time between the initial thought of NSSI and the actual behaviour. Among a university sample ($N = 39$), Klonsky and Glenn (2008) found most self-injurers attempted to resist urges to self-injure, often employing a wide range of methods in attempts to resist urges to self-injure, such as being around friends and keeping busy. Participants rated the most helpful methods, such as exercise and removing the implement of injury from home; however, they were not the most commonly used, perhaps because they were not as intuitive. Klonsky and Glenn's findings have significant clinical implications, as helpful methods for resisting urges can be worked into therapeutic treatment plans.

Problem-solving therapy. Another approach that has shown some success in treatment of NSSI is problem-solving therapy (PST), particularly when combined with other cognitive behavioural therapy skills. PST helps individuals systematically define problems, generate a greater range of solutions, select an action plan, put the plan into effect, and then evaluate it (Moorey, 2010). Muehlenkamp (2006) noted the goal of PST is to assist clients in identifying and resolving the problems they encounter in their daily lives as well as formulating coping strategies and problem-solving skills that can be utilized in the future. PST approaches that incorporate additional cognitive, interpersonal, or behavioural elements to form a more comprehensive approach have demonstrated greater long-term efficacy (Muehlenkamp, 2006). The underlying assumption is that unhealthy coping (i.e., NSSI) is due to a breakdown in cognitive or behavioural processes in problem solving (Muehlenkamp, 2006). Using the framework of PST, NSSI is conceptualized as a dysfunctional solution to problems; therefore, improving problem-solving attitudes and skills allows an individual to decrease his or her reliance on NSSI to cope (Washburn et al., 2012).

Wester and Trepal (2010) found evidence that supports a problem-solving approach; they differentiated three groups of university students ($N = 974$): (a) those who never self-injured, (b) those who had in the past, and (c) those who currently self-injured. The latter group, despite being in counselling at a rate of 21.6%, were least likely to use problem-focused coping behaviours to help deal with stress and difficult emotions; rather, they continued to engage in avoidant methods of coping, such as substance abuse and behavioural disengagement, as measured by the Brief Coping Orientations to Problems Experienced (COPE) Inventory (Carver, 1997). Wester and Trepal (2010) noted

participants who were currently engaged in self-injury did not actively devise strategies to solve their problems, attempt to reframe problems to a positive perspective, or concentrate their efforts in actively changing their situations. Those engaged in self-injury tended to give up trying to address problems and were less likely to seek social support when attempting to solve problems. Participants who currently self-injured or had self-injured in the past were more likely to engage in substance abuse in coping with problems and to blame themselves for problems when compared to participants who had never self-injured. Students who never self-injured were more likely to seek social support and use significantly more problem-focused coping strategies, such as active coping and planning, than those who currently self-injured (Wester & Trepal, 2010).

Wester and Trepal (2010) suggested creating step-by-step strategies for resolving problems may be more beneficial than concentrating on emotion-focused coping strategies, as all three groups were found not to differ on their likelihood to use emotion-focused coping strategies, such as acceptance and humour. The authors posited that counsellors could assist clients who self-injure with utilizing the problem-focused coping strategies, such as planning and actively working through situations endorsed by participants who self-injured in the past or had never self-injured. The authors hypothesized participants who had stopped self-injuring had learned problem-focused coping strategies to work through their presenting concerns, and they no longer needed to use NSSI as a coping method to alleviate overwhelming emotions.

Washburn et al. (2012) noted evaluations of PST are suggestive of its potential as an effective treatment for individuals with deliberate self-harm, but also cautioned that the findings have limitations. Washburn et al. noted meta-analysis studies have produced

inconsistent results, with some studies not measuring directly the effects of treatment on self-harm, while another meta-analysis, although noting a trend towards reduction in deliberate self-harm among five studies, did not find statistically significant reductions when compared to control groups (Hawton et al., 1999). Further, the construct of self-harm rather than NSSI was being evaluated.

Cognitive behavioural therapy. Cognitive behavioural therapy (CBT) has been well documented at treating a range of psychological problems, including depression, anxiety, post-traumatic stress disorder, and suicidality (Butler, Chapman, Forman, & Beck, 2006; Moorey, 2010), which are some of the psychological correlates associated with NSSI (see Chapter 2). Cognitive therapies evaluate and challenge an individual's dysfunctional cognitions in order to get the individual to question the processes that maintain NSSI. One of the underlying assumptions of CBT approaches is that individuals struggle not only with deficits in emotional regulation, but also have difficulty in managing stressful life events. CBT approaches aim to create a detailed cognitive conceptualization of dysfunctional beliefs associated with NSSI, such as hopelessness, helplessness, and unloveability, with the client, and elaborate cognitive and behavioural coping strategies are examined (Moorey, 2010).

Cognitive therapy targets the core beliefs, recurrent automatic thoughts, assumptions, rules, and attitudes that support NSSI. Walsh (2006) suggested it is useful to determine how much a person believes a particular thought, as thoughts held with the greatest convictions required the most significant amount of attention. According to Walsh (2006), treatment aims at getting the individual to weigh the evidence both for and against the automatic thought (e.g., "Hurting myself is the *only* way to feel better").

Once the individual begins to question his or her automatic thoughts, adaptive and positive thoughts can be introduced, evaluated, and integrated (e.g., “Cutting myself will not make me feel better in the long term”). Throughout the course of treatment, the individual learns to identify his or her recurrent automatic thoughts and recognize that they are a cue that NSSI is about to occur. The individual then immediately uses replacement skills (e.g., breathing) as an alternative to injury (Walsh, 2006). The development of healthy coping skills aimed at targeting deficits and creating exercises directed at managing dysfunctional thoughts and feelings have been thought to be beneficial in reducing self-harm (Taylor et al., 2011).

The success of DBT in reducing NSSI in individuals diagnosed with BPD and the efficacy of CBT in the treatment of mood disorders such as depression has led some to integrate elements of both approaches in the treatment of NSSI (Moorey, 2010). Manual-assisted cognitive behaviour therapy (MACT) combines CBT with techniques of DBT in a booklet for bibliotherapy, in addition to up to seven treatment sessions with a clinician. While an initial pilot study ($N = 32$; Evans et al., 1999) found MACT to reduce depressive symptoms and increase positive future thinking in individuals with repeated deliberate self-harm, a further investigation ($N = 480$; Tyrer et al., 2003) revealed no significant differences in self-harm reductions between those treated with MACT over treatment as usual. However, Tyrer et al. (2003) asserted MACT to be superior over treatment as usual when considering the cost effectiveness and brevity of the combined treatment, in conjunction with the efficacy in reducing self-harm repetition. Further support for the efficacy of a manualized CBT approach for self-harm were found in a pilot study of adolescents ($N = 25$; Taylor et al., 2011) presenting for outpatient treatment

in the United Kingdom. Significant reductions in self-harm behaviour posttreatment and at a 3-month follow-up session were observed, as well as reductions in depressive symptoms and trait anxiety.

The efficacy of interventions drawn from a model that assumed vulnerability to self-harm could be addressed based on cognitive-behavioural maintenance factors (i.e., self-harm can be reduced through increased-problem solving abilities, changing negative and suicidal thinking, and dealing with the triggers of self-harm) was examined by Slee, Garnefski, van der Leeden, Arensman, and Spinhoven (2008). Participants ($N = 90$) aged 15 to 35 years of age were randomized to 12 CBT sessions or treatment as usual, which participants choose on their own accord and included psychotropic medication, psychotherapy, and psychiatric hospitalization. Participants allocated to the CBT group showed on average a significant decrease in self-harm when compared to participants in the treatment-as-usual group. Additionally, those receiving CBT showed significantly greater reductions in depression, suicidal cognitions, and anxiety and significantly greater improvements in self-esteem and problem-solving ability (Slee et al., 2008). It is important to note that while the aforementioned research (Evans et al., 1999; Slee et al., 2008; Taylor et al., 2011; Tyrer et al., 2003) provided evidence for the efficacy for CBT, all the studies examined reductions in deliberate self-harm (i.e., inclusive of suicidal intent) rather than NSSI. Nevertheless, given the lack of randomized controlled trials evaluating treatment of NSSI (Nock, Teper, et al., 2007), this evidence provides valuable information into the potential utility of cognitive-behavioural approaches.

Multimodal approach. According to Klonsky and Muehlenkamp (2007), the key to successfully treating NSSI is the ability of the clinician to form an empathic, nonjudgmental relationship with the client and to be flexible in adapting empirically supported techniques into an individualized, multimodal approach. The following approach, supported by the researcher, integrates a number of the approaches previously reviewed. Muehlenkamp (2006) proposed a comprehensive treatment approach for NSSI that involved four key elements: (a) the therapeutic relationship, (b) a functional behavioural analysis, (c) behavioural interventions, and (d) cognitive restructuring. Each of these items will be briefly reviewed.

Muehlenkamp (2006) asserted a strong, empathetic therapeutic relationship that relies on collaboration with the client appears to be vital to successfully treating NSSI, as the relationship can often be challenged. Conducting a functional behavioural analysis allows the clinician and client to uncover the precipitating and maintaining factors (i.e., cognitive, emotional, and environmental) associated with an act of NSSI. Furthermore, understanding the context of NSSI allows for targeted interventions and alternative coping strategies. Behavioural interventions, such as teaching new skills or discovering alternative ways of expressing emotion, that focus on eliminating the PRs and NRs of NSSI, as identified through the behavioural analysis, are likely to produce the greatest effects in reducing NSSI. Finally, cognitive restructuring will likely be necessary in order to tackle key cognitive distortions that maintain NSSI. Muehlenkamp (2006) stressed that using cognitive therapy techniques that challenge and change key dysfunctional beliefs will likely result in a reduction and potential cessation of NSSI.

Treatment and interventions summary. In summary, while the mechanisms behind effective treatment of NSSI remain largely unknown, a comprehensive, multidimensional approach incorporating basic techniques from behavioural, cognitive, and problem-solving treatments appears to produce the greatest effect (Muehlenkamp, 2006). Due to the heterogeneity of individuals who engage in NSSI, creating a standardized treatment that is effective for all is likely unrealistic. Muehlenkamp (2006) proposed that therapies must be multimodal and have standardized interventions that have demonstrated efficacy in addressing specific aspects of NSSI (e.g., emotion regulation and distress tolerance), but remain flexible enough to be tailored to the functions that produce and maintain NSSI in certain individuals.

In this section, information on the therapies and interventions currently being used in the treatment of NSSI was provided. Given the lack of research into treatment of NSSI, insight into the efficacy of treatments can be drawn from randomized controlled trials evaluating the effectiveness in populations engaging in deliberate self-harm (i.e., self-injury inclusive of suicidal intent). This summary provided the foundation for the formation of open-ended survey questions for this thesis, in which participants were asked about potential treatments they may have utilized that assisted in the cessation of NSSI. Participants were asked regarding the potentially helpful and unhelpful elements of treatment, as well as the type of treatment. As these questions will assist in answering the primary research question of how and why individuals are able to successfully resolve NSSI, providing a thorough background of the available treatments was crucial to understanding potential factors that may influence cessation.

Chapter Summary

This chapter provided additional background information on NSSI by examining how the behaviour is currently treated. A brief review of assessment was presented, including a review of two commonly used instruments, the SITBI (Nock, Holmberg, et al., 2007) and the ISAS (Klonsky & Glenn, 2009). Few standardized instruments of assessments for NSSI have been developed to date (Craigén et al., 2010), with the majority of instruments focusing on the presence and functions of the behaviour. The survey questionnaire contributed to the literature by addressing the instances when the individuals is not engaged in NSSI and seeks to examine the factors that contribute to cessation. The emphasis of the survey was on the solution to NSSI, rather than the problem, unlike previous instruments.

This chapter also discussed the challenges individuals face when seeking treatment. Low rates of help seeking can be found amongst individuals who engage in NSSI, potentially due to experiences of negative attitudes by health professionals (McHale & Felton, 2010) and an overgeneralized sense of shame that could inhibit help seeking (Flett et al., 2012). Individuals seeking treatment for NSSI have been found to disengage from treatment early, independent of type of treatment sought (Ougrin & Latif, 2011). Further research is needed to determine how to draw individuals to treatment and retain them in treatment. Through this thesis, the researcher sought to address these factors indirectly by asking participants about the helpful and unhelpful aspects of treatment they may have received.

The currently utilized approaches in the treatment of NSSI were presented in this chapter, and included: the working alliance, emotional regulation, DBT, psychodynamic,

replacement skills training, PST, CBT, and a multimodal therapeutic approach. Each treatment was reviewed, and where available, evidence regarding its effectiveness was presented. However, randomized clinical trials regarding therapeutic interventions and NSSI was rare (Nock, Teper, et al., 2007), and much of the evidence has been drawn from studies involving individuals with BPD or those who have engaged in deliberate self-harm, inclusive of suicidal intent. Although this may limit the generalizability of findings, it does provide insight into treatments that have been useful in assisting in the resolution of self-harming behaviours. The researcher supports a multimodel treatment approach that incorporates key elements of the therapeutic relationship, a functional behavioural analysis (i.e., assessment techniques), behavioural interventions, and cognitive restructuring (Muehlenkamp, 2006).

While the focus in this chapter was on treatment of individuals engaged in NSSI, in Chapter 4, a comprehensive look at the available literature regarding NSSI and cessation (i.e., those who have successfully resolved NSSI) will be discussed. The core foundational framework for the thesis survey questionnaire will be provided in Chapter 4, and a thorough discussion of the available literature on the cessation of NSSI will be presented.

Chapter 4: The Cessation of Non-Suicidal Self-Injury

The intention of providing an extensive literature review to this point has been to establish a context in which NSSI exists. This is in line with Motz's (2009) work, as she noted NSSI needs to be acknowledged, with attention given to the function and purpose of NSSI. It is timely to address the major focus of this thesis: the cessation of NSSI.

The focus of this chapter will be on reviewing the very limited available research on the cessation of NSSI, as this provides the essential theoretical foundation for the thesis. Reviewed in detail will be the eight studies that could be located regarding the cessation and recovery from NSSI. This establishes that the thesis has the potential to significantly contribute to the understanding of how and why people stop engaging in NSSI. Each study will be explored in detail in order to provide a foundational framework for the methods employed within the thesis, as insight gleaned from previous research was utilized in the formulation of survey questions and aided in providing the factors that were addressed when investigating potential reasons for cessation. Many of the variables developed for the survey questionnaire have been drawn from the findings presented in Chapter 4.

NSSI Cessation Research

Study #1: Cessation within a nonclinical sample. Shaw's (2006) study investigating how women successfully resolved NSSI was central to this thesis. The purpose of the study was to understand how women stopped NSSI and to determine the role, if any, of professional treatment during this process (Shaw, 2006). The study will be reviewed in detail in the following section, and links will be provided to the thesis.

Participants. Shaw's (2006) participants were six female college students, aged 18 to 21 years, recruited through posters at three different colleges in the United States. Participants had a history of repeated NSSI behaviour, endorsing cutting behaviour an estimated 10–50 times during their engagement of NSSI (a period that ranged from several months to 5 years). Participants reported first engaging in cutting behaviour between the ages of 13 and 19 years. Shaw (2006) noted some participants endorsed NSSI such as burning and other self-destructive behaviours (e.g., eating disorders), although the exact number of participants was not reported. Prior to the study, participants had not engaged in cutting behaviours for a time period of 10 months to 5 years.

Method. Shaw (2006) engaged in three, 1.5-hour, open-ended, face-to-face interviews with each participant for a cumulative total of approximately 9 hours. Participants completed initial demographic information, including history of mental and physical illnesses and traumatic experiences. The initial interview sought to determine the participant's life context, including family, relationship, childhood or adolescent experiences, body image, and coping mechanisms. The second interview focused on assessment of NSSI, other forms of self-harming (such as disordered eating and substance abuse), and treatment of NSSI. The final interview examined the meanings of NSSI—essentially how the participant made sense of her behaviour. The final interview also addressed the impact of NSSI on the participant's life and relationships, experiences that were perceived as helpful or unhelpful in dealing with NSSI, the experiences the participant would have hoped for, and visions for the future. The study utilized grounded theory, interpretive poetics, and voice-centred analytic methods to analyze the data.

Results. Based on the in-depth interviews, Shaw (2006) identified 10 salient factors present during participants' journeys towards the cessation of NSSI. Given the significance and relevance of these findings to this thesis, each factor will be discussed in further detail. To provide an overall context, the factors will be listed and then elaborated upon. The three factors directly related to the act of NSSI were: (a) the desire or decision to stop NSSI, (b) the meaning of NSSI and problem identification, and (c) elimination or decreases in psychological catalysts to NSSI. In addition, four factors were found related to broader life issues: (a) professional treatment, (b) self-initiative, (c) life commitments and engagements, and (d) relational ties and support. Furthermore, three factors were considered to be general factors salient to stopping NSSI: (a) motivators to stop and deterrents to NSSI, (b) disclosure, and (c) momentum. It should be noted that the specific number of participants endorsing each factor will be reported where available; however, this was not always reported in the original article, perhaps owing to small sample sizes.

Factor 1: Desire or decision to stop NSSI. Shaw (2006) found the desire to stop engaging in NSSI existed on a continuum, with two participants reporting making a clear decision to stop NSSI, while one participant expressed little or no desire to stop NSSI, despite having successfully resolved the behaviour. One participant reported ambivalence towards cessation of NSSI, while another endorsed a passive transition towards stopping the behaviour, indicating she outgrew the behaviour. Shaw noted the cessation of NSSI in this sample was not necessarily predicted by participants' varying inclinations or disinclinations towards cessation. Given this finding, this thesis sought to investigate the role of the decision or desire to stop the engagement in NSSI as an influential variable in cessation. Participants were asked questions surrounding the extent

to which the decision or desire to stop engaging in NSSI influenced cessation. The thesis also examined if cessation was associated with factors such as the decision to stop NSSI or by maturational factors such as outgrowing the behaviour.

Factor 2: Meaning of NSSI and problem identification. Shaw (2006) found that the participant's understanding of her NSSI behaviour and what she perceived to be problematic in her life was crucial to her stance towards stopping the behaviour. For example, an individual may not want to stop engaging in NSSI if he or she does not view it as a problem if he or she believes it allows him or her to cope with unpleasant emotions. However, if an individual views NSSI as no longer providing the affective regulatory functions it once did and instead begins to see the behaviour as a source of distress, this may lead the individual to stop engagement in NSSI. This is consistent with exploration of the functions of NSSI (see Chapter 2) and was a primary goal of inquiry for this thesis. Shaw hypothesized the functions that NSSI provides to the individual would play an influential role in reasons for cessation.

Shaw (2006) further investigated how participants viewed their NSSI prior to cessation (e.g., as assisting them in dealing with issues or as a problem contributing factor to psychological distress). Participants were asked for their opinions about how NSSI helped them (e.g., as a coping mechanisms, affect regulation, or interpersonal influence), in order to determine potential association with cessation. Through an examination of the functions NSSI once provided to the individual, the questionnaire investigated if participants endorsed these same functions as being influential during cessation.

Factor 3: Elimination or decrease in psychological catalysts to self-injury. Shaw (2006) found all the participants reported cessation of NSSI when the psychological symptoms that drove NSSI, such as extreme anxiety or dissociation, were reduced in entirety, frequency, or intensity. Participants endorsed various reasons for the elimination, reduction, or both elimination and reduction of psychological symptoms, such as more adaptive coping skills, while other participants reported feeling emotionally better. This variable was examined in the thesis by determining if participants' psychological catalysts were eliminated or reduced in frequency or intensity prior to cessation. As such, this indirectly measures the psychological correlates and risk factors of NSSI, which were comprehensively outlined during Chapter 2 of the literature review.

Factor 4: Professional treatment. Shaw (2006) found two of the six participants did not receive professional treatment during the resolution of NSSI behaviour. One participant reported feeling that professional help would not have been beneficial to helping her resolve NSSI behaviour, as she found social supports from friends to be much more favourable, providing a sense of mutual caring and a feeling of being loved. Other participants perceived professional treatment as validation they were experiencing psychological distress and viewed treatment as a symbol of care. However, professional help was also met with feelings of trepidation that therapy might expose painful vulnerabilities, with participants feeling unworthy of deserving treatment.

Participants reported an empathic relationship with a professional who finds strengths beyond diagnostic labels as being helpful in the cessation of NSSI. Shaw (2006) noted that providing a place to explore their NSSI behaviours allowed participants to make meaning of their NSSI—an intervention that was reported as powerful yet

underutilized. Helpful interventions included verbal plans for dealing with urges to engage in NSSI and concrete methods for managing feelings. Two participants also reported differences in preference for treatment, with some showing an inclination towards a structured approach such as DBT; whereas, others preferred an unstructured approach that was consistent with their ambivalence to stop injuring. This thesis investigated the role of professional treatment by determining if participants sought treatment prior to cessation. Further, the type of treatment was sought from participants, as well as the helpful and unhelpful elements of treatment.

Factor 5: Self-initiative. All six participants spoke of taking control of their lives as an essential aspect of cessation. Shaw (2006) classified the process self-initiative as manifesting in cognitive, emotionally, and behaviourally focused experiences. Participants developed psychological insight and knowledge, such as developing an understanding of the triggers of NSSI. Participants also developed a belief in the inherent value of the self, as evidenced by a concern for her physical and psychological well-being and a desire to live true to oneself. Participants also took the steps necessary in order to care and advocate for themselves, such as learning to cope with psychological distress and urges to engage in NSSI and asking for help. Self-initiative can be thought of as the internal processes that are primarily independent of others that allow the individual to manage his or her life (Shaw, 2006). Self-initiative was investigated in the thesis by examining how participants sought to take control of their lives prior to cessation, as it relates to cognitive, emotional, and behavioural areas. This variable focused on the internal process of change, independent of outside sources.

Factor 6: Life commitments and engagements. Participants reported decreased NSSI behaviour as involvement in other life pursuits, such as intellectual and career goals, became more prominent in their lives. Some participants reported that NSSI might interfere with the attainment of goals (e.g., the belief that physical scars would impede employment opportunities). Shaw (2006) speculated that for other participants, there was no longer room for the behaviour after participants began filling their lives with meaningful activities, such as higher educational pursuits and increased social networks. Four of the six participants became more future oriented, meaning they were able to think through the consequences of engaging in NSSI and determine the behaviour was no longer in their best interests. The variable of life commitments was investigated in this thesis by inquiring if participants engaged in future-oriented and goal-directed pursuits prior to cessation.

Factor 7: Relational ties and support. Shaw (2006) found the role of relational ties and the support from peers, parents, and romantic partners was crucial in the successful resolution of NSSI. Participants reported having a dependable, supportive relationship provided emotional connection, mutual concern, and validation, as well as companionship. Participants endorsed supportive relationships as being helpful, as psychological distress no longer had to be hidden and the other individuals could be used as role models for healthier living. These relationships were a source of strength for participants and functioned as encouragement for participants to seek professional treatment or other resources. The role of support in the cessation of NSSI was examined in this thesis by asking participants about the extent to which supportive relationships assisted in the resolution of the behaviour.

Factor 8: Motivators to stop and deterrents to NSSI. Various motivators to stop and deterrents to NSSI were endorsed; however, Shaw (2006) found participants most frequently reported a relational aspect to cessation, such as the desire to please or not concern others. Other reported deterrents included fears around being labelled as crazy and having the behaviour spiral out of control. Motivators for cessation were often associated with the future-oriented and goal-directed behaviour endorsed in the previous factor of life commitments and engagements, as well as participants' growing self-initiative (e.g., becoming self-protective). This indicates that while some factors directly relate specifically to the NSSI, other factors are interconnected with one another. It is important to note this, as it serves to highlight the complexity and numerous variables that exist during the cessation of NSSI. Given the complexity and likelihood of related factors, the variables of motivators and deterrents of NSSI were investigated within this thesis by providing participants with the opportunity to describe this variable in their own words, through the use of open-ended questions.

Factor 9: Disclosure. Shaw (2006) noted that participants were aware of the stigma often faced by individuals who engage in NSSI and took great risks in disclosing their NSSI behaviour within a supportive relationship. While some participants were dismissed and pathologized and the disclosure tested the strength of their relationships, telling another individual about engagement in NSSI served a functional role in assisting participants to address issues of concern in their lives. Many participants found disclosure to be therapeutic and allowed them to discuss the experiences and functions that were underneath the behaviour. Disclosure also allowed two participants the ability to make disclosures regarding other painful experiences and to expose part of their

identities, allowing them to live more authentically true to their histories and developing identities. Participants also utilized disclosure as a means of accessing professional help and cementing a commitment to not engage in NSSI behaviour. The variable of disclosure was investigated in the thesis by determining if participants reported disclosure prior to cessation.

Factor 10: Momentum. Shaw (2006) found participants reported that once they had stopped engaging in NSSI for a period of time, or disrupted the pattern of NSSI, the idea of engaging in NSSI in the future became increasingly ego dystonic. Additionally, participants also endorsed greater ease in resisting urges to engage in NSSI the longer they refrained from self-injuring. The variable of momentum in this thesis was not investigated, as it pertains more to the concept of recovery rather than cessation in maintaining the resolution of NSSI. Momentum does not provide insight into what led to the initial cessation or disruption of the pattern of NSSI.

Summary of study #1. Shaw (2006) found 10 salient factors were associated with participants' successful cessation of NSSI; Shaw speculated many of these factors were representative of a developmental process normative to this life phase (i.e., young adulthood). This assertion was evidenced by an increased focus on future orientation, the participants' increased ability to understand the meanings of their NSSI behaviour, the growing capacity to take responsibility in acting and advocating for themselves, and their ability in negotiating issues of identity. These factors allowed for individuals to play a central and active role in the movement away from NSSI behaviour (p. 170).

However, it was also important to note that the cessation of NSSI did not equate to psychological health. Shaw (2006) noted participants varied on levels of

psychological robustness. Participants showing greater robustness showed a stronger sense of agency, repertoire of coping skills, solid relationships and connections to the community, and interests and goals to work towards, and they were more likely to have engaged in professional treatment. Participants demonstrating lower psychological robustness endorsed a relatively passive process towards cessation (i.e., they spoke of the absence of the behaviour as opposed to a transformational process) and reported fewer resources, a less solid sense of self, tenuous connections to the community, and no clear goals.

Unique thesis contribution. Shaw's (2006) findings provided the core theoretical foundation upon which the survey questionnaire was built. Nine of the 10 factors (the exception being momentum) were used as variables in order to assist in determining how and why individuals are able to successfully stop engaging in NSSI behaviour. The intention of the thesis was to expand on Shaw's (2006) initial research, given Shaw's limited sample size of only six women. It was the researcher's hope that a greater sample size that is inclusive of men would help to improve the generalizability of Shaw's findings. Further, the thesis differed in regards to methods, as Shaw utilized in-depth qualitative interview techniques in order to develop the aforementioned conceptual categories and factors. On the basis of Shaw's findings, this thesis sought to provide further insight by implementing these categories into a survey method for quantitative analysis.

Study #2: Additional research within a nonclinical sample. The next study to be reviewed is the honour's thesis by Zofnass (2009), which added further justification

for the use of the factors Shaw (2006) found to be influential in cessation: most notably, that of social support and self-initiative.

The 464 participants in Zofnass's (2009) study, aged 14 to 24 years, were recruited for an online survey using a mixed-methods design. Zofnass found 77% of participants reported current engagement in NSSI, and 23% reported past engagement, as determined by the past six months. Among those who reported to have successfully resolved the behaviour, 60% stated social reasons as one of the most helpful factors contributing to cessation, such as specific individuals providing support; 36% indicated factors related to internal reasons and motivations; 20% reported professional treatment; 14% reported the potential consequences of NSSI contributed; 10% endorsed religious reasons; and 6% reported NSSI was no longer helping (Zofnass, 2009). The variables of social support, internal motivation, professional treatment, potential consequences, and self-reported functionality of NSSI were examined within the survey. The variable of religious reasons was not measured directly. However, as participants were asked open-ended questions regarding the motivations and incentives for cessation, as well as the deterrents to NSSI, religious reasons had the potential be examined.

Study #3: Cessation within a clinical sample. Continuing with the review of the publications focusing on the cessation of NSSI will be Grocutt's (2009) study. Grocutt's doctoral research project, unlike Shaw's (2006) study, focused on a clinical sample. However, similar to Shaw's work, Grocutt's study was qualitative and focused on individuals who had successfully resolved NSSI behaviour. As such, Grocutt's study provided further insight into the cessation of NSSI and its premise will also be utilized to form the theoretical framework of the thesis.

Participants. Grocutt (2009) interviewed seven women from forensic mental health secure services in the United Kingdom who identified having begun the process of cessation of NSSI behaviour while in a secure setting. The women were aged between 21 and 59, with the length of current hospital admission ranging from 1 to 22 years. All participants endorsed a longstanding and severe history of NSSI and were able to recall when they began to self-injure, with many participants who reported beginning in adolescence. Participants had engaged in repeated and extreme forms of NSSI, which had left many with disfigurements, severe physical disabilities, and ongoing health complications. However, the criteria for NSSI were consistent with a range of behaviours that involved deliberately inflicting pain or injury to the body without conscious suicidal intent (Grocutt, 2009). All participants identified themselves as having stopped engaging in NSSI behaviour; however, it was not clear how long it had been since each participant last injured.

Methods. Grocutt (2009) utilized in-depth interviews that asked participants about the reasons for stopping NSSI. However, the number of times each participant was interviewed was unreported by the author. Participants were encouraged to voice the purpose and context of their engagement with NSSI, in order for the reasons for cessation to be fully explored. All participants referred back to their engagement with NSSI and provided a narrative of escalating violence with themselves. Interviews were analyzed using interpretative phenomenological analysis in order to determine salient themes.

Results. Grocutt (2009) found three dominant themes attributed to cessation of NSSI. The first theme highlighted the importance of relational support. The second theme was reflective of the varied experiences that served to initiate and sustain NSSI

cessation. From this theme, three subthemes also emerged: (a) events triggering cessation, (b) personal reasons to support cessation, and (c) prior cessation episodes. The third theme encompassed the personal and difficult journey towards cessation and involved two subthemes: (a) a difficult, long-term process and (b) pride and achievement. The following subsections will review each theme and subtheme.

Theme 1: Relational support. The first dominant theme represented the importance of accessing support from valued relationships. Participants highlighted the long-term emotional benefits of speaking with therapeutic care staff during times of distress as preferential to the immediate release provided by engagement in NSSI. Therapeutic relationships were based on available, positive, structured, and supportive interactions and provided validation, respect, and acknowledgement, as well as a sense of security and care (Grocutt, 2009). This was consistent with the notion an empathetic working alliance is crucial to the effective treatment of NSSI (Muehlenkamp, 2006; Walsh, 2006). Grocutt (2009) found participants also reported the emotional support received from peers who engaged in NSSI as being beneficial in facilitating a sense of understanding and decreasing feelings of isolation. Participants also recalled past significant relationships with family members and friends as reducing the urge to engage in NSSI, with the hope of reestablishing relationships with those outside the hospital setting as a motivator to maintain cessation.

The variable of relational support was investigated in the thesis by examining the influence of both professional treatment supports and emotional support by family members and friends. Participants were asked via survey if they believed having supportive structures assisted in their resolution of NSSI.

Theme 2: Incentives. The second dominant theme was reflective of participants' varied experiences that initiated and sustained cessation. Grocutt (2009) identified the following three subthemes, which will be reviewed below: events triggering cessation, personal reasons to support cessation, and prior cessation episodes.

The first subtheme is events triggering cessation. Some participants experienced an incident that served as a catalyst to cessation of NSSI behaviour. These included times in which women felt no longer in control of their NSSI and exceeded their own parameters of what constituted "acceptable" NSSI, to the extent that they realized the behaviour was no longer performing the function it was intended to serve. Participants reported the recognition of the severity of their NSSI served to promote change. This variable was examined in the thesis by asking participants if he or she experienced an event or event(s) that prompted him or her to stop NSSI; for example, if he or she experienced a loss of control of NSSI or felt his or her NSSI was beginning to scare him or her.

The second subtheme is personal reasons to support cessation. This subtheme highlighted the process of identifying incentives to maintain cessation. For many participants, the chance to reestablish personal relationships with family members was an incentive to stop engaging in NSSI. Cessation had a direct impact on participants' lives and relationships with others. This variable was addressed through the use of open-ended questions used to provide the motivations, incentives, and deterrents to NSSI identified by participants.

The last subtheme is prior cessation episodes. This subtheme represented the reflection of participants on times in their lives when they were not engaging in NSSI.

For some participants, these periods represented times of stability and provided inspiration for the future. However, for other participants, these periods of cessation were attributed to alternative forms of abuse in which the function and need to engage in NSSI were being met by another method (e.g., through violent relationships or substance abuse). Of particular interest to the researcher was the potential role of cessation being attributed to an alternative form of abuse, such as a substance abuse. This variable was examined by investigating if participants reporting cessation of NSSI also endorsed engaging in behaviours such as substance use that served similar functions and roles to that of NSSI.

Theme 3: Personal and difficult journey towards cessation. Grocutt (2009) noted a third dominant theme related to taking control of one's life, acknowledging the difficulty in the cessation of NSSI. The two subsequent subthemes that emerged included (a) difficult and long-term process and (b) pride and achievement.

The first subtheme is that cessation is a difficult and long-term process. Women's journey towards cessation and maintenance was found to be a difficult and long-term process, with participants stating they were "still battling with it" (Grocutt, 2009, p. 189). Reasons for maintenance included the acknowledgement that continuing to engage in NSSI was more detrimental in comparison to cessation, even though the temptation to self-injure was still prevalent at times. The decision to stop was an active choice, and all women felt a sense of pride and ownership. The women no longer identified themselves as "self-harmers" (p. 190) and had begun to forge a new identity for themselves. Participants endorsed having to make an active decision to take control of their lives and sought ways to cope with distress. For some women, therapeutic interventions were

helpful, while for others, replacement activities such as exercise, artistic endeavours, seeking support from staff, and self-care were more fundamental to maintenance of cessation.

All participants reported the urge to engage in NSSI remained. NSSI had provided a powerful and effective coping method for many years; thus, participants actively had to work to not return to well-rehearsed behaviours when in distress. The variability in strategies used by participants in Grocutt's (2009) study to achieve successful cessation of NSSI is reflective of the difficult process of resolving the behaviour. Participants in this study were asked an open-ended question about the strategies and techniques that were beneficial in their resolution of NSSI, in order to investigate this variable of the individual and potentially difficult process of cessation.

The second subtheme is that participants have pride in their achievement to cease NSSI. This subtheme represented the newfound self-perception that emerged from the cessation of NSSI. Through all of the women's narratives, there was a sense of pride, accomplishment, and of hope. Participants endorsed a sense of self-control, self-efficacy, and confidence (Grocutt, 2009). The survey questionnaire did not address this variable directly, as it is more reflective of the recovery process rather than cessation.

Summary of study #3. Grocutt's (2009) qualitative interviews with seven women in a secure clinical setting provided support for some of the factors found by Shaw's (2006) study with six women. Three dominant themes emerged from participants' perspectives on the cessation of NSSI that reflected the importance of accessing support from valued relationships, regaining control over their lives, and identifying the personal incentives that influence and maintain cessation (Grocutt, 2009). The themes of

relational support, personal incentives or motivators to cessation, and the desire to regain control of one's life are variables of inquiry present in the findings of both Grocutt (2009) and Shaw (2006) and were investigated within the thesis.

Grocutt's (2009) findings provided further justification for the factors and variables drawn from Shaw's (2006) study and helped to enhance the theoretical framework of the thesis. Grocutt's study differed from the thesis in that the focus was on a small clinical sample of women and utilized qualitative interviews. However, because the same variables pertaining to cessation were found in both Grocutt's clinical and Shaw's community samples, it was hoped that the thesis provided some insight to both clinical and nonclinical populations.

Study #4: Additional cessation research in clinical samples. Additional support for the variables Shaw (2006) and Grocutt (2009) found and further insight into cessation of NSSI can be drawn from Sinclair and Green's (2005) research. In their study, Sinclair and Green explored how young adults were able to move away from deliberate self-harm (i.e., NSSI irrespective of intent to die). The authors speculated the participants' subjective experience could provide insights on the appropriateness of treatment options and contribute significantly to the literature (Sinclair & Green, 2005), as no studies at the time had examined long-term outcomes from a qualitative perspective.

Sinclair and Green (2005) interviewed 20 participants, comprised of 8 men and 12 women drawn from previous hospital admissions; these participants had not had an episode of NSSI during the previous two years. Thematic and narrative analysis was utilized in order to identify recurring themes that aided in the cessation of NSSI.

Participants identified three recurrent narratives: (a) the resolution of adolescent chaos (i.e., gained predictability within the family structure) and establishment of a support person outside of the family to talk with, such as a professional or counsellor; (b) the recognition that alcohol played a significant role as did abstention from alcohol; and (c) the recognition and treatment of depression.

Sinclair and Green (2005) provided support for maturational factors, with participants' descriptions of changing life roles (e.g., achieving independence from their family of origin, having children of their own, etc.) that played an active role in resolution of NSSI. Participants identified their lives now having a sense of purpose and autonomy (Sinclair & Green, 2005). This was consistent with the factor of life commitments and engagements found by Shaw (2006). A sense of purpose was described as allowing for the ability to manage responses to distressing emotions in a healthier way as opposed to NSSI. The establishment of a supportive relationship highlighted the value of relational support and therapeutic care, results found by both Grocutt (2009) and Shaw (2006).

Sinclair and Green (2005) found four participants endorsed the misuse of alcohol as a previous attempt to escape difficult emotions: a strategy that further fuelled low self-esteem and precipitated NSSI. This supported both the notion NSSI functions as a means to regulate negative affect and the link between substance abuse and NSSI. Sinclair and Green's findings are also important, as they highlighted the significance of depression and NSSI, again providing support for the idea that NSSI acts as a means of emotional regulation. Once all participants began receiving treatment for their depression, their NSSI also began to resolve, with participants viewing admission to the hospital as a part

of the process of recovery (Sinclair & Green, 2005). This provided support for Shaw's (2006) finding that the elimination or decrease in psychological catalysts to NSSI is a significant factor in cessation of NSSI.

