Non-Suicidal Self-Injury and Perfectionism in Young Adults

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Abstract

Non-suicidal self-injury (NSSI) and perfectionism have each been foci of psychological research, however, the relationship between them has only recently begun to be examined. Further study is needed to understand if and how these concepts relate and the possible causal mechanisms underpinning this relationship. Discussion of the lived experiences of those who are perfectionistic and engage in NSSI also appears to be underrepresented in the literature. The current research, therefore, aims to examine the relationship between NSSI and perfectionism in young adults in New Zealand. The research also aims to examine the interpersonal theory of suicide (Joiner, 2005; Van Orden et al., 2010) to achieve a deeper understanding of the mechanisms of the relationship between NSSI and perfectionism.

Using a two-stage data collection and analysis approach, New Zealand participants aged 18 to 35 years old first completed an online, self-report questionnaire to measure their engagement in NSSI, relative levels of perfectionism, and relative levels of thwarted belongingness and perceived burdensomeness. Secondly, a smaller subset of participants with a history of NSSI and experiences of perfectionism engaged in a semi-structured interview to discuss these experiences.

Statistical analyses of the survey data supported overall perfectionism as positively related to NSSI. When perfectionism was broken down into two dimensions, both perfectionistic strivings and perfectionistic concerns were found to be positively related to NSSI. Overall perfectionism and perfectionistic concerns were both positively related to thwarted belongingness and perceived burdensomeness, while perfectionistic strivings was not. Thwarted belongingness and perceived burdensomeness were also positively related to NSSI. Finally, the relationship between both overall perfectionism and NSSI and

perfectionistic concerns and NSSI were found to be partially mediated by perceived burdensomeness.

The use of thematic analysis abstracted five main themes from the semi-structured interviews. These themes were: functions of NSSI; perfectionism and academic grades; perfectionism affected by others; NSSI scars and perfectionism; and failing to meet perfectionistic standards and engaging in NSSI.

Overall, the current study found a positive relationship between perfectionism and NSSI and demonstrated that perceived burdensomeness may partially mediate this relationship. These findings may have important implications for clinicians working with individuals with perfectionism that engage in, or are at risk of engaging in, NSSI. Having an awareness of the above relationship may improve the implementation of targeted prevention, intervention and treatment methods resulting in better client outcomes. The current findings may also contribute to the future development of targeted prevention and intervention methods in this, and related areas.

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Non-Suicidal Self-Injury and Perfectionism in Young Adults

Non-Suicidal Self-Injury (NSSI) refers to the intentional harm of one's own body through socially unsanctioned actions, *without* suicidal intent (Klonsky, 2007a; Muehlenkamp, 2006; Nock, 2009). It is a prevalent behaviour affecting children, adolescents, and adults around the world (Barrocas et al., 2012; Klonsky, 2011; Muehlenkamp et al., 2012). While NSSI is not a new phenomenon (Skegg, 2005), it has gained increasing attention from researchers to understand how it both relates to and differs from other types of self-harm as well as suicide (Chapman et al., 2006; Muehlenkamp & Kerr, 2010; Nock et al., 2006). Researchers' and clinicians' conceptualisations of NSSI have changed and developed over time, such that the importance of understanding NSSI specifically, as opposed to self-harm in general, has been acknowledged by associations such as the American Psychiatric Association in the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM-5*; American Psychiatric Association, 2013).

A growing focus on NSSI has resulted in increased research examining the aetiology, risk factors, and comorbidities associated with NSSI (Barrocas et al., 2015; R. C. Brown & Plener, 2017; Kaess et al., 2013; Nock et al., 2006). Perfectionism has received some attention in this area as researchers have sought to determine whether different levels of perfectionism may play a role in the engagement in NSSI (Brocklesby, 2017; Claes et al., 2012; Hoff & Muehlenkamp, 2009; Miskey et al., 2012). Perfectionism is commonly defined by researchers as the setting of unreasonably high personal standards, striving to reach expectations that are frequently unrealistic, and being overly critical of one's behaviour (Frost et al., 1990; Sirois & Molnar, 2016; Stoeber & Otto., 2006). While other conceptualisations of perfectionism exist, such as clinical perfectionism (Shafran et al., 2002), the above definition is used in the current research. Similar to NSSI, perfectionism has been observed in children through to adults (Chang, 2000; Flett & Hewitt, 2014).

Perfectionism has been a topic of interest for researchers for many years, however, like NSSI, the conceptualisation of perfectionism has changed over time as our understanding of this phenomenon has developed (Sirois & Molnar, 2016). Researchers have also begun to examine how perfectionism affects mental and physical health and wellbeing in a range of areas (Sirois & Molnar, 2016).

While it can be difficult to obtain accurate rates, it has been suggested by some researchers that both NSSI and perfectionism rates are increasing (Flett & Hewitt, 2014; O'Loughlin & Sherwood, 2005; Portešová & Urbánek, 2013). This has led to an interest in whether and how these two phenomena are related. Consequently, a small number of studies have begun to examine the way in which perfectionism and NSSI may relate to one another, and these suggest that a significant positive relationship may exist between some aspects of perfectionism and NSSI (Brocklesby, 2017; Claes et al., 2012; Hoff & Muehlenkamp, 2009; Miskey et al., 2012). What is still not understood, however, is the theoretical underpinnings of this suggested relationship. Sirois and Molnar (2016) have highlighted the lack of theoretical focus in the perfectionism and health literature, and the relationship between perfectionism and NSSI appears to be no exception. One theory that attempts to explain the mechanism underlying the relationship between perfectionism and NSSI is the interpersonal theory of suicide (IPTS; Joiner, 2005; Van Orden et al., 2010). Using the IPTS to examine the relationship between perfectionism and NSSI promises a better understanding of this relationship and subsequently the provision of grounded interventions that effectively assists those struggling with difficulties related to perfectionism and NSSI.

The current research, therefore, aims to improve our understanding of NSSI by examining the relationship between perfectionism and NSSI and, more specifically, the way in which the IPTS (Joiner, 2005; Van Orden et al., 2010) experiences of thwarted belongingness and perceived burdensomeness may promote engagement in NSSI. The

combination of both an online survey and a small number of face-to-face interviews aims to provide both a statistical basis to determine whether these relationships exist, as well as a deeper, contextual understanding of the experiences of relevant individuals. It is also hoped that the current research will contribute to improved clinical interventions to better assist those struggling with perfectionism and NSSI. The following chapters will provide an overview of existing research around NSSI, perfectionism, and the relationship between them. Theories relating to NSSI and perfectionism will be presented before outlining and describing the current research. The methods, results, and discussion sections for the quantitative and qualitative portions of the study will be presented separately before a combined discussion is presented.