The limitations of Sinclair and Green's (2005) study included a small sample size and the inclusion of participants who engaged in deliberate self-harm irrespective of intent to die. This thesis differed significantly on this respect; in order to focus exclusively on NSSI, deliberate self-harm with the intent to die was excluded. This study also focused on a clinical population, while the thesis was conducted with a nonclinical population. However, maturational factors, relational support, the function of emotional regulation, effect of treatment of other psychological conditions (e.g., depression), and abstention from alcohol were variables examined in the thesis.

Study #5: Additional cessation research in nonclinical samples. Deliberto and Nock (2008) provided evidence supporting many of the aforementioned reasons for cessation of NSSI among adolescents. Ninety-four adolescents, aged 12-19 years, including 73 females, participated in completing questionnaires and comprehensive interviews to obtain data. The majority of adolescents (78.8%) were able to self-report at least one reason to stop engaging in NSSI; the most common reason cited (56.1%) was recognizing it as an unhealthy behaviour (Deliberto & Nock, 2008). The authors noted this to be an internal reason to stop engaging in NSSI.

Deliberto and Nock (2008) identified other reasons for cessation included unwanted attention from others (17.1%), prevent scarring (14.6%), because of shame caused from engaging in NSSI (7.3%), and because their NSSI upset family and friends (4.9%). These reasons were classified as external reasons to stop engaging in NSSI.

Adolescents who reported they had begun to engage in NSSI for internal sources (e.g., emotion regulation or depressive symptoms) endorsed stopping for internal reasons, and adolescents whose onset was due to external factors (e.g., getting the idea from friends) endorsed external reasons for stopping. Deliberto and Nock (2008) suggested that further research into how individuals conceive of NSSI and what factors are correlated with cessations was needed.

Summary of study #5. Deliberto and Nock (2008) found reasons for cessation were often linked to reasons for initiating the behaviour. Thus, this also provided a rationale for examining the functions that NSSI serves, as it could inform cessation. Deliberto and Nock's results provided support for Shaw's (2006) factors of self-initiative, relational ties and support, elimination or decrease in psychological catalysts to NSSI, and motivators to stop and deterrents to NSSI.

Comparative Cessation Research

The remaining two studies regarding cessation included in this review are presented in this section. These studies compared individuals currently engaged in NSSI versus individuals who had successfully resolved NSSI, and included individuals with no history of NSSI for comparison. These findings can provide insight into cessation by investigating the distinctions and significant variables between those who continue to engage in NSSI and those who have been able to stop the behaviour. Examining the predictive variables that separated each group informed the methodology used within this thesis and assisted in the formation of a theoretical framework.

Study #6: Social and personal resources in cessation. Rotolone and Martin (2012) sought to identify the social and personal resources that assisted in the cessation of

NSSI by comparing individuals currently engaged in NSSI versus those who had successfully resolved NSSI. The study will be reviewed in detail, as it also provides support for the theoretical framework being utilized in the thesis.

Participants. Rotolone and Martin (2012) recruited a nonclinical sample of 312 participants (97 males, 215 females) in Australia from introductory psychology courses (participants received course credit), word-of-mouth, and fliers. Participants were aged 16 to 50 years and identified as university students. Three comparative groups were formed, with 38 participants (12.2%) currently engaging in NSSI, 68 (21.8%) participants with a past history of NSSI but no engagement within the past 12 months or more, and 206 (66.0%) participants who had never engaged in NSSI (Rotolone & Martin, 2012).

Methods. Rotolone and Martin's (2012) participants completed an online questionnaire hosted through Qualtrics (2013) survey software, the same software used in this thesis. NSSI behaviour was assessed through the deliberate self-injury questionnaire (Gratz, 2001), which determines frequency, purpose, types of NSSI, and NSSI cessation. Participants also completed measures regarding characteristics of social support networks, social connectedness, perceptions of social support, resiliency, self-esteem, and satisfaction with life scales.

Results. While Rotolone and Martin (2012) found 106 participants endorsed a history of NSSI, 68 of their participants reported having not self-injured in the past 12 months (i.e., reflecting NSSI cessation). Of these, 37 individuals (54.4%) had sought professional treatment for NSSI, with 29 (78.4%) finding it helpful in successfully resolving in reducing or discontinuing the behaviour. Participants also reported helpful factors in cessation as support from a significant other (52.9%, $n = 36$), from family and

friends (35.3%, $n = 24$), finding a meaning in life (42.6%, $n = 29$) and having a problem resolve (22%, $n = 15$). Other factors included findings new ways to cope and the realization NSSI did not improve the anything, however the authors did not note the exact number of participants endorsing these two factors. These findings were consistent with those found by Shaw (2006), such as the importance of supportive structures, self-initiative, life commitments, or future orientation.

Rotolone and Martin (2012) found meaningful difference between current and past individuals who engaged in NSSI. Individuals currently engaged in NSSI reported significantly lower levels of family support ($t = 3.32, p = 0.016, r = .23$) and social connectedness ($t = 2.73, p = 0.008, r = .31$) compared to those who had successfully resolved NSSI. Those currently engaged in the behaviour also reported significantly lower resilience ($t = 4.30, p < 0.001, r = .48$) when compared to individuals with past NSSI. Individuals with past NSSI had significantly higher levels of self-esteem than individuals currently engaging in NSSI ($t = 3.72, p < 0.001, r = .21$). Current individuals also reported lower levels of life satisfaction ($t = 3.89, p < 0.001, r = .33$). Rotolone and Martin suggested that improving self-esteem, increasing life satisfaction, and social support may be particularly beneficial in assisting in the cessation of NSSI.

Implications for the thesis. Rotolone and Martin's (2012) recent study provided further justification for the investigation into the role of relational support, professional treatment, self-initiative, and future-orientated behaviour as variables of inquiry. Based on the results of this study, the variable of problem resolution was also investigated. Their study was significant, as it utilized several elements that were used within the thesis, such as the use of a 12-month timeframe as a standard to determine past or current

engagement in NSSI, a nonclinical sample recruited from psychology courses, and an online survey design method hosted by Qualtrics (2013) survey software. However, the variables of self-esteem, resiliency, and life satisfaction were not measured directly.

A second study by Brown, Williams, and Collins (2007) that provided comparison data on past and recent individual engagement of NSSI will be reviewed in the next section. Like Rotolone and Martin (2012), Brown et al.'s study provided theoretical elements utilized within the thesis.

Study #7: Emotion and coping differences in cessation. Brown et al. (2007) examined the emotional and coping strategies among three nonclinical groups with recent, past, and no history of NSSI. The authors recruited 223 participants from introductory psychology courses, with individuals receiving course credit for their participation (Brown et al., 2007). The average age was 19.4 years, and the majority of the participants were female. Participants were assessed for NSSI and considered as having a past history of NSSI if they reported no engagement of NSSI within the last 12 months. In this sample, 10.3% ($n = 23$) had engaged in NSSI within the past 12 months, and 17.5% ($n = 39$) had engaged in NSSI over 12 months ago. Measures were given to assess emotions (i.e., positive and negative affect) and coping strategies. The COPE (Carver, Scheier, & Weintraub, 1989) is a 60-item self-report inventory designed to assess an individual's use of specific coping strategies.

Brown et al. (2007) found those with a past history of NSSI have an intermediary level of negative emotions, which was lower than those who have recently engaged in the behaviour, but higher than those who do not have a history of NSSI. An unexpected finding was that no significant differences were found across the 15 specific coping

strategies on almost all of the 13 subscales among the three groups of participants. This was unexpected, as it was believed those who engaged in NSSI would utilize poorer coping strategies; however, this was not found. Two maladaptive coping strategies were found to be different among the groups: (a) behavioural disengagement strategies and (b) substance use. Individuals who engaged in NSSI, both in the past and present, reported using behavioural disengagement more often than those without a history of NSSI, indicating they were more likely to quit, give up, or put in less effort when confronted with a challenging situation. Substance use coping strategies were reported as highest among individuals with a past history of NSSI. Brown et al. speculated that perhaps those previously engaged with NSSI had adopted substance use as an alternative to NSSI. This merited further investigation and was a variable of inquiry in the thesis.

Brown et al.'s (2007) study was of value to the thesis, as it provided another look at the available research into NSSI cessation. Their study was also significant, as it provided similar methodology to the thesis, including participant recruitment strategies, and provided a classification of past NSSI as not having engaging in the behaviour within 12 months. The thesis also used an adapted version of the COPE Inventory to determine coping strategies among participants.

At this point, it is important to note the distinction between cessation and recovery. For the purposes of this thesis, cessation was conceptualized as the successful resolution of NSSI, while recovery referred to the ongoing process of attempting to resolve NSSI, for example, through treatment. While the primary focus of this thesis was on cessation, Morgan, Purington, and Whitlock's (2012) recent research into recovery

can also provide useful insight into reasons for cessation and has been included given the limited number of studies regarding the resolution of NSSI.

Study #8: NSSI recovery research. Recent research being conducted into the recovery of NSSI can assist in providing insight into reasons for cessation. Morgan et al. (2012) were in the initial stages of developing a six-stage model of recovery for NSSI. The authors conducted semistructured qualitative interviews with 20 youth regarding NSSI recovery experiences, finding evidence for the application of a theoretical model of recovery initially developed by Andresen, Caputi, and Oades (2006) for schizophrenia recovery.

The stages were adapted for NSSI as follows: (a) moratorium—no plan to stop NSSI; (b) awareness—realization NSSI is a problem or unnecessary; (c) preparation—starting to work on developing recovery skills; (d) rebuilding—NSSI free for one year or more and unlikely to injure again, may have thoughts or urges, but does not act on them; (e) stability—NSSI free for one year or more and unlikely to injure again, may have thoughts or urges, but does not act on them; and (f) secure—NSSI free for five years or more and highly unlikely to injure again.

Morgan et al. (2012) found participants moved sequentially through stages of recovery, with some fluctuation between stages and some participants returning to earlier stages. The majority of participants reported being in the preparation stage, although 23.3% and 14.3% reported being in the Rebuilding and Stability stages respectively. While this recent study provides insight into the recovery process, it does not address the underlying factors that led participants to initiate recovery initially (i.e., what led to cessation of NSSI). However, as Morgan et al. found that participants occasionally

returned to previous stages of recovery, the variable of cessation and returning to NSSI behaviours was examined in this thesis. Participants were asked if they returned to NSSI while attempting to resolve the behaviour, prior to their current cessation of NSSI. Furthermore, this study was significant to the thesis, as it provided further justification for the use of a 12-month time frame to accurately define cessation from NSSI.

Chapter Summary

A detailed review of the available, albeit limited, cessation research was presented in Chapter 4, as it provides the foundational framework for the survey questionnaire by presenting factors that were investigated within the thesis. As a result of demonstrating that the cessation of NSSI is often driven by multiple, interconnected factors that exist both internally and externally (Brown & Williams, 2007; Deliberto & Nock, 2008; Grocutt, 2009; Rotolone & Martin, 2012; Shaw, 2006; Sinclair & Green, 2005), there is a need to further investigate numerous salient factors endorsed by individuals who have successfully resolved the behaviour.

As a result, this thesis investigated the self-reported functions of NSSI and their association with cessation. Factors from previous research found to be helpful during cessation will be investigated and include (a) the decision to stop NSSI or desire to stop; (b) elimination or decrease in psychological catalysts; (c) role of professional treatment; (d) self-initiative; (e) support structures; (f) motivators, incentives, or deterrents to NSSI; (g) disclosure; (h) events triggering cessation; (i) use of unhealthy coping strategies; (j) problem resolution; and (k) the individual process of cessation. The goal of investigating these factors was to provide insight into how and why individuals are able

to stop NSSI. A variable relating to a return to NSSI (i.e., relapse) on the road to eventual cessation was also examined via the survey questionnaire.

As there was limited empirical evidence into the cessation of NSSI, insight can be gathered from research examining recovery disordered eating and substance abuse—two prominent mental health concerns that have extensive cessation research. The associations between NSSI, disordered eating, and substance abuse will be highlighted in the following chapter, with the intention to glean information on the cessation process from these issues and apply it to a theoretical understanding of cessation in NSSI.

Chapter 5: Cessation of Substance Abuse and Disordered Eating: Insights for NSSI

With little empirical evidence being published to date regarding the cessation of NSSI, the focus of this chapter will be to further investigate cessation by examining two prominent mental health concerns associated with NSSI that have substantial cessation research: (a) substance abuse and (b) disordered eating. Insight can be gleaned from research into how and why individuals recover from substance abuse and disordered eating. Examining the cessation process of these two associated disorders will be applied to a deeper theoretical understanding of the cessation of NSSI.

To begin, an overview will be presented of the association and psychological comorbidity of NSSI, substance abuse, and disordered eating. An outline of the similarities between disorders will be addressed to justify the use of cessation research in substance abuse and disordered eating. Next, a review of readiness and motivation to change, particularly as it pertains to disordered eating, will be explored. Natural recovery from substance abuse and eating disorders will also be examined, as it describes individuals who have recovered without formal means of treatment and provides insight into reasons for change. Finally, maturational factors will also be examined, as evidence indicates a developmental trend among some young individuals from unhealthy behaviours such as substance use towards healthier adult roles. Understanding the salient factors in the resolution of substance abuse and disordered eating will enable a parallel to be drawn to potential factors that exist within NSSI cessation. The information presented in this chapter serves to provide the context and basis for many of the variables the thesis sought to determine. To conclude the chapter, the importance of the thesis and a clear summary of the stated research questions of the thesis will be discussed.

Associations between NSSI, Disordered Eating, and Substance Abuse

Disordered eating behaviours and substance abuse can be regarded as indirect self-injury, a behaviour clearly damaging to the self, but lacking in the deliberate tissue damage prevalent in NSSI (St. Germain & Hooley, 2012). Similar to MacLaren and Best (2010), the review of NSSI and substance abuse presented in Chapter 2 noted that the two disorders may share underlying psychological mechanisms, and both function as a means to the same end—to increase or decrease the intensity of an emotional experience. Individuals engaging in NSSI may likely also engage in other forms of indirect self-injury, such as disordered eating and substance abuse (St. Germain & Hooley, 2012). The associations between substance abuse and NSSI and disorder eating and NSSI will be reviewed respectively, as several studies have examined the co-occurrence of NSSI, disordered eating, substance abuse, or a combination of the three.

Substance abuse association. As mentioned in Chapter 2, illicit drug use is a significant risk factor associated with NSSI (Goldstein et al., 2009). Kakhnovets et al. (2010) found that among university students who engaged in NSSI ($N = 504$) current use of drugs or alcohol was reported by 42.1% of students with multiple instances and 27.3% of those with one instance, with both groups reporting engaging in the act while under the influence (at the rate of 23.6% and 15.0% respectively). MacLaren and Best's (2010) study of 151 Canadian undergraduate students included a group of severe self-injurers (13%, $n = 20$) with significantly elevated rates of alcohol abuse compared to controls (35% versus 1%), and they were more likely to have problems with illegal or prescription drug abuse (25% versus 2.3%). In another Canadian study, Goldstein et al. (2009) found past-year illicit drug use as a significant positive correlate to deliberate self-harm in a

sample of university students ($N = 319$). Among those endorsing deliberate self-harm (29.5%, $n = 94$), past-year binge drinking and marijuana correlations were significant ($r = .21, p < .01$), with past-year illicit drug use showing a greater correlation ($r = .34, p < .001$). Serras et al. (2010) noted drug use among university students was associated with higher rates of self-injury for both undergraduate and graduate students.

Interestingly, while Serras et al. found undergraduates more likely to self-injure, the exception was if graduate students were using illicit drugs and smoking cigarettes, in which case the sample reported the highest rate of NSSI (62.0%). A study of adolescents ($N = 2,974$) in Japan found an association of an increased temptation to use substances and an easier access to illicit drugs among self-injuring students, with self-injury prevalence rates of 9.9% (Matsumoto & Imamura, 2008).

Walsh (2007) posited the physiological and psychological effects of substances might complement the emotion regulating functions of NSSI. Interestingly, Victor, Glenn, and Klonsky (2012) found NSSI to be craved (i.e., individuals had a strong urge to engage in the behaviour) exclusively in the presence of negative emotions, while substances were craved over a wider variety of constructs, including while experiencing positive emotions. NSSI was found not to be endorsed or craved while experiencing positive affect (Victor et al., 2012). Therefore, the experience of craving in general appears to be more central for substance use, suggesting NSSI may be more accurately understood by the emotion regulation model (Klonsky, 2007), rather than as an addiction.

Disordered eating association. The nature and extent of the association between NSSI and eating disorders (EDs), such as anorexia nervosa and bulimia nervosa, is evident. University students ($N = 504$), in Kakhnovets et al.'s (2010) research reported

an overall NSSI prevalence rate of 15.7%, and a history of an ED was reported in 15.8% ($n = 59$) of those who engaged in multiple instances of self-injury and in 22.7% ($n = 20$) of those who engaged in one instance of self-injury. In MacLaren and Best's (2010) study of 151 Canadian undergraduate students who were classified as severe self-injurers, 13% ($n = 20$) reported an elevated incidence of ED behaviours when compared to controls (45% versus 10%). It is worth noting these two studies investigated both variables of disordered eating and substance abuse in association with NSSI, providing support for the suspected relationship with NSSI.

Solano, Fernández-Aranda, Aitken, López, and Vallejo (2005) found among females with ED ($N = 109$), simultaneous onset of NSSI with onset of the ED in 48.5% ($n = 17$) participants, later onset in 40% ($n = 14$), and previous onset in 11.5% ($n = 4$). Solano et al. determined that while anorexia nervosa participants within their sample showed a greater prevalence of NSSI than bulimia nervosa, there were no significant differences between the groups, with 32% ($n = 35$) ED participants reporting a lifetime history of NSSI. Solano et al.'s study revealed ED participants who also engaged in NSSI demonstrated a greater severity of ED than those who did not self-injure. The authors suggested NSSI and ED could be understood as similar forms of coping with negative emotions. This is the same link made with substance abuse and NSSI noted earlier and also described by Walsh (2007).

Svirko and Hawton's (2007) literature review identified affect dysregulation, impulsivity, dissociation, self-criticizing cognitive style, need for control, and obsessive-compulsive characteristics as factors involved in the association between ED and NSSI. The authors noted the occurrence of NSSI in ED patients ranged from 13.6% and 68.1%,

with increased prevalence seen with in individuals exhibiting bingeing-purging anorexia subtype. Svirko and Hawton's findings were consistent with a study by Peebles, Wilson, and Lock (2011), which found an NSSI prevalence rate of 40.8% among adolescents ($N = 1,432$) who had generally reported a history of bulimia nervosa and substance abuse. There appears to be underlying similarities driving these behaviours, particularly with research indicating bingeing and purging behaviours were reported more frequently among individuals with EDs and NSSI (Andover, Holman, & Shashoua, 2014; Svirko & Hawton, 2007). The recent finding by Muehlenkamp and Brausch (2012) that adolescents who evaluate their body negatively may be prone to engaging in NSSI when confronted with overwhelming emotional states offers a potential explanation for the association between ED and NSSI, why NSSI emerges during adolescence, and for understanding why difficulties regulating negative affect might get expressed through NSSI over other coping.

Muehlenkamp, Peat, Claes, and Smits (2012) additionally found emotion dysregulation was significantly pronounced among individuals who endorsed both NSSI and disordered eating. Significantly higher levels of depressive symptoms and interoceptive deficits (i.e., the ability to recognize internal states) were also reported when compared to individuals who reported NSSI or disordered eating alone. Of interest, NSSI alone was characterized by increased symptoms of depression. Muehlenkamp et al. (2012) suggested NSSI and disordered eating represent the tendency to use the body as an emotional coping tool. Svirko and Hawton (2007) posited more effective interventions could be developed if the causal pathways involved in the NSSI and ED association were

better understood and that treatments need to address the problems underlying both disorders.

Summary. Evidence has been provided to make the association between disordered eating and NSSI, as well as NSSI and substance abuse, with evidence for a similar underlying psychological mechanism, affect regulation, which occurs when an individual uses unhealthy forms of coping in an attempt to deal with negative emotions. While the literature has thus far been limited in research on cessation of NSSI, ample scholarly material exists on the treatment and motivation to change in ED patients. Thus, this literature will be reviewed with the goal to conceptualize a model for cessation of NSSI. The following critical analysis does not seem to be reported elsewhere.

Readiness and Motivation to Change

Clients seeking treatment for NSSI can be ambivalent about stopping NSSI behaviours and may not be highly motivated towards cessation for fear they “cannot stop the behaviour and/or cannot cope without it” (Klonsky, Muehlenkamp, Lewis, & Walsh, 2011, p. 64). This is similar to the high degree of ambivalence found in the treatment of ED (Hasler, Delsignore, Milos, Buddeberg, & Schnyder, 2004) and those with substance abuse concerns (Vansteenkiste, Soenens, & Vandereycken, 2005). By examining the literature on readiness to change with reference to ED, this section will draw a parallel to readiness to change and the cessation of NSSI. It is relevant to make this case since a goal of the thesis was to determine if motivation to change was influential in participants’ desire to recover from NSSI; that is, to retrospectively examine the motivation to change in individuals who are no longer engaging in NSSI and determine if readiness to change played a role in the cessation process.

It is worth noting a couple of theories of change in order to better conceptualize motivation and readiness to change. Prochaska and DiClemente's (1982) transtheoretical model of change provided a description of an individual's movement towards change. Individuals are considered to move in a cyclical fashion from precontemplation (not considering change), to contemplation (weighing the pros and cons of change), to preparation (getting ready to make the change), to action (making the change), and lastly to maintenance (consolidating the positive change). A balance of pros and cons is thought to characterize each stage that moves the individual forward should the pros outweigh the cons of change. When evaluating the transtheoretical model of change, Hasler et al. (2004) found previous treatment did not account for a higher degree of readiness for change when compared to those seeking treatment for the first time. However, self-referral to treatment was found to be associated with advanced motivational stages and can be seen as a criterion for readiness to change. Therefore, readiness to change can be conceptualized as the individual's desire towards making positive change.

Readiness to change. Bewell and Carter (2008) found readiness to change among their sample of participants with ED was a significant predictor of treatment outcome and remained so, even after controlling for previously identified outcome predictors such as ED severity and subtype. Geller, Cassin, Brown, and Srikameswaran's (2009) study of participants with ED noted those who demonstrated a significant improvement in readiness to change over a 5-month period also showed improvements across all study measures of functioning, including reductions in psychiatric symptom severity, increased global self-esteem, and increased importance of friendship as a

determinant of self-esteem. In addition, Bewell and Carter's findings suggested further enhancing readiness to change during treatment increases the likelihood of a more favourable outcome. In a qualitative study among women who have recovered from ED, Patching and Lawler's (2009) participants placed an emphasis on both needing to be ready to make the choice to change and determining the pace of their own recovery. The participants noted the recovery process was aided by self-determination and self-acceptance.

These findings have provided justification for investigating the role of readiness to change in the cessation of NSSI (Bewell & Carter, 2008; Geller et al., 2009; Patching & Lawler, 2009), as Shaw (2006) found the decision or desire to stop NSSI was not predictive of successful resolution of NSSI. Thus, the variable merited further examination within the thesis in order to clarify the role of readiness to change. This objective was accomplished by asking the participants the extent to which the decision to stop or desire to change assisted cessation (e.g., "Before I stopped, I had a strong desire to stop my self-injury").

Motivation to change. Motivation to change may be thought of as a multidimensional construct, particularly evident in ED (Delinsky et al., 2011). Delinsky et al.'s (2011) quantitative study of adolescent inpatients with ED ($N = 67$) found three distinct dimensions relating to motivation to change: (a) perceived benefits of illness (e.g., self-control, self-esteem); (b) perceived burdens of illness (e.g., health, negative affect); and (c) functional avoidance (e.g., avoidance of painful emotions, decisions). A reduction in perceived benefits of illness, but not perceived burdens or functional avoidance, was related to cessation of the problematic behaviour. Delinsky et al. (2011)

noted pro themes were more relevant than con themes when it came to overall attitudes towards illness and recovery, suggesting a focus on perceived benefits may be more beneficial than techniques designed to help patients become aware of the harm caused by a problematic behaviour. This was similar to Shaw's (2006) findings in the cessation of NSSI, in which individuals were able to stop NSSI after making meaning of the behaviour. Individuals endorsed cessation when NSSI no longer provided the same functions it once did (e.g., affective regulation) and came to be viewed as problematic (Shaw, 2006).

When these findings are applied to NSSI, it is worthwhile to examine the variables related to the perceived benefits and burdens of engaging in NSSI in order to determine if reduction in the perceived benefits of NSSI (i.e., the function of NSSI) or increase in burden of engagement in NSSI assisted in cessation. Therefore, this thesis addressed these variables through an examination of the functions endorsed by participants and the reasons for their cessation. Specifically, participants were asked if NSSI no longer provided the same function it once did (i.e., a pro theme) and was creating problems for the individual (i.e., a con theme). For example, the individual stopped NSSI because it was no longer providing the same affective regulating qualities it once did and could also be damaging relationships with others.

Another set of variables included in the thesis comes from Norbø, Gulliksen, Espeset, Skårderud, Geller, and Holte's (2008) findings; these authors distinguished four motivational categories that characterized anorexia nervosa participants' wishes to recover. Specific themes that emerged were a (a) sense of vitality (e.g., joy, energy, concentration, and spontaneity); (b) sense of autonomy (e.g., choosing to recover, self-

determination, and new methods of mastery); (c) sense of insight (e.g., awareness, self-knowledge, seeing nuances, and limitation of goals); and (d) negative consequences (e.g., loss of future, feeling sick or thin, social costs, and cost to potential children).

While some participants described the wish to recover created a dramatic change in the ED behaviour, others described wishes to recover resulted in no behavioural changes.

These findings from Norbø et al.'s (2008) study have an implication for NSSI, and they are consistent with the factors reported by Shaw (2006), including the desire to stop, self-initiative, and motivators to stop or deterrents to NSSI. Therefore, Norbø et al.'s thematic findings were used to construct a number of survey questions. For example, research participants were asked to agree or disagree with statements that reflect their desire to stop NSSI, such as, "I made the conscious decision to stop self-injuring." Self-initiative will be measured using statements such as, "I actively took steps to reduce and stop my self-injury." In order to provide a wide variety of responses, participants were asked an open-ended question regarding the motivators to stop NSSI and the deterrents to return to NSSI.

The notion that some individuals are internally motivated by a desire to recover has prompted some researchers to examine the concept of natural recovery in ED and substance abuse. These variables are also included in the thesis, which is explained next.

Natural Recovery

The terms self-change, spontaneous remission, spontaneous recovery, natural recovery, and untreated recovery have been used interchangeably to define the same phenomenon—an unwanted condition is overcome without professional treatment or help (Sobell, 2007). Natural recovery has been reported to commonly occur through a process

of cognitive appraisal in which the individual evaluates the pros and cons of changing their behaviour and eventually becomes committed to changing (Sobell, 2007). As it appears numerous individuals are not seeking treatment for NSSI (Gollust et al., 2008; Klonsky, 2009), yet the prevalence of NSSI decreases from adolescence to adulthood (Jacobson & Gould, 2007; Klonsky, 2011), it may be possible that this phenomenon can be in part accounted for by individuals who have engaged in natural recovery.

One of the main goals of this thesis was to determine if individuals are engaging in natural recovery as a means of cessation of NSSI. This was investigated in the thesis by identifying those who did not seek professional treatment, which, for purposes of this research, will be categorized as natural recovery. The following section addresses the concept of natural recovery within disordered eating and substance abuse, as it will provide a theoretical understanding that can be applied to NSSI and the thesis. It is an important discussion, as no literature to date pertaining to natural recovery and NSSI has been located.

Natural recovery and disordered eating. Limited literature is available with respect to disordered eating and natural recovery (Vandereycken, 2012). Vandereycken (2012) located 10 community samples of individuals who resolved disordered eating without formal treatment. Two of these studies will be briefly reviewed, as they provide a context for asking research participants about their natural recovery methods.

An early study reported 42% of a sample of 392 people who were diagnosed with bulimia recovered through the process of natural recovery (Stanton, Rebert, & Zinn, 1986). Stanton et al. (1986) noted natural recovery began with the recognition that the behaviour was detrimental to the individual's health. Stanton et al.'s (1986) participants

also indicated they were able to begin the process of recovery by enlisting helping relationships (e.g., disclosing their eating behaviours to a supportive person), counterconditioning (e.g., doing something other than the unwanted behaviour), and using self-liberation techniques (e.g., telling themselves they are able to stop the behaviour if they wanted to).

Woods (2004) also found evidence for natural recovery from ED, with some participants reporting early parental intervention as being a significant turning point in their recoveries. Other social supports, such as friends and boyfriends, were also important to the process, as well as health concerns, inability to perform academically, and the desire to live an authentic life. Woods's study was consistent to findings in NSSI literature, with individuals reporting the significance of utilizing alternative coping strategies, evaluating the potential consequences of engaging in NSSI, and the realization of the detrimental impact the behaviour had on one's health (Grocutt, 2009).

The importance of supportive relationships was also prevalent throughout NSSI cessation research. Self-liberation seems to be closely linked to Shaw's (2006) concept of self-initiative, in which individuals seek to regain control of their lives through cognitive, emotional, and behavioural strategies. Based on this research, the survey had questions that addressed enlisting helping relationships, counterconditioning, and self-liberation. For example, participants were asked if they agreed or disagreed to statements such as, "When I wanted to self-injure, I sought out alternate activities instead" (i.e., counterconditioning), "Telling myself I could stop self-injuring helped me to quit" (i.e., self-liberation), and "Having a supportive person to talk to helped me to stop engaging in self-injury" (i.e., enlisting helping relationships).

Natural recovery and substance abuse. In a review of the literature, Sobell, Ellingstad, and Sobell (2000) found, unlike the ED research, approximately 20–25% of individuals with substance abuse issues indicated family and social factors as significant reasons for stopping this abuse. However, these factors were seen as maintenance factors once the individual had made the decision to change.

Cloud and Granfield (2001) noted participants recovering from substance abuse reported becoming intensely involved in alternative activities that provided new meaning to the individuals' lives (e.g., religious affiliation) and avoiding the substance abusing lifestyle. This was consistent with Burman's (1997) results among alcoholics and problem drinkers. Burman's participants identified supportive structures, seeking alternative activities, and the avoidance of alcohol as the notable reinforcers for continued motivation and determination to succeed after self-initiating change. The variables of supportive structures, seeking alternative activities, and motivators or deterrents for NSSI were included in the thesis via survey. A typical question was a statement such as, "I stopped self-injuring because it was hurting others in my life," which participants answered on a 5-point Likert scale, with 1 being strongly disagree to 5 being strongly agree.

To continue to explore cessation reasons, Burman (1997) identified common emotional and cognitive factors leading to cessation among alcoholics and problem drinkers. Similar to NSSI cessation findings that identified that events triggered the cessation of NSSI (Grocutt, 2009), often cessation of substance abuse was instigated by the accumulation of numerous distressing events or one major crisis that outweighed the benefits of continuing the behaviour (Burman, 1997). Burman's participants indicated

they perceived they were at risk “of an impending or existing severe and incapacitating loss(es)” (p. 47). This was consistent with Sobell et al.’s (2000) analysis, as the second most frequently reported reason for recovery concerned financial issues and negative personal issues relating to substance abuse. Therefore, this thesis investigated if NSSI cessation was related to a critical event or events that triggered participants to make a decision to stop engaging in NSSI. This was asked by inquiring if participants endorse the statement: “I had a major event(s) that triggered my decision to quit self-injuring.”

Burman (1997) also found participants suffered from persistent fears surrounding excessive drinking that created conflict and high anxiety, which was indicative of a cognitive change in thinking. This may be related to the cognitive change (i.e., changes in the way respondents viewed their substance use) that Sobell et al. (2000) found. Burman also noted participants indicated social reasons, such as wanting to be a role model for one’s children, as well as religious aspects, such as the power of love and prayer. Overall, participants’ resistance to change was decreased by the recognition of the need to regain control over the deteriorating condition of their lives. Patching and Lawler (2009) also found similar results among women who had recovered from ED. Participants recalled a loss of control to their ED, the need for a critical self-evaluation prior to beginning recovery, and the hope for regaining a sense of control of their lives. This was similar to NSSI findings that cessation occurred when individuals took control of their lives (Grocutt, 2009). As a result of these findings, participants were asked, via the survey questionnaire, to what extent they stopped engaging in NSSI in an attempt to gain more control in their lives.

Recovery capital. Another variable that was addressed in this thesis' survey is Cloud and Grandfield's (2001) notion of *recovery capital*, which describes particular attributes and resources that increase an individual's capacity to recover. Individuals with greater amounts of recovery capital have a greater capacity and a greater chance of overcoming substance dependency. However, a large amount of only one form of capital does not seem to be sufficient for recovery. Recovery capital is composed of actual and virtual resources, such as mental status, personal attributes, beliefs, and attitudes, and is inclusive of the individual's social circumstances prior to, during, and after the period of addictive behaviour.

Recovery capital, according to Cloud and Grandfield (2001), consists of three categories of resources used by the individual to address his or her addiction and its associated problems: (a) social capital, (b) human capital, and (c) physical capital. Individuals working to overcome substance abuse would be drawing on social capital if they responded favourably to the expectation placed on them by others that they could overcome their addiction and they felt socially supported. Social capital was investigated in the thesis by asking participants questions about social supports and the value of relational supports in cessation of NSSI. As noted by previous research, social supports have been reported as valuable resources in the successful resolution of NSSI.

Physical capital consists of access to tangible resources such as wealth and transportation, allowing individuals to perhaps access more formal means of treatment. Physical capital questions were determined through the use of the demographic questionnaire, with the inclusion of an income level question.

Human capital is conceptualized as attributes, abilities, and knowledge used as resources to achieve desired goals, such as vocational training, education, or problem-solving ability (Cloud & Grandfield, 2001). This thesis investigated participants' self-initiative and life commitments and engagements. For example, participants were asked whether they agreed or disagreed to statements such as, "I had goals for the future, and self-injury was getting in the way of attaining those goals."

Maturational Factors

Maturational factors were conceptualized within the thesis as referring to the eventual cessation of a behaviour as an individual ages. For example, an adolescent who engaged in NSSI "grows out" of the behaviour in his or her early 20s. Moran et al.'s (2012) longitudinal study suggested most adolescent self-harming behaviour resolves spontaneously, suggesting maturational factors may be at work. This potential explanation for the cessation of NSSI is a process seen in substance abuse and ED. An overview of disordered eating and substance abuse literature relating to the role of maturational factors in cessation will be provided in the following section. The intention of this is to provide insight into the potential underlying mechanisms associated with NSSI, as the role of maturational factors were investigated as a variable of inquiry within the thesis.

Burman (1997) found participants who achieved sobriety as a result of maturation and having other life responsibilities and interests. Cunningham, Blomqvist, Koski-Jännes, and Cordingley (2005) described this change as *maturing out*—the gradual transition from a lifestyle involving heavy drug or alcohol use (or both) to one in which life responsibilities increase as the individual matures. Misch (2007) noted a gradual

recovery among substance abusers was sometimes seen during the years following formal education in which individuals assumed adult roles, such as but not limited to parenthood, full-time work, and marriage. This was consistent with findings from ED studies in which participants noted concerns surrounding parenthood and conceiving a child often initiated recovery (Norbø et al., 2008; Patching & Lawler, 2009). Patching and Lawler (2009) found participants who engaged in new roles pertaining to careers, academia, and intimate relationships identified a shift in focus towards a healthier lifestyle and recovery.

As a result of these findings, the thesis included the following variables in the survey to determine maturational factors: (a) entering university, (b) becoming a parent, (c) beginning a new job, and (d) a relationship or the end of a relationship. These variables were consistent with reasons for cessation of NSSI endorsed in previous research; for example, future-oriented behaviour was reported to drive cessation (Shaw, 2006).

In an examination of maturing out of substance use, Labouvie (1996) found a trend among young adults towards a reduction in use of alcohol, cigarettes, and illicit drugs. Labouvie noted how as young adults were entering a period of greater responsibility in their lives and were beginning to conduct themselves in more socially acceptable ways, they started to moderate undesirable behaviours. Marriage and parenthood emerged as the most important goals for participants, and substance use declined in anticipation of these goals.

Given the association of substance abuse and NSSI, it was relevant to inquire in this thesis as to the reported engagement in substance use or misuse of participants prior

to and after engagement in NSSI. This is particularly important given the findings that individuals with a past history of NSSI reported using substances as a coping strategy more frequently than those currently engaging in NSSI (Brown et al., 2007), a finding that may be indicative that the former group is replacing one self-destructive behaviour for another.

As NSSI prevalence has been noted to decrease as a function of age (Jacobson & Gould, 2007), and in some studies remit spontaneously (Moran et al., 2012), perhaps some of the reduction in the behaviour can be accounted for by maturing out factors. Based on the literature available for substance use and abuse and disordered eating, it could be hypothesized individuals engaging in less severe NSSI may be more likely to endorse maturational factors as reasons for cessation of NSSI. Conversely, individuals with more severe NSSI histories may have required more formalized interventions and therapy in order to achieve recovery. Thus, this thesis sought to identify whether maturation factors (e.g., growing older, parenthood, marriage, role changes) played a role in the cessation of NSSI.