Chapter 1

Non-Suicidal Self-Injury

Definitions

NSSI is the intentional harm of one's body through socially unsanctioned actions and without suicidal intent (Klonsky, 2007a; Muehlenkamp, 2006; Nock, 2009). NSSI is distinct from socially-sanctioned behaviours that can inflict injury on the body, such as piercings and tattoos (Klonsky, 2007a). It is also distinct from self-injurious behaviour *with* suicidal intent, although it is possible that NSSI can lead to accidental death (Muehlenkamp, 2005, 2006). NSSI can be carried out through a variety of methods including, but not limited to, cutting, carving, burning, biting, scratching and sticking sharp objects into one's skin, and banging and hitting one's body (Gratz, 2001, Klonsky, 2007a). As will be discussed later, prevalence rates of NSSI can vary, with some studies suggesting disturbingly high rates (e.g., Gratz, 2001). Cutting, banging and hitting oneself, burning oneself (Ammmerman et al., 2019; Coppersmith et al., 2017; Klonsky, 2007b) and scratching and sticking sharp objects into the skin (Garisch & Wilson, 2015; Gratz, 2001) have all been identified as commonly used methods of NSSI. Many self-harming individuals have used more than one method of NSSI (Gratz, 2001).

The *DSM-5* (American Psychiatric Association, 2013) proposes criteria for NSSI to encourage research focused on this area. The *DSM-5* proposed criteria for NSSI are very similar to definitions currently used by researchers, as detailed above. However, the *DSM-5* dictates a specific number of times that an individual must have engaged in NSSI, which researchers do not usually specify. The complete criteria are as follows:

A. In the last year, the individual has, on 5 or more days, engaged in intentional self-inflicted damage to the surface of his or her body of a sort likely to induce bleeding, bruising, or pain (e.g., cutting, burning, stabbing, hitting, excessive

rubbing), with the expectation that the injury will lead to only minor or moderate physical harm (i.e., there is no suicidal intent).

Note: The absence of suicidal intent has either been stated by the individual or can be inferred by the individual's repeated engagement in a behaviour that the individual knows, or has learned, is not likely to result in death.

B. The individual engages in the self-injurious behaviour with one or more of the following expectations:

1. To obtain relief from a negative feeling or cognitive state.
2. To resolve an interpersonal difficulty.
3. To induce a positive feeling state.

Note: The desired relief or response is experienced during or shortly after the self-injury, and the individual may display patterns of behaviour suggesting a dependence on repeatedly engaging in it.

C. The intentional self-injury is associated with at least one of the following:

1. Interpersonal difficulties or negative feelings or thoughts, such as depression, anxiety, tension, anger, generalised distress, or self-criticism, occurring in the period immediately prior to the self-injurious act.
2. Prior to engaging in the act, a period of preoccupation with the intended behaviour that is difficult to control.
3. Thinking about self-injury that occurs frequently, even when it is not acted upon.

D. The behaviour is not socially sanctioned (e.g., body piercing, tattooing, part of a religious or cultural ritual) and is not restricted to picking a scab or nail biting.
E. The behaviour or its consequences cause clinically significant distress or interference in interpersonal, academic, or other important areas of functioning.
F. The behaviour does not occur exclusively during psychotic episodes, delirium, substance intoxication, or substance withdrawal. In individuals with a neurodevelopmental disorder, the behaviour is not part of a pattern of repetitive stereotypies. The behaviour is not better explained by another mental disorder or medical condition. (p. 803)

By including NSSI in the *DSM-5* (American Psychiatric Association, 2013), it is acknowledged as an important and distinct condition. Researchers have also highlighted the positive effects that its inclusion might have, including; improved understanding between professionals and clients, increased research and understanding of NSSI, and improved treatment (Wilkinson & Goodyer, 2011). Some researchers have also suggested that a dimensional conceptualisation of NSSI may be more helpful than the categorical conceptualisation applied in the *DSM-5* (Gratz et al., 2015; Muehlenkamp & Brausch, 2016; Washburn et al., 2015). Further discussion of the *DSM-5* and relevant critique is not provided here as the current study does not use the *DSM-5* definition when examining NSSI. Additional critique can be found in Roy et al. (2019).

NSSI Versus Self-Harm with Suicidal Intent

In line with existing research examining NSSI (Klonsky, 2007a; Muehlenkamp, 2006; Nock, 2009; Swannell et al., 2014), the current research will refer to NSSI as the deliberate act to harm one's body, without suicidal intent. Historically and currently, researchers have used many different terms, often interchangeably, to describe self-harming behaviours. Some of these include deliberate self-harm (Gratz, 2001), deliberate self-injury (Klonsky, 2007b),

self-mutilation (Ross & Heath, 2002), and self-injurious behaviour (Claes & Vandereycken, 2007). The term NSSI is growing in use due to its clarity in describing self-harming behaviours without suicidal intent. Given the recency of this, however, I will refer to research that has measured self-harm with and/or without suicidal intent, this being stated when the study is referenced.

Research findings suggest that while NSSI and self-harming behaviours with suicidal intent are related, they differ in ways that may be especially important for prevention and treatment (M. Z. Brown et al., 2002; Muehlenkamp, 2005; Muehlenkamp & Kerr, 2010; Nock & Favazza, 2009). Some of the ways in which NSSI and self-harm with suicidal intent differ include: the individual's intent and purpose of the behaviour, the frequency of the behaviour, the lethality of the method, the number of methods used, the cognitive state of the individual during the behaviour and the consequences of the behaviour (Kahan & Pattison, 1984; Muehlenkamp, 2005; Muehlenkamp & Gutierrez, 2004; Muehlenkamp & Kerr, 2010; Taylor et al., 2018). In regard to intent and purpose, both NSSI and self-harm with suicidal intent may be used in an attempt to reduce an individual's distress (M. Z. Brown et al., 2002). However, NSSI aims to improve how the individual is feeling, while suicide aims to eliminate all feelings (Muehlenkamp, 2005; Muehlenkamp & Gutierrez, 2004).