Chapter Summary

Numerous studies have indicated the comorbidity of NSSI, substance abuse, and disordered eating (Goldstein et al., 2009; Kakhnovets et al., 2010; Serras et al., 2010), leading some to speculate the behaviours may all function in some capacity as a form of affect regulation (MacLaren & Best, 2010). Given the similarities amongst the behaviours, insight can be drawn by reviewing the literature on substance abuse and ED recovery, particularly given the dearth of information on recovery from NSSI. In order to provide a strong rationale for utilizing substance abuse and disordered eating,

associations and comorbidity with NSSI were discussed. Up to this point, it has also been explored how an individual's readiness to change can provide insight into the desire to recover and into the reasons for cessation. A review of natural recovery literature also allows for potential motives for change and the factors that may be beneficial to an individual seeking to change. Taking maturational factors into consideration was also found to be of importance when considering substance use and disordered eating recovery. Reviewing the literature allowed for a greater understanding of the factors involved in cessation and recovery and has provided a foundation for many of the questions contained on the survey provided to participants as a part of this thesis.

Purpose and Importance of the Thesis

As this review has demonstrated, there remains a scarcity of research into the cessation of NSSI, particularly among nonclinical populations. This thesis will significantly contribute to the literature by addressing the following research questions that have been formulated from previous research into the prevalence, context, treatment, and cessation of NSSI, with insight being gleaned from research into the cessation of disordered eating and substance abuse.

Main research question. The primary research question sought to answer how and why individuals are able to stop engaging in NSSI, specifically, what are the significant factors that are influential to cessation? This question was answered through the use of several research objectives that evaluated the following influential values: (a) the self-reported function NSSI had in cessation; (b) the decision to stop or desire to stop; (c) elimination or reduction of psychological distress; (d) self-initiative; (e) life commitments and engagements; (f) support structures; (g) motivators, incentives, and

deterrents to NSSI; (h) disclosure of NSSI; (i) events triggering cessation; (j) use of unhealthy coping strategies; (k) problem resolution; (l) the individual process of cessation; and (m) relapse prior to eventual cessation.

Second research question. In order to further determine the factors related to the cessation of NSSI, the researcher sought to determine what were the factors influencing cessation as they pertain to insights drawn from substance abuse and disordered eating literature. A second research question examined these objectives as they related to the larger conceptual factors of readiness or motivation to change, maturational factors, and natural recovery.

Third research question. An additional research question was investigated to further contribute to the field of NSSI knowledge. Gender differences in NSSI cessation were examined given the discrepancies noted by previous research, as mentioned in this literature review (Klonsky et al., 2003; Moran et al., 2012; Whitlock et al., 2011). The researcher sought to answer the question: are there gender differences in NSSI cessation?

Summary and Conclusion

Overall, the researcher sought to contribute to the understanding of NSSI through this thesis by uncovering the motivations for terminating NSSI and the strategies individuals utilize in cessation. Understanding how and why some individuals are able to recover from NSSI will address some of the questions that remain unanswered in the literature. For example, in order for an individual to stop engaging in NSSI, alternative and healthier methods of coping must replace the functions the behaviour previously served. However, the process of recognizing and adapting these alternative coping mechanisms from the individual's perspective has been largely ignored in the literature,

as this literature review has demonstrated (Motz, 2009). Given the scarcity of research on the cessation of NSSI, this thesis had the potential to significantly contribute to the literature, as an understanding of cessation can help to inform more effective assessment methods, interventions, and treatment strategies. This was supported by Suyemoto (1998), who asserted more information was needed about the factors that contribute to the cessation of NSSI and the most effective therapeutic techniques. Furthermore, insight was provided into the notion that NSSI prevalence decreases with age. The common belief is that NSSI peaks during adolescence and decreases into adulthood; however, no such studies exist to evaluate this claim (Jacobson & Gould, 2007). The methods and procedures used to investigate the stated objectives will be discussed in greater detail in Chapter 6.

Chapter 6: Methods

The primary purpose of the researcher within this thesis was to determine the significant variables that were influential to the cessation of NSSI. A secondary purpose of inquiry examined the role of gender on reported NSSI engagement and cessation within the current sample. The procedures and methods to meet the primary and secondary purposes of this thesis will be described in detail within this chapter.

Outline of Chapter 6

Chapter 6 will begin with a discussion of the participants sought for the study, including inclusion and exclusion criteria in order to determine participation, recruitment strategies, and incentives to being involved in the study. The survey format is then outlined, which provides a description of each portion of the survey questionnaire: the psychometrics and description of the adapted brief COPE Inventory (Carver, 1997; Appendix A), the assessment of NSSI section (Appendix B), the cessation of NSSI (Appendix C), and demographics section (Appendix D). A flowchart is provided illustrating how participants proceed through the study, depending on their responses. The procedures section provides a description of the steps participants took once they began the survey, inclusive of informed consent, exit options, data collection, and storage. The chapter concludes with an explanation of the data analysis strategies used for each research question.

Participants

In order to be eligible to participate in the study, individuals needed to satisfy the inclusion and exclusion criteria of being English-literate and aged 18 years or older. Three categories of participants satisfying the initial inclusion and exclusion criteria

emerged and were categorized as follows: (a) Group I – NSSI Cessation, (b) Group II – Current NSSI, and (c) Group III – No NSSI history. Group allocation was dependent on participant response during the survey questionnaire, which determined the further inclusion and exclusion criteria detailed in the following subsections.

Group I – NSSI cessation. The primary group targeted for response analysis were Group I participants—individuals who have successfully resolved NSSI. As such, the following inclusion and exclusion criteria were used to determine group allocation.

Inclusion criteria. Participants needed to meet the definition of NSSI used throughout the thesis: “The direct and purposeful damage of one’s own body tissue in the absence of intent to die” (Nock, 2009, p. 78). Individuals included in Group I were those who met the definition for NSSI at one point in their life and reported no use of NSSI within the last 12 months. The rationale for a 12-month cessation period was to be consistent with previous research into the resolution of NSSI, which classified cessation of the behaviour as 1 year without engagement (Brown et al., 2007; Morgan et al., 2012; Rotolone & Martin, 2012).

Exclusion criteria. Participants were not eligible for this study if self-harming behaviour was with the conscious intent to end one’s life. Excluding participants who have endorsed self-harming as a deliberate attempt to end his or her life helped to ensure that the findings could be generalized to other NSSI research.

Group II – current NSSI. Participants endorsing current engagement in NSSI within the past 12-month period were allocated to Group II. As such, the criteria for this group were as follows: The participant met the definition of NSSI and reported engaging in NSSI within the previous 12 months.

Group III – no NSSI. In order for responses to be included within Group III, participants satisfied the initial inclusion and exclusion criterion. Participants within this group did not meet the inclusion criterion of ever engaging in NSSI. A visual representation of the three survey participant groups is presented in Figure 1.

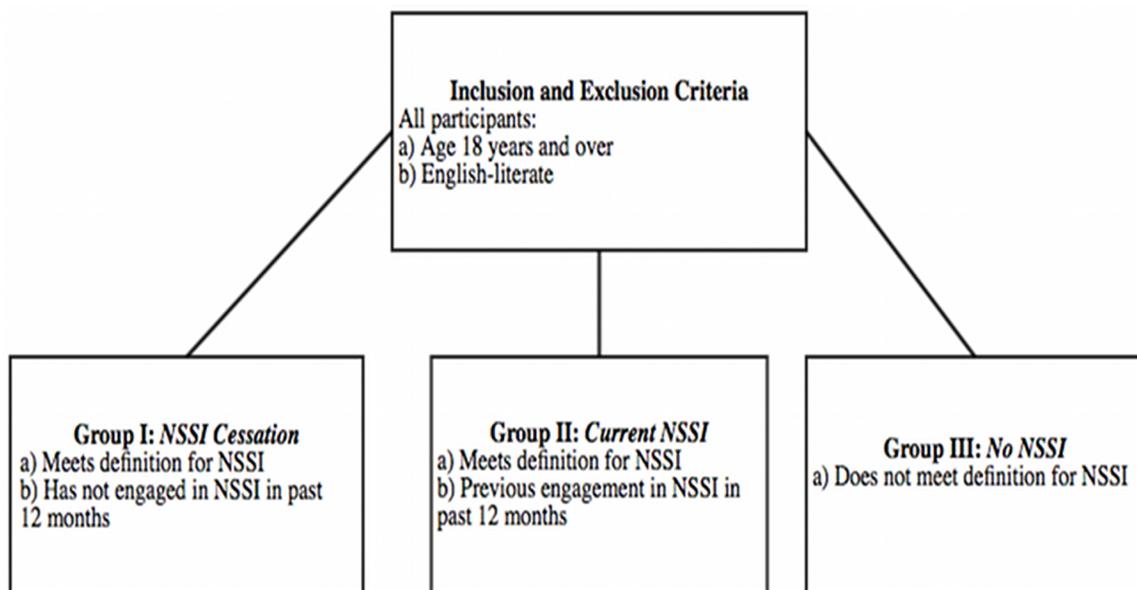


Figure 1. Inclusion and exclusion criteria for participants. NSSI = non-suicidal self-injury.

Recruitment

After receiving approval from the University of Lethbridge HSRC, convenience sample methods were used. As this study aimed for a participant pool of at least 50 individuals, the recruitment strategy was broad and was inclusive of both post-secondary student recruitment and online recruitment in order to meet this goal.

Online recruitment. Participants were recruited from two online resources for NSSI, SAFE Alternatives® (2013) and Self-Injury.net (2013). The SAFE Alternatives® website hosted by a treatment program for self-injury by the same name. The philosophy behind the SAFE Alternatives® treatment program is the promotion of creating supportive relationships and selecting of healthier forms of coping to deal with emotional

distress rather than self-injury. The SAFE Alternatives® website provides resources, a discussion blog, and hosts a forum for individuals seeking participants to post their research. Self-Injury.net is an online forum for those engaging in NSSI and seeking recovery from the behaviour. The Self-Injury.net site hosts a section that allows researchers to recruit participants for studies. Both websites were utilized in order to increase the number of participants in this thesis.

Social media. Social media sites were used to create awareness of the study and recruit participants. The researcher created a Facebook (2013) page entitled “Self-Injury Recovery Study” (2013), which provided a description of the study, contacts for the researcher, and the link to the survey questionnaire. A Twitter (2013) account was created under the name “Self-Injury Recovery: @nssirecovery (“Self-Injury Recovery,” 2013) in order to raise awareness of the study and provide potential participants with a link to the study. Likewise, a Tumblr (n.d.) account was developed entitled *Self-Injury Recovery Study* (n.d.) that provided a description of the study, contact information to the researcher and a link to the survey. Referrals for specific NSSI resources, 24-hour crisis hotlines, counselling support, and mental health treatment were provided on the Facebook and Tumblr pages for participants to access at any time.

Invitations to participate in the study were sent out web posting on each type of social media on a frequent interval basis throughout the time study ran. Through the Facebook page (“Self-Injury Recovery Study,” 2013), the researcher recruited potential participants by posting on various other Facebook pages associated with NSSI as well as providing a brief description of the study and a link to the survey. Hashtags, which create keywords users may search in order to find specific subjects, were employed through

Tumblr (n.d.) and Twitter (2013) in order to distribute the invitations to participate. These included #selfinjury, #selfinjuryrecovery, #selfharm, #selfharmawareness, and #mentalhealth.

Email recruitment. A mass email was distributed through the Faculty of Education listserv at the University of Lethbridge promoting the study with a brief description of the research and provided a link to the survey. This invitation was sent out once during the duration of the study.

Posters. Posters advertising the study (Appendices E and F) were placed in common areas at the University of Lethbridge. Posters were designed to invite individuals to participate in a short online survey regarding recovery from self-injury and offered a link to the survey questionnaire and Facebook (2013) and Tumblr (n.d.) pages. Potential participants could tear off contact information from the posters to take with them. The poster also listed the contact information for the primary researcher, as an email address had been created specifically for the purposes of this study.

Undergraduate psychology courses. Participants were recruited from three undergraduate psychology courses during the summer semester at the University of Lethbridge. Undergraduate psychology students participated by accessing a password-protected University of Lethbridge's Department of Psychology Experiment webpage and selected the researcher's study. Students were provided with course credit if they participated and had the option to participate in the study from May 13, 2013, to June 21, 2013.

Undergraduate kinesiology course. Participants were recruited from Kinesiology 2140 during the summer semester at the University of Lethbridge.

Participants were advised of the survey by their instructor and provided with a handout with a link to the research survey site.

Graduate students. The researcher recruited graduate students from the “University of Lethbridge Graduate Students’ Association” (2013) Facebook page by posting the link to the survey and a description of the research. In order to maximize participants for the study, incentives were provided for individuals participating in the research. The incentives and incentive protocol will be reviewed in the following section.

Incentives

Participants recruited from psychology courses at the University of Lethbridge received course credit for participating in the study. The researcher followed the psychology department protocol to ensure course credit was awarded. Participants accessed the survey via the password-protected Department of Psychology experiment homepage and automatically received credit for participating. As such, at no time would the researcher know the names of the participants. Participants were informed that even if they withdraw from the study prior to the submission of responses they would still be eligible for course credit.

All participants, inclusive of those recruited from other sources and those from psychology courses at the University of Lethbridge, were eligible to enter into a raffle draw for one of four \$50 Amazon gift cards, held on August 7, 2013. Participants were invited to email their name or the name of a friend or family member to a designated email address, which was monitored by a third-party administrator, an individual within the Faculty of Psychology. Participants were informed the researcher did not have access

to this email account, nor did the third-party administrator have access to participant data. Participants were informed that even if they withdrew from the study prior to the submission of responses, they were still eligible for the draw. Due to the process outlined, there was no way of verifying if the person emailing the third party did or did not participate in the study.

Draw Protocol

Each email address received by the third-party administrator was entered into the draw. The administrator randomly drew four email addresses to provide the winning entries. The administrator notified each of the individuals at the provided email addresses in order to send out the gift cards via email. The researcher provided the administrator with \$200 in order to purchase the gift cards. Receipts were retained demonstrating the distribution of gift cards to participants.

Survey Format

Introduction to the survey. The survey was designed for online delivery and was comprised of four sections: (a) the adapted Brief COPE (Coping Orientations to Problems Experienced) instrument (Carver, 1997); (b) assessment of NSSI; (c) cessation of NSSI; and (d) demographics. Depending on a participant's response, he or she was automatically directed to selected sections of the survey (e.g., participants who do not endorse NSSI will not complete the section on cessation). The survey had an inviting and welcoming style, and contained a variety of multiple-choice, Likert-scale, and open-ended style of questions, depending on the section of the survey. Inclusive of all four sections, the survey was comprised of 89 questions. Based on the existing literature, the researcher chose to personalize existing assessment methods of NSSI in order to reduce

the length of the survey and focus participants on the cessation of NSSI. The survey was created using Qualtrics (2013) survey software. A description of the Qualtrics software and the rationale for its use is provided in the following section.

Qualtrics. The decision to use Qualtrics (2013) was made after engaging in a live demonstration of the software on May 22, 2012. Qualtrics online survey software holds an academic and commercial reputation that provides a high standard of quality and has been used in other recent NSSI cessation research (Rotolone & Martin, 2012). Qualtrics provided ease of use and security, while also allowing for numerous features this study was seeking. Given the sensitive nature of the research topic (i.e., NSSI), allowing participants the ability to quickly exit the study was a significant concern, which Qualtrics was able to address through easy withdrawal methods. The online design allows for different formatting of questions that are crucial in this study, such as the use of Likert scale, open-ended questions, and enabling participants to automatically skip questions as a result of their responses. Qualtrics does not claim any ownership or access to the data, although they securely stored and hosted the data for the duration of the data collection period.

An overview of the survey format and how participants were directed through the survey depending on their responses is presented in the flowchart presented in Figure 2. Each of the various sections of the survey will then be described.

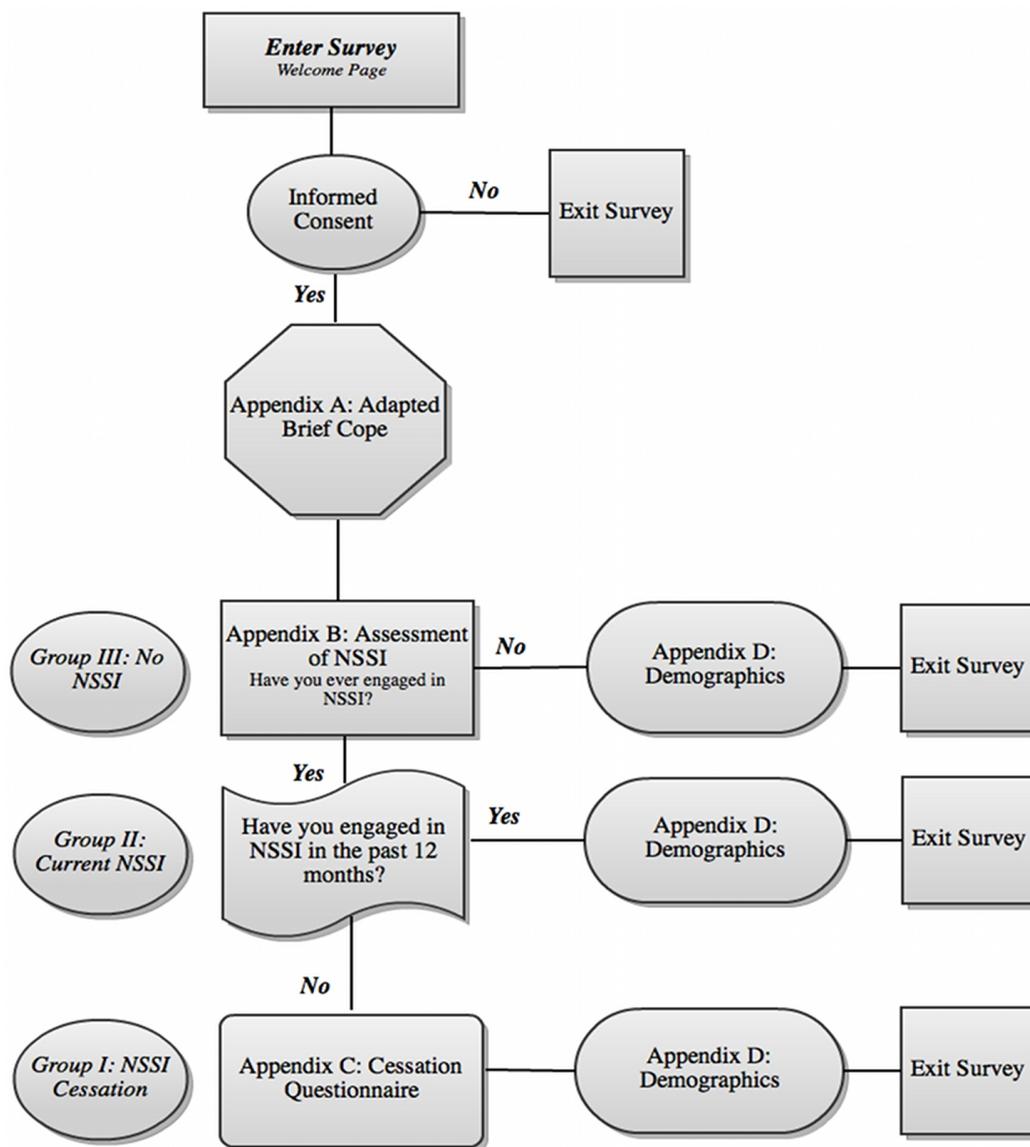


Figure 2. Survey format. NSSI = non-suicidal self-injury.

Welcoming statement. Upon accessing the survey link, participants were greeted with a welcoming statement (Appendix G) indicating they had reached the correct site. Participants had to agree they were of the age 18 years or older before proceeding further. Informed consent was then provided with two slightly different forms depending on if participants were psychology students at the University of Lethbridge or had learned of the survey through other recruitment methods (Appendices H and I). Participants were thanked for participation and reminded of the anonymity and

confidentiality of their responses. A link was offered to the resources provided on the associated Facebook (“Self-Injury Recovery Study,” 2013) and Tumblr (“Self-Injury Recovery Study,” n.d.) pages to ensure participants had access to resources from the beginning of the study. Those individuals who provided informed consent proceeded forward in the survey to the first section: the adapted brief COPE Inventory (Carver, 1997; Appendix A).

The COPE. The COPE Inventory (Carver et al., 1989, Appendix A) is a 60-item self-report inventory designed to assess an individual’s use of specific cognitive and behaviour coping strategies. Based on a theoretical approach, 14 subscales were constructed: active coping, planning, use of instrumental support, positive reframing, acceptance, humour, religion, using emotional support, denial, self-distraction, venting, behavioural disengagement, venting, self-blame, and substance abuse (Carver, 1997). Each subscale was based on four items, with each item utilizing a Likert scale ranging from 1 (I usually don’t do this at all) to 4 (I usually do this a lot). Items include statements such as, “I let my feelings out” (venting subscale) and “I drink alcohol or take drugs, in order to think about it less” (substance abuse subscale). Higher scores indicate greater endorsement of each coping strategy.

The COPE Inventory has been found among college students ($N = 978$) to have poor to good test-retest reliability ($r = .46$ to $.89$) and acceptable validity (Carver et al., 1989). During construction of the instrument, Carver et al. (1989) found internal consistency to be acceptably high, with Cronbach’s alpha reliability coefficients ranging from $.92$ (religion), $.85$ (emotional support), $.80$ (planning), to $.77$ (venting).

The COPE Inventory has been used in other NSSI research (Brown et al., 2007; Wester & Trepal, 2010). The COPE Inventory was an appropriate choice to include in this study as it addressed the use of substances or unhealthy coping methods as a replacement for NSSI, which was a variable within the primary research question for this thesis. Additionally, as three groups of participants completed the survey, the COPE Inventory supplied a measure to those without a history of NSSI (Group III) so that they could also complete the study. This was important because this group could provide comparative data on coping styles between groups (i.e., no NSSI, current NSSI, and NSSI cessation) in future research.

Due to the length of the full COPE Inventory (Carver et al., 1989), an adapted version of the Brief COPE Inventory (Carver, 1997) was used based on a study examining postsecondary students who engaged in current and past NSSI (Wester & Trepal, 2010). Participants were only asked one question that related to the following 14 subscales, adapted from the two-question-per-subscale format utilized in the Brief COPE Inventory (see Table 1). However, both questions regarding substance abuse were left intact in order to determine participant endorsement of drugs and alcohol as a coping style. This resulted in a total of 15 COPE questions being used in this study. Scores were obtained by summing responses, after reverse scoring relevant items, and ranged from 0 to 60. The researcher adapted the Brief COPE Inventory (Carver, 1997) by utilizing the 4-point Likert scale initially employed in the complete COPE Inventory (Carver et al., 1989). The ordering and item number of the scales, as well as the subscale grouping are presented in Table 1.

Table 1
Order of Brief COPE Subscales

Subscale	Overarching Scale	Survey Item Number
Self-distraction	Avoidant coping behaviours	1
Active coping	Problem-focused coping behaviours	6
Denial	Emotion-focused coping behaviours	2
Substance use	Avoidant coping behaviours	3, 8
Use of emotional support	Emotion-focused coping behaviours	4
Use of instrumental support	Problem-focused coping behaviours	7
Behavioural disengagement	Avoidant coping behaviours	5
Venting	Avoidant coping behaviours	11
Positive reframing	Emotion-focused coping behaviours	10
Acceptance	Emotion-focused coping behaviours	13
Humour	Emotion-focused coping behaviours	15
Religion	Emotion-focused coping behaviours	12
Self-Blame	Avoidant coping behaviours	14
Planning	Problem-focused coping behaviours	9

Note: Compiled from Carver (1997).

Assessment of NSSI. Following the adapted brief COPE Inventory (Carver, 1997), all participants proceeded to the assessment of NSSI section of the survey questionnaire (Appendix B). The researcher designed Appendix B, which was composed of two parts designed to distinguish groups of participants. Participants were asked if they have ever engaged in deliberate self-injury (i.e., “Have you ever injured your body on purpose, without intending to kill yourself?”) and given a “Yes or No” option.

Participants responding “No” (i.e., Group III) were automatically directed to the demographics portion of the survey (Appendix D). Participants responding “Yes” continued with the assessment of NSSI and were provided with a list of 13 NSSI behaviours drawn from the literature (e.g., Gratz, 2001; Klonsky & Glenn, 2009). Next to each type of NSSI behaviour participants were asked to fill in the lifetime frequency of each behaviour.

Participants were asked questions designed by the researcher about the age of onset, duration of NSSI engagement, and need for medical intervention. Conducting a thorough assessment of the typology of self-injury ensures the inclusion and exclusion criteria are being met, allowing the research to be generalized to other NSSI studies. This also prevented against potential inconsistencies in definitional interpretations that would include attempted suicides and individuals who engage in indirect self-injury (e.g., reckless behaviour).

Upon completion of the assessment of NSSI survey questions, participants were asked if they have engaged in NSSI, even once, in the past 12 months. Participants who answered “Yes” were given provided with a question regarding the length of time since last engaging in NSSI. Those responding over 6 months were directed to the cessation portion of the questionnaire, while those under 6 months or those not providing a response were automatically directed to Appendix D. Although participants over 6 months were able to complete questions regarding cessation, these responses were not used in the analysis. Participants answering “No” thus satisfied the inclusion criteria for Group I and were automatically directed to the cessation portion of the questionnaire (Appendix C).

Cessation of NSSI. Participants who endorsed a history of NSSI but reported no engagement during the past 12 months were asked a variety of multiple-choice, open-ended, and Likert-scale questions. The researcher designed 44 questions to ascertain several central sections: (a) reasons for self-injury, (b) why an individual stopped self-injury, (c) effects of treatment, (d) how an individual stopped self-injury, and (e) an open category for individuals to expand on their experience of cessation. The cessation section used a 5-point Likert scale to assess variables such as the disclosure of NSSI and the decision to stop or desire to stop. For example, the statement, “Telling someone about my self-injury made me commit to stop injuring myself,” would correspond to a 5-point Likert scale with 5 being “strongly agree” and 1 being “strongly disagree.”

In order to examine the variable of self-reported functionality of NSSI, the researcher designed 13 questions that utilize three multiple-choice answers: “yes,” “no,” and “unsure.” To determine the role NSSI function may have played in cessation, participants who selected “yes” for a particular function of NSSI were automatically directed to a subsequent question regarding that function’s role in cessation. For example, participants who responded “yes” to the statement, “I intentionally used to hurt myself to relieve stress,” would be automatically directed to respond to the statement, “Self-injury was no longer helpful or useful in relieving stress, so I stopped doing self-injuring.” Participants were given the aforementioned 5-point Likert scale to provide their response. The phrasing of functionality questions were based on questions from Whitlock et al.’s (2008) study.

The survey allowed participants to provide their own responses to variables, such as motivators or incentives to cessation and deterrents to NSSI, by using open-ended

question formats. This allowed participants to fully expand on their experience of cessation and highlight potential individual variables that allowed them to successfully resolve NSSI. Participants were also asked a general open-ended question as to why they believe they were able to resolve NSSI. The potentially effective elements of treatment was investigated through the use of open-ended questions in which participants were asked about the helpful and unhelpful elements of treatment, if treatment was sought. Given the lack of research on the cessation of NSSI, open-ended questions can provide the opportunity for participants to provide variables that potentially were not identified by the researcher.

Upon completion of the cessation portion of the survey questionnaire, participants proceeded to the demographics section of the survey (Appendix D). All participants completed the demographics section of the online survey. The demographics portion is reviewed in the subsequent section.

Demographics. Participants were asked to complete a demographics section designed by the researcher (Appendix D). This section contained eight questions asking participants their age, ethnicity, relationship status, sexual orientation, gender, estimated family income per year, and if they identified as currently being a postsecondary student. In order to distinguish between participants recruited from different locations, participants were asked their current country of residence. In order to distinguish between participants living Southern Alberta and those from other sources, participants who selected “Canada” were asked if they were currently living in Southern Alberta, with Southern Alberta being defined as being living “Calgary area and south.”

Procedure

A description of the steps beginning from the moment the potential participants accessed the supplied link to learn about the study and potentially agreed to participate in the study is provided in this section. The link was supplied to potential participants in one of the various participant recruitment ways described earlier (e.g., poster, class announcement, etc.).

Welcome page. This page (Appendix G) confirmed that the participant reached the correct webpage by informing him or her that this is a self-injury study, that the study is voluntary, and that to participate in the study, one must give permission in order to participate in the study. Individuals wishing not to continue were informed they could exit their browser at this time. Participants were also required to select how they came to find out about the study in order to determine if they are from undergraduate psychology courses at the University of Lethbridge or recruited from other sources. Participants selecting undergraduate psychology courses were provided with a modified version of the informed consent form reflecting course credit procedures (Appendix H).

Informed consent. The participant was provided with an informed consent protocol after reading the welcoming message (Appendix G). The informed consent was approved by the University of Lethbridge HSRC and was consistent with the *Canadian Code of Ethics for Psychologists* (Canadian Psychological Association, 2000; see also Sinclair & Pettifor, 2001) in order to ensure the full protection of the rights of participants.

Format. The informed consent form was presented in a user-friendly manner, using a question-and-answer format; it provided a description of the purpose of the study

and the rights of the participant, including the right to end at any time and how he or she may do so (Appendices H and I). The potential risks, benefits, compensations, and how the research results would be used were detailed on the consent forms. Participants were provided with a list of available resources should they be come under duress at any time. Contact numbers for the principle researcher, the researcher's thesis supervisor, and the HRSC at the University of Lethbridge were provided to participants. Participants gave consent to complete the survey by clicking on a submit consent button, and then continued on to the survey questionnaire.

Exit options. Participants were informed they could exit the survey at any time. This could occur before beginning the survey as well as during the survey or just prior to completion. In order to exit the survey, participants were informed that they needed to simply close their browser window. Participants were informed that this would discard their responses and none of their data would be included in the study. Once participants exited the surveys, they did not have the option to re-enter and continue the survey. Participants were provided with links to the main researcher, supervisor, and HSRC should they have any questions regarding the study. A list of available resources for counselling as well as NSSI and crisis lines were provided should the participant feel any distress as a result of the study. The participants were also provided with several resources within the informed consent, and a full list of resources was provided on the social media sites (e.g., Facebook, Tumblr) used to recruit participants, which participants could access at any time.

Completion. Participants who completed the survey measures were directed to submit the responses or close their browser window to discard their responses.

Participants were informed they could contact the researcher or the researcher's supervisor after March 2014 for a summary of the results. Participants were again provided with links to the main researcher, supervisor, and HSRC should they have any questions regarding the study. A list of available resources for counselling as well as NSSI and crisis lines were provided should the participant feel any distress as a result of the study. Throughout the survey, participants were able to view a footnote, which provided the direct link to the associated Facebook ("Self-Injury Recovery Study," 2013) and Tumblr ("Self-Injury Recovery Study," n.d.) pages in order to access resources. A 24-hour crisis line was also listed at the bottom of the screen throughout the survey.

Collecting Internet data. The completed survey responses were downloaded onto the researcher's computer. No private identifiable data were collected by either the principle researcher or through the Qualtrics (2013) website. Qualtrics utilizes temporary Internet browser cookies that ensure participants only accessed the survey once; however, no private or identifiable data were held within these cookies. Surveys were downloaded and formatted in order to import the data into SPSS for analysis and review by the researcher, supervisor, and committee, and a statistician. Surveys that did not meet inclusion and exclusion criteria were deleted off the Qualtrics server. Surveys that fulfilled the criteria were transferred from the Qualtrics site and stored in an encrypted and password-protected folder on the researcher's computer. In order to prevent the loss of data in the event of computer failure, data were stored on an encrypted and password-protected flash drive only accessible to the researcher. Additionally, hard copies of the data will be stored in a locked filing cabinet accessible only to the researcher and supervisor for a duration of 10 years pending the completion of the study.

Data Analysis Strategy

In order to determine internal consistency of the survey questionnaire, measures such as Cronbach's alpha (α) coefficient (Green & Salkind, 2011) and Spearman-Brown coefficients (Green & Salkind, 2011) to determine split-half reliability were utilized to ensure reliability once all the data has been collected. Further analysis grouped participants into three categories based on endorsement of NSSI: (a) Group I – NSSI Cessation, (b) Group II – Current NSSI, and (c) Group III – No NSSI. The primary focus of research was Group I – NSSI Cessation. Descriptive statistics were run for the entire sample. Mann-Whitney U tests (Lund & Lund, 2013b) and Kruskal-Wallis tests (Lund & Lund, 2013a) were used to determine significant differences between Groups I and II. A description the data analysis being used in each of the research questions is provided in the following subsection.

Research question 1. The primary research question, Research Question 1 (RQ1), was designed to answer how and why individuals are able to stop engaging in NSSI. In order to investigate this question, the following factors were examined to determine their influence in cessation: (a) the self-reported function of NSSI in cessation; (b) the decision to stop or desire to stop; (c) elimination or reduction of psychological distress; (d) self-initiative; (e) life commitments and engagements; (f) support structures; (g) motivators, incentives, or deterrents to NSSI; (h) disclosure of NSSI; (i) events triggering cessation; (j) use of unhealthy coping strategies; (k) individual process of cessation; (l) problem resolution; and (m) relapse. Descriptive statistics, including frequency counts and percentages for each variable were conducted to analyze the data. Further analysis included the use of nonparametric tests such as Kendall tau (τ)

correlations to determine associations between factors (Gall, Gall, & Borg, 2007; Green & Salkind, 2011).

Survey questions that allowed participants the ability to provide their own responses were analyzed using content analysis. Content analysis has proven to be powerful in examining trends and patterns (Stemler, 2001). Data were coded according to the established 13 factors of cessation and insight drawn from disordered eating and substance abuse literature. Each response was analyzed to look for units of meaning and themes that could be organized into categories. In order to establish reliability, a research assistant was used to code responses independent of the researcher. The second reader was provided with a guide providing a description of each cessation factor (see Table 2). All discrepancies in coding were examined to ensure the accuracy of categorization. Where differences in coding appeared, the researcher included the response in each category in order to be more inclusive.

Research question 2. The second research question, Research Question 2 (RQ2), examined the variables as they pertained to the larger conceptual factors of readiness or motivation to change, maturational factors, and natural recovery. Descriptive statistics that provided frequency counts and percentages were utilized. Nonparametric tests including Kendall tau (τ) correlation and Mann-Whitney U tests were used to further analyze the data (Gall et al. 2007; Green & Salkind, 2011; Lund & Lund, 2013b). Open-ended responses were coded into categories using the procedure outlined in the previous research question. Table 2 provides a brief review of each cessation factor and was used as the coding guideline for each open-ended response.

Table 2

Review of Cessation Factors and Themes

Factor	Description
Self-reported function	The function provided by NSSI. May assist in providing regulatory function or create distress. Perceived benefits of NSSI may outweigh the burdens of engagement.
Decision and desire to stop NSSI	Exists on a continuum with individuals expressing a clear decision to stop or ambivalence.
Reduction or elimination of psychological distress	Decrease or cessation of NSSI when the psychological symptoms driving NSSI are reduced or eliminated.
Self-initiative	Internal processes primarily independent of others, manifesting in cognitive, emotional and behaviourally focused experiences. Developing psychological insight and knowledge, taking steps necessary to care and advocate for self. Internal process of change.
Life commitments and engagements	Involvement in other life pursuits, e.g., career and intellectual goals. NSSI may interfere with attainment of goals.
Support structures	Relational ties and support from peers, parents, and romantic partners. Includes professional treatment.
Motivators to stop and deterrents to returning to NSSI	May have a relational aspect, such as a desire to please or not concerns others. Deterrents include not having behavioural spiral out of control and concern for judgment by others.
Disclosure	Telling others about NSSI.
Events triggering cessation	Incident(s) that serve as catalyst for cessation.
Use of unhealthy coping	Use of substances or disordered eating to fulfill similar functions to NSSI.
Individual and difficult process	Journey towards cessation and maintenance a difficult and long-term process, with the temptation to injure still prevalent at times. Urge to injure remains however individual employs

Factor	Description
	strategies to actively combat impulse.
Problem resolution	Cessation occurs once individual has a problem resolve.
Return to NSSI	Individual returns to NSSI after a period of cessation.
Motivation to change	Desire towards making a positive change. Incorporates desire to stop, self-initiative, function, and motivators and deterrents.
Natural recovery	Individuals that do not have professional treatment. Incorporates variables from support, self-initiative, events triggering cessation and disclosure.
Maturation factors	Individual stops engagement with assumption of adult life roles and future orientation. Incorporates engagement factor.

Note. NSSI = non-suicidal self-injury.

Research question 3. In asking Research Question 3 (RQ3), the researcher sought to discern if the variable of gender on NSSI cessation was significant among the sample. Descriptive statistics provided information into the relative prevalence of NSSI in each gender category. Independent sample Kruskal-Wallis tests were conducted to examine the differences between gender groups on the variable of cessation (Lund & Lund, 2013a).

Summary

A description of the methods used within the thesis was provided in Chapter 6, with the aim of addressing the three principle research questions. A description of the participants, recruitment procedures, survey design, measures, data storage, and software was provided. Informed consent was also discussed. The chapter concluded with the presentation of a data analysis strategy for each of the research questions and a review of each cessation factor.

Chapter 7: Results

Overview

The questionnaire and the methodology associated with the thesis were explained in the previous chapter. The focus of this chapter will be to present the descriptive results and explain the statistical analyses performed on the data obtained from the questionnaire to answer the three research questions.

Chapter 7 is divided into three major sections, beginning with the preparation of the data and the measures performed in order to establish reliability. Second, a general demographic overview of the data will be presented, with the demographics of each participant group described. Results from the assessment of NSSI for Groups I and II will also be presented in this section. Finally, the complete analysis for each research question will be extensively described.

Data Preparation

Ethical approval was granted from the University of Lethbridge HSRC on May 24, 2013. The online survey was launched May 29, 2013, and was closed on August 7, 2013. A total of 188 respondents completed the survey, two of which were excluded due to not fulfilling the inclusion criterion of being 18 years of age or older. The remaining 186 participants were categorized into three groups on the basis of inclusion and exclusion criteria (see Chapter 6). Group I – NSSI Cessation contained 49 participants, Group II – Current NSSI contained 86 participants, and the final Group III – No NSSI behaviours had 51 participants.