NSSI is frequently reported as an affect-regulation or emotion-regulation strategy that individuals use to help them cope with emotional distress, provide emotional relief, influence the social environment, modify cognitions, and it may also produce physiological effects (M. Z. Brown et al., 2002; Klonsky, 2007b; Klonsky et al., 2015; McKenzie & Gross, 2014; Nock, 2010; Taylor et al., 2018). In contrast, individuals who attempt suicide may seek relief from distress by killing themselves, rather than to improve coping (Muehlenkamp & Gutierrez, 2004). Both NSSI and suicide may therefore be intended as methods to cope with or escape distress, but NSSI may be a temporary solution, unlike the permanency of suicide.

NSSI and self-harm with suicide ideation may also differ in the frequency of which individuals engage in the behaviour, specifically with individuals engaging in NSSI more frequently than suicidal attempts (Joiner et al., 2012; Muehlenkamp, 2005). Individuals also tend to use lower lethality methods to engage in NSSI, such as skin cutting and scratching, and higher lethality methods to attempt suicide, such as hanging and overdosing (M. Z. Brown et al., 2002; Halicka & Kiejna, 2018; Muehlenkamp, 2005). In New Zealand, Fitzgerald and Curtis (2017) found scratching, cutting and carving to be the most frequently used method of NSSI in a sample of university students. The Ministry of Health (2018) states that hanging, strangulation and suffocation were the most commonly used methods of suicide from 1996 to 2015, particularly in those aged 15 to 44 years. Those engaging in NSSI may also use more methods of self-injury than those engaging in self-harm with suicidal intent (Halicka & Kiejna, 2018; Muehlenkamp, 2005; Muehlenkamp & Gutierrez, 2004; Muehlenkamp & Kerr, 2010).

Individuals' cognitive states may differ when engaging in NSSI compared to self-harm with suicide ideation (Muehlenkamp & Kerr, 2010). Muehlenkamp and Kerr (2010) highlight that a person engaging in NSSI may experience less hopelessness than a person engaging in self-harm with suicidal ideation. Individuals engaging in self-harm with suicidal ideation, may also experience an inability to problem solve and think of alternative solutions to reduce their distress, leading to further feelings of hopelessness and helplessness. Individuals engaging in NSSI, however, have difficulties in using adaptive problem solving. NSSI and self-harm with suicidal intent may also produce different psychological results for individuals (Muehlenkamp & Kerr, 2010). While individuals engaging in NSSI may experience some internalised relief, they can face criticism and frustration from others about their behaviour (Anderson et al., 2003; Friedman et al., 2006; Muehlenkamp & Kerr, 2010; Ramon, 1980; Skegg, 2005). Conversely, self-harm with suicidal ideation may increase an

individual's distress, but in some contexts may also elicit more caring behaviours from others (Wagner et al., 2000).

With these differences in mind, treatment for those experiencing NSSI versus self-harm with suicidal intent may also differ (M. Z. Brown et al., 2002; Muehlenkamp & Kerr, 2010; Nock & Favazza, 2009). For example, one aspect of supportive treatment for a client engaging in NSSI may involve teaching alternative distress tolerance methods, while a client engaging in self-harm with suicidal ideation may benefit from therapy that includes modifying beliefs about themselves and how others see them (M. Z. Brown et al., 2002). Clinicians may also monitor a client's cognitive state to assess whether they begin to experience suicidal intent and desire to self-harm in this manner. For example, clinicians may notice clients talking about increased feelings of hopelessness and helplessness as an indicator that NSSI may be replaced by self-harm with suicidal intent (Muehlenkamp & Kerr, 2010). Understanding an individual's intent when engaging in a self-harm behaviour is therefore important to enable targeted and appropriate treatment and support. While it is clear that NSSI and self-harm with suicidal intent show some key differences they also appear to relate to each other in some distinct ways. This will be discussed below, along with other comorbidity factors for NSSI.

Functions and Results of NSSI

Researchers have sought to understand the functions of NSSI and the results that it produces (e.g., Klonsky et al., 2015; Taylor et al., 2018). In an attempt to better understand the functions of NSSI, Nock and Prinstein (2004) assessed self-mutilative behaviour (similarly defined to NSSI) through the use of the Functional Assessment of Self-Mutilation measure (Lloyd et al., 1997). Twenty-two reasons were reported by participants as to why they engage in self-mutilative behaviour. These included "To stop bad feelings", "To get help", and "To get control of a situation". Not only were the reasons wide ranging, but some

were in direct contrast to each other, such as “To punish yourself” and “To avoid punishment or paying the consequences”. Further, an individual’s reason(s) for engaging in self-mutilative behaviour can change between acts. Nock and Prinstein (2004) suggest that self-mutilative behaviour is carried out due to being automatically reinforcing (such as through regulating one’s emotions) and/or socially reinforcing (such as receiving support from others).

An examination of social factors impacting NSSI in university students was undertaken by Heath et al. (2009). They found that most participants indicated emotional motivations for engaging in NSSI (91%). These motivations included “To relieve/escape unwanted thoughts and feelings” and “To feel a sense of control”. Approximately two-thirds of the sample (65.2%) endorsed social motivations for engaging in NSSI. These motivations included “To feel close to someone” and “To not feel like an outsider”. Heath et al. (2009) also found that individuals that engaged in NSSI reported significantly lower levels of friend support than individuals that did not engage in NSSI. They did not find any significant differences in parent social support. Further, no significant relationship was found between levels of social support and life-time frequency of NSSI.

More recent research has provided further support for a two-facture structure to explain the functions of NSSI (Klonsky et al., 2015; Taylor et al., 2018). Klonsky et al. (2015) examined the reported functions of NSSI in a sample of 1157 participants that had been admitted to an NSSI treatment programme. Participants completed either the Functional Assessment of Self-Mutilation measure (Lloyd et al., 1997) or the Inventory of Statements About Self-Injury measure (Klonsky & Glenn, 2009). Klonsky et al. (2015) found that both measures resulted in a two-factor structure which they termed intrapersonal functions (termed automatic functions by Nock and Prinstein (2004)) and social functions. Taylor et al. (2018) conducted a meta-analysis of the different functions of NSSI by examining 53 independent

samples. Their analysis examined NSSI functions as either intrapersonal or interpersonal. Intrapersonal functions included emotion regulation and self-punishment, and interpersonal functions included communicating distress, attempting to influence others, and punishing others. Taylor et al. identified that interpersonal functions were identified by 66% to 81% of individuals while intrapersonal functions were identified by 32% to 56% of individuals.