Inclusion criteria. One respondent indicated current engagement in NSSI; however, this individual reported it had been 12 months since last time NSSI event.

Given the discrepancy, the decision was made to allow for the inclusion of this participant to Group I, as the question format regarding the last time of engagement in NSSI required more effort—it incorporated the use of a sliding ruler to measure time, rather than simply checking a box to indicate yes or no for cessation.

Since variability within the typology of NSSI behaviours exists, participants were also provided the opportunity to list their definition of NSSI. This thesis has defined NSSI as “the direct, deliberate destruction of one’s own body tissue in the absence of intent to die” (Nock, 2009, p. 78), and several participants identified behaviours that did not meet this definition. As such, participants who identified behaviours that were not entirely consistent with the definition of NSSI were included in the analysis based on the rationale that individuals were asked to self-identify their method of self-injury. As the definition for NSSI was not provided, the researcher chose to accept what the participant considered to be self-injury, within reason. One participant identified “extreme masochism” as a form of NSSI and remained within the sample as he or she also indicated other forms of NSSI such as skin cutting. Another participant identified vomiting as the sole form of self-injury, and an argument could be made that the act of vomiting is a form of direct self-injury. Although disordered eating behaviours are considered indirect forms of self-injury (St. Germain & Hooley, 2012), the function and intention behind vomiting was not asked of participants. It is possible vomiting was induced as a symptom of an ED; however, it could also have been used for the purposes of inflicting pain to damage one’s body. Given that the reasons surrounding vomiting are unknown, and the participant identified this behaviour as a form of NSSI, the decision was made to include the participant within the analysis. Further clarification surrounding

the purpose of behaviours such as vomiting would be beneficial in determining if it should be included as a form of NSSI.

Data review. Following the allocation of participants into the three groups on the basis of NSSI behaviours and length of cessation, the data were reviewed for any missing responses. Where numerous missing cases were present (e.g., in the Function variable), series mean imputation was used to replace the missing case with the average of the rest of that variable (Green & Salkind, 2011). Based on the literature and face validity, questions that measured similar constructs were combined to create subscales in order to assess the various cessation factors and themes drawn from disordered eating and substance abuse research. Each factor subscale contained between 15 questions on the survey to a single question. In hindsight, the varying numbers of questions within the factor subscales had the potential to influence the results and skew the data in favour of subscales containing a greater amount of questions. Thus, the results of associations between factors need to be considered with this limitation in mind. Further limitations are discussed in Chapter 8.

Reliability and Validity

Preliminary analysis of the variables indicated violations in normal distribution, thus nonparametric statistical analyses were used throughout. Internal consistency measures were run in order to determine the reliability of the survey design and factor subscales where applicable. Cronbach's alpha (α) and split-half reliability, using Spearman-Brown coefficient measures (Green & Salkind, 2011), were both utilized to assess the internal consistency of the developed survey to ensure the survey was measuring the intended constructs drawn from the literature and to assess the reliability

of the survey; that is, measurement of individuals at different times would produce similar results (Streiner, 2003). These measures were chosen given they are commonly used indices of reliability, and the latter compensates for a reduced number of questions when determining split-half reliability (Streiner, 2003). These measures are described in the following section.

Since participants completed different sections of the survey based on the endorsement of NSSI behaviours and length of cessation, the entire survey lacked sufficient participant data to complete reliability measures across the entire sample. However, internal consistency estimates were computed for the combined Assessment of NSSI and Adapted Brief COPE (Carver, 1997) sections of questionnaire for Group I and II in order to determine initial reliability. The Spearman-Brown coefficient was determined by splitting the questions into equivalent halves. One half contained from the adapted Brief COPE Questions 1, 3, 5, 7, 9, 11, 13, and 15, and Questions 5, 6 and every other question from Question 2 (typology) and 4 (duration) from the Assessment of NSSI portions. The second half contained Questions 2, 4, 6, 8, 10, 12, and 14 from the Brief COPE and Question 1 and every other question from Question 2 and 4 from the Assessment of NSSI section. The results indicated a coefficient alpha of .58 and a Spearman-Brown coefficient of .53. These findings are below the recommended reliability levels of .70 (Peterson, 1994). The lack of satisfactory reliability could be accounted for by the small number of participants ($n = 125$, 10 individuals were excluded due to not completing enough questions), the variety of constructs measured, and the different types of questions.

Internal consistency estimates were conducted for the cessation portion of the survey questionnaire. Based on the variety of different types of questions, such as short answer, Likert scale, and multiple-choice and open-ended answers, as well as the range of constructs measured, internal consistency was calculated through determining the consistency of groupings questions measuring similar factors. This ensured content validity within the factor subscales, verifying the scales were measuring similar constructs (Streiner, 2003). These grouping were carefully considered based on theory and drawn from the literature (see Chapters 2 through 6).

Functions. Thirteen questions that assessed the self-reported function NSSI once performed for the Group I participants ($n = 48$) were measured for internal consistency. One participant was excluded from the analysis, as this individual did not complete a sufficient number of questions. A coefficient alpha of .67 was found, indicating adequate reliability. The questions were split into two halves (each half contained every other question regarding the reasons for NSSI), yielding a split-half Spearman-Brown corrected correlation of .73, indicating adequate reliability. Further internal consistency measures on functions influencing cessation, such as questions pertaining to NSSI no longer providing the same functions or benefits as it once did, were unable to be performed due to low response rates.

Self-initiative. Five items were included to determine the face validity of self-initiative. One participant was excluded from the analysis, as this individual did not complete all the questions. Two measures of internal consistency were performed, with a coefficient alpha of .79 demonstrating good reliability. The split-half coefficient,

Spearman-Brown corrected correlation was .70, indicating adequate reliability (halves were split into Questions 23, 30 and 31, 32, 33).

Support structures. Five questions measured support structures, inclusive of the disclosure of NSSI. A coefficient alpha of .86 was determined, with a Spearman-Brown corrected coefficient of .89, both indicating good reliability. Halves were split into Questions 37, 38 and 39, 40, 41.

Decision to stop NSSI. Seven questions were used to measure the decision and desire to stop NSSI. Internal consistency measures indicated a coefficient alpha of .66 and Spearman-Brown corrected coefficient of .55, demonstrating less than adequate reliability within the subscale. Halves were split into Questions 16, 17, 19, 20 and 14, 18, 21.

Motivation to change. Twelve questions incorporating factors of the decision or desire to stop NSSI, events triggering cessation, and self-initiative were grouped into the category “motivation to change.” One participant was excluded, as this individual did not complete all the questions within this variable. Internal consistency measures revealed a coefficient alpha of .79 and a Spearman-Brown corrected coefficient of .75, indicating satisfactory reliability (Questions were split into halves of 14, 16, 20, 21, 23, 30 and 17, 18, 19, 31, 32, 33).

Open-ended responses. Written responses on short-answer questions were categorized using deductive content analysis (Elo & Kyngäs, 2007). Responses were coded first into categories according to the 13 factors influencing cessation, as well as maturational factors, a theme drawn from substance abuse and disordered eating literature. Each category was outlined and described in a coding reference matrix.

Responses that did not fall within these categories were then coded according to any emerging themes, through an inductive process of content analysis (Elo & Kyngäs, 2007). Reliability in the coding procedure was established by having a second reader (a research assistant) code for responses independently from the researcher. The research assistant was provided with a description of each factor as a guideline for coding. An interrater reliability rate of 75–90% was established between the two coders. All discrepancies in coding were examined to ensure accuracy, and where differences occurred the researcher erred on the side of caution and included the responses in more than one category. The decision to be more inclusive arose from the recognition that some responses belonged in more than one category and from the desire to be as accurate as possible in coding. Elo and Kyngäs (2007) noted researchers can interpret the data differently according to their subjective perspectives, thus it was anticipated discrepancies within coding might occur, and this may explain the varying interrater reliability rate.

Descriptive Analysis

This section presents the demographic data based on Tables 3 to 5. The results for this section will be presented according to three categories: (a) total participants and descriptive analyses of demographic questions; (b) participants assigned to the three groups (Groups III, II, and I, respectively) according to demographics; and (c) assessment of NSSI.

General demographics. The demographic information for the total sample, inclusive of the group breakdown, can be found in Tables 3 to 5. A total of 186 adults met the initial criteria (see Chapter 6) and completed the online survey. The total sample

of participants included 157 females (84.4%), 23 males (12.4%) and 6 individuals (3.2%) who chose the “other” category (i.e., androgynous, gender queer, or transgender). Of the 186 participants, the mean age was 24.8 years old, with ages ranging from 18 years of age to 55 years of age, with a standard deviation (*SD*) of 7.10.

Geographical profiles, for demographic purposes, were also recorded, noting the country of the participants. Participants who indicated Canada could also select if they were from Southern Alberta, as defined as being the Calgary area and south. Of the total sample, 58.6% indicated they were from Canada, with 45.7% being from Southern Alberta and 11.8% responding they were not in Southern Alberta. Participants reported being from the United States (28.0%), Europe (5.9%), Asia (0.5%), Australia (4.3%), and other (2.2%). One participant’s geographical information was missing.

A total of 81.7% of participants identified their ethnicity as Caucasian; 3.8% as Asian, First Nation, or Métis, and multiracial respectively; 2.7% as Hispanic, 1.1% as African-Canadian or American, and 3.2% identified selected “Other” for their ethnicity. No participants identified as Indo-Canadian or American.

Responses were also collected regarding participants’ sexual orientation. Of the total participant sample, 71.0 % identified as heterosexual, 10.2% as homosexual, 14.0% as bisexual, and 4.3% as questioning their sexuality. One participant chose not to answer this question. The majority of participants (57.0%) indicated they were single, which was defined as dating, divorced, separated, or widowed. Relationship status demographics also included married (14.0%), long-term relationship (21.0%), and common-law (8.1%), which was defined as living together for six months consecutively.

Responses were collected regarding current postsecondary education, with 76.9% of the sample indicating they were currently identified as a student, and 23.1% were not. A final response collected from participants for demographic profiles was total household income (e.g., if living with parents, a spouse, or a partner). Of the participants, 27.4% reported earning under \$10,000 yearly; between \$10,000 – \$20,000 at 15.1%; \$20,000 – \$40,000 at 17.2%; \$40,000 – \$60,000 at 7.0%; \$60,000 – \$80,000, \$80,000 – \$100,000, and \$100,000 – \$120,000 all reported 7.5%; \$120,000 – \$140,000 with 1.6%; and 8.1% reported earning over \$140,000 annually. Income demographics were missing for two participants.

Demographics for group III – no NSSI. A total of 51 adults completed the survey and fulfilled the criteria of Group III – No NSSI (see Chapter 6). The mean age was 26.41 ($SD = 9.47$), ranging in age from 18 to 55 years (see Table 3). The group was composed primarily of females (80.4%, $n = 41$), with nine males (17.6%), and one participant selecting the “Other” category. The ethnicity of Group III participants was 76.5% Caucasian, 9.8% Asian, 5.9% First Nation or Métis, and 2.0% Hispanic, African-Canadian, American, or multiracial, and one individual identified as “Other” ethnicity. Participants within Group III identified as 92.2% heterosexual and 3.9% as homosexual and bisexual. No participants identified as questioning. Relationship status demographics indicated participants 43.1% were single, 23.5% were married, 11.8% were in long-term relationships, and 21.6% had common-law partners. Four participants (7.8%) indicated they were currently not enrolled in postsecondary education, with the remaining 92.2% indicating they were students.

The geographical profile of Group III indicated participants were primarily from Canada, with 50 (98.0%) indicating they were from Canada, 90.2% being from Southern Alberta, and 7.8% responding they were from other areas. The remaining participant identified as being from Asia (2.0%). No participants identified as being from the United States, Europe, Australia, or “Other.” A total of 39.2% of the Group III participants reported under \$10,000 annual income; 13.7% reported between \$10,000 – \$20,000, 11.8% reported between \$20,000 – \$40,000; 3.9% reported between \$40,000 – \$60,000; 9.8% reported between \$60,000 – \$80,000; \$80,000 – \$100,000 and \$100,000 – \$120,000 both reported 3.9%, 2.0% reported between \$120,000 – \$140,000; and 9.8% earned over \$140,000 annual income. Income demographics were missing for one participant.

Table 3

Age of Participants

	Current Age			
	<i>n</i>	Mean	<i>SD</i>	Range
Total Sample	186	24.77	7.10	18-55
Group I – Cessation	49	25.20	5.22	18-43
Group II – Current NSSI	86	23.55	6.20	18-52
Group III – No NSSI	51	26.41	9.47	18-55

Note. NSSI = non-suicidal self-injury

Demographics for group II – current NSSI. A total of 86 adults met the criteria requirement for Group II – Current NSSI. The mean age was 23.55 (*SD* = 6.20), ranging from 18 to 52 years of age (see Table 3). The group was composed of 75 females (87.2%), nine males (8.1%), and four individuals (4.7%) who selected the “Other” category. The ethnicity of Group II participants were 82.6% Caucasian, 5.8 %

multiracial, 4.7% identified as “Other” ethnicity, 2.3% Asian, 2.3% First Nation or Métis, and 2.3% Hispanic. No participants identified as African-Canadian or American. Within Group II, 54.7% of participants identified as heterosexual, 15.1% identified as homosexual, 22.1% identified as bisexual, with 7.0% questioning. One participant chose not to answer this question. Relationship status demographics indicated 70.9% participants were single, 10.5% were married, 2.3% were in long-term relationships, and 16.3% had a common-law partner. Of the participants, 69.8% reported currently being enrolled in postsecondary education and 30.2% were not students.

The geographical profile for Group II reported in Table 4 indicated 29.1% of participants were from Canada, with 17.4% being from Southern Alberta and 11.6% responding they were from other areas. Of the participants, 46.5% reported being from the United States, 12.8% were from Europe, 5.8% were from Australia, and 4.7% chose “Other.” No participants identified being from Asia, and one participant did not answer this question. Of the Group II participants, 26.7% reported under \$10,000 annual income, 15.1% reported between \$10,000 – \$20,000, 18.6% reported between \$20,000 – \$40,000, 7.0% reported between \$40,000 – \$60,000, 4.7% reported between \$60,000 – \$80,000, 9.3% reported between \$80,000 – \$100,000, 7.0% reported between \$100,000 – \$120,000, and 10.5% had a household income over \$140,000. No participants reported an overall household income of \$120,000 – \$140,000, and data were missing for one participant (see Table 5).

Demographics for group I – cessation. A total of 49 adults who completed the survey fulfilled the criteria of Group I – Cessation (see Chapter 6). The mean age was 25.20 ($SD = 5.22$), ranging from 18 to 43 years of age (see Table 3). The group was

composed primarily of females, (83.7%, $n = 41$), seven males (14.3%), and one participant selected the “other” category. The majority of Group I participants identified their ethnicity as Caucasian (85.7%), 4.1% selected First Nation or Métis, 4.1% identified as Hispanic, and 2% African-Canadian or American, multiracial, and an identified “Other” ethnicity, respectively. No participants identified as being of Asian ethnicity. Of the participants within Group I, 77.6% identified as heterosexual, 10.2% as bisexual, 8.2% as homosexual, and 4.2% as questioning. Relationship status demographics indicated 46.9% of the participants were single, 10.2% were married, 28.6% were in long-term relationships, and 14.3% had common-law partners. Participants reported being postsecondary students at a rate of 73.5%, compared to 26.5% of those who indicated they were not currently enrolled in postsecondary education.

The geographical profile of Group I indicated participants were primarily from Canada, with 34 individuals (69.4%) indicating they were from Canada, 49.0% being from Southern Alberta, and 16.3% responding they were from other areas. Two participants did not provide responses regarding geographical location within Southern Alberta. Of the Group I participants, 24.5% were located in the United States and 6.1% were in Australia. No participants identified being from Europe, Asia, or “Other.” Group I participants reported under \$10,000 yearly income at 16.3%, between \$10,000 – \$20,000 at 16.3%, \$20,000 – \$40,000 at 20.4%, \$40,000 – \$60,000 and \$60,000 – \$80,000 at 10.2% respectively, \$80,000 – \$100,000 at 8.2%, \$100,000 – \$120,000 at 12.2%, \$120,000 – \$140,000 with 4.1%, and 2.0% earned over \$140,000 annually.

Table 4

*Gender, Ethnicity, Sexual Orientation, Relationship Status, and Post-Secondary Status**Demographics*

Demographics	Total		Group I		Group II		Group III	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Gender								
Female	157	84.4	41	83.7	75	87.2	41	80.4
Male	23	12.4	7	14.3	4	8.1	9	17.6
Other	6	3.2	1	2.0	4	4.7	1	2.0
Ethnicity								
Caucasian	152	81.3	42	85.7	71	82.6	39	76.5
Asian	7	3.7	--	--	2	2.3	5	9.8
First Nation or Métis	7	3.7	2	4.1	2	2.3	3	5.9
African-Canadian or American	2	1.1	1	2.0	--	--	1	2.0
Hispanic	5	2.7	2	4.1	2	2.3	1	2.0
Multiracial	7	3.7	1	2.0	5	5.8	1	2.0
Other	6	3.2	1	2.0	4	4.7	1	2.0
Sexual orientation								
Heterosexual	132	71.0	38	77.6	47	54.7	47	92.2
Homosexual	19	10.2	4	8.2	13	15.1	2	3.9
Bisexual	26	14.0	5	10.2	19	22.1	2	3.9
Questioning	8	4.3	2	4.1	6	7.0	--	--
Relationship status								
Single ^a	106	57.0	23	46.9	61	70.9	22	43.1
Married	26	14.0	5	10.2	9	10.5	12	23.5
Common-law ^b	15	8.1	7	14.3	2	2.3	6	11.8
Long-term relationship	39	21.0	14	28.6	14	16.3	11	21.6
Post-secondary student								

Demographics	Total		Group I		Group II		Group III	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Yes	143	76.9	36	73.5	60	69.8	47	92.2
No	43	23.1	13	26.5	26	30.2	4	7.8

Note. $N = 186$ ^aSingle refers to dating, divorced or separated, or widowed. ^bCommon law refers to living together for 6 months consecutively.

Table 5

Income and Geographical Demographics

Demographics	Total		Group I		Group II		Group III	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Income^a								
Under \$10,000	51	27.4	8	16.3	23	26.7	20	39.2
\$10,000 – \$20,000	28	15.1	8	16.3	13	15.1	7	13.7
\$20,000 – \$40,000	32	17.2	10	20.4	16	18.6	6	11.8
\$40,000 – \$60,000	13	7.0	5	10.2	6	7.0	2	3.9
\$60,000 – \$80,000	14	7.5	5	10.2	4	4.7	5	9.8
\$80,000 – \$100,000	14	7.5	4	8.2	8	9.3	2	3.9
\$100,000 – \$120,000	14	7.5	6	12.2	6	7.0	2	3.9
\$120,000 – \$140,000	3	1.6	2	4.1	--	--	1	2.0
\$140,000 +	15	8.1	1	2.0	9	10.5	5	9.8
Location								
Canada	109	58.6	34	69.4	25	29.1	50	98.0
United States	52	28.0	12	24.5	40	46.5	--	--
Europe	11	5.9	--	--	11	12.8	--	--
Asia	1	0.5	--	--	--	--	1	2.0
Australia	8	4.3	3	6.1	5	5.8	--	--

Other	4	2.2	--	--	4	4.7	--	--
Southern Alberta ^b								
Yes	85	45.7	24	49.0	15	17.4	46	90.2
No	22	11.8	8	16.3	10	11.6	4	7.8

Note. $N = 186$. ^aBased on total household income. ^bSouthern Alberta refers to living in Calgary, Alberta, and south.

In summary, with respect to the demographic profiles, several significant differences between groups were found using the Kruskal-Wallis tests (Lund & Lund, 2013a). Follow-up pairwise comparisons using Bonferroni correction for multiple comparisons were performed for significant results, with $p \geq .05$. Current age was found to be significantly different between groups ($\chi^2(2) = 7.44, p = .024$), with Group I (Mdn age = 25 years, $p = .02$) being significantly different from Group II ($Mdn = 22$ years), although neither differed from Group III ($Mdn = 22$ years). While all groups were predominately heterosexual, significant differences ($\chi^2(2) = 21.71, p = .00$) existed between Groups I and II ($p = 0.03$) and Groups II and III ($p = .00$). Postsecondary enrolment was significantly different between groups ($\chi^2(2) = 9.31, p = .01$). Post-hoc analysis revealed significant differences between Group III and Group II ($p = .009$), although all groups identified predominantly as postsecondary students.

Significant differences were also found for location ($\chi^2(2) = 59.57, p = .00$), with all three groups being statistically different ($p \geq 0.02$). When examining the median scores, individuals in Group II tended to reside in the United States, while the other participants generally lived in Canada. Given this finding, residing in Southern Alberta differed significantly ($\chi^2(2) = 10.35, p = .006$), with the difference existing between Group III and II ($p = .006$). Individuals in Groups I and III were more likely to be

married, while participants in Group II were generally single. This finding was statistically significant ($\chi^2(2) = 11.79, p = .003$), with differences existing between Groups II and III ($p = 0.02$), and Groups I and II ($p = 0.01$). Groups were not significantly different in terms of ethnicity or income, although Group III had a lower median income (\$10,000 – \$20,000) than Group I and II ($Mdn = \$20,000 – \$40,000$).

Descriptive Analyses for the Assessment of NSSI

Based on the inclusion criterion of having purposely injured oneself, without the intention of suicide, Group I and II participants completed questions regarding the assessment of NSSI. The data are presented in Tables 6 to 10. Data were gathered regarding the typology of NSSI and lifetime frequency of engagement in NSSI behaviours. Differences between groups were analyzed in order to determine significance. The age of onset for NSSI and the duration of engagement, either ongoing or previous, were also collected for Groups I and II. Participants also reported on level of severity of NSSI.

Frequency and typology of NSSI. Responses for Group II lifetime engagement per NSSI typology are provided in Table 6, and responses for Group I can be found in Table 7. Given the wide variety of responses, entries were coded into six categories based on frequency and adapted from Whitlock et al. (2008). Whitlock et al. (2008) found three frequency categories: 2–10, 11–50, and greater than 50 instances of NSSI. Based on the variety of responses and the high number of frequencies in the hundreds and thousands, three additional categories were added to the analysis: 0, 1, 101–500, and greater than 500. Responses were coded with the following values for frequency: 0 = 0, 1 = 1, 2–10 = 2, 11–50 = 3, 51–100 = 4, 101–500 = 5, 500+ = 6.

Table 6

Group II Lifetime Engagement in Type of NSSI

Type of NSSI	Total		Lifetime Frequency of NSSI						
	<i>n</i>	%	0	1	2–10	11–50	51–100	101–500	500+
Cut skin	78	90.7	8	--	8	10	16	29	15
Burned skin	56 ^a	65.9	29	4	29	16	5	1	1
Carved words or pictures into skin	48 ^a	56.5	37	6	28	12	2	--	--
Severely scratched self	59	68.6	27	3	24	17	6	6	3
Bit self	36 ^a	42.4	49	7	23	4	--	1	1
Severely pinched self	32 ^a	37.6	53	1	17	10	2	2	--
Glass or sandpaper to break skin	21	24.4	65	3	7	7	2	2	2
Dripped acid onto skin	5 ^a	5.9	80	--	3	1	1	--	--
Stuck self with sharp objects	51	59.3	35	2	24	16	3	5	1
Punched or hit self	55 ^a	64.7	30	2	26	20	2	3	2
Attempted to or did break bones	19 ^a	22.4	66	6	13	--	--	--	--
Prevented wounds from healing	64	74.4	22	--	5	18	22	13	6
Other	12 ^a	14.1	73	1	6	3	1	--	1

Note. $n = 86$; NSSI = non-suicidal self-injury. ^a One participant chose not to answer questions. Other includes taking too much medication or overdose, punching walls, suffocation, banging head against wall, snapping rubber band on arm, stab with knife, slapping, destroying toe nails, and using an eraser to break the skin.

Group II, those currently still engaging in NSSI, reported engaging in more overall instances of NSSI across all times of the behaviour compared to Group I. Group

II also demonstrated an increased frequency in lifetime engagement across the types of NSSI, with more participants indicating they engaged in the behaviour greater than 50 times. Participants in both groups reported cutting their skin as the most frequently endorsed method of NSSI, with 90.7% of Group II and 85.7% of Group I having engaged in that behaviour. Both groups reported dripping acid on their skin as the least frequent, with Group II reporting 5.9% (with one participant missing from the analysis) and Group I reporting 2.0%. As the primary focus of this thesis is concerned with Group I respondents, additional data for Group II can be found in Table 6 since it will not be elaborated upon in this chapter.

Group I participants indicated the most common form of NSSI to be skin cutting ($n = 42, 85.7\%$), primarily endorsing frequency rates within the 2–10 and 11–50 categories, although all rates of frequency were reported. Other frequently endorsed types of NSSI included severely scratching oneself ($n = 27, 55.1\%$), preventing wounds from healing ($n = 21, 42.9\%$), burning one's skin ($n = 20, 40.8\%$), and sticking oneself with sharp objects ($n = 16, 33.3\%$). One participant chose not to answer this question. Participants also reported carving words or pictures into one's skin ($n = 16, 32.7\%$), punching or hitting oneself to the extent bruising occurred ($n = 13, 26.5\%$), biting oneself to the extent bleeding occurred ($n = 10, 20.4\%$), using glass or sandpaper to break one's skin ($n = 9, 18.4\%$), severely pinching oneself ($n = 8, 16.3\%$), and attempting to or breaking one's bones ($n = 3, 6.1\%$). Seven participants (14.6%) reported "other" forms of NSSI. One participant did not answer this question.

Table 7

Group I Lifetime Engagement in Type of NSSI

Type of NSSI	Total		Lifetime frequency of NSSI						
	<i>n</i>	%	0	1	2–10	11–50	51–100	101–500	500+
Cut skin	42	85.7	7	2	15	10	6	3	6
Burned skin	20	40.8	29	4	12	3	1	--	--
Carved words or pictures into skin	16	32.7	33	3	11	2	--	--	--
Severely scratched self	27	55.1	22	3	13	7	4	--	--
Bit self	10	20.4	39	3	5	2	--	--	--
Severely pinched self	8	16.3	41	1	5	2	--	--	--
Glass or sandpaper to break skin	9	18.4	40	6	2	--	--	1	--
Dripped acid onto skin	1	2.0	48	--	--	1	--	--	--
Stuck self with sharp objects	16 ^a	33.3	32	--	7	6	2	1	--
Punched or hit self	13	26.5	36	3	7	3	--	--	--
Attempted to or did break bones	3	6.1	46	1	2	--	--	--	--
Prevented wounds from healing	21	42.9	28	--	5	8	3	4	1
Other	7 ^a	14.6	41	1	3	1	1	1	1

Note. *n* = 49; NSSI = non-suicidal self-injury. ^a One participant chose not to answer question. Other includes extreme masochism (1), made self vomit (2), thrown self down stairs (1), poured liquid nitrogen on skin (1), repeatedly banged head (1), and punched fences (1).

Participants were able to provide a written description of their self-identified form of self-injury, along with the lifetime frequency of this behaviour. Responses included

throwing oneself down stairs, pouring liquid nitrogen on skin, punching fences, and making self vomit (endorsed by two participants).

Typology differences between groups. Mann-Whitney U tests were run to examine the differences in engagement in various typologies of NSSI between Group I and II. Significant differences in engagement frequencies were found between groups on certain typologies, the results of which are presented in Table 8.

Table 8

Mann-Whitney U Tests for Differences in Lifetime Engagement per Typology in Groups

Typology	<i>U</i>	<i>z</i>	<i>p</i>	Median Scores	
				Group I	Group II
Cut skin	1319.50	-3.59	.000	3.00	5.00
Burned skin	1424.50	-3.15	.002	0.00	2.00
Carved words or pictures into skin	1525.00	-2.74	.006	0.00	1.00
Severely scratched self	1589.50	-2.83	.017	1.00	2.00
Bit self	1532.00	-2.94	.003	0.00	0.00
Severely pinched self	1606.00	-2.64	.008	0.00	0.00
Glass or sandpaper to break skin	1922.50	-1.05	.295	0.00	0.00
Dripped acid onto skin	1988.00	-.98	.325	0.00	0.00
Stuck self with sharp objects	1570.50	-2.39	.017	0.00	2.00
Punched or hit self	1167.50	-4.49	.000	0.00	2.00
Attempted to or did break bones	1736.50	-2.36	.018	0.00	0.00
Prevented wounds from healing	1287.00	-3.81	.000	0.00	3.00

Note. $n = 135$. Median scores for lifetime frequency: 0 = 0, 1 = 1.00, 2–10 = 2.00, 11–50 = 3.00, 51–100 = 4.00, 101–500 = 5.00, 500+ = 6.

Median scores on cutting skin were significantly different ($U = 1319.00, p = .00$) for Group I (3.00) and Group II (5.00), indicating those currently engaging in NSSI

reported significantly greater lifetime frequency of this type of NSSI. Other significant differences included burning skin ($U = 1424.50, p = .00$), carving words or pictures into the skin ($U = 1525.00, p = .00$), severely scratching self ($U = 1589.00, p = .00$), biting self ($U = 1532.00, p = .00$), severely pinching self ($U = 1606.00, p = .00$), sticking self with sharp objects ($U = 1570.50, p = .00$), punching self ($U = 1167.00, p = .00$), attempting to break bones ($U = 1736.50, p = .00$) and preventing wounds from healing ($U = 1287.00, p = .00$). These results suggest those still engaging in NSSI may demonstrate a greater lifetime frequency of engaging in certain types of NSSI over those who have resolved NSSI.

Age of onset. Data collected regarding age of onset for NSSI are reported in Table 9. Participants in Group I ($n = 49, M = 13.59, SD = 3.20$) reported similar ages of onset to Group II ($n = 85, M = 13.55, SD = 2.57$). One participant was excluded from the analysis in Group II due to the text response being unclear. A Kruskal-Wallis test was used to determine if there were differences between groups across onset of NSSI; however, the null hypothesis was retained ($\chi^2(1) = .839, p = .36$), meaning there were no significant differences for age of onset of NSSI between those who had stopped and those currently still engaging in the behaviour.

Table 9

Onset of NSSI

Group	<i>n</i>	Age of Onset (Mean)	(<i>SD</i>)	Range
Group I	49	13.59	3.20	3-19
Group II	85 ^a	13.55	2.57	6-18

Note. ^a One participant excluded from analysis.

Duration of NSSI. Responses collected regarding duration of NSSI engagement, both current for Group II, and previous for Group I, are presented in Table 10.

Participants could choose from yearly, monthly, weekly, and daily time frames with which to indicate length of time they had engaged or were currently engaging in NSSI. Although participants could select more than one time frame, the majority selected yearly engagement in NSSI. Group II participants reported the longest duration of NSSI engagement, with 7.45 years ($SD = 5.63$). Group I indicated the average length of time they were engaging in the behaviour was 5.46 years ($SD = 5.88$).

Table 10

Duration of NSSI Engagement

Group	Duration of NSSI											
	<i>n</i>	Years (mean)	SD	<i>n</i>	Months (mean)	SD	<i>n</i>	Weeks (mean)	SD	<i>n</i>	Days (mean)	SD
I	38	5.46	5.88	12	2.24	9.10	3	1.67	5.77	5	3.67	1.25
II	77	7.45	5.63	24	1.81	3.26	2	3	--	3	3.67	2.51

Note. NSSI = non-suicidal self-injury

Severity of NSSI. Participants reported on the severity of their NSSI by answering if they had needed to seek medical attention by a nurse or doctor for their NSSI. Of the 49 participants in Group I, 10 (20.4%) indicated they had sought medical attention and 39 (79.6%) had not. Group II participants ($n = 86$) reported 34 (39.5%) individuals sought medical attention and 52 (60.5%) individuals had not.

A Mann-Whitney U test was run in order to determine if there were differences in seeking medical attention between those who stopped NSSI and those who did not. Median scores in seeking medical attention for Group I (2.00) and Group II (2.00),

reflecting not seeking treatment, was statistically significant $U = 2469.00$, $z = 2.16$, $p = .03$. Thus, the null hypothesis that both groups were equal on seeking medical attention for NSSI was rejected. This suggests individuals in Group II sought medical attention at a greater frequency than Group I.

Analysis of the Research Questions

The following section will address the analysis of each of the research questions. Nonparametric and descriptive statistics were used to analyze the data, along with content analysis for the open-ended questions. Refer to Tables 11 through 24 for a complete breakdown of the results.

Research question 1. How and why do individuals with a past history of NSSI stop engaging in NSSI, specifically, what are the significant factors that are influential in cessation? Thirteen factors were identified within the literature and hypothesized as influencing cessation: (a) the self-reported function of NSSI at time of engagement (Pre-Function), and cessation (Function), (b) the decision to stop or desire to stop (Desire), (c) elimination or reduction of psychological distress (Psychological), (d) self-initiative (Initiative), (e) life commitments and engagements (Engagements), (f) support structures (Support), (g) motivators or incentives to stop NSSI and deterrents to NSSI (Motivators and Deterrents), (h) disclosure of NSSI (Disclosure), (i) events triggering cessation (Events), (j) use of unhealthy coping (Unhealthy), (k) individual process of cessation (Process), (l) problem resolution (Resolution), and (m) return to NSSI (Relapse).

Rationale for nonparametric procedure. Evaluating the overall cessation variables for skewness and Kurtosis indicated some variables to be normally distributed while others failed to meet the assumption of normal distribution. Thus, given the overall

violations in normality throughout the distribution of the data, the decision was made to use nonparametric procedures throughout.

Descriptives for factor subscales. Questions from the cessation portion of the questionnaire were combined to form subscales of factors. Two questions from the adapted Brief COPE Inventory (Carver, 1997) were used to create the Unhealthy factor. As some factors contained open-ended questions or only used one question on the survey question, not every factor has a subscale. For ease of presentation and reference, when citing the variables under analysis, the survey question number will also be indicated. The survey can be found in Appendices A to D. Group I participants ($n = 49$) responded to each of the 13 cessation factors, with the exception of the Functions ($n = 38$), as participants only answered certain questions based on the endorsement of a particular Pre-Functions question. As several responses were missing, the Functions subscale was created using mean imputation (i.e., the average of available responses). Descriptive statistics for each factor will be presented individually in the following section.

Functions. Participants provided responses on the reasons for NSSI during their engagement of the behaviour. Participants who endorsed a particular function were asked about its role in cessation (i.e., NSSI was no longer satisfying a certain function for the individual), leading the individual to stop NSSI. A complete breakdown of responses is presented in Tables 11 and 12.

Frequency counts and percentages were gathered for the 49 participants on questions of Pre-Functions, the function provided by NSSI during time of engagement. The most common functions of NSSI were to relieve stress or anxiety ($f = 43, 87.8\%$), to cope with unpleasant thoughts and feelings ($f = 37, 75.5\%$), to make emotional pain real

($f = 30, 61.2\%$), self-punishment ($f = 29, 59.2\%$), and feeling generation ($f = 24, 49.0\%$). Functions less commonly endorsed were the use of NSSI to communicate distress ($f = 20, 40.8\%$) to feel real ($f = 19, 38.8\%$), avoid impulse for suicide ($f = 16, 32.7\%$), provoke reactions from others ($f = 13, 26.5\%$), end flashbacks ($f = 11, 22.4\%$), connecting with others ($f = 5, 10.2\%$), and revenge ($f = 4, 8.2\%$).

Table 11

Frequency Counts and Percentages for Pre-Function Variables

NSSI used to:	Yes		No		Unsure	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Relieve stress or anxiety	43	87.8	4	8.2	2	4.1
Cope with unpleasant thoughts, feelings	37	75.5	10	20.4	2	4.1
Made emotional pain real	30	61.2	14	28.6	5	10.2
Self punishment	29	59.2	17	34.7	3	6.1
Feeling generation	24	49.0	23	46.9	2	4.1
Feel real ^a	19	38.8	25	51.0	4	8.2
Communicate distress ^a	20	40.8	26	53.1	2	4.1
Connect with others ^a	5	10.2	41	83.7	2	4.1
Provoke reactions ^a	13	26.5	32	65.3	3	6.1
Avoid punishment ^a	--	--	48	98.0	--	--
Revenge ^a	4	8.2	42	85.7	2	4.1
Anti-suicide ^a	16	32.7	29	59.2	3	6.1
End flashbacks ^a	11	22.4	36	73.5	1	2.0

Note. $n = 49$; NSSI = non-suicidal self-injury. ^a One participant response missing.

No participants reported engaging in NSSI as a function of avoiding punishment. One participant response was missing from the final eight categories of Functions that received lower rates of endorsement.

Table 12

Frequency Counts and Percentages for Function Variables

Cessation when NSSI no longer helped or useful to:	Strongly Agree		Agree		Unsure		Disagree		Strongly Disagree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Relieve stress or anxiety ^a	4	9.5	9	21.4	9	21.4	13	26.5	7	16.7
Cope with unpleasant thoughts, feelings ^a	3	8.3	7	19.4	6	16.7	13	36.1	7	19.4
Made emotional pain real ^a	2	6.9	7	24.1	3	10.3	11	37.9	6	20.7
Self punishment ^a	1	3.6	5	17.9	9	32.1	9	32.1	4	14.3
Feeling generation ^a	2	8.7	5	21.7	3	13.0	9	39.1	4	17.4
Feel real	2	10.5	4	21.1	1	5.3	9	47.4	3	15.8
Communicate distress	2	10.0	7	35.0	3	15.0	5	25.0	3	15.0
Connect with others	1	20.0	--	--	--	--	4	80.0	--	--
Provoke reactions	1	7.7	9	69.2	--	--	2	15.4	1	7.7
Avoid punishment	--	--	--	--	--	--	--	--	--	--
Revenge	1	25.0	--	--	2	50.0	1	25.0	--	--
Anti-suicide	3	18.8	1	6.3	2	12.5	7	43.8	3	18.8
End flashbacks	--	--	4	36.4	1	9.1	4	36.4	2	18.2

Note. NSSI = non-suicidal self-injury ^a One participant response missing.