When considering the above studies (Klonsky et al., 2015; Nock & Prinstein, 2004), individuals have identified some of the following reasons for engaging in NSSI: "To feel relaxed", "To relieve feeling numb or empty", "To stop bad feelings", and "To feel something, even if it was pain". With this in mind, researchers have also sought to further understand the physiological response to NSSI (e.g., Osuch et al., 2014). Van Hoorn (2020) examined whether using NSSI as a method of affect regulation could be further explained by NSSI affecting the autonomic nervous system. It is suggested that engaging in NSSI may result in vagal self-stimulation and increase vagal tone. As a result, top-down emotion regulation may be improved and this may promote feelings of calm. Van Hoorn also suggests that this may contribute to perpetuating NSSI engagement. While examination of the physiological effects of NSSI appear to be ongoing, these studies provide some suggestions as to the physiological response for those engaging in NSSI and how this may contribute as a maintenance factor for NSSI engagement.

Prevalence

It can be difficult to obtain accurate NSSI rates due to the range of measures used, as well as inconsistencies across the literature in defining and distinguishing NSSI from self-harm with suicidal intent (Fraser et al., 2017; Garisch & Wilson, 2015). In a random sample of adults in 2008, Klonsky (2011) reported a lifetime prevalence rate for NSSI of 5.9% in a sample of 439 adults in the United States. Giletta et al. (2012) examined rates of NSSI in adolescents across three countries; the United States, Italy and the Netherlands. In a sample

of 1862 adolescents aged between 14 and 19 years, Giletta et al. found that approximately 24% of adolescents (21.9% in the United States, 23.6% in Italy, and 25.8% in the Netherlands) had engaged in at least one episode of NSSI within the past six (for the United States) to 12 (for Italy and the Netherlands) months. Lundh et al. (2007) examined engagement in self-harm in a sample of 15-year-old Swedish students. They did not measure self-harm based on the presence or absence of suicidal intent and, with this broad definition, found that 65.9% of students had engaged in at least one act of self-harm over their lifetime. The differences in NSSI and self-harm rates between the three studies above is demonstrative of the rate differences found across the literature, as highlighted by other researchers (e.g., Heath, Schaub, et al., 2008). However, factors such as whether the sample is from the community or a clinical setting, as well as the measures used to obtain this data, may have an effect on the results (Heath, Schaub, et al., 2008). Plener et al.'s (2016) examination of NSSI rates in a sample ranging from 14 to 94 years of age, suggests that lifetime prevalence rates differ, with younger age groups having higher rates of NSSI than older age groups.

Researchers have examined rates of NSSI in New Zealand in an attempt to understand its prevalence in the population. Garisch and Wilson (2015) examined NSSI in a sample of 1162 secondary school students in Wellington. Garisch and Wilson found that 48.7% of adolescents had a lifetime history of NSSI. There was no significant difference in this rate for female versus male students and the most common method of NSSI was sticking sharp objects into the skin, while the least common method was bone breaking. The sample was identified as representative of New Zealand adolescents in regard to sex and socio-economic status, but not ethnicity, with an over representation of New Zealand European students and an under representation of Māori students. Fraser et al. (2017) also examined rates of NSSI in Wellington students as part of the Youth Wellbeing Study, a longitudinal research project. Out of 1179 students aged 13 to 18 years, 20.6% of the sample reported having engaged in

NSSI at least once, while an additional 9.6% of the sample had considered engaging in NSSI, but had not done so.

In a meta-analysis conducted by Swannell et al. (2014), the NSSI prevalence in non-clinical samples was examined. Swannell et al. used 128 prevalence estimates and the samples were grouped into three age categories: adolescents (aged 10 to 17 years), young adults (aged 18 to 24 years) and adults (aged 25 years and older). Participants were based in Asia, Australia, New Zealand, Canada, Europe, the United Kingdom, and the United States. Swannell et al. found that NSSI lifetime prevalence estimates ranged from 1.5% to 54.8%. When examining NSSI prevalence among the different age categories, young adults had the highest prevalence (21.3%), followed by adolescents (18.3%), and adults (3.9%). Swannell et al. also conducted adjusted analyses to examine the influence of methodological factors (such as participant response format and participation incentive). Using adjusted analysis resulted in adolescents demonstrating the highest NSSI prevalence (15.4%), followed by young adults (10.5%), and adults (4.2%). Female participants demonstrated higher prevalence than males in both the unadjusted and adjusted analyses. However, this difference became non-significant in the adjusted analysis. Finally, Swannell et al. found that NSSI prevalence increased over time in their unadjusted analysis, but did not once adjusting for methodological factors.

As the above demonstrates, estimated rates of engagement in NSSI can be wide-ranging, however, it is clear that NSSI affects a significant number of individuals both in New Zealand and overseas. Some researchers suggest that engagement of self-harm and NSSI may be increasing over time (O'Loughlin & Sherwood, 2005). O'Loughlin and Sherwood (2005) found an overall increase in the rates of self-harm in a British sample presenting to hospital from 1991 to 2000. Similarly, Wester et al. (2018) explored rates of lifetime and current NSSI engagement in first year university students in the United States.

Three participant cohorts completed an adapted version of the Deliberate Self-Harm Inventory (Gratz, 2001) in 2008, 2011 and 2015. Wester et al. (2018) found that both rates of lifetime and current NSSI engagement increased across the three cohorts. However, other researchers (e.g., Lundh et al., 2007; Muehlenkamp et al., 2009; Swannell et al., 2014) have highlighted that a range of definitions and measures used, means that rates of NSSI specifically are difficult to determine and may not be increasing. It is currently unclear as to whether; rates of NSSI have increased over time, an increase in suicidal behaviour more generally may be occurring, or increased help-seeking behaviour and societal acknowledgment of NSSI contribute to increasing rates (Heath, Schaub, et al., 2008).

As well as examining the prevalence of NSSI overall, researchers have sought to understand rates of engagement across age, gender, ethnicity, and sexual orientation (Heath, Schaub, et al., 2008). Research suggests that the age of onset for NSSI is commonly in early adolescence between ages 13 and 15 (Heath, Schaub, et al., 2008). Heath, Toste, et al. (2008), for example, examined NSSI in college students in Canada and found that 43.5% of the participants first engaged in NSSI between 14 and 16 years of age and 18.3% of participants first engaged between 11 and 13 years of age. They found that 21.7% of participants first engaged in NSSI between 17 and 19 years and 17.3% were older than 20 years of age. Muehlenkamp and Gutierrez (2007) examined NSSI and suicide attempts in adolescents in the United States and found that 15.1% of the participants started engaging in NSSI at 13 years old and 28.4% started at 14 years old. While a significant number of individuals may engage in NSSI for the first time during adolescence, research also suggests that children may start engaging in NSSI earlier than 13 years old. Ross and Heath (2002) examined the age of onset of self-harm in adolescents in Canada, finding that 24.6% of their sample reported engaging in self-harm during Grade 6 or younger which they indicated was before age 12. Similarly, Barrocas et al. (2012) examined rates of NSSI in children and adolescents in the

United States. They found that of the 8.0% in the sample that reported engaging in NSSI, 6.7% were in third grade, 4.0% were in sixth grade, and 12.7% were in ninth grade, indicating that those aged between seven and 16 years old endorsed engagement in NSSI.

Research suggests that rates of NSSI may differ across genders, with women more likely to engage in NSSI than men (Bresin & Schoenleber, 2015). While this finding is consistent across most research, some research does not demonstrate this pattern (e.g., Andover et al., 2010; Klonsky et al., 2014) which may be due to a range of factors including population differences and which methods of NSSI are examined (Heath, Schaub, et al., 2008). In clinical samples, some researchers have found higher rates of NSSI in female participants than male participants. Jacobson et al. (2008) for example, examined the rates of engagement in NSSI as well as suicidal attempts in 227 adolescents that were admitted to an outpatient depression and suicide programme in New York. Jacobson et al. found that self-harm (either with or without suicidal intent) was significantly more likely in female participants, however, the type of self-harm did not show significant differences in relation to gender.

Community samples have shown some inconsistencies regarding gender differences and engagement in NSSI (Heath, Schaub, et al., 2008). Giletta et al.'s (2012) examination of NSSI in secondary school adolescents across the United States, Italy and the Netherlands, resulted in significantly higher rates of NSSI in female students than male students. In contrast, Barrocas et al. (2015) found that in a community sample of adolescent students in Mainland China, male students reported higher rates and frequencies of engaging in NSSI than female students. Lundh et al. (2007) found that there was no significant gender difference in rates of self-harm overall (not specifying the absence of suicidal intent) in 15-year-old Swedish students. However, when examining different methods of self-harm, Lundh et al. found that two methods of self-harm showed significant gender differences. Female

students were found to be significantly more likely to engage in cutting behaviours than male students. Female students were also more likely to engage in rubbing glass into their skin than male students. In New Zealand, Garisch and Wilson (2015) found no difference in rates of NSSI between male and female adolescents. In an attempt to provide more clarity to this area, Bresin and Schoenleber (2015) conducted a meta-analysis to examine whether gender differences exist in the prevalence of NSSI. They found that overall rates of NSSI were significantly higher in women than men and that this difference was larger in clinical samples compared to university and community samples. Some methods of NSSI were also used more frequently by women than men, such as cutting, while other methods did not show a significant difference.

Examination of NSSI across different ethnicities has also been an area of focus for researchers. Muehlenkamp and Gutierrez (2007) found that in adolescents in the United States, participants termed Caucasian reported significantly more engagement in self-harm than non-Caucasian participants, with no significant differences between the ethnic minority groups of African American, Hispanic, Multi-Ethnic and Other Race/Ethnicity. When examining a sample of New Zealand university students, Fitzgerald and Curtis (2017) found that participants who identified as New Zealand European or New Zealand Māori were more likely to engage in NSSI than all other ethnicities. These studies suggest that rates of NSSI may differ across ethnicities.

To further understand how different populations may engage in NSSI, some studies have investigated whether sexual attraction and sexual orientation is related to NSSI (Fitzgerald & Curtis, 2017; Lucassen et al., 2011; Whitlock et al., 2011). Lucassen et al. (2011) examined rates of self-harm (without defining whether suicidal intent was present or not) and its relationship to sexual attraction, as well as depression, suicidality and help-seeking behaviour. Lucassen et al. (2011) used data from the Youth'07 health and well-being

survey in which 9107 secondary school students across New Zealand were randomly selected to participate. 8002 of these students responded to the survey accounting for 3.4% of enrolled secondary school students in New Zealand in 2007. Lucassen et al. found that 20.91% of these New Zealand secondary school students reported engaging in self-harm (with or without suicidal thoughts) over the previous 12-month period. Those sexually attracted to both sexes were most likely to engage in self harm, followed by those attracted to the same sex and those who were not sure. Individuals attracted to the opposite sex or neither sex were least likely to engage in self-harm. Fitzgerald and Curtis' (2017) New Zealand sample of university students found similar results. From their sample of 767 students that completed the survey, 38.2% indicated having engaged in NSSI at least once in their lifetime and the risk of engaging in NSSI increased for non-heterosexual students compared to heterosexual students. Specifically, this relationship was stronger for female non-heterosexual students and included those that identified as lesbian, bisexual, and questioning.

The above research demonstrates the wide-varying prevalence rates of NSSI. This may be due to methodological factors (Swannell et al., 2014) and inconsistencies as to how NSSI is defined (Fraser et al., 2017; Garisch & Wilson, 2015). Two New Zealand studies found NSSI rates of 20.6% and 48.7% in adolescent students (Fraser et al., 2017; Garisch & Wilson, 2015). Meta-analyses such as Swannell et al.'s (2014) suggest that rates of NSSI engagement are highest among adolescents and young adults as compared to adults aged 25 years and older. NSSI prevalence rates have been found to differ across ethnicities (Fitzgerald & Curtis, 2017), sexual orientations (Lucassen et al., 2011), and genders (e.g., Giletta et al., 2012. However, this latter finding can be inconsistent as highlighted by Swannell et al.'s (2014) findings in which gender differences became non-significant when adjusting for methodological factors.