Frequency counts and percentages were collected for responses on questions for the factor of Function, for those individuals endorsing specific Pre-Function variables. The total number of participants per type of function corresponded with the affirmative frequency counts indicated in the Pre-Function variable, with the exception, where noted, of one participant who did not provide a response.

Participants reported that their reasons for stopping NSSI was not related to NSSI ceasing to be helpful in relieving stress or anxiety ($f = 13, 26.5\%$) nor to NSSI no longer helping participants to cope with unpleasant thoughts and feelings ($f = 13, 36.1\%$). Furthermore, reasons for cessation did not seem to be related to NSSI no longer being helpful in making emotional pain real ($f = 11, 37.9\%$), self-punishment ($f = 9, 32.1\%$), and feeling generation ($f = 9, 39.1\%$). One participant did not complete these questions. Overall, this finding suggests individuals in this study did not believe that even if the reason they engaged in self-injury in the first place was no longer providing them with the same relief, it was not related to stopping the behaviour.

However, there were two variables of self-reported functions of self-injury that were no longer working for participants and were endorsed more frequently as reasons for stopping NSSI. Nine participants endorsed cessation being due to NSSI no longer providing effectiveness in provoking reactions ($f = 9, 69.2\%$) and communicating distress ($f = 7, 45.0\%$). Within this sample, NSSI ceased to be useful at ending flashbacks and was endorsed at the same frequency for both “agree” and “disagree” ($f = 4, 36.4\%$) as a reason for stopping.

Two questions were also included within the Function factor regarding the perceived burdensomeness of NSSI. Twenty-eight individuals (57.1%) “agreed” or

“strongly agreed” the benefits of NSSI were no longer worth the consequences of NSSI, and 14 individuals (28.5%) “disagreed” or “strongly disagreed.” Seven participants were unsure. When asked if their decision to stop was due to NSSI becoming problematic in one’s life, 26 of participants (53%) chose “agree” or “strongly agree,” 5 (10.2%) were “unsure,” and 18 (36.7%) chose “disagree” or “strongly disagree.” The frequency counts and percentages are represented in Table 13, as the latter question was also combined within the factor of Desire.

Desire and events. The Desire factor examined the decision individuals made towards cessation and desire to stop engagement in NSSI. This factor was composed of seven statements on the cessation section of the survey questionnaire. Likert-scale responses ranged from 5 (strongly disagree) to 1 (strongly agree). Descriptive statistics, including frequency counts, percentages, means, and standard deviations can be found in Table 13.

Twenty-one individuals (42.9%) selected “agree” and 17 (34.7%) selected “strongly agree” when asked if they had made a conscious decision to stop NSSI ($M = 3.94, SD = 1.11$). Prior to stopping NSSI, 14 (28.5%) participants responded they “disagree,” and 12 (24.5%) “strongly disagree” to having a strong desire to stop NSSI ($M = 2.55, SD = 1.22$). Twelve participants (24.5%) selected “agree,” indicating that they did have a strong desire to stop NSSI. Responses were collected regarding the influence of others ($M = 2.98, SD = 1.70$), with 16 (32.7%) participants selecting “strongly agree” in reference to being told by others to stop NSSI, and 15 (30.6%) selecting “strongly disagree.” These results suggest that making a decision to stop NSSI

was a greater influential factor than having the desire to stop NSSI prior to actually quitting. The influence of others was not prominent for this sample of respondents.

Table 13

Descriptive Statistics for Desire and Events Variables

Question	Strongly Agree		Agree		Unsure		Disagree		Strongly Disagree		<i>M</i>	<i>SD</i>
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%		
NSSI problematic ^a	8	16.3	18	36.7	5	10.2	11	22.4	7	14.3	3.18	1.35
Made conscious decision to stop	17	34.7	21	42.9	4	8.2	5	10.2	2	4.1	3.94	1.11
Strong desire prior to stopping	2	4.1	12	24.5	9	18.5	14	28.5	12	24.5	2.55	1.22
Told by others to stop	16	32.7	6	12.2	3	6.1	9	18.4	15	30.6	2.98	1.70
Severity led to decision to quit ^b	2	4.1	6	12.2	6	12.2	13	26.5	22	44.9	2.04	1.21
Loss of control led to decision ^b	4	8.2	6	12.2	6	12.2	12	24.5	21	42.9	2.18	1.33
Major event triggered decision to stop ^b	5	10.2	14	28.6	6	12.2	14	28.6	10	20.4	2.79	1.33

Note. *n* = 49; NSSI = non-suicidal self-injury. ^a Question included in Function factor.

^b Questions comprise the Events factor.

Three questions that measured Desire related to events that triggered cessation.

As such, these questions were also used to create the Events factor, and will be addressed

in this section. As with all the items on the survey, these questions were designed based on the literature and were grouped into factors according to previous research (see Chapters 4 and 5). Regarding what led to their decision to stop NSSI, 22 (44.9%) participants did not endorse that NSSI had become too severe ($M = 2.04$ out of 5.00, $SD = 1.21$), with 22 (44.9%) responding “strongly disagree” and 13 (26.5%) “disagree.” Similarly, the statement asking participants if no longer feeling in control of NSSI led to their decision to stop ($M = 2.18$, $SD = 1.33$) was only supported by four (8.2%) individuals with “strongly agree” and six (12.2%) with “agree.” Twenty-one participants responded “strongly disagree,” with 12 (24.5%) responding “disagree.” Slightly more individuals endorsed having a major event triggered the decision to stop NSSI ($M = 2.79$, $SD = 1.33$), with five (10.2%) participants responding “strongly agree” and 14 (28.6%) choosing “agree.” However, the majority of participants in this sample did not report the decision to quit as being influenced by a major event, with 14 (28.6%) responding with “disagree,” and 10 (20.4%) participants selecting “strongly disagree.”

The next set of analyses pertains to the mental health of participants and continues to be part of RQ1. This section includes the Psychological factor, which involved mental health diagnoses and examined if the reduction of psychological symptoms, such as depression or anxiety, influenced cessation.

Psychological. Responses were collected regarding mental health diagnoses, the results of which are presented in Table 14. Participants indicated depression to be the most commonly diagnosed, with 28 individuals reporting having depression (57.1%), followed by anxiety with 25 individuals 25 (51.0%). EDs ($n = 10$, 20.4%), posttraumatic stress-disorder ($n = 9$, 18.4%), bipolar disorder, alcohol or drug addiction ($n = 4$, 8.4%),

and obsessive-compulsive disorder ($n = 2$, 4.1%) were less commonly endorsed. Seven individuals (14.3%) reported “other” diagnoses, which included ADHD, antisocial personality disorder, body identity issues, and no formal diagnosis but treated for mental health concerns or experienced depression, anxiety, or ED symptoms.

In order to investigate the Psychological factor, participants were asked whether NSSI cessation occurred due to the reduction of the frequency or intensity of psychological symptoms (corresponding to Question 27 on the cessation section). The mean was 2.69 ($SD = 1.26$), with the responses broken down as follows: “strongly disagree” ($f = 10$, 20.8%) and “disagree” ($f = 14$, 29.2%), “unsure” ($f = 8$, 16.7%), “agree” ($f = 13$, 27.1%), and “strongly agree” ($f = 3$, 6.1%). One participant response was missing. These results indicate that, for this sample, the reduction or elimination of psychological distress did not appear to be a strong influencing factor.

Table 14

Descriptive Statistics for Mental Health Diagnoses

Diagnosis ^a	n	%
Depression	28	57.1
Anxiety	25	51.0
Eating disorder (anorexia, bulimia, or binge eating disorder)	10	20.4
Posttraumatic stress disorder	9	18.4
Other	7	14.3
Bipolar disorder	5	10.2
Alcohol or drug addiction	4	8.4
Obsessive-compulsive disorder	2	4.1

Note. $n = 49$. ^a Question 26 on the cessation section.

Initiative. The Initiative factor investigated the cognitive, emotional, and behavioural changes made by the individual in order to assist in stopping NSSI. This factor was measured through five statements on the cessation section of the survey questionnaire. Responses ranged from “strongly disagree” (with a Likert-scale value of 5) to “strongly agree” (with a value of 1). Complete descriptive statistics are provided in Table 15.

The statement “I sought to regain control of my life, and in doing so was able to stop self-injuring” had a mean of 3.24 out of 5.00 ($SD = 1.23$). Responses were distributed as follows: “strongly disagree” ($f = 12, 24.5\%$) and “disagree” ($f = 12, 24.5\%$), “unsure” ($f = 9, 18.4\%$), “agree” ($f = 16, 32.7\%$), and “strongly agree” ($f = 8, 16.3\%$). Slightly more participants endorsed actively taking steps to reduce and stop NSSI ($M = 3.43, SD = 1.21$), 17 (34.7%) individuals responded “agree,” with 10 (20.4%) selecting “strongly agree” and “disagree,” respectively. Individuals were split on whether learning to identify triggers and using this information assisted in stopping NSSI ($M = 3.22, SD = 1.14$), with 17 (34.7%) participants responding “agree” and 12 (24.5%) “disagree.”

Slightly more participants endorsed the statement “telling myself I could stop help me to quit” NSSI ($M = 3.23, SD = 1.21$). A total of 17 (34.7%) individuals endorsed this statement by selecting “agree” and 7 (14.3%) chose to “strongly agree”; however, 14 (28.6%) participants selected “disagree” and three (6.1%) selected “strongly disagree.” One participant response did not respond to this question.

Table 15

Descriptive Statistics for Initiative Variables

Question	Strongly Agree		Agree		Unsure		Disagree		Strongly Disagree		<i>M</i>	<i>SD</i>
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%		
Sought to regain control of life	8	16.3	16	32.7	9	18.4	12	24.5	12	24.5	3.24	1.23
Actively took steps to reduce and stop	10	20.4	17	34.7	9	18.4	10	20.4	3	6.1	3.43	1.21
Learned triggers and used info to help stop	6	12.2	17	34.7	11	22.4	12	24.5	3	6.1	3.22	1.14
Sought out alternative activities	11	22.4	17	34.7	8	16.3	9	18.4	4	8.2	3.45	1.26
Telling self could stop helped ^a	7	14.3	17	34.7	7	14.3	14	28.6	3	6.1	3.23	1.21

Note. $n = 49$. ^a One participant response is missing.

Participants who sought out alternative activities when having the urge to engage in NSSI ($M = 3.45$, $SD = 1.26$) included 11 (22.4%) responding “strongly agree” and 17 (34.7%) “agree.” This was greater than those who did not seek out alternative activities, with nine (18.4%) individuals selecting “disagree” and four selecting (8.2%) “strongly disagree.” Those seeking out alternative activities were asked in an open-ended question to provide examples of what they did to deal with the urge to injure. Twenty-six

participants provided responses, although one was excluded due to the response being a notation of previously providing an answer.

Exercise was the most commonly endorsed alternative activity ($f = 10$, 40.0%), followed by the use of social support and strategies ($f = 8$, 32.0%) such as speaking to friends. The use of different distraction techniques was also frequently reported ($f = 11$, 44.0%), including watching television, knitting, and being with animals. Distraction techniques included reading and writing ($f = 4$, 16.0%) and art and video games ($f = 2$, 8.0%). The use of unhealthy strategies was also endorsed ($f = 4$, 16.0%), such as using drugs or alcohol. Cognitive strategies such as examining emotions or focusing on positive aspects of one's life was reported less frequently ($f = 3$, 12.0%), and only one individual (4.0%) reported life commitments as an alternative activity to engaging in NSSI.

Life commitments and engagements. The Engagements factor was a measure of future goals and life commitments that may have been influential in cessation of NSSI. As it relates to future orientation, questions within Engagements were also used to measure maturational factors, which will be discussed in RQ2. The factor was measured through three questions on the cessation section. This included one statement evaluating if NSSI was “getting in the way of attaining one's goals for the future” (Question 43). The mean for this statement was 3.14 out of 5.00 ($SD = 1.29$), with 13 (26.5%) participants selecting “agree” and 8 (16.3%) selecting “strongly agree.” Eight (16.3%) individuals responded “disagree” and 7 (14.3%) “strongly disagree,” with 13 (26.5%) participants selecting “unsure.” The role of life commitments and engagements was also assessed through the statement, “I stopped self-injuring because I felt I outgrew it”

(Question 22). The mean for this statement was 2.94 ($SD = 1.28$). The most commonly reported response was “agree” with 16 (32.7%) participants, followed by “unsure” with 12 (24.5%), and “strongly disagree” with 10 (20.4%). Seven (14.3%) participants selected “disagree” and four (8.2%) participants selected “strongly agree.” These results indicate participants within this sample did not generally feel they had outgrown the behaviour and were split on whether having goals for the future was significant.

Responses were collected regarding potential life commitments and engagements that acted as reasons for cessation. Participants could select as many responses as were applicable to their situation. Descriptive statistics are presented in Table 16. The most frequently reported life commitment and engagement reason was the establishment of a new peer group ($f = 16$, 36.4%), followed by entering into a significant positive long-term relationship ($f = 13$, 29.5%). Beginning a new job and beginning university or college were each endorsed by nine participants (20.5%), and leaving a significant negative long-term relationship and moving out on one’s own were respectively reported by eight participants. One participant (2.3%) reported starting a family and becoming pregnant as a life commitment that resulted in NSSI cessation. Nineteen participants (43.2%) selected the “other” category and provided text responses. Examples of responses included having a support group, leaving multiple negative short-term relationships, serving a mission for one’s church, entering into a positive relationship and making the promise to stop NSSI, receiving counselling for past trauma, family illness, and the use of drugs. One participant responded all events listed had assisted in cessation at different times.

Table 16

Descriptive Statistics for Life Commitment and Engagement Reasons for Cessation

Reasons for Cessation ^a	<i>f</i>	%
Other	19	43.2
New peer group	16	36.4
Entered into significant positive relationship	13	29.5
New job	9	20.5
Began university or college	9	20.5
Moved out on one's own	8	18.2
Left a significant negative relationship	8	18.2
Became pregnant	1	2.3
Started a family	1	2.3

Note. $n = 44$. ^a Question 42 on cessation section.

Support and disclosure. The Support factor includes formal relationships, such as counselling, and informal relationships, such as friends and family, that may have aided in stopping NSSI. Supportive variables were also used to determine if telling others about NSSI was beneficial in cessation and were included in the Disclosure factor. Support was measured through five statements on the cessation section of the survey questionnaire. Complete descriptive statistics are provided in Table 17.

The statement “I stopped NSSI because it was hurting others in my life” had a mean of 2.70 ($SD = 1.56$), thus indicating this was not a strong reason for stopping NSSI. Responses were distributed as follows: “strongly disagree” ($f = 16, 32.7\%$) and “disagree” ($f = 11, 22.2\%$), “agree” ($f = 10, 20.3\%$), and “strongly agree” ($f = 9, 18.4\%$). On the statement of “having a supportive person to talk with helped me to stop engaging in” NSSI ($M = 3.35, SD = 1.48$) the most frequently selected response was

“strongly agree” with 14 (28.6%) participants, followed by “agree” ($f = 13$, 26.5%), “strongly disagree” ($f = 9$, 18.4%), “unsure” ($f = 7$, 14.3%), and “disagree” ($f = 6$, 12.2%). Feeling supported to stop NSSI ($M = 3.02$, $SD = 1.33$) was endorsed by 18 (36.7%) individuals who responded with “agree,” followed by “strongly disagree” ($f = 10$, 20.4%), “unsure” ($f = 9$, 18.4%), “disagree” ($f = 7$, 14.3%), and “strongly agree” ($f = 5$, 10.2%). Thus, participants were divided on whether they were supported in stopping.

The following two statements measured Disclosure in addition to the Support. On the statement “telling someone made me commit to stop” NSSI ($M = 2.41$, $SD = 1.40$), the most commonly selected response was “strongly disagree” ($f = 18$, 36.7%), followed by “disagree” ($f = 11$, 22.4%), “agree” ($f = 8$, 16.3%), “unsure” ($f = 7$, 14.3%), and “strongly agree” ($f = 5$, 10.2%). The most commonly reported response on the statement “telling others helped me to overcome” NSSI ($M = 2.39$, $SD = 1.40$) was also “strongly disagree” ($f = 19$, 38.8%), followed by “disagree” ($f = 10$, 20.4%) and “agree” ($f = 10$, 20.4%), “unsure” ($f = 6$, 12.2%), and “strongly agree” ($f = 4$, 8.2%). Therefore, these results revealed telling others about NSSI was not a strong influencing factor in stopping the behaviour.

The next set of analyses provides information regarding the potential motivations and incentives to stopping NSSI, and the deterrents identified by individuals to returning to the behaviour, both variables examined within RQ1. Open-ended questions were used to gain a variability of responses in order to provide individuals with the freedom to list their own motivations and deterrents.

Table 17

Descriptive Statistics for Support and Disclosure Variables

Question ^a	Strongly Agree		Agree		Unsure		Disagree		Strongly Disagree		<i>M</i>	<i>SD</i>
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%		
Stopped NSSI as it was hurting others	9	18.4	10	20.3	3	6.1	11	22.2	16	32.7	2.70	1.56
Supportive person to talk with helped to stop	14	28.6	13	26.5	7	14.3	6	12.2	9	18.4	3.35	1.48
Telling others ^b helped to overcome NSSI	4	8.2	10	20.4	6	12.2	10	20.4	19	38.8	2.39	1.40
Telling someone created commitment to stop ^b	5	10.2	8	16.3	7	14.3	11	22.4	18	36.7	2.41	1.40
Felt supported to stop	5	10.2	18	36.7	9	18.4	7	14.3	10	20.4	3.02	1.33

Note. $n = 49$; NSSI = non-suicidal self-injury. ^a Questions 37 – 41 on cessation section combine to create the Support factor. ^b Disclosure variables.

Motivations and incentives. The Motivators and Deterrents factor was investigated directly through two open-ended questions, the first of which asked participants about the motivations they had for stopping NSSI. Participants' written responses were organized into categories using the 13 factors as a guideline for content analysis. Answers were first coded according to motivators and incentives, with the

following responses categorized into the remaining 12 factors. Frequency counts and percentages are presented in Table 18.

Forty-five participants provided a written response to the question regarding the motivations they had for stopping NSSI, with one participant not included in the analysis owing to the response “answered in the previous question.” Participants often endorsed multiple motivations for cessation; as such, their responses were coded into numerous categories.

Twenty responses (45.5%) were coded under the category Motivators or incentives to stopping NSSI and Deterrents to NSSI. Participants identified specific elements that led to cessation, the most common motivator being the scars left by NSSI ($f = 7, 15.91\%$). For example, participants noted feeling embarrassed or ashamed by scarring, with some individuals endorsing being motivated not to create new or more scars. One participant stated simply, “[I] was motivated to not do self-injury because I did not want ugly scars.” The second most commonly found theme involved a relational aspect, as participants described being motivated to quit as they believed NSSI had a detrimental and harmful effect on others in their lives ($f = 6, 13.64\%$). For example, one participant stated, “It was hurting the people I loved and making me feel worse,” while another noted, “Hurting myself I don’t care about but hurting someone I care about is a different story.” Finally, another common incentive to cessation was the difficulty in hiding injuries left by NSSI ($f = 3, 6.81\%$). One participant described the difficulty in hiding injuries, explaining, “The trouble to hide it often caused me more pain.”

Table 18

Category Frequency Counts and Percentages for Motivations for Stopping NSSI

Factor	<i>f</i>	%
Motivators ^a	20	45.45
- Scars	7	15.91
- Effect on others	6	13.64
- Difficulty hiding injuries	3	6.81
Support structures	15	34.09
Decision or desire to stop	11	25.00
Function	7	15.91
Self-Initiative	7	15.91
Life engagements and commitments	5	11.36
Reduction of psychological distress	4	9.00
Individual process	4	9.00
Events triggering cessation	3	6.81
Relapse	2	4.55
Use of unhealthy coping	2	4.55
Problem resolution	1	2.27
Disclosure	1	2.27

Note. *n* = 44. ^a Question 35.

Responses also coded with respect to the remaining 12 factors indicated Support (*f* = 15, 34.09%) and Desire (*f* = 11, 25.00%) as the most common themes. Examples of Support included having a helping network or at least one individual that assisted the participant. This included professional supports such as psychiatrists, counsellors, friends, family, and commonly a significant other; for example, one participant stated, “The support of my family, friends and boyfriend helped me greatly.” Responses coded into Desire reflected at times the wish to change one’s behaviour for the better as a

motivating factor; for example, one participant explained, “I wanted to be healthy and successful, and able to help others, and I knew I could not do that while self-injuring.” Other participants reflected no decision to stop (e.g., the participant could not remember why he or she stopped in the first place) or indicated “the impulse went away.”

Participants also provided responses that were coded into themes of Function ($f = 7, 15.91\%$) and Initiative ($f = 7, 15.91\%$). examples of FUNCTION motivators for cessation included NSSI no longer being effective and feeling as though NSSI was more harmful than it was helpful. For example, one participant highlighted this with the following statement: “[I] realized the self-injury was getting progressively worse and more frequent, and was not effective long term.” Responses coded into Initiative reflected the internal changes made by participants, such as dealing with stress and emotions in healthier ways. Participants’ examples included the need “to find healthy ways of dealing with my stress” and learning “to deal with my problems and stress in a different way.”

Deterrents. Forty-seven participants provided written responses to the question regarding what kept them from returning to using NSSI behaviours. This provided deterrents to returning to NSSI. As with motivations, participants often endorsed numerous reasons for not returning to the behaviour; thus, responses were coded into multiple categories. Responses that did not clearly fall under the specific deterrents to NSSI were coded using the remaining 12 factors. Frequency counts and percentages for each category can be found in Table 19.

Table 19

Category Frequency Counts and Percentages for Deterrents for Returning to NSSI

Factor	<i>f</i>	%
Self-initiative	20	42.55
Deterrents ^a	12	25.53
- Social	6	12.76
- Scars	4	8.51
- Fear	2	4.26
Support structures	12	25.53
No longer have the urge or nothing	6	12.76
Life commitments and engagements	5	10.64
Individual and difficult process	5	10.64
Reduction of psychological distress	5	10.64
Function	1	2.13

Note. $n = 47$. ^a Question 36.

The most frequently endorsed reasons for not returning to the use of NSSI behaviours were categorized as being from the Initiative factor ($f = 20$, 42.55%). Response of this type included better coping mechanisms and strategies for dealing with stress and emotion, use of distraction, and the knowledge of how to deal with the urges of NSSI. The role of SUPPORT was also important ($f = 12$, 25.53%), with individuals utilizing professional resources such as counsellors and therapeutic techniques. Participants described the need to talk about how they were feeling and to utilize informal supports such as significant others, friends, and family members. For example, one participant stated, “[I] learned to trust [my significant other] with my anxieties.”

Responses that could be categorized as being specifically within the Motivators and Deterrents factors were endorsed at the same frequency as Support ($f = 12$, 25.53%).

Deterrents to returning to NSSI primarily had a social aspect ($f = 6, 12.76\%$), with individuals reporting relationships kept them from engaging in the behaviour, particularly as they felt it was harmful for others. For example, one respondent stated, “Knowing how crushed and upset my boyfriend, my family, and myself would be if I returned to self-harm.” Social aspects also included the fear of judgment from others, both in terms of appearance of injuries resulting from NSSI and concern that NSSI would make the individual appear mentally unstable. One participant noted he or she did not “want my family thinking I’m crazy,” while another expressed feeling self-injury “makes people think I am pathetic and weak, and I do not want scars.” These responses were similar to individuals who endorsed scars as being the main deterrent to NSSI ($f = 4, 8.51\%$), as responses included not wanting to create new scars and concern of how injuries would look. Fear was also clearly identified as a deterrent ($f = 2, 4.26\%$), with themes of fear of long-term consequences and NSSI becoming uncontrollable if a relapse were to occur. For example, one participant stated, “I’m scared that it will get out of control again and controlled me.”

Six (12.76%) individuals identified having “nothing” as a deterrent to returning to NSSI or no longer having the urge or need to engage in NSSI. For example, one participant explained, “[I] just don’t want to engage in that activity.” This was in contrast to five participants (10.64%) whose responses were coded as Process as they reflected the individual and difficult process of cessation with ongoing urges and active strategies to fight those urges. Participants noted having thoughts of NSSI despite a period of cessation, and reflected on the difficulty of overcoming the impulse to engage in NSSI. For example, one individual stated, “[I] thought about it every now and again, but the

effort doesn't seem worth it; I have other coping mechanism." Another individual noted, "Recovery is a day-to-day process." The responses also included a sense of accomplishment with the choice to utilize healthy coping strategies over NSSI: "I enjoy being able to control my impulses."

Use of unhealthy coping. The Unhealthy factor was created to investigate if participants reported using unhealthy means of dealing with stress and emotions, such as alcohol and drugs, in the absence of NSSI. The Unhealthy factor was measured through two questions on the adapted Brief COPE designed by Carver (1997; see Chapter 6), and is the only factor that was not drawn from responses on the cessation section of the survey questionnaire. Responses ranged from "I usually don't do this at all" (a value of 1.00) to "I usually do this a lot" on each statement (a value of 4.00). Complete descriptive statistics can be found in Table 20.

Responses collected relating to the statement regarding the use of alcohol or drugs to feel better ($M = 1.65$, $SD = .95$) revealed the majority of participants "usually don't do this at all" ($f = 29$, 59.2%) or "usually do a little bit" ($f = 12$, 24.4%). Less frequently endorsed were the responses "usually do a medium amount" and "usually do this a lot," each with four participants (8.2% each). Similar results were found for the statement regarding the use of alcohol or drugs to help get through a stressful time ($M = 1.65$, $SD = .95$), with 31 (63.3%) individuals responding, "usually don't do this at all," and 11 (22.4%) responding, "usually do this a little bit." Four (8.2%) individuals endorsed "usually do a medium amount" and three (6.1%) selected "usually do this a lot." Thus, these results indicate the majority of participants did not use alcohol or drugs to deal with stressful emotions or to feel better.

Table 20

Descriptive Statistics for Unhealthy Variables

Question	Usually don't do at all		Usually do a little bit		Usually do a medium amount		Usually do this a lot		<i>M</i>	<i>SD</i>
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%		
Use alcohol or drugs to feel better ^a	29	59.2	12	24.5	4	8.2	4	8.2	1.65	.95
Use alcohol or drugs to help get through it ^b	31	63.3	11	22.4	4	8.2	3	6.1	1.57	.89

Note. $n = 49$. ^a Question 3 on adapted Brief Cope (Carver, 1997). ^b Question 8 on adapted Brief Cope (Carver, 1997).

Process. The Process factor was created to examine the process with which individuals engaged in to overcome NSSI. This included aspects of continued thoughts of NSSI despite a period of not using the behaviour, as described by Grocutt (2009). The factor was directly investigated with an open-ended question regarding the strategies individuals learned and utilized that may have assisted in the cessation of NSSI (question 24). A total of 41 written responses were collected; however, one participant was excluded from the analysis as a result of responding he or she had already provided a response during a previous question. Frequency counts and percentages for the responses coded according to the 13 factors influencing cessation can be found in Table 21.

Table 21

Frequency Counts and Percentages for Strategies Assisting in Cessation

Factor	<i>f</i>	%
Support structures	21	52.50
Self-initiative	15	37.50
Motivators and deterrents	14	35.00
Individual and difficult process	7	17.50
Decision or desire to stop	7	17.50
Function	5	12.50
Reduction in psychological distress	5	12.50
Relapse	4	10.00
Problem resolution	3	7.50
Disclosure	2	5.00
Use of unhealthy coping	2	5.00
Life commitments and engagements	2	5.00
Events triggering	2	5.00

Note. $n = 40$.

The most frequently identified category within responses regarding techniques employed by participants that assisted them in cessation came from the Support factor ($f = 21, 52.5\%$). This was inclusive of professional treatment, such as counsellors, as well as informal supports, such as spending time and speaking with family, friends, and significant others. For example, the following statements were coded as Support; “I had a friend who encouraged me to stop” and staying “with my boyfriend and/or friends every night to keep myself from being home alone.” Cognitive and behavioural strategies employed by the individual to assist in cessation relating to the Initiative factor were endorsed second most frequently ($f = 15, 37.50\%$). Examples of these strategies

included waiting for the urge to engage in NSSI to pass, avoiding triggers, and focusing on positive aspects of one's life. One respondent noted, "[I] regained my passion for dance," while another stated, "[I] would give myself a half hour, if I still felt like cutting myself I would either give myself permission to cut myself or give myself another half hour." Motivators and Deterrents were also commonly endorsed ($f = 14$, 35.00%), particularly in relation to the negative effect NSSI had on others ($f = 9$, 22.50%) and not wanting scarring to occur ($f = 3$, 7.50%).

Seven participants (17.5%) provided responses that directly corresponded to the Process factor. Responses of this type highlighted the individual journey towards cessation of the respondent and often included continued thoughts of NSSI despite a period of cessation. Participants described the ongoing struggle at times to not engage in NSSI, but often employed cognitive and behavioural techniques in order to combat the urges. An equal number of responses were categorized within the Desire factor ($f = 7$, 17.50%). These responses alternatively at times indicated no desire to stop engaging in NSSI, rather denoting simply losing the urge to use NSSI any longer ($f = 3$, 7.50%). While participants noted no longer having the impulses and just ceasing the behaviour, others endorsed having made a clear decision to stop. The decision to stop was at times linked to other factors, such as Events ($f = 2$, 5.00%) and Supports ($f = 3$, 7.50%). For example, one response reflected Desire and Events: "It was a fear I was going to kill myself one that ended it; it got really bad one night and when I couldn't stop the bleeding I knew I had to stop now before it got worse."

Themes from the Function and Psychological factors were also identified from participant responses on what assisted cessation. Participants who identified Function

factors ($f = 5$, 12.50%) reported examples such as the recognition NSSI would not solve anything and NSSI began to make the individual feel worse. Psychological factors were found at the same rate ($f = 5$, 12.50%), with participants noting mental health concerns had improved and thus lessened the need to use NSSI. For example, one participant stated,

When I keep up with my medications I feel more in control of my emotions and then I'm able to avoid self-injury because I can rationalize and organize where the hurt is and I don't need to put a physical quality to it.

Overall, while some responses provided a direct measure of the Process factor, participants endorsed a variety of strategies and techniques that assisted in cessation that were categorized across all factors. However, this is representative of the factor as a whole, with the process of cessation being an individual and unique one.

Problem resolution. The Resolution factor was developed to determine if having a problem or stressor resolve was influential to stopping NSSI. The factor was comprised of one statement evaluating if participants reported having a problem resolve in their lives, and as a result, no longer needed NSSI to cope (Question 34). The mean for this statement was 2.84 ($SD = 1.18$), with 14 (28.6%) individuals reporting to the selections “agree” and “disagree,” respectively. Eleven (22.4%) participants were “unsure,” seven (14.3%) reported they “strongly disagree,” and three (6.1%) reported they “strongly agree.” The even distribution of responses indicates that for some individuals having a problem resolve was important; however, for others this was not a reason for cessation.

Relapse. One question was used to measure the factor of Relapse, which looked at whether individuals returned to NSSI after a period of cessation. Participants were

asked to select the statement that best described how they stopped NSSI (Question 25). Results revealed a variability in return to NSSI, with the most commonly endorsed reports being 18 (36.7%) participants stopping NSSI abruptly with some brief returns to NSSI behaviours. However, this was closely followed by 16 (32.7%) participants reporting stopping NSSI abruptly, with no return to NSSI behaviours. Eleven (22.4%) individuals reported stopping NSSI gradually, eventually getting to the point of no longer engaging in the behaviour. Four (8.2%) individuals selected “other” and provided a text response. Examples of responses included having two periods of time of engaging in NSSI, one of which was stopped gradually and the other ended abruptly.

At this point in the results, the following is known within this sample of participants: Cessation of NSSI appears to be an individual process with no one factor clearly being influential in assisting in stopping the behaviour. Participant reports indicates numerous reasons for quitting and variability in the how the individual achieved this. The next section, still part of RQ1, will review the associations between the cessation factors that could be combined into subscales.

Association between cessation factors. While the previous section addressed the specific variables associated within the 13 cessation factors, the following section will examine potential associations between cessation factors. The analysis was conducted in order to examine significant correlations that could provide insight into the factors most influencing the cessation of NSSI. Of the 13 factors, analysis was done on the cessation factors that were comprised of several questions on the survey questionnaire to create factor subscales. Kendall tau (τ) correlations were applied to assess the relationship between the cessation factors. All tests were 2-tailed, with a significance level set at $p \leq$

.05. The results are presented in Table 22. It should be noted that these results are also important within RQ2 and will be discussed further in that section.

A significant positive correlation was found for Initiative and Support ($\tau = .31$, $p < .01$), Desire ($\tau = .33$, $p < .01$), and Disclosure ($\tau = .32$, $p < .01$). These tests indicate higher scores on Initiative factors were associated with higher scores on Support, Desire, and Disclosure factors. This may be representative of Initiative being a significant factor in cessation of NSSI. Increased endorsement of the cognitive, emotional, and behavioural strategies to stop NSSI was significantly correlated with increased reports of a desire to stop and supportive relationship, including disclosing NSSI to others.

Desire scores were found to be significantly positively associated with scores on Function ($\tau = .27$, $p < .05$), meaning individuals endorsing NSSI no longer provided the same effectiveness were correlated with increased reports of a desire to change. A positive significant correlation was demonstrated between Events and Pre-Function ($\tau = .25$, $p < .05$), indicating greater endorsement on reasons for engaging in NSSI was associated with increased scores on questions measuring the events that led an individual to stop NSSI.

The Events ($\tau = .65$, $p < .01$) factor was also significantly positively correlated with the Desire factor; however, this was expected as the subscale contained the same questions as Desire. This was also true for the highly significant correlation seen between Support and Disclosure ($\tau = .80$, $p < .01$); the latter contained questions found within the Support subscale. Engagements were significantly correlated with Function ($\tau = .36$, $p < .01$) and Desire ($\tau = .27$, $p < .05$). These results are discussed in the following section regarding maturational factors.

Table 22

Kendall tau (τ) Correlations Across Cessation Factors

Factors	Pre-function		Function ^a		Desire	
	τ	<i>p</i>	τ	<i>p</i>	τ	<i>p</i>
Pre-Function			-.08	.52	.16	.13
Function ^a	-.08	.52			.27*	.02
Desire	.16	.13	.27*	.02		
Initiative	.13	.21	.01	.93	.33**	.00
Supports	.21*	.04	-.05	.64	.09	.36
Disclosure	.17	.13	-.02	.86	.13	.22
Events	.25*	.02	.20	.09	.65**	.00
Unhealthy	-.03	.82	.17	.17	.05	.66
Engagements	.10	.36	.36**	.00	.27*	.01

Factors	Initiative		Support		Disclosure	
	τ	<i>p</i>	τ	<i>p</i>	τ	<i>p</i>
Pre-Function	.13	.21	.21*	.04	.17	.13
Function ^a	.01	.93	-.05	.64	-.02	.85
Desire	.33**	.00	.09	.36	.13	.22
Initiative			.31**	.00	.32**	.00
Supports	.31**	.00			.80**	.00
Disclosure	.32**	.00	.80**	.00		
Events	.20	.06	.16	.13	.18	.10
Unhealthy	-.07	.52	-.22	.05	-.16	.18
Engagements	.16	.14	.01	.95	.07	.50

Factors	Events		Unhealthy		Engagements	
	τ	<i>p</i>	τ	<i>p</i>	τ	<i>p</i>
Pre-Function	.25*	.02	-.03	.82	.10	.36
Function ^a	.20	.09	.17	.17	.36**	.00
Desire	.65**	.00	.05	.66	.27*	.01
Initiative	.20	.06	-.07	.52	.16	.14
Supports	.16	.13	-.22	.05	.01	.95
Disclosure	.18	.10	-.16	.18	.07	.50
Events			.01	.93	.16	.14
Unhealthy	.10	.93			.07	.54
Engagements	.16	.14	.07	.54		

Note. *n* = 49. ^a *n* = 38. * Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Research question 2. What are the factors influencing cessation as they pertain to substance abuse and disordered eating literature? Three themes identified within the

literature were the motivation to change, natural recovery, and maturational factors. As these themes were used to inform many of the questions on the survey questionnaire, the descriptive statistics have already been presented in the previous section. The following section will address the association between factors in order to provide further insight into possible influences to cessation.

Rationale for nonparametric procedure. As with the previous section, after evaluating the overall cessation variables for skewness and kurtosis, it was noted some variables were normally distributed while others failed to meet the assumption of normal distribution. Given the overall violations in normality throughout the distribution of the data, nonparametric procedures were utilized.

Motivation to change. Motivation to change was characterized by a desire towards making a positive change in one's life. This included variables from the factors Desire, Initiative, and Function, which were grouped according to theory and the literature review (see Chapters 4 and 5). Participants' motivations to stop NSSI and deterrents to returning to NSSI (Motivators and Deterrents) were also considered within the theme of motivation to change; however, these responses were open-ended to allow for a variety of responses and could not be included within the correlational analysis.

Kendall tau (τ) correlations were run in order to determine the association between the factors of Desire, Initiative, and Function. All tests were 2-tailed, with the significance set at $p \leq .05$. There was a strong positive correlation between Desire and Initiative ($\tau = .33, p < .01$). This finding suggests those who reported a greater desire to stop NSSI were significantly associated with higher endorsement on measures of Initiative—they reported the use of more cognitive and behavioural strategies to stop

NSSI. This may suggest those who identified with more factors of Desire and Initiative had a greater motivation to change. A strong correlation between these two factors suggests it makes sense to include these factors within the theme of motivation to change.