Comorbidity and Risk Factors

Those who engage in NSSI may be more likely to experience mental health difficulties (Bentley et al., 2015; Jacobson et al., 2008; Miller & Smith, 2008). Bentley et al. (2015) undertook a meta-analytic review of the association between NSSI and emotional disorders. Their meta-analytic review included 56 studies and included both clinical and non-clinical settings. The majority of studies were North American and participants included children, adolescents, and adults. Emotional disorders included depressive disorders, anxiety disorders, obsessive-compulsive and trauma- and stress-related disorders. Bentley et al. found that overall individuals with an emotional disorder were more likely to report engaging in NSSI than those without an emotional disorder. This was not found for bipolar disorder and social anxiety disorder, however.

Examination of the relationship between NSSI and psychiatric disorders in a community sample was undertaken by Liu (2021). Face-to-face surveys were undertaken with 7,192 adults in England during which they were asked about NSSI engagement, psychiatric illness, suicidal thoughts and behaviour, and treatment history. Liu found that 63.82% of participants that had engaged in NSSI had at least one current psychiatric disorder. NSSI was also strongly associated with suicidal ideation and suicide attempts when psychiatric disorders and sociodemographic factors were controlled for.

The relationship between NSSI and mental disorders was examined by Kiekens et al. (2021) as part of the World Mental Health International College Student initiative. The sample was made up of students from 24 colleges across nine countries, resulting in a final sample of 20,842 first-year students. Kiekens et al. found that of the participants who had engaged in NSSI at least once in their lifetime, 59.6% met criteria for at least one mental disorder in accordance with the *DSM-IV* (4th ed.; American Psychiatric Association, 1994). This was compared to those with no history of NSSI engagement in which 25% of

participants met criteria for at least one mental disorder. When controlling for pre-existing mental disorders, the researchers also found that NSSI predicted later onset of mental disorders. Kiekens et al. highlight that NSSI is associated with a range of mental health disorders and may be a risk factor for future mental disorders.

Examination of the relationship between different types of self-harm and psychiatric profiles was undertaken by Jacobson et al. (2008). Jacobson et al.'s examination of 227 adolescents who were admitted to an outpatient depression and suicide programme in New York, found that those who engaged in NSSI were more likely to possess features of borderline personality disorder compared to those who had not engaged in deliberate self-harm. Individuals who had attempted suicide were more likely to experience major depressive disorder and/or posttraumatic stress disorder compared to individuals who had engaged in NSSI without any suicide attempts. Jacobson et al. found that, when compared to the group who had not engaged in deliberate self-harm, individuals who had engaged in NSSI did not show an increased likelihood of other psychiatric diagnoses. Finally, levels of suicidal ideation were similar between the group who had engaged in NSSI and the group who had no deliberate self-harm engagement in this sample of adolescents admitted to an outpatient depression and suicide programme.

In contrast to Jacobson et al.'s (2008) findings, some researchers suggest that those engaging in NSSI are more likely to meet criteria for some Axis I disorders (Garrison et al., 1993; Nock et al., 2006). Nock et al. (2006) examined clinical interviews from 89 adolescent psychiatric inpatients who had engaged in NSSI in the past year. They found that 87.6% of their sample met criteria for at least one psychiatric diagnosis. Specifically, 51.7% of those met criteria for an internalising disorder (including major depressive disorder, posttraumatic stress disorder and generalised anxiety disorder), 62.9% for an externalising disorder (including conduct disorder and oppositional defiant disorder), and 59.6% for a substance use

disorder (including substances such as alcohol, nicotine and marijuana). Nock et al. (2006) also found that 67.3% of the sample met criteria for a *DSM-IV* (American Psychiatric Association, 1994) personality disorder with borderline personality disorder being the most frequently met, followed by avoidant personality disorder and paranoid personality disorder. Garrison et al. (1993) also examined NSSI and its relationship to psychiatric disorders in 12- to 14-year-olds. They found that NSSI was positively related to major depression, obsessive-compulsive disorder and phobic disorder.

As well as possible links between NSSI and psychiatric disorders, NSSI may also be related to other psychological features and experiences (Ross & Heath, 2003; Zlotnick et al., 1996). Zlotnick et al. (1996) found that in a sample of 103 female inpatients, those who engaged in NSSI demonstrated more dissociative symptoms and alexithymia than those who do not engage in NSSI. Ross and Heath (2003) examined NSSI in relation to the hostility model and anxiety reduction model in 122 adolescent high school students. They found that adolescents who engaged in NSSI reported higher levels of experienced hostility compared to those who did not engage in NSSI as well as higher levels of generalised and state anxiety. Finally, a relationship between NSSI and perfectionism has also begun to be investigated with research suggesting that perfectionism and NSSI are positively related (Brocklesby, 2017; Claes et al., 2012; Hoff & Muehlenkamp, 2009; Miskey et al., 2012). As the key area of investigation in the current study, this research will be discussed in full detail in Chapter 3.

The above research highlights the relationship between NSSI and psychiatric disorders (Bentley et al., 2015; Jacobson et al., 2008; Liu, 2021; Miller & Smith, 2008). While some of the research has found a positive relationship between NSSI and psychiatric disorders, this is not always the case (e.g., Jacobson et al., 2008) and may not apply to all psychiatric disorders (e.g., Bentley et al., 2015). NSSI has also been found to relate to other

psychological features and experiences (Ross & Heath, 2003; Zlotnick et al., 1996) and NSSI's relationship to perfectionism will be discussed further in Chapter 3.

NSSI, Self-Harm with Suicidal Intent and Suicide

As discussed above, NSSI and self-harm with suicidal intent differ in many ways, however, researchers have also found a relationship between the two (Hamza et al., 2012; Joiner et al., 2012; Wester et al., 2016; Whitlock, Muehlenkamp, et al., 2013). Whitlock, Muehlenkamp, et al. (2013) examined NSSI and suicidal thoughts and behaviours in 1466 American university students over two years. They found that a history of engagement in NSSI predicted suicidal thoughts and behaviours and that participants who had engaged in NSSI more than 20 times were more likely to experience subsequent suicidal thoughts and behaviours than those who had engaged in NSSI less frequently.

The relationship between NSSI and suicidal attempts has also been examined via meta-analysis and literature reviews. Victor and Klonsky (2014) conducted a meta-analysis examining correlates of suicide attempts among people who engage in NSSI. Through analysis of 52 articles, Victor and Klonsky found that the strongest predictors of suicide attempts were suicidal ideation, NSSI frequency, the number of NSSI methods used, and hopelessness. The use of the NSSI method of cutting also demonstrated moderate positive prediction of suicide attempts. Victor and Klonsky suggest many reasons that this might be the case, including the significant tissue damage that cutting may cause and the relationship that this may have to increased suicide capability. They also suggest that those that engage in cutting may engage in other methods and experience greater clinical severity and increased suicide attempts. Hamza et al. (2012) conducted a literature review examining the link between NSSI and suicidal behaviour. Hamza et al. examined 31 studies and found that NSSI was a significant predictor of suicidal thoughts and behaviours, with individuals who had engaged in NSSI being significantly more likely to experience greater levels of suicide

ideation and make a suicide attempt, compared to individuals who had not engaged in NSSI. They also found some support that higher frequency of engagement in NSSI predicted more frequent suicide attempts and that engagement in NSSI was a significant predictor of future suicidal behaviour.

Research is still ongoing in regard to the way in which NSSI and self-harm with suicidal intent relate, including whether they are distinct behaviours or exist on a continuum (Skegg, 2005; Whitlock, Muehlenkamp, et al., 2013). Researchers have developed theoretical models to conceptualise how these behaviours might relate. The IPTS (Joiner, 2005; Van Orden et al., 2010) posit that NSSI may increase the likelihood of engaging in suicide. The IPTS suggests that engaging in NSSI increases an individual's acquired capability for suicide. That is, as an individual engages in NSSI, their fear of death is reduced and their pain tolerance increased. Engagement in NSSI may therefore have a causal effect on suicide attempts. The integrated-volitional model of suicidal behaviour (O'Connor, 2011) posits that three phases exist; the pre-motivational phase, the motivational phase, and the volitional phase. Similar to the IPTS (Joiner, 2005; Van Orden et al., 2010), the integrated-volitional model of suicidal behaviour suggests that an increase in pain tolerance and reduced fear of death are volitional moderators, moderating the effect of suicidal ideation and intent on suicidal behaviour (O'Connor & Kirtley, 2018). These moderators contribute to an acquired capability for suicide. The model also suggests that psychological, environmental, physiological, and social factors may be volitional moderators. Such factors include access to means and exposure to other people's suicidal behaviour.

In acknowledging the above models, however, it is important to remember that individuals who engage in NSSI are not all alike and can differ significantly on a number of historical and ongoing factors (Victor & Klonsky, 2014). Michele (2021) highlights that these models struggle to account for the individuation of each person considering suicide. It is also

important to note that while NSSI may be a significant risk factor for suicidal ideation and attempts (Hamza et al., 2012; Victor & Klonsky, 2014), not all individuals who engage in NSSI will engage in suicidal thoughts and behaviours (Whitlock, Muehlenkamp, et al., 2013). Researchers, therefore, continue to highlight the importance of identifying protective factors and effective treatments to reduce the risk of suicide in those that engage in NSSI (Skegg, 2005; Whitlock, Muehlenkamp, et al., 2013).

Importance of NSSI Research

With this information about NSSI in mind, it is important to briefly highlight why NSSI, as distinct from self-harm with suicidal intent, is a critical area of focus for research and has been identified as such by the American Psychiatric Association (2013). While an individual does not intend for NSSI to result in death, engaging in NSSI can increase a person's risk of death. Firstly, NSSI can increase a person's acquired capability for suicide. As explained in the IPTS (Joiner, 2005; Van Orden et al., 2010), as engagement in NSSI can increase an individual's pain tolerance and reduce their fear of death. Secondly, while by definition NSSI is not intended to result in suicide, it can result in accidental death (Hawton et al., 2015; Messer & Fremouw, 2008; Muehlenkamp, 2005, 2006; Shapiro, 2008). Finally, even when NSSI does not result in death it can produce long-term, negative health consequences. For example, those who engage in head banging as a form of NSSI are at increased risk for a range of negative health outcomes including blindness, injuries to hearing and speech, and traumatic brain injury (Chester & Alexander, 2018). It is important, therefore, to have focused research on NSSI specifically, as the long-term health consequences can be significantly damaging and sometimes fatal.

Conclusion

It is clear that NSSI is a prominent issue affecting a significant proportion of the New Zealand population (Fraser et al., 2017; Garisch & Wilson, 2015) and people worldwide (e.g.,

Giletta et al., 2012; Lundh et al., 2007; Muehlenkamp et al., 2012). There is an increasing interest in defining and differentiating NSSI from other self-harming behaviours and suicide (American Psychiatric Association, 2013), which may lead to an improvement in targeted preventions, supports and effective treatment for those at risk of, and currently engaging in, NSSI (M. Z. Brown et al., 2002; Muehlenkamp & Kerr, 2010). While our current understanding is improving, there is still much to learn about NSSI including predisposing, precipitating, perpetuating, and protective factors. As briefly highlighted above, one factor that has shown a positively relationship to NSSI is perfectionism (Brocklesby, 2017; Claes et al., 2012; Hoff & Muehlenkamp, 2009; Miskey et al., 2012). Research in this area is limited, however, as a possible causal factor of NSSI, perfectionism will be discussed in greater detail below before discussing how NSSI and perfectionism may relate.

Chapter 2

Perfectionism

Definitions

A key conceptualisation of perfectionism is that it is centred around the setting of consistently high personal standards, holding unreasonably high expectations, and being highly critical when these standards are not met (Frost et al., 1990; Sirois & Molnar, 2016; Stoeber & Otto, 2006). It is generally agreed that perfectionism is multidimensional and that possessing different dimensions of perfectionism may result in more positive or negative outcomes for individuals (Bieling et al., 2004; Blankstein et al., 2008; R. W. Hill et al., 2010; Stoeber & Otto, 2006; Stumpf & Parker, 2000). While the above definition of perfectionism is based on Frost et al. (1990), it is important to mention that other conceptualisations of perfectionism exist, such as that of clinical perfectionism (Shafran et al., 2002). Clinical perfectionism is conceptualised as self-evaluation being overly dependent on pursuing personally demanding, self-imposed, standards in at least one area, despite negative consequences. The current research uses the definition of perfectionism in line with Frost et al. (1990). This is due to its acceptance as a prominent conceptualisation of perfectionism and to remain consistent with the definition most commonly used in research in the area of the current study, i.e., examination of the relationship between perfectionism and NSSI. It is acknowledged that alternative conceptualisations could be used, however, and it may be useful to do so in future research.