A significantly positive correlation was also found between Function and Desire ($\tau = .27, p < .05$), suggesting individuals for whom NSSI was no longer providing the same functions may have a greater desire to change or made the decision to stop engaging in NSSI. However, the Function factor was not correlated with Initiative ($\tau = .01, p = .93$), suggesting the use of strategies to stop NSSI was unrelated to whether or not NSSI had stopped being effective for the individual. Therefore, the results demonstrate that while the reasons for engaging in NSSI may have a role in the decision and desire to stop NSSI, it is not associated with the techniques utilized to actively cease the behaviour. Thus, Function may have a limited role in the motivation to change, while Desire and Initiative appear to be more significant to the desire towards making positive change.

Natural recovery. Natural recovery was categorized as individuals who did not seek professional treatment to assist in the cessation of NSSI. Included within natural recovery were variables from Initiative, Support, Disclosure and Events; however, these variables were also applicable for individuals who sought professional treatment. Participants were asked regarding the treatment they may have received for NSSI, and were also asked to describe the effectiveness and helpful elements of treatment.

Due to the increased rate of psychological comorbidity seen with NSSI (see Chapter 2), participants were asked if they received counselling for mental health concerns (Question 27 on the cessation section of the survey in Appendix C). Responses

were evenly split, with 24 (49.0%) individuals responding they had received counselling, and 24 (49.0%) individuals reporting they had not received counselling for mental health concerns. One participant chose not to answer this question.

Regarding NSSI, participants were asked if they had sought any type of treatment specifically for NSSI (i.e., medical help, counselling, inpatient treatment, or crisis intervention) and if this had assisted them in stopping NSSI (Question 29 in Appendix C). Thirty (61.2%) participants endorsed this category as being not applicable, reflecting they did not seek help. Thus, the majority of participants stopped NSSI through some form of natural recovery. The remaining participants were divided on the effectiveness of treatment, with eight (16.4%) individuals endorsing that professional help had assisted them in stopping the behaviour, and seven (14.3%) participants reported that professional help had not been beneficial. Four (8.2%) participants were unsure if treatment had assisted them in stopping the behaviour.

Correlations between cessation factors and treatment options. Kendall tau (τ) correlations were performed in order to examine the association of natural recovery, professional treatment, and overall cessation factors. All tests were 2-tailed, with a significance level set at $p \leq .05$. The results are presented in Table 23. Analyses were performed by grouping participants according to having sought professional treatment for mental health concerns by assigning participants the value of 1.00 for treatment and 2.00 for no treatment or natural recovery. On a second variable, individuals who did not seek help for specifically for NSSI were categorized as engaging in natural recovery and assigned to the value of 1.00. Individuals who sought treatment specifically for NSSI

were assigned a value of 0.00. Correlations were run with the cessation factors that could be combined to create factor subscales.

Table 23

Kendall Tau (τ) Correlations Across Cessation Factors with Natural Recovery

Factors	Mental Health Treatment			NSSI Counselling		
	<i>n</i>	τ	<i>p</i>	<i>n</i>	τ	<i>p</i>
Pre-Function	48	.26*	.04	49	.23	.06
Function	37	-.16	.25	38	-.14	.32
Desire	48	.37**	.00	49	.14	.24
Initiative	48	.35**	.00	49	.25*	.04
Engagements	48	-.29	.82	49	-.14	.26
Supports	48	.18	.14	49	.26*	.03
Disclosure	48	.15	.25	49	.26*	.04
Events	48	.43**	.00	49	.26*	.04
Unhealthy	48	.05	.72	49	-.20	.14

Note. *n* = 49; NSSI = non-suicidal self-injury. * Correlation is significant at the 0.05 level (2-tailed). ** Correlation is significant at the 0.01 level (2-tailed).

On the measure of seeking professional treatment for mental health concerns, some factors were found to be significant. A significant positive correlation was found between mental health treatment and Pre-Function ($\tau = .27, p < .05$), indicating those who did not seek treatment were associated with higher scores on reasons for engaging in NSSI. The mental health treatment variable was positively correlated with Desire ($\tau = .38, p < .01$) and Initiative factors ($\tau = .35, p < .01$), meaning higher scores on the

subscales were strongly associated with those not seeking treatment. These results indicated increased scores on treatment, indicating potentially that natural recovery is significantly associated with increased scores on measures of the desire to stop NSSI and self-initiative subscales.

A strong positive correlation was also found for Events ($\tau = .43, p < .01$), suggesting individuals not seeking treatment for mental health concerns were strongly associated with endorsement of events triggering cessation. The association is similar to that seen in Desire, particularly as some of the variables are the same between Desire and Events. However, those endorsing Events demonstrated a slightly greater strength of association than Desire.

Kendall tau (τ) correlations were performed for in order to investigate possible associations of cessation factors with individuals seeking treatment and specifically for NSSI and those who did not (i.e., natural recovery). All correlations were 2-tailed, with a significance level set at $p \leq .05$. Natural recovery was reflected in higher values for NSSI counselling. A positive significant correlation was found for NSSI counselling and Initiative ($\tau = .25, p < .05$), indicating those utilizing natural recovery were associated with higher levels of self-initiative. Significant positive correlations were also found for Supports ($\tau = .26, p < .05$), Disclosure ($\tau = .26, p < .05$), and Events ($\tau = .26, p < .05$).

These results indicate those engaging in natural recovery also endorsed higher scores on factor subscales of Initiative, Supports, Disclosure, and Events. This provides support for the variables outlined in Chapter 5 within natural recovery and justification for the creation of a natural recovery category. These results may also suggest those using natural recovery may tend to utilize more strategies in order to stop NSSI. The

following section addresses the specific variables individuals may have used to stop NSSI within these factors.

Specific variables associated with natural recovery. Mann-Whitney U tests were performed to assess differences within the cessation factors Initiative, Disclosure, Support, and Events with natural recovery. Participants were grouped according to natural recovery or treatment in order to examine potential differences in factors of cessation. The results are presented in Table 24.

Differences between the natural recovery and treatment groups existed on several variables. Median scores on the variable self-liberation, as measured by “telling myself I could stop helped me quit” for natural recovery (3.00) and treatment (4.00) were statistically significant different, $U = 370.50, z = 2.22, p = .02$. This suggests those who used natural recovery to stop NSSI tended to endorse self-liberation techniques more frequently than those who sought professional treatment. Another Initiative variable, “I sought to regain control of my life,” also had statistically significant differences ($U = 382.00, z = 2.05, p = .04$) between natural recovery (3.00) and treatment (4.00) median scores. Those who did not seek treatment also endorsed a greater frequency of seeking to regain control of their lives. Other variables measuring Initiative were not significantly difference between natural recovery and treatment median scores.

Table 24

Mann-Whitney U Tests for Variables Associated with Natural Recovery

Factor	<i>U</i>	<i>z</i>	<i>p</i>
Initiative			
Actively took steps to reduce and stop NSSI	369.50	1.79	.07
Sought out alternative activities	347.50	1.33	.18
Telling self could stop helped ^a	370.50	2.22	.02*
Sought to regain control of life	382.00	2.05	.04*
Disclosure			
Telling someone created commitment to stop	381.50	2.05	.04*
Telling others helped to overcome NSSI	375.00	1.92	.05
Support			
Supportive person to talk with helped to stop	372.00	1.83	.07
Stopped NSSI as it was hurting others	336.50	1.09	.28
Events			
Severity led to decision to quit	385.00	2.18	.03*
Loss of control led to cessation	329.50	.96	.34
Major event triggered decision to stop	363.00	1.65	.10

Note. $n = 49$; NSSI = non-suicidal self-injury. * Significant at $p < 0.05$. ^a One participant response missing.

A statistically significant difference was found between the median scores for natural recovery (2.00) and treatment (2.00) regarding “telling someone created a commitment to stop” ($U = 381.50, z = 2.05, p = .04$), with both group scores disagreeing with the statement. Disclosure and Support variables that were further examined using Mann-Whitney U tests revealed no significant differences between groups.

A significant difference was found between those who engaged in natural recovery ($Mdn = 1.00$) and individuals who sought treatment ($Mdn = 3.00$) on the variable of having the “severity of NSSI lead to cessation” ($U = 385.00, z = 2.18, p = .03$). Individuals using natural recovery were more likely to not have the severity of NSSI increase. While this may suggest those who sought treatment were prompted by the severity of NSSI, other variables measuring Events were not statistically significant.

Treatment. Participants seeking help specifically for NSSI were asked to identify helpful and unhelpful elements treatment, and if they were aware of the type of treatment they received. Nineteen responses were provided regarding the helpful elements of treatment; however, four responses were excluded, as participants wrote “not applicable.” Written responses were collected for 21 individuals regarding the unhelpful elements of treatment, four of which were excluded, as the responses were “not applicable” or “tied to a previous question.” Thirteen responses were collected the type of treatment received, five of which were excluded as individuals respondent “not applicable.”

Responses were coded using inductive content analysis to determine if any common themes emerged. Elements of what was deemed helpful aspects of treatment by participants included learning techniques for coping with stress and emotions, and identifying triggers ($f = 7, 46.7\%$) and rapport built with a counsellor that included a nonjudgmental approach and respect ($f = 6, 40.0\%$). One participant noted that while he or she saw one therapist and “felt completely judged and misunderstood,” another therapist “allowed me to feel comfortable enough to talk about what was really going on,” which was a huge benefit to the individual. Talking with a counsellor was also

reported as being helpful ($f = 5$, 33.3%) and some individuals noted the reduction of psychological distress as being beneficial ($f = 3$, 20.0%).

Unhelpful elements of treatment described by the 17 participants reflected three major themes. The most commonly described response was categorized as a lack of understanding of NSSI by the counsellor ($f = 7$, 41.2%). Participants described not feeling understood by professionals and noted a lack of knowledge regarding NSSI. For example, one participant stated, “My psychiatrist was inexperienced with self-injury.” Similarly, judgment and negative attitudes towards the individual were frequently reported ($f = 6$, 35.3%). Participants described negative experiences with professionals and feeling as though they were treated with disrespect. One individual described the “additional guilt and shame, dealing with assumptions, judgments, and negative personal feelings” on the part of the professional. Ineffective techniques were reported by some individuals ($f = 3$, 17.6%), as counsellors suggested therapeutic interventions that did not assist during treatment. Examples of such techniques included focusing on “surface issues,” and overuse of homework and workbooks.

Eight responses were collected regarding the type of treatment received for NSSI. The majority of participants were unsure of the type of counselling they had received ($f = 5$, 62.5%). DBT and CBT were reported as being utilized in combination for one participant, with DBT alone endorsed by a single participant. An existential and Rogerian approach was endorsed as being employed with one respondent in combination with CBT. One participant reported receiving a general type of counselling.

Maturational factors. Maturational factors influencing cessation were measured on several questions throughout the cessation portion of the survey in order to determine

if cessation occurred as the individual aged and assumed adult roles. The Engagements factor described previously provided insight into the potential maturational factors influencing cessation within this sample. Reasons for cessation attributed to maturation were presented previously in Table 16. The following section will provide further investigation of these factors.

Participants' written responses for the open-ended questions regarding the motivations for stopping NSSI and the deterrents to returning to NSSI behaviour were coded for maturational factors. Of the 44 responses for motivations for stopping NSSI, themes of maturation were endorsed within 15 (34.10%) responses. Several participants reported growing out of the behaviour, while others noted an increased focus on the future and commitments that were not conducive with continuing to engage in NSSI. Example of such responses included "I grew up," and "I'm planning on a future in medicine; I knew I couldn't fully help people until I got better." Preliminary themes emerged of the realization NSSI was no longer effective or worth engaging in, and participants employed strategies such as finding healthier ways of dealing with stress in order to actively recover.

Written responses collected for 47 individuals provided insight into potential maturational factors as reasons for not returning to NSSI. Maturation factors were endorsed directly in 6 (12.77%) responses. Participants noted more mature ways of coping or feeling as though they were too old to be engaging in the behaviour: "I feel I am too old to act like that." Some participants reflected no longer having the urge to engage in NSSI anymore and noted NSSI to be a brief temporary means of coping. One respondent referred to self-injury as "simply an adolescent stage, very brief."

Kendall tau (τ) correlations for the Engagements factor subscale were performed with the other noted cessation factor subscales in order to provide insight into the potential role of maturational factors. Future life commitments and engagements were strongly correlated with Function ($\tau = .36, p < .01$). This suggests individuals endorsing increased scores on future goals and feeling as though they had outgrown the behaviour were positively associated with increased reporting that NSSI no longer created the same desired result. The Engagements factor was also significantly correlated with Desire ($\tau = .27, p < .05$), meaning increased agreement with engagement variables was positively associated with higher scores on measures of desire to stop engaging in NSSI. Analyses performed on the remaining factor subscales did not reveal any other factors to be significant with Engagements. Complete results can be found in Table 22.

As presented in Table 15, participants selected potential reasons for cessation based on various life commitments, assumed adult roles, and future goals. Of the 44 participants who responded to the question, 21 (47.7%) individuals selected one of the responses as a reason for cessation, while 15 (34.1%) individuals selected two maturational reasons as assisting in cessation. Five (11.4%) participants endorsed three maturational factors, and three participants reported four or more reasons. These results indicate that for some participants a single maturational reason may have assisted in cessation while for others, a combination of factors denoting a shift towards the assumption of adult life roles was important.

Research question 3. RQ3 was designed in order to determine if there are there gender differences in NSSI cessation. In order to answer this research question, participants from Groups I and II were used for analysis. Three categories of gender

were used to categorize participants (male, female, or other). Cessation was defined as not having engaged in NSSI within the past 12 months, which participants were provided with a yes or no choice. A total of 135 participants were used for analysis, 116 females, 14 males, and five individuals endorsing “other.”

Rationale for analysis. As the data failed to meet the assumptions of normality, a nonparametric test was used to analyze the data. An independent samples Kruskal-Wallis test was performed rather than a one-way ANOVA.

Results. A Kruskal-Wallis test was run in order to assess differences in cessation between gender groups. Cessation was not significantly different between gender groups ($\chi^2(2) = 1.85, p = .397$). Median cessation endorsements for each group, female ($Mdn = 1.00$), male ($Mdn = 1.50$), and other ($Mdn = 1.00$) were not statistically significant ($p < .05$). Therefore, the null hypothesis was retained, as results for this sample indicated there were no differences in reports of cessation of NSSI with regards to gender identification.

Summary

The intention of Chapter 7 was to present the complete results of the designed survey and subsequent analysis of each research question. Demographic information, descriptive statistics, and statistical procedures were described in detail within this chapter. The following chapter will provide a full discussion of the results presented, bringing the thesis together and highlighting the implications of the data as well as potential areas for future research.

Chapter 8: Discussion

Overview

To begin Chapter 8, the purpose of the thesis will be briefly reviewed, as well as a summary of the results. The main focus of this chapter will be to elaborate upon the answers to each of the three research questions, followed by an exploration of how the findings may impact the work of counsellors and researchers. In addition, numerous strengths and critical limitations of the study will be addressed, along with future areas of research. The thesis concludes with a reflection of the researcher's experience throughout the research journey.

Purpose of the Thesis

The purpose of this study was to ascertain why individuals stopped engaging in self-injury behaviours and how they were able to do so. Utilizing cessation factors identified in a comprehensive review (see Chapters 4 and 5), the aim of this study was to contribute to the current knowledge of NSSI by addressing a gap in the literature, that of how individuals are able to stop NSSI. To meet this aim, two comprehensive literature reviews were undertaken examining factors of cessation drawn from previous NSSI studies and factors drawn from disordered eating and substance abuse literature (e.g., Patching & Lawler, 2009; Sobell, 2007; Stanton et al., 1986). The variables extracted from the literature review were integrated into an engaging, user-friendly survey administered online. The survey had a number of sections to be completed based on the participants' self-disclosed status of NSSI. The answers gained from the study proved to be interesting and have the potential to be of value to researchers and clinicians who are interested in the cessation of self-injury.

Relevant Demographics

During the 70 days the survey was available online, a total of 186 individuals fulfilled the inclusion and exclusion criteria of the study. The majority of participants identified as Caucasian, a finding consistent with previous research (Andover, Primack, Gibb, & Pepper, 2010; Whitlock et al., 2008). The average age of participants was 25 years old, with a range from 18 to 55 years of age. Most of the participants were located with Canada.

Self-injury profiles. Participants reported age of onset to be around the age of 14 years old, consistent with previous literature (Jacobson & Gould, 2007). While skin cutting was the most frequently endorsed method of NSSI, all typologies were endorsed at different frequencies. This is reflective of the variability seen in type and frequency of NSSI utilized by individuals seen in previous research (Jacobson & Gould, 2007; Whitlock et al., 2008). Participants were allocated to three separate groups on the basis of their NSSI status, which is summarized in the Table 25.

Table 25

Participant Group Allocation

	Group I	Group II	Group III
Criteria	No longer engaging in NSSI behaviours	Currently engaging in NSSI behaviours	No NSSI behaviour
Sample size	49	86	51

Note. NSSI = non-suicidal self-injury.

Group II participants reported more overall instances of lifetime engagement in NSSI across all typologies compared to Group I participants, and reported a longer duration of engagement in NSSI. Interestingly, as Group II participants reported

engaging in a greater frequency of NSSI, this may be suggestive a greater severity of the behaviour than those in Group I (i.e., individuals who have successfully resolved NSSI). Support for an increased severity of NSSI for those still engaging in NSSI was provided by significant differences between Groups I and II on various typologies for overall lifetime engagement. Group I participants reported frequencies that were consistent to those found by Whitlock et al. (2008), specifically falling under 100 times of lifetime frequency. Group II individuals reported a greater variability in lifetime frequency, often indicating greater than 100 instances of NSSI and occasionally into the 1000s.

Alternatively, more instances of self-injury within Group II could be explained by the recency of engaging in the behaviour. Individuals may be able to recall more times when they were self-injuring due to the availability of these memories. The greater ease with which people can bring memories to mind increases the risk of overestimating the number of times the behaviour occurred (Bradburn, Rips, & Shevell, 1987). Similarly, since Group I participants have stopped engaging in NSSI, they may be more likely to underestimate frequency or have more difficulty in recalling frequency as a result of the increased length of time from engaging in the behaviour. Individuals tend to incorporate previously distinct memories of similar events into memory making retrieval more difficult (Bradburn et al., 1987). Taking into consideration the effect of recency on memory recollection, future study to determine if lifetime frequency of NSSI is associated with the ability to stop the behaviour would be warranted.

Group II participants sought medical attention significantly more often (at 39%) than those in Group I (20%). This may also suggest individuals in Group II demonstrate a greater severity of NSSI. Assessing for the severity of NSSI is important for clinicians

to determine, as previous research has found that higher suicidality has been found with increased severity of NSSI (Whitlock et al., 2008). According to researchers, individuals engaging in NSSI multiple times were also found to have more reports of suicidal ideation (Kakhnovets et al., 2010), suggesting the need for counsellors to assess for suicide ideation when working with individuals who engage in NSSI behaviours.

Psychological correlates. In this sample of Group I participants ($n = 49$), a high comorbidity of mental health diagnoses were found, notably depression (57%) and anxiety (51%). This is consistent with the previous research indicating co-occurring mental health conditions were significantly related to NSSI (Gollust et al., 2008). EDs (20%) were reported in the sample at a higher rate than substance abuse diagnoses (8%), suggesting the link between EDs and NSSI may be stronger than that with substance abuse. However, having an ED or substance abuse concern was not readily apparent in this thesis sample.

The next section will present the findings of the first research question. While three groups were necessary groupings as a way to solicit a broad range of participants who have a history of self-injury, the following analysis will be focused, at this time, on Group I.

Research question 1. How and why do individuals with a past history of NSSI stop engaging in NSSI; specifically, what are the significant factors that influence cessation? This section discusses functions, desire and events, psychological, initiative, engagements, support and disclosure, motivators and deterrents, unhealthy coping, process, resolution, relapse, and the association between the cessation factors.

Table 26

Research Question 1 Summary Table

Variable	Description of Variable	Main Findings
Pre-functions	Reason for engaging in NSSI	<ul style="list-style-type: none"> • Intrapersonal reinforcement endorsed more frequently than interpersonal. • Significant correlation with supports, events.
Function	NSSI no longer effective for intended reason	<ul style="list-style-type: none"> • Interpersonal reinforcement endorsed more frequently as relating to cessation than intrapersonal reinforcement • Majority (53–57%) indicated NSSI became problematic and no longer worth consequences. • Significant correlation with desire, engagements.
Desire	Desire or conscious decision to stop NSSI	<ul style="list-style-type: none"> • Making decision to stop (78%) more important than desire to stop (29%) • Significantly correlated with initiative, events, engagements, function
Events	Events (severity, loss of control) triggering cessation	<ul style="list-style-type: none"> • Few endorsements (16–40%) of events triggering cessation. • Significant correlation with pre-function, desire
Psychological	Reduction or elimination of psychological distress	<ul style="list-style-type: none"> • Variable only assisted with cessation in 33% of time.
Initiative	Internal process of change through cognitive, behavioural, and emotional strategies	<ul style="list-style-type: none"> • 47–57% self-initiative strategies endorsed. • Significant correlation with desire, supports, disclosure
Engagements	Future oriented commitments and life pursuits	<ul style="list-style-type: none"> • 41% felt outgrew behaviour, 43% have goals that NSSI was interfering with. • Significant correlation with function, desire.

Variable	Description of Variable	Main Findings
Support	Relational ties and support from formal and informal sources	<ul style="list-style-type: none"> • Supportive person to talk to helpful (55%) • 47% felt supported to stop NSSI • Significant correlation with pre-function, initiative, disclosure
Disclosure	Telling others about NSSI to serve a functional role	<ul style="list-style-type: none"> • Disclosure not a strong reason for cessation (26–29%) • Significant correlation with initiative, supports
Motivators	Motivation to stop NSSI	<ul style="list-style-type: none"> • Scars, effect on others, difficulty hiding injuries common motivating themes. • Support and desire common themes.
Deterrents	Reasons to not return to NSSI	<ul style="list-style-type: none"> • Effect on others, scars common deterrents to returning to NSSI. • Initiative and support themes common.
Unhealthy	Use of substances to replace NSSI	<ul style="list-style-type: none"> • 84–86% used little to no substances to cope
Process	Individual and difficult process of cessation	<ul style="list-style-type: none"> • Techniques assisting in cessation included self-initiative strategies, supports. • 17% had ongoing thoughts of NSSI. • 13% lost urge to engage in NSSI
Resolution	Problem resolution leads to cessation	<ul style="list-style-type: none"> • Resolution weak reason for cessation: (35%)
Relapse	Return to NSSI after period of cessation	<ul style="list-style-type: none"> • 37% reported relapse. • 33% no relapse. • 22% gradually stopped NSSI behaviours.

Note. NSSI = non-suicidal self-injury.

Findings. RQ1 is the heart of this thesis and will be discussed extensively in this chapter. Table 26 provides a summary of the main findings from RQ1 for reference. The findings will be presented in 13 main themes: Function, Desire, Events, Psychological,

Initiative, Engagements, Support, Disclosure, Motivators and Deterrents, Unhealthy, Process, Resolutions, and Relapse. After each theme, the implications for counsellors and researchers will be discussed before moving to the next theme. To begin, the reasons that contributed to the person stopping NSSI behaviour will be identified.

Functions. Overall, the results confirmed a functional approach to NSSI, as proposed by Nock and Prinstein (2004) and as evidenced by the answers provided by the individuals completing the survey who ceased to cause self-injury. Participants endorsed all the function categories, intrapersonal and interpersonal functions, within the model. The following will highlight some of the key findings associated with the purpose of hurting oneself.

When asked about reasons for engaging in NSSI, the majority of participants reported intrapersonal NR functions (i.e., NSSI decreases negative affect), such as using NSSI to relieve stress or anxiety (88%), cope with unpleasant thoughts and feelings (75%), make emotional pain real (61%), and punish oneself (59%). Intrapersonal PR (i.e., feeling generation) was reported less frequently, with participants using NSSI as a means to feel real (39%), avoid the impulse for suicide (33%), and end flashbacks (22%). Using NSSI behaviours to deal with intrapersonal functions appears to be consistent with previous findings on motivations for NSSI (Laye-Gindhu & Schonert-Reichl, 2005; Nock & Prinstein, 2004) and provides additional support for the clinical assumption that NSSI is an emotion-focused coping strategy often used to regulate affect.

Consistent with the research of Nock and Prinstein (2004), intrapersonal functions were endorsed more frequently than interpersonal functions, such as using NSSI to communicate distress (41%), provoke reactions with others (26%), connecting with

others (10%), and as a means of revenge (8%). Interestingly, no participant indicated NSSI was used to avoid punishment, meaning that this may not be as prevalent a reason for injury. Within this sample of 49 individuals, interpersonal PR (i.e., NSSI facilitates help seeking) appeared to be endorsed more than interpersonal NR (i.e., NSSI facilitates escape from undesired social circumstances).

It was interesting to discover only a few participants (under 10%) indicated the reason they stopped NSSI was because the self-injury was no longer helping to regulate internal processes. This finding was contrary to the hypothesis that cessation arises from NSSI no longer being effective in the reported function it once provided. The only instances in which participants disclosed cessation as being influenced was when interpersonal functions, such as provoking reactions (77%) and communicating distress (45%), were decreased in effectiveness. This latter finding may suggest that the loss of effectiveness in interpersonal functions may be of greater significance than the listed intrapersonal functions. It appears that while NSSI continues to be effective at regulating affective processes, the behaviour has aversive effects on relationships, prompting cessation. These findings should be interpreted with caution, as the number of individuals who responded to these questions varied dramatically (ranging from five participants to 43).

However, what did seem to contribute to stopping self-injury behaviours were the consequences, as the majority of participants (57%) said they stopped NSSI because the consequences of this behaviour were no longer worth it. This powerful finding suggests cessation may occur when the consequences of the action (e.g., increased interpersonal difficulties) begin to outweigh its benefits (e.g., the intrapersonal stress relief provided by

self-injury). Consequences of engaging in NSSI were reflected in a small majority (53%) of participants endorsing NSSI as becoming problematic in their lives. These results suggest that, for the majority of individual in this sample, NSSI resulted in negative consequences and distress that potentially drove cessation.

Implications for counsellors and researchers. The findings from the thesis lend support for counsellors to conduct a full inquiry as to why someone engages in NSSI behaviour. Understanding that an individual uses self-injury to cope with negative affect may assist in breaking the biased notion individuals are using NSSI as a form of manipulation or seeking undue attention (McHale & Felton, 2010; Warm et al., 2002). As well, finding out why people hurt themselves might help with treatment planning, as the need (or reason why) may be able to be met by using emotional regulation strategies (e.g., DBT and CBT), if avoidance is one of the reasons why. The counsellor needs to assess the functions NSSI provides for the client, and whether those reasons are still effective in relieving the client's distress. Implementing techniques that replace the function of NSSI (e.g., replacement skills), may prove to be beneficial to the client in reducing NSSI.

Another implication from the findings obtained from this thesis is the value in counsellors examining the consequences of NSSI as well as the benefits. This exploration may assist counsellors in helping client to reduce or stop the behaviour. This study reported results that some of the participants decided to stop self-injury behaviours because the consequences of NSSI behaviour outweighed the advantages of the behaviour. It is important for counsellors to recognize NSSI can provide an effective coping strategy for clients, although a potentially harmful. Perhaps using motivational

interviewing (MI) techniques, which discusses the pros and cons of a behaviour (Miller, 1983), may be a valid addition to the treatment plan when helping those who engage in NSSI.

Given the finding that the perceived burdensomeness seems to be a factor that contributes to ceasing self-injury counsellors may want to consider how to use this potential change variable in therapy. For example, perhaps the counsellor may want to enlist the support of external resources to help the person weigh the pros and cons of continuing in NSSI behaviours. Counsellors could also ask family and friends to share how the client's self-injury behaviour impacts them, in order to help highlight the potentially unseen negative consequences the behaviour may be having towards others. However, in this study, as it was not found to be the majority of individuals who stopped engaging in NSSI when they learned the behaviour was hurting others, these interventions should perhaps be more supportive than punitive in nature. Involving the use of family and friends should be done with care to ensure that shame is not part of the change agent. This might be done by educating family and friends about NSSI, and encouraging an open conversation between individuals. As the majority of individuals found it helpful to talk to a supportive person in this study, assisting family members in communication skills and empathetic support would be beneficial.

Desire and events. Another aspect of RQ1 asked about the individual's desire and decision to stop engaging in NSSI, including particular events that may have triggered cessation. The large majority of participants (78%) made a conscious decision to stop NSSI, but reported lower rates (29%) of having a strong desire to stop prior to actual cessation. This suggests the desire to stop NSSI may not be as important as

making the actual decision to stop. However, within this sample, what led to the decision to stop was not strongly influenced by particular events. Severity of NSSI and loss of control were reported by nearly 70% as not being important to cessation, and having a major event trigger cessation was only reported by 39% of individuals. This differs from findings within substance abuse literature that note a significant event is often instigated by a major crisis or accumulation of distressing events (Burman, 1997; Sobell et al., 2000). These results may also be reflective that external events are not as important as an internal process of change for the person. The individual who engages in self-injuring behaviour may need to make the decision to change rather than being influenced by an external event.

Implications for counsellors and researchers. Counsellors need to be aware of the potential ambivalence demonstrated by clients in wanting to change their behaviour, understanding that a lack of desire to change may not reflect future outcomes. As Shaw (2006) noted, the desire to stop did not necessarily predict cessation of NSSI. Future research could further explore if ambivalence towards change affected treatment outcomes for NSSI. Individuals displaying ambivalence towards giving up the behaviour may benefit from the implementation of MI techniques in counselling. Researchers have shown that MI can assist in enhancing a client's intrinsic motivation to change through communication (Miller & Rollnick, 2009). Increasing intrinsic motivation to change appears to be important given this study's findings that external events were not strongly influential in cessation. Making the important decision to stop may be driven by internal factors, which can be facilitated through the MI process.

Psychological. Another facet of RQ1 that helped understand the factors associated with cessation examined the role of mental health issues. Previous research noted reducing or eliminating psychological catalysts contributed to stopping NSSI (Shaw, 2006). However, this was not found to be a strong reason for cessation in this sample of participants, as only 33% of respondents supported the statement NSSI was reduced or stopped after the participant's associated psychological distress was alleviated. This finding needs to be interpreted cautiously as the sample size for this finding was small.

Implications for counsellors and researchers. Given the respondents to the survey did not believe having their psychological distress reduced or eliminated was a reason for cessation, perhaps counsellors may want to ensure they are spending more of the session time on the treatment of NSSI, rather than focusing on the person's mental health concerns. Alternatively, perhaps offering stress management and focusing on addressing the reasons why the individual injures him or herself may be seen as more useful to the client than addressing the mental health symptoms. Further research, such as focus groups, are needed to confirm the value of this recommendation. Additionally, more investigations need to be centred on whether mental health concerns are driving NSSI behaviour or vice versa.

Initiative. A third theme involved in answering the research question focused on self-initiative—the participants' cognitive, emotional, and behavioural strategies to reduce and stop NSSI. Self-initiative proved to be an important factor in cessation, since more participants endorsed these variables than not, with percentages ranging from 47% to 57%. Although these results do not reflect a large majority, it should be noted that

14% to 22% of participants reported being unsure on these questions. Thus, the conclusions are drawn from comparing the frequency of individuals who agreed and disagreed.

The small majority of participants of this sample were actively seeking to deal with NSSI, using internal strategies such as telling oneself he or she could stop engaging in the behaviour (self-liberation), learning about triggers for self-injury, and striving to regain control of one's life. These findings were consistent with those found by Shaw (2006) and support that idea some individuals engage in internal processes primarily independent of others in order to make positive changes and achieve cessation. Within the sample of this thesis, actively seeking alternative activities (counter-conditioning) and taking steps to reduce NSSI were common practice, endorsed by 57% and 55% of participants respectively. This suggests participants recognized NSSI as an unhealthy means of coping, and were internally motivated to change their behaviour.

In an open-ended response, participants in this sample disclosed they used a variety of cognitive and behavioural replacement strategies to deal with NSSI urges. These replacement strategies are similar to those suggested by Walsh (2006) in the treatment of NSSI. The most common strategies were exercise and distraction techniques such as watching television, creating art, reading, and writing. Social support, such as speaking with others, was noted as an effective way of dealing with the urge to engage in NSSI. The surveyed participants also reported the use of a counsellor and therapeutic interventions were beneficial in reducing NSSI. Notably, no participant in this study reported the use of negative replacement behaviours such as snapping an elastic band on one's wrist (Walsh, 2006).

Implications for counsellors and researchers. Since it appears using replacement skills to deal with the urge to engage in NSSI was beneficial for some of the thesis participants, counsellors may want to help the clients develop a list of distraction options. An important caution for counsellors, as described in Chapter 3, replacement skills often serve as a temporary coping mechanism to deal with the impulse to engage in NSSI, rather than addressing the core issue of why the individual is utilizing that behaviour.

Researchers may want to investigate self-initiative variables in a larger scale study of cessation, particularly what assists those who are able to draw upon internal strategies to influence behaviour. Perhaps there are differences in individuals who use these behavioural, cognitive, and emotional strategies to reduce NSSI. It would be interesting to determine if there are other internal strategies people use to actively stop unwanted behaviours. Conducting further research on what individuals use as replacement skills with a larger sample of participants may provide additional insight into the most commonly used techniques and whether negative replacement skills are used and are effective.

Engagements. The fourth theme for the first research question looked at how individuals were influenced by future-orientated events in their journey towards cessation. Of participants within this study, 43% reported a reason to stop included having life goals and fulfilling commitments that were difficult to achieve if they had continued to self-injure, while 41% of individuals indicated they had outgrown the behaviour. These two reasons for stopping the harmful behaviour appear to be support Shaw's (2006) speculation that NSSI will be discontinued, for some, when individuals

began to fill their lives with meaningful activities, such as educational pursuits and an increased social network.

When asked about other commitment related reasons for stopping self-injury, commonly endorsed items included a social aspect, such as joining a new peer group (36%) and entering into a significant positive relationship (29%), and gaining new opportunities, such as getting a new job (20%) and beginning university (20%). Generally, it appears that developing future goals and engaging in life commitments had a moderate effect for this sample population. However, approximately 25% of participants stated they were unsure about the degree to which having future commitments and outgrowing the behaviour was a reason they stopped using self-injury. A possible explanation could be the individual did not recognize the influence of commitments and engagements. As the person slowly engages in more future-oriented commitments, this may not have been attributed by the individual as being helpful to cessation as it did not pertain to NSSI behaviours directly. For example, joining a new healthy peer group allows an individual to develop stronger emotional connections with others, resulting in feeling better about oneself and subsequently decreasing NSSI behaviours. While the engagement in a new peer group influenced cessation, the individual may be unaware this was a contributing factor, given that it does not directly impact NSSI.

Support and disclosure. The support and disclosure variables for RQ1 focused on the relationships that aided an individual in stopping NSSI, and the potential utility of discussing NSSI with others. The results from this study confirmed Shaw's (2006) and Grocutt's (2009) assumptions that people who no longer depend on NSSI have a

supportive person to talk to about NSSI. Over 55% of participants in this thesis sample reported talking to someone was a useful strategy in curbing their urge to engage in NSSI, highlighting the importance of emotional support. Participants were divided on whether or not they felt supported to stopping NSSI, with 47% of respondents endorsing they felt supported, and 35% reported they did not perceive having that support. It is also possible that feeling supported may have been helpful in seeking out further resources for assistance, such as professional treatment, as Shaw (2006) proposed. However, according to the participants in this thesis sample, disclosure of NSSI to someone was not a strong reason for cessation, as only 28% of participants endorsed this cessation variable. This result contradicts Shaw's (2006) finding that telling others about NSSI was found to be therapeutic and allowed individuals to have an open conversation with others regarding the motivations for cessation. It is possible that the role of relationships vary depending on the individual, the strength and health of the relationship, and the perceived support from others. Perhaps disclosure to individuals who are supportive is beneficial but disclosing to individuals who react negatively has the opposite effect. Relational ties may not be as important to the individual who does not feel supported to begin with. However, generally within this sample, providing emotional support to those engaged in NSSI appears to be more beneficial than the act of disclosing the behaviour.

Implications for counsellors and researchers. Encouraging people who engage in self-injury to seek counselling and join a support group would be a valuable recommendation. Developing healthier relationships that could provide support to quit NSSI would be important to assisting in cessation. Previous research indicated 44% of adolescents had up to three friends who also engaged in NSSI; while 70% of individuals

who engaged in NSSI did disclose the behaviour, most often it was to a friend (Muehlenkamp et al., 2010). It could be proposed that individuals who associate with friends who are also currently engaging in NSSI may not benefit as much from the support of their friends. This idea is also supported by the endorsement of participants who joined a new peer group and indicated this changed assisted in cessation. Additionally, previous research has found those who engage in NSSI have lower levels of friend support to begin with (Heath et al., 2009). It would be interesting for future researchers to examine the role of healthy and unhealthy relationships among people who are trying to stop self-injuring. This would also be useful in understanding why disclosure could be beneficial for some individuals.

Motivators and deterrents. Another RQ1 variable examined the motivators and incentives to stop NSSI and the deterrents to return to the behaviour. To learn about this variable, open-ended questions were provided for participants to describe their personal experiences. An important theme that was not anticipated at the beginning of this study was the disclosure that the scars left by self-injury and the desire not to create new scars were a reason for quitting NSSI among nearly 16% of the respondents. This finding is consistent with previous reports that physical scarring can be a strong motivating factor in cessation (Pietrusza & Whitlock, 2010).

Having supportive relationships was the second most common theme among individuals in describing what motivated them to stop, with 34% of the responses including aspects of informal or formal support structures. Similar to what motivated individuals to stop the behaviour, almost 26% of individuals described relationships and supports as being influential in not returning to NSSI (a deterrent). Consistent with Shaw

(2006), participants reported the fear of judgment from others and the worry that the individual would appear mentally unstable. This is similar to previous research that found individuals were motivated to stop because NSSI upset and concerned others, often drawing unwanted attention (Deliberto & Nock, 2008; Pietrusza & Whitlock, 2010; Shaw, 2006).

The role of relationships was also evident, as 40% of participants in this study reported they stopped NSSI because it was hurting those around them. The effect NSSI had on others was a theme among participants that emerged using inductive content analysis of the short-answer questions. Participants noted how their behaviour affected others was a motivating factor to stop (found within 14% of the responses) and kept them from returning to self-injury (found in 13% of responses). This result was important, as it was a theme that emerged during the analysis and was not anticipated at the beginning of the study. Given the relatively small sample of this study, it is worth acknowledging a portion of participants (even though it was less than half) appear to be driven by external influences to quit NSSI.

When asked about what assisted individuals in not returning to NSSI, participants' responses were most frequently (42%) coded under the self-initiative category. Participants' utilized different strategies to avoid relapse and actively sought ways to not return to the behaviour. Consistent with previous research (Grocutt, 2009), participants also reported a sense of pride and accomplishment in not returning to NSSI, notably themes of hope, self-control, self-efficacy, and confidence.

Implications for counsellors and researchers. It would be worthwhile for counsellors to explore a client's different motivations for stopping and reasons to not

return to the behaviour, given the variability in responses provided by participants in this sample. It could be useful for a client to keep in mind why he or she stopped self-injuring in the first place, in order to prevent returning to the behaviour. Pietrusza and Whitlock (2010) suggested the strategy of keeping the reasons for cessation in mind and could assist in dealing with the urge to self-injure. As Grocutt (2009) noted, NSSI provided an effective coping mechanism for many years; therefore, it follows that while the urges remain among some participants, combating these urges would lead to a sense of accomplishment among participants.

It is interesting that participants endorsed the role of supports and the effect of NSSI on others more frequently when discussing their motivations to stop compared to what kept them from returning to the behaviour. Perhaps after a period of cessation participants were better equipped with internal strategies to deal with negative emotions and stress without resorting to self-injury. It is also possible that individuals require more support when trying to first stop the behaviour; after stopping, individuals become more self-reliant. This suggests that the role of a counsellor could be most helpful during the initial stages of stopping NSSI, particularly in teaching a client internal strategies to deal with stress. The fear of being judged and perceived as mentally unstable is an important consideration for counsellors. When first working with a new client it would be important for counsellors to keep in mind the difficulty an individual may face in disclosing self-injurious behaviours.

Overall, based on the results presented for the variable of motivators and deterrents, it appears the underlying factors that differentiate those who are affected by outside influences versus individuals who are potentially motivated by internal influences

is not clear within this study and merits further research. Perhaps what initially motivates someone to stop using NSSI, whether it is internal or external, is not that important to the overall process of recovery. Further exploration is merited to examine the role factors such as scars, the difficulty in hiding injuries, and the detrimental effect self-injury can have on relationships, play in cessation. It would also be interesting for researchers to examine if the importance of relational ties and supports decreases as individual moves further away from NSSI behaviours. Furthermore, it is unclear if one factor alone, such as having scars, is sufficient enough to motivate an individual to stop NSSI and provide a deterrent from returning to the behaviour.

Unhealthy coping. The 10th of the 13 variables that was examined to provide insight into RQ1 was the use of unhealthy coping strategies such as drugs and alcohol to deal with stressful events. However, 85% of participants within the Group I sample reported little to no use of alcohol or drugs as a means of coping with stress. This is contrary to the findings of Brown et al. (2007), who reported that substance use was used most frequently as a coping strategy among individuals with a past history of NSSI. The same survey, the COPE Inventory, was used in this study and in Brown et al.'s (2007) research, so the difference in results is surprising.

Implications for counsellors and researchers. Although this sample reported low rates of substance use as a coping mechanism, given previous research (Brown et al., 2007) and the suggestion that individuals adopted maladaptive coping as a means of replacing the function NSSI once served (Grocutt, 2009), future research is needed to clarify the role of unhealthy coping methods such as substance use. Notably, four participants reported using substances as an alternative activity to NSSI within the short

answer responses. This would suggest that within a larger sample it might be more prevalent. Similarly, it would be prudent for counsellors to inquire as to the potential use of substances or other unhealthy methods as attempts of replacing NSSI.

Process. The process variable investigated the particular strategies respondents used to assist in cessation and examined the individual process of cessation. In particular, an ongoing struggle to not return to NSSI remained for seven individuals within this sample, a result that is in line with Grocutt's (2009) and Morgan et al.'s (2012) findings that cessation was often a difficult and long-term process that despite having a period of cessation from NSSI, some individuals continued to have thoughts or urges to use the behaviour. Participants in this study relied on supports ($n = 21$) and utilized self-initiative strategies ($n = 15$) to assist in cessation and prevent relapse. These findings suggest differences in the journey to overcome NSSI, with some individuals finding it more difficult than others.

Implications for counsellors and researchers. It could be that those who lose the desire to use NSSI were engaging in NSSI for different reasons than those individuals who continue to struggle with thoughts of returning to the behaviour. For some, perhaps NSSI served as a temporary coping mechanism, such as dealing with a difficult adolescence, as the results by Suyemoto (1998) and Ross and Heath (2002) suggested. Individuals who reported continued urges might have been using NSSI for different reasons that go beyond trying to negotiate a difficult circumstance. This could suggest the behaviour is more entrenched and well rehearsed, and could possibly take longer to give up. Further exploration into the difference between individuals who lose the desire to engage in NSSI and those who struggle with continued urges is warranted.

Additionally, counsellors should be aware that, despite periods of cessation, the urge to return to self-injury may be present for some clients.

Resolution. As part of the first research question, the 12th variable of problem resolution was used to determine if having a stressor resolve aided in stopping NSSI. The results of this study are similar to previous findings (Rotolone & Martin, 2012), as only 35% of participants within this sample indicated having a problem resolve was a reason for stopping NSSI. Rotolone and Martin (2012) found a small portion of individuals ($n = 106$, 22%) achieved cessation by having a problem resolve. Additionally, Suyemoto (1998) proposed NSSI may be a temporary coping mechanism to deal with stressful circumstances, and once that situation had resolved itself, the individual no longer needed to engage in the behaviour. It appears problem resolution is a small factor in cessation for some participants within this sample, but overall appears to not strongly influence cessation. NSSI may function to address several underlying problems, rather than acting a temporary coping mechanism for dealing with just one stressful situation.

Implications for counsellors and researchers. It would be of value to counsellors to inquire about a client's significant stressors that may have triggered the behaviour and assist in developing coping strategies to deal with and resolve the problems if possible. This is consistent with PST, which has shown some success in the treatment of deliberate self-harm (Washburn et al., 2012). Future research into the effectiveness of PST with NSSI is merited given the early evidence suggesting its benefits and the role problem resolution has for some individuals.

Relapse. The last variable of the 13 cessation factors examined whether individuals returned to NSSI behaviour after a period of cessation. As noted previously,

individuals may return or fluctuate to previous stages of recovery from NSSI (Morgan et al., 2012), and a relapse to the behaviour may occur. Thirty-three percent of participants in this study indicated they stopped NSSI and never returned to the behaviour. However, 37% of participants reported a relapse to the behaviour before eventually quitting. These groups of participants are very similar in terms of frequency, and this finding is indicative of the individual process of cessation identified by Grocutt (2009). It is unclear at this point whether there are underlying differences between the two groups.

Implications for counsellors and researchers. Future research into the differences between individuals who never return to NSSI behaviour compared to those that do could provide insight into the how an individual is able to successfully stop the behaviour. Certainly, the results of this study indicate it is not unusual for individuals to have continued thoughts of engaging in NSSI despite a period of cessation. It would be important for the counsellor to acknowledge the desire to return to NSSI among clients and to recognize this does not indicate regression on the part of the client. For some individuals, this appears to be a “normal” part of the recovery process. A counsellor would need to evaluate each client to potentially assess if relapse may be a risk.

Association between cessation factors. All 13 cessation factors have been described in this chapter; therefore, this section will examine what significant associations were found between the variables that were combined to form factor subscales. These factors included Pre-functions, Functions, Desire, Initiative, Supports, Disclosure, Events, Unhealthy, and Engagements, as each of these factors had more than one question on the survey questionnaire. The meaning of these associations will be presented for the significant results.

After performing analysis on the nine factors that could be combined into subscales, some important findings emerged. Significant positive correlations were found between several subscales (refer to Table 22). Understanding these associations can be beneficial as they provide a clearer picture of the factors that are most important in influencing cessation. Within this sample, individuals who used self-initiative strategies to deal with NSSI were associated with individuals who had a greater desire to stop the behaviour or had made a conscious decision to quit. This makes sense, as it follows that people who have made a decision to stop self-injury or have a desire to stop may be more likely to actively work to find strategies that are useful to stopping. Similarly, the cognitive, emotional, and behavioural strategies seen in self-initiative were strongly associated with utilizing supports and relational ties. This suggests individuals who employ a number of different techniques to resolve NSSI may enlist helping supports as one of those strategies.

Since self-initiative significantly correlated with three other factors, the findings of this thesis suggest self-initiative may be an important factor in cessation. The implication for counsellors is the need to be cognizant of the self-initiative strategies employed by the client in potentially reducing and stopping NSSI. A counsellor can assist in fostering these techniques, such as developing skills to deal with difficult emotions, seeking support when needed, identifying triggers for NSSI, and promoting positive self-talk in which the client tells him or herself he or she is able to stop NSSI if desired. Clients may be more receptive to these suggestions given the association of the factors of self-initiative with support, desire, and disclosure. Clients in counselling would likely score higher on measures of support and disclosure, as the act of seeking treatment would

classify as support seeking and telling others of NSSI. However, as demonstrated in this study's findings, it is important for clients to develop a supportive relationship (e.g., one with a counsellor), rather than simply disclosing the act of self-injury to potentially unhealthy supports.

Another significant finding was the association between the reasons individuals engaged in NSSI and the events that triggered cessation. This finding suggested that why someone would use NSSI in the first place was related to potentially having a major event that prompted cessation, possibly indicating a loss of control or severity. This may suggest that individuals with a greater severity of NSSI (i.e., those who indicated having more reasons for engaging in NSSI) may also experience greater rates of having a major event that leads them to cessation. This result supports the recommendation for counsellors to examine the reasons underlying self-injury and also to keep in mind the possibility NSSI could worsen in severity as the individual uses it to manage a greater range of situations and emotions.

Summary of RQ1. Thirteen factors of cessation were examined to answer the question of how and why individuals with a past history of NSSI were able to stop. Overall, the results were consistent with findings from previous research and provided further insight into cessation. The process of cessation was often individual, as participants had different motivations for stopping and some continued to struggle with having thoughts of returning to self-injury. Factors that were consistent among participants included making the conscious decision to stop, although the desire to quit did not always precede the decision, seeking supportive relational ties, and engaging in self-initiative strategies. The significant association of self-initiative with other factors

suggests it may be an important factor in cessation, as individuals engage in an internal process largely independent of others to actively seek strategies in reducing and stopping NSSI. This internal motivation to change was further supported by the majority of participants reporting they were not influenced by outside events to change their behaviour. Additionally, for the majority of the sample, disclosing NSSI or having a problem resolve was not found to be a strong reason for cessation, and cessation occurred despite NSSI still being effective at performing the same functions for the individual (i.e., to relieve stress or generate feelings).

The next section will further investigate how individuals are able to stop engaging in NSSI. Findings from the previous sections on future engagements and the associations of cessation factors will be included in order to answer RQ2 and to address the factors drawn from substance abuse and disordered eating literature.

Research question 2. What are the factors influencing cessation as they pertain to insights drawn from substance abuse and disordered eating literature? This section discusses the findings with respect to motivation to change, natural recovery, and maturational factors.

Findings. Each category drawn from disordered eating and substance abuse literature will be addressed in the following order: motivation to change, natural recovery, and maturational factors (see Chapter 5). Table 27 provides a summary of the main findings for RQ2 for reference. Implications for counsellors and researchers will also be identified, including helpful and unhelpful elements of treatment for NSSI.

Motivation to change. Motivation to change was conceptualized an individual's desire towards making positive change. Three factors assessed motivation to change on

the survey questionnaire: Desire, Initiative, and Function. When looking at an individual's motivation to change NSSI behaviours, the findings were consistent with the motivational themes of wishing to recover drawn from Norbø et al.'s (2008) work with individuals with anorexia. Norbø et al. highlighted strategies that would be considered self-initiative factors, such as the sense of insight and the sense of autonomy. Those who actively sought to quit NSSI by using internal processes of change, thereby achieving a greater sense of insight and autonomy, could potentially be characterized as having a greater desire to recover. The results of this thesis provide a tentative link suggesting stopping self-injury is similar in this respect, to the process of wanting to recover from an ED.

Table 27

Research Question 2 Summary Table

Variable	Description of Variable	Main Findings
Motivation to change	Desire towards making positive change – includes desire, initiative, function	<ul style="list-style-type: none"> • Desire strongly correlated with initiative, function and desire correlated • No correlation between function and initiative • Incorporates having desire to stop, utilizing strategies to assist in cessation, having NSSI no longer providing same functions
Natural recovery	Cessation without professional treatment – includes initiative, support, disclosure, events	<ul style="list-style-type: none"> • 61% engaged in natural recovery for NSSI. • 49% received treatment for mental health. • Natural recovery with mental health concerns associated with greater desire, initiative, events, pre-functions • Natural recovery for NSSI associated with using strategies, having supportive relationships, events triggering cessation, disclosure • Increased severity associated with seeking treatment
Treatment	(Un)helpful elements of professional treatment	<ul style="list-style-type: none"> • Helpful: Rapport, talking, specific techniques • Unhelpful: Lack of understanding regarding NSSI, perceived negative attitudes and judgments by professionals, ineffective techniques.
Maturational factors	Eventual cessation as individual ages – includes engagements	<ul style="list-style-type: none"> • Maturational themes in 34% of motivations to stop, 13% of deterrents. • Engagements correlated with desire, function.

Note. NSSI = non-suicidal self-injury.

Another significant finding was the desire or decision to stop self-injuring was associated with NSSI no longer being effective at providing the intended relief (Function

factor). These results suggest that if NSSI is no longer helpful to the individual, the person could potentially be more motivated to change his or her behaviour and might seek out alternative ways of coping. If self-injury was no longer effective in producing the desired benefits, people might be more likely to recognize the consequences of the behaviour. Once the perceived benefits of the behaviour (i.e., the function NSSI provides) are outweighed by the burden of continued engagement, the individual's desire to stop NSSI may increase. Similarly, individuals may make the conscious choice to stop NSSI when the cons of the behaviour began to outweigh the pros.

Interestingly, different internal and behavioural strategies to stop NSSI were not associated with a loss in effectiveness from the behaviour. Norbø et al. (2008) found the wish to recover from anorexia sometimes provided a dramatic change in behaviour, while other times having a wish to recover did not change the individual's behaviour at all. Therefore, it could be that although the desire to change is present within the individual, it does not necessarily mean he or she will engage in active strategies to change the situation. As mentioned previously, the desire to change was found in 53% of this sample, but the decision to stop NSSI was reported in 78%, suggesting that making the decision to stop is what actually prompts the individual to make a change.

Implications for counsellors and researchers. As the desire to change is associated with the function NSSI may no longer provide, it would be useful for counsellors to examine the pros and cons of continuing to engage in the behaviour, particularly with individuals who demonstrate ambivalence towards changing. Using MI techniques may be of benefit, as it would assist in weighing the perceived benefits and burdens in a nonjudgmental manner. Through this examination, clients may be able to

move more towards the decision to stop NSSI, rather than just having a desire to stop. Additionally, increasing the client's motivation to change may prompt the individual to begin utilizing self-initiative strategies to actively reduce NSSI, such as engaging in alternative activities, developing a sense of autonomy, and choosing to recover and increase self-awareness (Norbø et al., 2008).

The next section will continue discussing the results of the thesis based on disordered eating and substance abuse literature, specifically the theme of natural recovery as part of RQ2. Klingemann, Sobell, and Sobell (2009) argued that while natural recovery research has indicated numerous individuals are able to change their substance use without professional treatment or help, there is less evidence regarding the mechanisms by which people decide to change. In certain instances the decision to change may be event based, which is supported by Blume and Marlatt (2000) and Burman (1997). However, Klingemann et al. (2009) posited that in many cases the decision to change is not triggered by an event; rather, it is a result of a process. This is evident in the results of this thesis; participants frequently did not have events that triggered cessation of NSSI. Although the process is referred to as decisional balancing in which the pros and cons of the behaviour are evaluated, it is only descriptive rather than being able to provide an explanation as to why the shift towards recovery occurs. Further research into analyzing these cessation factors with those individuals who used natural recovery could potentially help to uncover the different mechanisms of change.

Natural recovery. Natural recovery was conceptualized as an individual who did not seek professional treatment for NSSI or mental health concerns. Four variables—Initiative, Supports, Disclosure, and Events—drawn from the literature (see Chapters 4

and 5) created the category of natural recovery. The following section will discuss the significant results and implications for treatment.

Mental health treatment. Interesting results were found when analyzing the developed cessation factor subscales and individuals who did not seek treatment (i.e., natural recovery) for mental health concerns. The reasons for engaging in NSSI were significantly associated with not seeking treatment for mental health. This is important, as it suggests that individuals using self-injury are actively not seeking out treatment for mental health concerns, despite potentially demonstrating a greater severity in NSSI behaviour. It is unclear as to why this is, however, one possible explanation could be participants who did not seek mental health treatment were more focused on dealing with the self-injury, than on their mental health.

Natural recovery for mental health was strongly associated with higher scores on measures of desire, events, and initiative. This is surprising as one might expect that the seeking treatment would indicate a greater desire to change, development of strategies to help the client cope, and be a result of having an event that prompted the decision to stop. However, the opposite was found, and individuals who could be considered as using natural recovery appeared to be more motivated to change.

NSSI treatment. When comparing groups of individuals who received treatment specifically for NSSI and those who did not (i.e., natural recovery), all four factor subscales designed to measure the concept of natural recovery were significantly correlated. Having all the proposed factors be significantly correlated helps to provide justification for the inclusion of these factors within the natural recovery category and supports the theoretical framework developed within this thesis.

Significant differences emerged between those who sought treatment compared to those who used natural recovery. Interestingly, individuals engaging in natural recovery were associated with having events that prompted them to quit the behaviour. Individuals who engaged in natural recovery tended to seek control of their lives and use self-liberation techniques significantly more frequently than individuals in treatment, as well as benefiting from disclosing their behaviour to someone. As previously reported, the majority of participants in this sample (57%) also engaged in alternative activities when the urge use NSSI was present (counter-conditioning strategies), although this was not a significantly different variable between treatment groups. These findings are consistent with ED research that proposed recovery from bulimia was aided by enlisting helping relationships, counter-conditioning, and using self-liberation techniques (Stanton et al., 1986).

A surprising finding came from the significant differences between individuals engaging in natural recovery and those who sought professional treatment, particularly with respect to self-initiative variables. Similar to the mental health treatment results, it might be expected that those who sought treatment would be more likely to engage in strategies to stop self-injury, particularly as seeking professional help would seem to indicate a greater desire to stop NSSI. However, on several of the variables the opposite was found to be true. It is uncertain why participants using natural recovery tended to use many of the cessation variables more frequently than individuals who were in treatment specifically for NSSI. Future research is needed to understand the differences between individuals who seek out treatment compared to individuals who are able to stop NSSI on their own (i.e., natural recovery).

One possible explanation could be fundamental differences in personality between those who seek treatment and those who do not. Perhaps the underlying differences are related to the person's internal motivation; it could be those who seek treatment are pressured from outside sources to stop NSSI, while internal processes drive the natural recovery individual. Another explanation is that those using natural recovery may engage in a "milder" form of self-injury, and individuals who seek treatment may experience a greater severity of NSSI that requires professional intervention. This explanation has some support by the finding of significant differences on the variable of increasing severity of NSSI between treatment groups within this study. The results suggest that when the self-injury became increasingly worse, individuals may then seek out treatment for NSSI. However, this is only speculative given the lack of support within the other events variables. Additionally, this finding is interesting given the previous finding that having increased severity was correlated with not seeking treatment for mental health issues.

Treatment. Seeking treatment for mental health concerns was sought at equal rates within this sample, with 49% of participants reporting some type of counselling for mental health issues. Fewer participants within this sample (39%) sought treatment for NSSI, thereby successfully resolving self-injury through the process of natural recovery. These findings are in line with other rates of seeking treatment, with previous findings between 26% and 56% (Gollust et al., 2008; Nixon et al., 2008). Within this study's results, only 16% reported counselling as being beneficial to stopping NSSI.

In order to examine the potentially beneficial elements of treatment, participants provided written responses regarding the helpful and unhelpful aspects of treatment.

Major themes that emerged regarding unhelpful elements were consistent with previous research regarding the negative attitudes experienced by clients from mental health professionals (McHale & Felton, 2010; Warm et al., 2002). Within this sample, six participants described being treated with disrespect and often perceived judgment on the part of the clinician. Seven participants also indicated not feeling understood and noted a lack of knowledge regarding NSSI. A lack of understanding regarding NSSI could lead to use of interventions that are not well suited to the client and the issue, leading to what three participants described as ineffective techniques.

Helpful elements to seven participants included techniques to reduce stress and deal with emotions, including learning techniques to identify triggers for NSSI. Six participants described a nonjudgmental approach and respect on behalf of the counsellor was beneficial. Building a rapport and talking with a counsellor were also perceived as helpful for five individuals. The results suggest the relationship built with the counsellor to be an important element to successfully reducing or stopping NSSI.

Implications for counsellors and researchers. Although the findings from this thesis indicated natural recovery played a role for the majority of participants, professional treatment may also facilitate the shift towards making positive changes and increasing the individual's motivation to change. As Ougrin and Latif (2011) demonstrated in their literature review, continued treatment engagement was not supported by any specific type of psychotherapeutic approach. The majority of participants within this sample were unsure about the type of treatment received. This finding suggests that it was the techniques and specific elements that made treatment helpful, rather than the type of treatment provided to participants that may have assisted

in cessation. As the results suggest, counsellors who demonstrated an understanding and knowledge of NSSI were able to provide more effective interventions to clients. It would be beneficial for counsellors to familiarize themselves with the current literature available regarding NSSI to develop a competency in treating NSSI. Demonstrating an empathetic, nonjudgmental approach to treating NSSI was important to participants, and supported by previous research (Muehlenkamp, 2006; Walsh, 2006). The results also suggest the development of rapport is highly valued among clients, a finding that is consistent with the approach proposed by Klonsky and Muehlenkamp (2007) of a supportive relationship that is flexible and able to incorporate individualized techniques into a multimodal approach. Incorporating MI would not only be beneficial in assisting in reducing potential ambivalence demonstrated by the client, but it would also draw heavily upon emphasizing an egalitarian and collaborative relationship seen in a client-centred approach (Moyers & Rollnick, 2002).

However, MI is often delivered as a prelude to another form of treatment, and has been shown to improve treatment outcomes when applied to other treatment approaches (Hettema, Steele, & Miller, 2005). Given its particular utility in addressing clinical issues such as ambivalence and lack of engagement in treatment, MI seems well suited for use with individuals engaging in NSSI. Evidence has been found to support MI when used in populations for anxiety, depression, substance abuse, and EDs, all co-occurring conditions with NSSI (Westra, Aviram, & Doell, 2011). Kress and Hoffman (2008) suggested the use of MI as a framework for counselling clients engaging in NSSI, believing it to be a beneficial strategy. Kress and Hoffman suggested conducting a thorough assessment of NSSI that includes the client's readiness to change while

promoting a strong therapeutic alliance built upon support and empathy inherent to MI strategies. Once this has been established, developing individualized treatment based upon the context of NSSI, including the use of behavioural interventions and cognitive restructuring, can provide an effective therapeutic approach (Muehlenkamp, 2006). As the findings presented within this thesis demonstrate, engagement and cessation of NSSI is a highly individualized process, and no single factor emerged as being highly significant. Thus, approaching treatment from a nonjudgmental, individualized, and multimodal approach may be most effective in reducing and stopping NSSI.

Maturational factors. Maturational factors were investigated to determine if cessation occurred as the individual aged and assumed life commitments. This category was closely linked to the previously identified factor of engagements. Engagements was found to be strongly correlated with function, meaning participants who reported NSSI was no longer serving the desired purpose and identified NSSI as creating more burdens than benefits, were associated with having increased scores on future goals. This could suggest that future responsibilities were becoming more prevalent to the individual, and, therefore, NSSI was no longer had a significant place in the individual's life. This could be similar to the findings of Labouvie (1996), who noted as young adults entered into greater responsibility, they tended to act in more socially acceptable ways. These results may suggest that for a portion of this sample (43%), NSSI stopped when future goals began to take precedence in the individual's life. This was supported by the results of open-ended questions regarding motivations for stopping NSSI. Themes of maturation were noted within 15 responses, with participants identifying either outgrowing NSSI or continued engagement in NSSI not being conducive to future commitments.

The engagements factor was also correlated with desire, meaning participants who identified with increased future commitments also demonstrated higher scores on the desire to stop NSSI. This could be as a result of making a clear decision to stop NSSI given it is no longer conducive to newly assumed roles and responsibilities. This would suggest that as individuals assumed more mature roles, they may also have had to make a clear decision to stop the behaviour. Several participants identified within written responses that that they outgrew the behaviour, which suggests a subset of participants did not actively make the decision to stop. Referencing deterrents to returning to the behaviour, six participants indicated no longer having the urge to engage in NSSI, suggesting NSSI may be a temporary coping mechanism that may have assisted the individual during a particular adolescent stage. This was contrasted with the seven individuals who actively sought to not return to the behaviour, indicating there may be differences in these groups of participants, with the one achieving cessation through maturation.

Implications for counsellors and researchers. Understanding maturational factors may be of future interest to researchers, as it appears some participants engaged in a process of maturing out, having made a gradual transition to no longer using NSSI behaviours likened to that seen in substance use research (Cunningham et al., 2005). Schulenberg and Maggs (2002) asserted for most postsecondary students, heavy drinking peaks during college and subsides as the individual transitions into adult roles. Heavy drinking exhibited by some individuals, and the concomitant negative consequences experienced as a result, would likely reflect diagnosable alcohol misuse or alcohol dependence at any other stage during the individual's life appears to run its course and

stop over the course of a few years. However, for some individuals heavy drinking becomes a recurrent problem that continues as the individual transitions into adulthood. Future research could investigate the prevalence of NSSI behaviours that subside into adulthood compared to behaviours that persist as a coping mechanism in order to determine potential underlying factors that may be influencing persistence or remission.

Labouvie (1996) also found evidence to support a considerable degree of developmental continuity in substance use from early to late 20s. Individual factors, such as severity of the substance abuse problem may be in part responsible for accounting for some of discrepancies as to why some individuals terminate the behaviour while others persist (Steinman, 2003). When applied to NSSI, it could indicate that those who engage in a greater severity of NSSI may be less likely to stop the behaviour as a result of maturational factors. It would be interesting to determine if severity was linked to a decreased likelihood of “growing out” of the behaviour.

In a survey of former heavy drinkers, Cunningham et al. (2005) found drifting-out reasons (such as finishing university, moving, getting older, and having children) were endorsed more frequently by individuals with less severe alcohol use. Individuals with more severe alcohol problems prior to resolution tended to endorse consequence-related reasons for change (including health problems, financial concerns, pressure from others, and driving while impaired). Interestingly, a third category, reflective maturational reasons, was found to be unrelated to severity of prior alcohol problems. This category reflected a conscious acknowledgement of possible consequences and included the desire for good health, a desire for a better future, personal decision, and getting tired of drinking. Future research could investigate drifting-out, consequence-related, and

reflective maturational reasons among individuals engaging in NSSI. Developing a longitudinal study beginning with adolescents could provide insight into patterns of outgrowing self-injury. A counsellor could also incorporate these reasons to provide the appropriate interventions. For example, depending on severity, counsellors could assist the client in weighing the perceived benefits and burdens of continuing the behaviour in order to promote reflective maturational reasons.

Cunningham et al.'s (2005) propositions are consistent with preliminary findings indicating subclinical EDs (i.e., EDs that do not fully meet the symptomology and arguably less severe) are relatively unstable states and have a tendency to remit spontaneously (Cotrufo, Monteleone, Castaldo, & Maj, 2004). Polivy (2007) supported this statement, noting the subclinical pathological eating attitudes and behaviours often seen in university students appear to improve naturally over time. However, in more severe instances, the attitudes and behaviours seem likely to progress to full-blown pathology. While the three most commonly mentioned variables conducive to recovery were supportive relationships outside the family, therapy, and maturation, Polivy asserted that when comparing treated and nontreated individual who have recovered from an ED, treated individuals were more likely to recovery fully from the disorder. Therefore, severity of NSSI may determine the course of the behaviour. This would be valuable for counsellors to take into consideration when doing an assessment of NSSI with a client. It also suggests it is important to attempt to try assist those engaging in self-injury during the early stages in order to better foster full recovery and cessation.

Summary for RQ2. Based on insights drawn from disordered eating and substance abuse literature, three categories were examined in regards to the cessation of

NSSI: motivation to change, natural recovery, and maturational factors. Having the desire to stop NSSI (i.e., developing a motivation to change), was associated with increased use of self-initiative strategies to assist in cessation. Furthermore, when NSSI was no longer providing the same functions to the individual, the desire to stop was increased. Individuals using natural recovery were associated not only with an increased desire to stop, but with variables of self-initiative strategies, disclosure of NSSI, and seeking out supports. Individuals who did seek out professional treatment specifically for NSSI reported helpful elements as being the use of techniques to deal with stress and difficult emotions, having someone to talk about NSSI, and developing a strong nonjudgmental rapport with the counsellor. Unhelpful elements of treatment included perceived judgment and negative attitudes by professionals, the lack of understanding and knowledge surrounding NSSI, and the use of ineffective therapeutic techniques.

Participants reported an increased focus on future goals and commitments as a potential reason for cessation, which reflected maturational factors. This was associated with the acknowledgement that NSSI was no longer worth engaging the consequences and the recognition NSSI was no longer effective. A portion of participants reported outgrowing the behaviour, and participants endorsed numerous maturational factors as assisting in cessation.

Research question 3. Are there gender differences in NSSI cessation? This section discusses the findings and implications for RQ3.

Findings. A total of 135 participants having engaged in NSSI behaviours, both currently and past, were considered for analysis regarding the role of gender in NSSI cessation. Of the total participants, 116 were females, 14 were males, and five

individuals identified as an “other” gender. Given the violations in normal distribution of data, a Kruskal-Wallis test was run in order to assess differences in cessation between gender groups. The findings revealed that within this sample, there were no statistically significant differences in reports of cessation with regards to gender identification.

Implications for counsellors and researchers. Previous researchers who studied gender differences noted females are more likely to report more lifetime instances of NSSI compared to males, while both were equally likely to report NSSI within the past year (Whitlock et al., 2011). Differences have been found primarily in typology, severity, and duration of NSSI (Laye-Gindhu & Schonert-Reichl, 2005; Whitlock et al., 2008; Whitlock et al., 2011). Andover et al.’s (2010) findings indicated males and females did not differ significantly on some measures of NSSI, including reported lifetime episodes, engagement during the past year, and average number of episodes per year. However, the authors found differences existed for females having an earlier age of onset and severity measures.

The research suggests differences exist between males and females, and it appears to be dependent on specific aspects of NSSI. This thesis provides some evidence that differences do not exist on the measure of cessation, although it is limited by its small sample size. The creation of an “other” category for participant gender identification also provides for some distinction from previous research, although no differences were found in cessation. Further investigation of the specific similarities and differences in gender, with the inclusion of an “other” category for participants to identify with, is warranted given the variations in research and the preliminary findings presented within this

sample. Regardless of research outcomes, it is imperative clinicians recognize variability for gender and NSSI exist, and consider NSSI when dealing with male clients.

Strengths

The next section presents the strengths of the study, including addressing the significant gap in NSSI literature regarding cessation. Other strengths include survey design, online software, the use of social media, and consideration given to the emotional wellbeing of participants.

Fills an important gap. The main strength of this thesis is its uniqueness in contributing to the understanding of NSSI by determining the significant factors involved in the cessation of the behaviour that has not had a lot of study to date. As Chapter 4 highlighted, only eight studies were found addressing the cessation of NSSI in participants. The study findings will be valuable to those researchers who are interested in the cessation of NSSI, as they may be able to use the results to further their investigation of cessation. The study findings are also very important to counsellors, as this type of focus moves the emphasis away from problem-focused to what works in helping people give up a coping mechanism that works but is harmful to their well being.

Survey reliability and validity. Overall, the survey was deemed to be satisfactory, based on internal consistency measures (i.e., split-half coefficients and coefficient alphas). The results analyzing the validity and the reliability of the survey revealed Spearman-Brown coefficients ranging from .53 to .89 for groupings of questions carefully considered on the basis of face validity. Achieving satisfactory reliability measures on factor subscales developed by the researcher allows a degree of confidence to emerge that the questions targeted the intended information on the survey.

Survey questions. Three areas of strength are apparent in the use of the questions in this survey. First, the questions on the survey were very purposeful and were informed from factors supported from the detailed NSSI literature review, which was the focus of Chapters 4 and 5. Second, the questions drew upon the factors found in the literature review of substance abuse and disordered eating because the cessation reasons seemed to be similar the suspected pattern of cessation related to NSSI. Third, the questions focused on the strengths of the individual, and tapped into how he or she was able to overcome NSSI. A conscious effort was made to focus less on the problem of NSSI and rather more on the process that enabled the individual to stop engaging in the behaviour.

Online software. Another strength of the study was the survey design and software, Qualtrics (2013). The online format provided for a larger geographical range of participants from around the world, offering participants the convenience of completing the survey on their own time. The survey was designed to allow for any participant to complete, regardless of engagement in NSSI behaviour. Any participant who accessed the survey was able to complete the survey; however, the software allowed for target participants to be filtered dependent on relevant responses. The survey software provided for participants to access only certain parts of the survey depending on their answers, ensuring that participants did not spend any extra time than needed on the survey.

Use of social media to market survey. The survey received a great deal of social media support, due to the creation of the Facebook (“Self-Injury Recovery Study,” 2013), Tumblr (“Self-Injury Recovery Study,” n.d.), and Twitter (“Self-Injury

Recovery,” 2013) pages. Recruitments for participants on these sites would correspond to an increase in participants that particular day.

Addressed mental health needs. Resources for counselling assistance, 24-hour helplines, and NSSI resources were listed on the Tumblr (n.d.) and Facebook (2013) pages for participants to access at anytime. An open link was provided for participants to click on to access these pages at anytime during the survey should they be feeling distressed and need to exit the survey. These links to resources were available at all times at the bottom of the survey, as well as at the beginning and end of it. This link also contained the number for a 24-hour suicide helpline. This was extremely important given the sensitive nature of the subject of NSSI and the potential that a participant could be triggered by some of the questions on the survey.

Overall, this survey did what it was intended to within a short period of time. It elicited the desired information and had met the intended *n* size of nearly 50 participants who indicated they had stopped engaging in the behaviour.

Limitations

This study cannot be generalized given the small sample size and exploratory nature of the study. Eight main limitations of this thesis shall be addressed; they mainly stem from the size of the study, methods, and survey design.

Lacked a pilot study. Although the survey was informally pilot tested among eight friends and family members to assist with ease of survey use, technical difficulties, question readability, and survey length, a formal pilot study was not conducted. Conducting a full-length pilot study with the targeted participant population would have assisted with determining which questions may have been more relevant to include on the

questionnaire, and would also have been beneficial in providing preliminary feedback about potential questions that may have been unclear. Fan and Yan (2010) suggested a formal review of web pilot results with a small group of respondents will greatly assist in the survey design process and development, and increase response rates.

Threats to reliability. As a relatively new topic of research, an original survey needed to be created by the researcher. Being cognizant of the participant fatigue within the completion of the survey, multiple styles of questions (e.g., Likert scale, multiple choice, as well as numerous short-answer responses) were used with the intention to keep the participant interested in continuing with the survey. Additionally, pre-existing survey measures on the assessment of NSSI were not used in order to shorten the length of the survey and keep a focus on the cessation of NSSI. However, designing the survey with a various survey questions created difficulties in ascertaining the survey's internal reliability. For example, overall internal consistency measures could not be performed on the survey as a whole due to the variety in question type. As a result, internal consistency was measured on the basis of face validity by grouping similar questions drawn from the literature. Numerous written responses could not be included within internal consistency measures. Every attempt was made to assure reliability, with a second reader coding for themes within open-ended responses. However, as coding the responses was open to interpretation, variabilities in responses occurred. In addition, since a complex branch and skip pattern was used, making certain questions viewable to only certain participants to whom they were relevant. This proposed challenges in analyzing the data and combining variables as numerous questions were missing participant data. In order to address this challenge, in which large amounts of data were absent, an average of existing

data were used to perform analysis. This decreases the generalizability of the findings, as they may not be representative of a larger sample of participants and may provide an incomplete picture of the analyzed data.

In hindsight, a significant limitation exists within the survey design as each of the cessation factor subscales contained varying amounts of questions to measuring the proposed variables. For example, the Initiative factor contained five questions, while Resolution was only comprised of one question. This created difficulties in the analysis of the data, and could potentially have skewed the results in favour of subscales containing more questions. Thus, the results of this study are limited in their generalizability. For future research, ensuring that each factor subscale contained the same amount of questions would be crucial to the survey design.

Missing data. Participants were allowed the option of not answering questions, which led to numerous cases of missing data, as many participants chose to skip questions. This was done with the conscious intent given the sensitive nature of the topic and not wanting to force participants into answering questions that may be triggering to them. However, this created instances of participants not completing questions, resulting in a numerous instances of missing data in an already small sample. In cases in which large amounts of data were missing (e.g., for the functions section), the mean of the existing data was used for analysis. This may have created variabilities in the resulting data that would not have existed had all the data been present.

Sexual orientation question. The four categories of sexual orientation (heterosexual, homosexual, bisexual, and questioning) proved to be limiting for some participants, with respondents commenting on online forums such as Tumblr that they

would have preferred more categories for sexual orientation. While an “other” category was made available for participants with respect to gender, in order to be inclusive of individuals who identify as transgender, in future surveys the creation of another sexual orientation category for participants to self-identify would be warranted.

Question flow. In hindsight, the questions regarding the reasons for NSSI were repetitive and lengthy. Participants were given 13 questions utilizing “yes,” “no,” and “unsure” responses in order to evaluate the previous functionality NSSI had once served. If participants answered “yes,” they were automatically directed to a subsequent question regarding that particular functions potential role in cessation. Participants may have noted they were able to skip questions by selecting the “no” response, thus reducing the number of questions. More participants selected “no” on the later questions than the beginning questions, although this may be a function of the type of questions, as they pertained to interpersonal functions. Providing more randomization of questions would assist in clarifying this problem.

Frequency question. Given the variations in frequency (Whitlock et al., 2008), and the importance of determining frequency in assessing severity, a question was asked regarding lifetime engagement of NSSI. The survey was designed to measure the frequency of 12 NSSI behaviours, with the inclusion of an “other” category for participants to write in their own type of NSSI and was adapted from the ISAS (Klonsky & Glenn, 2009). Participants were provided with a textbox to enter a frequency count for each behaviour.

However, it was noted that recalling specific rates of occurrences could be difficult for participants. Having participants provide specific frequency counts may

have been confusing and difficult for some participants, leading to false estimates and unreliability in responses. In comments provided on the website “Safe Haven,” users who had completed the survey noted they found it difficult to answer questions regarding the frequency as NSSI, as it was a coping skill one might not necessarily keep track of, thus making frequency very difficult to estimate. Users commented they felt frequency information might be inaccurate, as it can be difficult to recall. Inaccurate estimations of frequency could also be considered for based on the recency of the behaviour (Bradburn et al., 1987), as individuals currently engaging in NSSI may recall more instances than those who have a period of cessation. The raw data presented such a large variety of frequency responses (ranging from 1 to 10,000,000) and necessitated the creation of frequency categories in order to analyze the data. It is unclear on the basis of this thesis whether extremely high reports of NSSI frequency were due to greater severity of NSSI or an overestimation in recollection. In future surveys, a question that provided a range of frequencies from which participants could choose, such as the classes described by Whitlock et al. (2008), would be more useful.

Self-report. As anonymous respondents conducted this study online, there is no way to accurately verify the responses of the participants. There exists the potential for erroneous and false reporting. As mentioned previously with measuring the frequency of NSSI behaviours, estimates can sometimes be difficult to recall. Furthermore, participants may be subject to recall bias as this thesis dealt with past events, particularly emotions, often years ago. After a period a time, individuals demonstrate a gradual decline in the accessibility of episodic memory (i.e., the specific emotions tied to an event) and rely on more generalized belief about emotion to fill in the details (Robinson

& Clore, 2002). It is possible these issues may not be present if the study were conducted using alternative methods, such as ecological momentary assessments, in-person clinical interviews, or a longitudinal design. However, Robinson and Clore (2002) noted that the generalized beliefs individuals form about their emotions and experiences are reliable and valid. It is also possible participants may have been more willing to disclose information given the anonymous design of the survey.

Low number of participants. It was anticipated it would be challenging to secure participants given the often-secretive nature of NSSI as a private and unreported behaviour (Duffy, 2009), the limited time frame, and the access to individuals who had successfully stopped NSSI for a period of one year. This prediction was true and led to a relatively small sample size. While 49 participants were recruited for Group I (NSSI Cessation), and the target number of participants was 50, ultimately this study engaged a relatively low number of participants for more complex analysis. The findings presented within this thesis are only preliminary results that may not be generalizable to a larger sample of individuals who have stopped engaging in NSSI; however, they do provide initial insight into cessation. Further research with a greater number of participants who have ceased NSSI behaviours would provide a more in-depth look at the specific factors influencing cessation, and potentially refute or support the exploratory results presented here.

Directions for Future Research

As has been identified repeatedly, there is a research gap in understanding the cessation element of NSSI. Although some factors were investigated within this thesis, much remains to be investigated and many avenues of future research are available

within the domain of cessation. These areas will be discussed within the following section.

Length of cessation. As previous research has utilized 12-months as a time period consistent with cessation (Brown et al., 2007; Rotolone & Martin, 2012), this was also the time frame used for this study. However, several respondents also endorsed cessation under 12-months. This period of time ranged anywhere from one month to 10 months. There is a need to perhaps evaluate the 12-month period of cessation, as Glenn and Klonsky (2011) performed exploratory analyses predicting NSSI relapse and remission of young adults. Among past self-injurers, those who avoided relapse tended to have over two years free of the behaviour, while those who relapsed on average had a year of abstinence. The authors suggested that one year of NSSI abstinence was not a sufficient indicator of a full recovery, whereas two years provided a better predictor of NSSI remission. Conducting a longitudinal study of individuals who have recently stopped NSSI would provide significant insight into the factors that maintain cessation and those that may lead to relapse.

Likewise, a comparison of the differences between those who have not self-injured for one month up to 12 months could be compared to determine what variables remain constant in the time of cessation versus which variables emerge as a result of being free from this coping mechanism. For example, one might find individuals with a longer duration of cessation would be associated with increased social support and self-initiative strategies to deal with urges to engage in NSSI.

Predicting cessation. In this thesis, a trend was found that those within Group II (Current NSSI) reported higher rates of lifetime NSSI than those in Group I. It is

wondered if longitudinal studies of individuals within Group II may reveal if there are differences in how these individuals stop NSSI, or if they stop NSSI. Given the higher degree of severity and frequency of NSSI, do individuals within Group II require more intensive, long-term treatment in order to stop NSSI? Thus, a potential area of research is determining if the severity and frequency of NSSI could predict the difficulty in stopping the behaviour.

There is also value in determining what variables are the same and different in those who have stopped engaging in NSSI and those who are currently still engaging in NSSI, as it relates to predicting cessation. Potentially these factors could be similar to those identified earlier, such as desire to stop, social support, and self-initiative given the significant correlations of these factors in individuals who have successfully stopped NSSI within this thesis.

Rate of relapse. While 16 respondents indicated they stopped engaging in NSSI and never returned to the behaviour, 18 participants indicated they stopped abruptly but had returned to NSSI for a period of time. Eleven participants reported stopping NSSI gradually. Future research involving cessation could evaluate the rate of relapse among individuals engaging in NSSI and what variables seem to predict or end relapse. It may be of interest to see if these rates are comparable to those seen in substance abuse. There may be differences between groups on how they stopped; for instance, those participants who reported gradually stopping may be linked to more variables associated with maturational factors.

Substance abuse. Although the sample size was limited, a small number of participants indicated that the cessation of NSSI was assisted through the use of

substance abuse. Given the links demonstrated in this thesis to substance abuse within the literature review, future research could examine the extent to which individuals may stop engaging in NSSI and begin using substance as a means to cope. It would also be beneficial to clarify the prevalence of substance abuse and NSSI, given the low reports of substance abuse within this study. Comparing the use of substances to cope when the individual was engaging in NSSI and the rate of use following cessation of NSSI may provide a larger picture of substance use or abuse.

This pattern to switch from one unhealthy mechanism for another makes sense from an emotional regulation perspective because essentially the person is substituting NSSI behaviours used to deal with stressful situations for the use of substances to cope. Thus, this future research idea may offer support that counselling, in addition in to the cessation of NSSI, is required to achieve a measure of psychological health.

Sexual orientation. The small sample size in this study limited the ability to generalize the findings regarding sexual orientation and cessation. The findings of this thesis align with the support for more research is needed regarding evidence of a higher likelihood of NSSI among those who identify as gay and bisexual (Gollust et al., 2008; Serras et al., 2010). Furthermore, understanding the extent of the association relative to cessation is an area that requires much more research. Future studies could also investigate sexual orientation within cessation as well, as there could potentially be some differences in those who stop the behaviour as well. One hypothesis would be that individuals use NSSI as a means of coping with the struggle of their sexual orientation, and NSSI incidences are reduced when individuals develop self-acceptance.

Conclusion

Throughout this journey of writing my thesis, as a researcher and counselling psychology student, I have been humbled and honoured to be given the opportunity to have individuals share their perspectives and stories of how they have successfully overcome self-injury. For some, it was the first time they had shared the story of engaging in NSSI, and many added comments on the survey that spoke of the importance of this thesis topic. This empowering and positive feedback afforded me greater compassion for those who have kept their self-injury a secret for so long and gave me hope into the tremendous ability of people to recover. My thesis project also reinforced my passion to continue in this field, as a clinician and as a researcher.

During this process, I acquired deeper insight into the challenges of conducting research. In particular, I gained a greater understanding of survey design and statistical procedures that I will surely be able to implement in the future. Developing my own survey was a unique experience that has provided me with the opportunity to enhance my survey design in the future. For example, even though I insisted at the development phase to include a large variety of question formats, I learned during the data analysis phase that this desire caused many challenges that would have been avoided if I had used a simple survey design.

Another source of accomplishment is discovering the depth of my resiliency and determination, as I had to tap into these powerful personal traits to complete this thesis given that there were many challenges, both emotionally and professionally, that required me to stay focused and not lose hope in the dream of completing my first major research study. This thesis offered me the opportunity to strengthen my belief that I truly want to

pursue work within the field of NSSI as both a researcher and clinician. I still have so much learn on the topic, and I am driven by even more curiosity and passion after having spent the last two years researching the topic.

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Appendix A

Adapted Brief COPE Inventory

Adapted from Carver (1997) and Carver, Scheier, and Weintraub (1989)

Thank you for agreeing to participate in our study. First, we are interested in learning about how you deal with stressful events. Please think of what you would generally think, feel and do when faced with a stressful event and then indicate how you would usually respond to a stressful situation.

- 1 = I usually don't do this at all
- 2 = I usually do this a little bit
- 3 = I usually do this a medium amount
- 4 = I usually do this a lot

1. I've been turning to work or other activities to take my mind off things.
2. I've been saying to myself "this isn't real."
3. I've been using alcohol or other drugs to make myself feel better.
4. I've been getting emotional support from others.
5. I've been giving up trying to deal with it.
6. I've been taking action to try to make the situation better.
7. I've been getting help and advice from other people.
8. I've been using alcohol or other drugs to help me get through it.
9. I've been trying to come up with a strategy about what to do.
10. I've been looking for something good in what is happening.
11. I've been expressing my negative feelings.
12. I've been trying to find comfort in my religion or spiritual beliefs.
13. I've been learning to live with it.
14. I've been blaming myself for things that happened.
15. I've been making fun of the situation.

→ All participants automatically proceed to Appendix B

Appendix B

Assessment of Non-Suicidal Self-Injury Questionnaire

Thank you for completing the first section. This next section asks about a number of ways people may hurt themselves, without the intention of attempting suicide. Please be sure to read each question carefully, and answer as honestly as possible. Only answer YES to the following questions if you have done the behaviour intentionally, or on purpose. Keep in mind, if you hurt yourself accidentally (e.g., you tripped and banged your head accidentally), you would not answer “Yes.” Please be assured your responses will be kept confidential and there is no way to track your answers.

1. Have you ever injured your body on purpose, without intending to kill yourself?
 a) Yes b) No
 - If YES, move on to question #2 (continue with NSSI assessment)
 - If NO, automatically move on to APPENDIX D (Demographics)

2. The following questions will ask you about specific types of self-injury. Please estimate the number of times you have done each type of behaviour intentionally, without intending to kill yourself (e.g., 0, 1, 5, 20, 50, 100, etc).
 - _____ Cut your skin (e.g., wrists, arms, legs, etc)
 - _____ Burned your skin (e.g., with a cigarette, lighter, object, etc)
 - _____ Carved words or pictures into your skin
 - _____ Severely scratched yourself, to the extent bleeding or scarring occurred
 - _____ Bit yourself, to the extent you broke the skin
 - _____ Severely pinched yourself, to the extent you damaged the skin
 - _____ Used glass or sandpaper (etc.) to break your skin
 - _____ Dripped acid onto your skin
 - _____ Stuck yourself with sharp objects such as needles, pins, staples, etc. (This does not include tattoos, ear piercing, needles for drug use)
 - _____ Punched or hit yourself, to the extent you caused a bruise to appear
 - _____ Attempted to/or did break your own bones
 - _____ Prevented wounds from healing (e.g., interfered with scabs)
 - _____ Other

The next questions ask for some background information regarding times when you self-injured.

3. How old were you when you first started to self-injure on purpose?

4. APPROXIMATELY, how many days, weeks, months OR years have you been self-injuring for? (If you have stopped self-injuring, how many days, weeks, months, OR years did you self-injure prior to stopping?): Please choose the one time frame that best applies to you.

_____ Days

_____ Weeks

_____ Months

_____ Years

5. Have you ever engaged in self-injury (on purpose, but not attempting to die) severe enough to required medical attention by a nurse or doctor?

Yes

No

6. Have you, even one time, self-injured in the past 12 months?

Yes

No

When was the last time you engaged in self-injury?

_____ Time since last self-injury

→ If YES, participants will be automatically directed to APPENDIX D (Demographics)

→ If NO, continue on to APPENDIX C (Cessation Questionnaire)

Appendix C

Cessation Questionnaire

You are doing great, thanks for answering these questions! What's next? We are curious, what helped you to stop self-injuring? Your answers will be very valuable, as understanding how individuals have stopped self-injuring can help those still self-injuring. Remember, you are offered privacy, as no one will know what you answered.

REASONS FOR SELF-INJURY

To begin, we would like to know why you used to self-injure, and if this was influential in why you stopped self-injuring. If your answer is "sometimes" or even "once" - then answer YES.

1. I intentionally used to hurt myself to relieve stress and/or anxiety.

- Yes
- No
- Unsure

1A. Self-injury was no longer helpful or useful (effective) in relieving stress and/or anxiety, so I stopped self-injuring

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

2. I intentionally used to hurt myself to relieve and cope with unpleasant thoughts and feelings.

- Yes
- No
- Unsure

2A. Self-injury was no longer helpful or useful in relieving and coping with unpleasant thoughts and feelings, so I stopped self-injuring.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

3. I intentionally used to hurt myself as a way of making my emotional pain become real.

- Yes

- No
- Unsure

3A. Self-injury was no longer helpful or useful in making my emotional pain become real, so I stopped self-injuring.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

4. I intentionally used to hurt myself in order to punish myself.

- Yes
- No
- Unsure

4A. Self-injury was no longer helpful or useful in punishing myself, so I stopped self-injuring.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

5. I intentionally used to hurt myself in order to feel something, even if it was pain

- Yes
- No
- Unsure

5A. Self-injury was no longer helpful or useful in order to feel something, so I stopped self-injuring

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

6. I intentionally used to hurt myself to feel real again.

- Yes
- No
- Unsure

6A. Self-injury was no longer helpful or useful in feeling real again, so I stopped self-injuring.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

7. I intentionally used to hurt myself to let someone(s) know what I was going through.

- Yes
- No
- Unsure

7A. Self-injury was no longer helpful or useful in letting others know what I was going through, so I stopped self-injuring.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

8. I intentionally used to hurt myself to feel connected with others.

- Yes
- No
- Unsure

8A. Self-injury was no longer helpful or useful in feeling connected with others, so I stopped self-injuring.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

9. I intentionally used to hurt myself to get reactions out of someone(s).

- Yes
- No
- Unsure

9A. Self-injury was no longer helpful or useful in getting reactions out of others, so I stopped self-injuring.

- Strongly Disagree

- Disagree
- Unsure
- Agree
- Strongly Agree

10. I intentionally used to hurt myself to avoid punishment from someone(s).

- Yes
- No
- Unsure

10A. Self-injury was no longer helpful or useful in avoiding punishment from someone(s), so I stopped self-injuring.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

11. I intentionally used to hurt myself to get back at someone as a form of revenge

- Yes
- No
- Unsure

11A. Self-injury was no longer helpful or useful in getting back at someone, so I stopped self-injuring.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

12. I intentionally used to hurt myself to avoid the impulse to attempt suicide

- Yes
- No
- Unsure

12A. Self-injury was no longer helpful or useful in avoiding impulses to attempt suicide, so I stopped self-injuring.

- Strongly Disagree
- Disagree
- Unsure
- Agree

Strongly Agree

13. I intentionally used to hurt myself to end flashbacks I endured

Yes

No

Unsure

13A. Self-injury was no longer helpful or useful in ending flashback, so I stopped self-injuring.

Strongly Disagree

Disagree

Unsure

Agree

Strongly Agree

WHY DID YOU STOP SELF-INJURING?

The next section of the questionnaire will ask you questions about why you wanted to stop self-injuring.

14. Self-injury was becoming problematic in my life, so I decided to quit.

Strongly Disagree

Disagree

Unsure

Agree

Strongly Agree

15. The benefits I received from self-injury were not worth the consequences of self-injury.

Strongly Disagree

Disagree

Unsure

Agree

Strongly Agree

16. I made the conscious decision to stop self-injuring.

Strongly Disagree

Disagree

Unsure

Agree

Strongly Agree

17. Before I stopped, I had a strong desire to stop my self-injury.

Strongly Disagree

Disagree

Unsure

- Agree
- Strongly Agree

18. Other people in my life told me I needed to stop intentionally hurting myself.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

19. My self-injury got so bad/severe, I decided to quit.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

20. I no longer felt in control of my self-injury, so I decided to quit.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

21. I had a major event(s) that triggered my decision to quit self-injuring.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

Please explain:

22. I stopped self-injuring because I felt I outgrew it.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

23. I sought to regain control of my life, and in doing so, was able to stop self-injuring.

- Strongly Disagree
- Disagree

- Unsure
- Agree
- Strongly Agree

24. Please describe some of the things you did, strategies you used, and/or things you learned that assisted you in helping you stop self-injuring.

TREATMENT OF SELF-INJURY

This section will ask you about whether or not treatment was helpful to you in stopping self-injury behaviour.

25. Which statement best describes how you stopped self-injuring?

- Abruptly – I stopped self-injuring and had NO relapses (i.e., a return to self-injury behaviours)
- Abruptly – I stopped self-injuring and had SOME relapses (i.e., a brief return to self-injury behaviours)
- Gradually - I stopped and returned to self-injury behaviours and off, but I got to the point of no longer engaging in self-injury
- Other (Please describe) _____

26. Some individuals who self-injure may also struggle with mental health concerns. To the best of your knowledge, have you ever been diagnosed with any of the following (Please select all that might apply):

- Depression
- Post Traumatic Stress Disorder
- Anxiety
- Eating Disorder (Anorexia, Bulimia, and/or Binge Eating Disorder)
- Bipolar Disorder
- Alcohol or Drug Addiction
- Obsessive-Compulsive Disorder
- Other (Please Describe) _____

27. I attended counselling (even if for ONE session - or for at least 3 sessions) for my mental health concerns, prior to stopping self-injury. ANSWER YES, IF YOU ATTENDED EVEN ONCE AND EVEN IF IT WAS NOT HELPFUL.

- Yes
- No

28. HOW MUCH DO YOU AGREE WITH THE FOLLOWING STATEMENT: I no longer engaged in self-injury because the frequency and/or intensity of my mental health concerns were reduced (e.g., my depression got better so I stopped self-injuring).

- Strongly Disagree
- Disagree
- Unsure
- Agree

- Strongly Agree

29. If you sought treatment (e.g., medical help, inpatient treatment, counselling, crisis intervention, etc) SPECIFICALLY for self-injury, did it assist in helping you to stop self-injuring?

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree
- N/A

29A. If you sought treatment (e.g., medical help, inpatient treatment, counselling, crisis intervention, etc) SPECIFICALLY for self-injury, what were the helpful elements of treatment? Please describe.

29B. If you sought treatment (e.g., medical help, inpatient treatment, counselling, crisis intervention, etc) SPECIFICALLY for self-injury, what were the unhelpful elements of treatment? Please describe.

29C. If you received counselling SPECIFICALLY for self-injury, are you aware of what kind of counselling you received? (e.g., cognitive behavioural therapy, dialectical behavioural therapy, etc). Please describe.

HOW DID YOU STOP?

The following questions will ask you about the changes you made when stopping your self-injuring, and how you were able to successfully stop your self-injury.

30. I actively took steps to reduce and stop my self-injury

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

Please describe how you were able to do this.

31. I learned what my triggers for self-injury were and was able to use this information to help stop self-injuring (for example, I was able to resist the urge to self-injure).

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

32. When I wanted to self-injure, I sought out alternate activities instead.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

Please describe:

33. Telling myself I could stop self-injuring helped me to quit.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

34. I had a problem resolve in my life, and I no longer needed self-injury to cope.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

35. Please describe the motivations you had for stopping self-injury. Why did you stop engaging in self-injury? *WHY AM I ASKING THIS QUESTION? People who intentionally hurt themselves often report different motivations for stopping self-injury, as well as different things that keep them from starting self-injury again. Hearing your experience, in your own words, will help to understand why people are motivated to stop self-injuring and what keeps them from returning to it.*

36. Please describe what keeps you from returning to USING self-injury BEHAVIOURS.

This next set of questions will focus on family, friends, and significant others in your journey towards resolving self-injury.

37. I stopped self-injuring because it was hurting others in my life.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

38. Having a supportive person to talk to helped me to stop engaging in self-injury.

- Strongly Disagree
- Disagree

- Unsure
- Agree
- Strongly Agree

39. Telling others about my self-injury helped me to overcome it.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

40. Telling someone about my self-injury made me commit to stop injuring.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

41. I felt supported by people in my life to stop my self-injury.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

42. The next question looks at possible reasons for stopping self-injuring. Please select all that apply to you.

- I got a new job
- I got a new peer group
- I started university/college
- I entered into a significant positive long-term relationship
- I left a significant negative long-term relationship
- I became pregnant
- I started a family
- I moved out on my own
- Other: Please describe _____

43. I had goals for the future, and self-injury was getting in the way of attaining those goals.

- Strongly Disagree
- Disagree
- Unsure
- Agree

Strongly Agree

WHAT ELSE?

44. Now that we have reached the end of this portion of the questionnaire, is there anything else that would be helpful for us to know about how you were able to successfully stop self-injuring?

→ Participants complete APPENDIX C, move on to APPENDIX D (Demographics)

Appendix D

Demographics Questionnaire

Thank you for hanging in there! You are almost finished! This portion of the questionnaire will ask you some basic questions regarding yourself. Please answer as best you can and select the category most applicable to you.

1. How old are you today?

2. Do you currently identify yourself as a post-secondary student?

- Yes
- No

3. Are you?

- Female
- Male
- Other (please describe) _____

4. Where is your current residence, as of today, located?

- Canada
- United States
- Europe _____
- Asia _____
- Australia
- Other (please describe) _____

(If living in Canada)

Do you currently live in Southern Alberta (i.e., Calgary area and south)?

- Yes
- No

5. What is your identified ethnicity?

- Caucasian
- Asian
- First Nation/Metis
- African-Canadian/American
- Hispanic
- Indo-Canadian/American
- Multiracial
- Other (please describe) _____

6. What is your sexual orientation?

- Heterosexual
- Homosexual
- Bisexual
- Questioning

7. As of today, what is your relationship status?

- Single (e.g., dating, divorced/separated, widowed)
- Married
- Common-Law (living together for 6 months consecutively)
- Long-term relationship

8. What is your estimated family income per year:

- Under \$10,000
- \$10,000 – \$20,000
- \$20,000 - \$40,000
- \$40,000 - \$60,000
- \$60,00 - \$80,000
- \$80,000 - \$100,000
- \$100,000- \$120,000
- \$120,000 - \$140,000
- \$140,000 +

Thank you very much for taking the time to complete this survey! Your answers are extremely important to us, and will help to better inform ways of helping others. Please be assured that your answers are completely confidential and anonymous. Thank you very much for participating! Don't forget to email uoflstudy@gmail.com for your chance to enter into a draw to win one of four \$50 Amazon gift cards. Additionally, you can email us at nssicessation@gmail.com for a summary of the results once they are available, anytime after March 2014. Remember, if you require any additional resources for help, please visit our Facebook page at <https://www.facebook.com/pages/Self-Injury-Recovery-Study> or our tumblr site at <http://nssicessation.tumblr.com/> for a full list of resources at anytime. In order to submit your responses, please proceed to the next page. If you would like to withdraw prior to submitting your responses, you may close your browser at this time.

Appendix E

Promotional Poster Sample A

What are different coping styles for stress?



Do people use self-injury?

If yes, how and why do they stop using self-injury?

Volunteers needed for a research study out of the University of Lethbridge



- **Want to participate in a survey about different coping styles for stress?**
- Please visit **<http://tinyurl.com/d6pjuyh>** to participate!
- Or contact **nssicessation@gmail.com** for more information.

You could win 1 of 4 \$50 Amazon gift cards!!

Thesis title: Healing the Wounds: Understanding Individuals' Experiences in Cessation of Non-Suicidal Self-Injury

Researcher: Tamiko Sugimoto, M.Ed (Counselling Psychology) Thesis Student under the supervision of Dr. Dawn McBride.

Ethical approval has been granted from the University of Lethbridge Faculty of Education Human Subject Research Committee.

<http://tinyurl.com/d6pjuyh>

nssicessation@gmail.com
<http://tinyurl.com/d6pjuyh>

Appendix F

Promotional Poster Sample B

SELF-INJURY

Volunteers needed for a research study
out of the University of Lethbridge

- Do you have a past history of self-injury?
- Are you 18 years of age or older?
- Want to participate in a survey about recovery from self-injury? Please visit <http://tinyurl.com/d6pjuyh> to participate!
- Visit our Facebook page at “Self-Injury Recovery Study” or contact me at nssicessation@gmail.com for more information.



You could win one of four \$50 Amazon gift cards!

Thesis title: Healing the Wounds: Understanding Individuals' Experiences in Cessation of Non-Suicidal Self-Injury



Researcher: Tamiko Sugimoto, M.Ed (Counselling Psychology) Thesis Student under the supervision of Dr. Dawn McBride.
Ethical approval has been granted from the University of Lethbridge Faculty of Education Human Subject Research Committee.

nssicessation@gmail.com
<http://tinyurl.com/d6pjuyh>

Self-Injury Recovery
Study™ on Facebook
<http://tinyurl.com/d6pjuyh>

Appendix G

Survey Welcome Page

WELCOME! You are invited to participate in a University of Lethbridge approved research study called: WHAT ARE DIFFERENT COPING STYLES FOR STRESS? DO PEOPLE USE SELF-INJURY? IF YES, HOW AND WHY DO THEY STOP USING SELF-INJURY? Your time and responses are truly appreciated! This study is important to understanding how people use different types of coping styles, including how individuals are able to stop self-injury. Please remember, in the event you feel any distress during this survey, you may exit at any time. You can access resources for help by visiting our Facebook page at Self-Injury Recovery Study, or checking out our tumblr blog at Self-Injury Recovery Study. Before we start, please select how you came to know about this study. Please pick only ONE answer.

- I am in Psychology 2030A, 2110A, and/or 2850A at the University of Lethbridge OR
- I saw the study on the internet (websites, social media, etc)
- I saw it advertised on a poster
- I was told about this survey by someone
- Other (Please describe) _____

Appendix H

Form 1: Psychology Participant Informed Consent Form – University of Lethbridge

Psychology Students

You are being invited to participate in a research study called:

**WHAT ARE DIFFERENT COPING STYLES FOR
STRESS?
DO PEOPLE USE SELF-INJURY?
IF YES, HOW AND WHY DO THEY STOP USING
SELF-INJURY?**

What is this form?

This form is a chance for me to tell you about the study that I hope you will participate in. It tells you about your rights!

What is the purpose of this research?

I am doing an important study to find out how people cope with stress, and if people use self-injury as perhaps a way to cope, to find out more about this style of coping and how people with a past history of self-injury stop hurting themselves. Understanding these issues is important because it can help create better ways of treating self-injury.

Who is doing this research?

I am a graduate student in the Faculty of Education at the University of Lethbridge. You may contact me by email if you have further questions at nssicessation@gmail.com.

Am I supervised?

Absolutely! My supervisor is Dr. Dawn McBride (Ph.D, R. Psych). She can be contacted if you have any further questions by phone at 403-317-2877 and/or by email at dawn.mcbride@uleth.ca.

Can anyone participate?

Well, sort of. Anyone who wants to help me with my research who is 18 years of age or older, and has access to the Internet.

What will I be expected to do, and when will I do it?

It's basic. You would complete an online survey, without recording your name, at the time and location of your choosing. It is important that you understand that your participation is completely voluntary. You are in no way required to participate.

What are potential benefits to me?

The potential benefits of your participation include contributing to a greater knowledge of how people deal with stress, and adding to a greater understanding of self-injury and self-injury recovery. You can help to inform better ways of assisting others!

For your time, you will receive one course credit for participating, which you can designate to the course of your choosing. Please remember that you must sign up for a specific time slot in order to receive course credit. While the Department of Psychology Administrator, Leanne Wehlage-Ellis, will assign course credit to you, she will never have access to your responses or your survey. Furthermore, I (the researcher) will never know your name, your email address, or be able to link your responses to your name. You will also be eligible to win one of four \$50 Amazon gift cards that will be drawn on August 7, 2013. All you need to do is email an email address (yours or a friend/family member) to uoflstudy@gmail.com to enter. This email has been set up specifically for this study, and viewed only by Leanne Wehlage-Ellis. Please know there is no way to link your name, or email to your responses on the survey – ensuring your anonymity. And please remember – you are eligible for the draw and course credit even if you choose to withdraw at some point during the survey.

One thing for you to remember is that your participation is completely voluntary and it would be unethical to pressure you into doing the study by offering a reward. I don't want to force you into participate – the course credit and draw is simply my way of thanking those who start and/or finish the survey. It is up to you to choose to participate.

What are potential risks to me?

It will take some of your time, anywhere between 10 to 40 minutes, and it may bring up some uncomfortable feelings. A potential risk of completing this survey is emotional discomfort. Please know that my supervisor, thesis committee, and the Faculty of Education Human Subjects Research Committee at the University of Lethbridge have reviewed this study to minimize any discomfort.

If you do not want to feel distressed, including by questions about self-injury and different types of self-injury, you can do several things:

- ***You can choose not to participate or stop at anytime***

You can withdraw at any time (simply by closing your internet browser) if you become distressed. If you experience discomfort or choose to withdraw, I can provide you with a list of resources for additional support.

- ***You can reach out for help***

You are encouraged to call your local 24 hour crisis hotline, such as the Lethbridge Distress Line at 403-327-7905 or the Calgary Distress Centre at 403-266-HELP.

Alternatively, you are encouraged to call 1-800-SUICIDE (which does not just deal with those struggling with suicidal thoughts) to be directed to your nearest crisis hotline, or 1-800-DONT-CUT (for help with self-injury).

How do I access these resources again?

If you want to stop answering questions because it is causing you a bit of distress, you can access resources by going to our Facebook or tumblr pages at “Self-Injury Recovery Study” for a full list.

What if I want to withdraw from the study?

Your participation in this research is completely voluntary. You may withdraw before or during the completion of the survey without explanation or consequence. If you chose to withdraw at some point during the survey, your responses will automatically be discarded. However, it won't be possible to withdraw once you have submitted your survey as there will be no way to identify your specific survey. Further, the data may have already been integrated with other survey data for analysis.

How will my privacy be protected?

Your anonymity will be protected as, I will not know who completed which survey. You will not be asked to provide your name, address, or any other personally identifiable information. Because everyone's responses are entered into a large database, (viewed only by myself, my supervisor, and consultants) there will be no way to track your answers. Like other websites, this study uses web browser cookies, so you can only access the survey once. These cookies are temporary, and cannot be used to identify you in any way.

I am required to abide by strict codes of ethics, and your privacy will be honoured.

In addition, any hard copies of data will be kept, in a locked cabinet, for 10 years. Any electronic data will be stored in a secure file on a password-protected computer. All data will also be backed up on a password protected USB that I will keep in a locked cabinet. After this time, all materials associated with the research will be shredded or deleted/wiped from computers.

What will be done with the results of this research?

The results from this study may be presented in a Master's thesis, scholarly reports, published journal articles, book chapters, and conference presentations. It could also be used for comparison in future studies, in counsellor training/helping professional courses, and in workshops. You will not be able to be identified on any publications, reports, or presentations of the results. If you would like a summary of the results, you may contact the researcher or my supervisor at the email addresses listed above anytime from March 2014 onwards.

Who can I contact if I have questions or concerns?

In addition to being able to contact me, *Tamiko Sugimoto* and my supervisor, *Dr. Dawn McBride*, at the above email address and/or phone number, you may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Chair of the Faculty of Education Human Subjects Research Committee at the University of Lethbridge (403-329-2425).

Thank you for your participation in this survey!

I have read and understood the above conditions. I agree to the above conditions and I am 18 years of age or older.

Appendix I

Form 2: Participant Informed Consent Form

You are being invited to participate in a research study called:

WHAT ARE DIFFERENT COPING STYLES FOR STRESS? DO PEOPLE USE SELF-INJURY? IF YES, HOW AND WHY DO THEY STOP USING SELF-INJURY?

What is this form?

This form is a chance for me to tell you about the study that I hope you will participate in. It tells you about your rights!

What is the purpose of this research?

I am doing an important study to find out how people cope with stress, and if people use self-injury as perhaps a way to cope, to find out more about this style of coping and how people with a past history of self-injury stop hurting themselves. Understanding these issues is important because it can help create better ways of treating self-injury.

Who is doing this research?

I am a graduate student in the Faculty of Education at the University of Lethbridge. You may contact me by email if you have further questions at nssicessation@gmail.com.

Am I supervised?

Absolutely! My supervisor is Dr. Dawn McBride (Ph.D, R. Psych). She can be contacted if you have any further questions by phone at 403-317-2877 and/or by email at dawn.mcbride@uleth.ca.

Can anyone participate?

Well, sort of. Anyone who wants to help me with my research who is 18 years of age or older, and has access to the Internet.

What will I be expected to do, and when will I do it?

It's basic. You would complete an online survey, without recording your name, at the time and location of your choosing. It is important that you understand that your participation is completely voluntary. You are in no way required to participate.

What are potential benefits to me?

The potential benefits of your participation include contributing to a greater knowledge of how people deal with stress, and adding to a greater understanding of self-injury and self-injury recovery. You can help to inform better ways of assisting others!

For your time, you will also be eligible to win one of four \$50 Amazon gift cards that will be drawn on August 7, 2013. All you need to do is email an email address (yours or a friend/family member) to uoflstudy@gmail.com to enter. This email has been set up specifically for this study, and viewed only by an administrator in the Psychology Department at the University of Lethbridge, Leanne Wehlage-Ellis. That way, I will never know your name or email address. Furthermore, Leanne will never have access to your survey or your responses. Please know there is no way to link your name, or email to your responses on the survey – ensuring your anonymity. And please remember – you are eligible for the draw even if you choose to withdraw at some point during the survey.

One thing for you to remember is that your participation is completely voluntary and it would be unethical to pressure you into doing the study by offering a reward. I don't want to force you into participate - the raffle is simply my way of thanking those who start and/or finish the survey. It is up to you to choose to participate.

What are potential risks to me?

It will take some of your time, anywhere between 10 to 40 minutes, and it may bring up some uncomfortable feelings. A potential risk of completing this survey is emotional discomfort. Please know that my supervisor, thesis committee, and the Faculty of Education Human Subjects Research Committee at the University of Lethbridge have reviewed this study to minimize any discomfort.

If you do not want to feel distressed, including by questions about self-injury and different types of self-injury, you can do several things:

- ***You can choose not to participate or stop at anytime***

You can withdraw at any time (simply by closing your internet browser) if you become distressed. If you experience discomfort or choose to withdraw, I can provide you with a list of resources for additional support.

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Alternatively, you are encouraged to call 1-800-SUICIDE (which does not just deal with those struggling with suicidal thoughts) to be directed to your nearest crisis hotline, or 1-800-DONT-CUT (for help with self-injury).

How do I access these resources again?

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What if I want to withdraw from the study?

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How will my privacy be protected?

Your anonymity will be protected as I will not know who completed which survey. You will not be asked to provide your name, address, or any other personally identifiable information. Because everyone's responses are entered into a large database, (viewed only by myself, my supervisor, and consultants) there will be no way to track your answers. Like other websites, this study uses web browser cookies, so you can only access the survey once. These cookies are temporary, and cannot be used to identify you in any way.

I am required to abide by strict codes of ethics, and your privacy will be honoured.

In addition, any hard copies of data will be kept, in a locked cabinet, for 10 years. Any electronic data will be stored in a secure file on a password-protected computer. All data will also be backed up on a password protected USB that I will keep in a locked cabinet. After this time, all materials associated with the research will be shredded or deleted/wiped from computers.

What will be done with the results of this research?

The results from this study may be presented in a Master's thesis, scholarly reports, published journal articles, book chapters, and conference presentations. It could also be used for comparison in future studies, in counsellor training/helping professional courses, and in workshops. You will not be able to be identified on any publications, reports, or presentations of the results. If you would like a summary of the results, you may contact the researcher or my supervisor at the email addresses listed above anytime from March 2014 onwards.

Who can I contact if I have questions or concerns?

In addition to being able to contact me, *Tamiko Sugimoto* and my supervisor, *Dr. Dawn McBride*, at the above email address and/or phone number, you may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Chair of the Faculty of Education Human Subjects Research Committee at the University of Lethbridge (403-329-2425).

Thank you for your participation in this survey!

I have read and understood the above conditions. I agree to the above conditions and I am 18 years of age or older.