Perfectionism is not a mental disorder listed in the *DSM-5* (American Psychiatric Association, 2013), but rather is referred to as a feature in the Personality Disorders section. It is predominantly referred to as a feature of obsessive-compulsive personality disorder, although it is briefly mentioned in relation to narcissistic personality disorder. To meet the criteria for obsessive-compulsive personality disorder, the *DSM-5* states that individuals are

preoccupied with perfectionism, as well as other features such as orderliness and mental and interpersonal control. Four of eight possible features must be exhibited to meet criteria for the diagnosis of obsessive-compulsive personality disorder, one of which states that an individuals' commitment to perfectionism must interfere with completing tasks because they struggle to meet their own overly strict standards. This can result in distress for the individual and may also result in unfinished projects due to the desire to make every aspect perfect. Regarding narcissistic personality disorder, perfectionism arises in the context that individuals may proclaim that they exhibit perfectionism, can achieve perfection, and do things better than others regardless of whether this is accurate or not.

Prevalence

Research suggests that perfectionism is a prevalent trait in the population, from children (Herman et al., 2011) through to older adults (Chang, 2000). Hawkins et al. (2006) used the Frost et al. (1990) Multidimensional Perfectionism Scale (MPS-F) to assess its psychometric properties and to measure perfectionism in female Australian secondary school students. Hawkins et al. used cluster analysis, which resulted in three types of perfectionism groups that they labelled: healthy perfectionists, unhealthy perfectionists, and nonperfectionists (depending on participant scores on the different MPS-F subscales). Hawkins et al. found that out of 409 students ranging from Year 7 to Year 10, 23.47% of students were placed in the unhealthy perfectionist cluster, 50.61% of students in the healthy perfectionist cluster, and 25.92% of students in the nonperfectionist cluster.

Not only does perfectionism appear to be prevalent in the population, but research also suggests that rates of perfectionism may be increasing (Curran & Hill, 2017; Portešová & Urbánek, 2013). Curran and Hill (2017) conducted a meta-analysis of multidimensional perfectionism in university students between 1989 and 2016. Their analysis was composed of 164 samples which included 41,641 students attending university in either the United States,

Canada or the United Kingdom. The studies all measured perfectionism using Hewitt and Flett's (1991) Multidimensional Perfectionism Scale (MPS-HF). Overall, Curran and Hill found that all three perfectionism subscales measured by the MPS-HF showed a linear increase over time. These studies, therefore, suggest that not only is perfectionism a common trait in society, including in young people, but that rates of perfectionism may continue to increase (Curran & Hill, 2017; Flett & Hewitt, 2014; Hawkins et al., 2006; Portešová & Urbánek, 2013).

Researchers have attempted to examine differences in rates of perfectionism across gender and ethnicity (Castro & Rice, 2003; Stallman & Hurst, 2011; Stoeber & Stoeber, 2009). Stallman and Hurst (2011) examined perfectionism, as measured by the MPS-F (Frost et al., 1990), in Australian university students. They found that female students scored significantly higher in the organisation and high standards subscales (similar to the personal standards subscale) than male students. In contrast, Stoeber and Stoeber (2009) examined rates of perfectionism in two samples, university students and internet users. They did not find a significant relationship between an overall perfectionism score and gender, although some differences were found when examining different domains of perfectionism. The university sample also consisted of mostly women, so findings should be interpreted with caution.

Research examining perfectionism rates across ethnicities appears to be limited, however, Castro and Rice (2003) examined rates of perfectionism in Asian American, African American and Caucasian American students. Measuring perfectionism through the MPS-F (Frost et al., 1990), they found that Asian Americans scored significantly higher on the concern over mistakes, parental criticism and doubts about actions subscales than Caucasian Americans and African Americans. Asian Americans also scored significantly higher on the personal standards subscale than Caucasian Americans. Finally, Asian

Americans and African Americans scored significantly higher on the parental expectations subscale than Caucasian Americans.

Perfectionism as a Multidimensional Construct

Traditionally, psychologists viewed perfectionism as a unidimensional, pathological concept (Burns, 1980; Ellis, 1962; Horney, 1950). Individuals with perfectionism were viewed as having low self-esteem which encouraged their unrealistically high standards and a fear of failure (Horney, 1950). These individuals were described as using their accomplishments and productivity as their measure of self-worth and as their standards and goals were impossible to achieve, it resulted in a host of negative outcomes in areas including health, relationships, self-control and self-esteem (Burns, 1980). Research used unidimensional measures of perfectionism and found perfectionism to be positively related to negative mental health outcomes, such as a positive relationship between perfectionism and suicide ideation in psychiatric patients (Ranieri et al., 1987). Hamachek (1978) was one of the first to challenge the ideas that perfectionism was a unidimensional construct and was solely pathological. He instead proposed that two dimensions of perfectionism exist; normal perfectionism and neurotic perfectionism. Hamachek suggested that normal perfectionists set realistic standards, derived pleasure from the effort it takes in being precise, and had the ability to be less precise when required. Neurotic perfectionists, however, were prone to setting unrealistically high standards, not obtaining pleasure from their high standards due to not feeling satisfied with their achievements, and displaying an inability to compromise their standards.

Researchers have continued to conceptualise perfectionism as a multidimensional construct in line with tests of factor analysis, although a final consensus has not been reached regarding how many dimensions exist and what these dimensions should be called (Sirois & Molnar, 2016). Researchers have therefore developed several scales to measure trait

perfectionism. These include, Frost et al.'s (1990) MPS-F, Hewitt and Flett's (1991) MPS-HF, Slaney et al.'s (2001) Almost Perfect Scale-Revised, R. W. Hill et al.'s (2004) Perfectionism Inventory, and Smith et al.'s (2016) Big Three Perfectionism Scale. Clinical perfectionism can also be measured by the Clinical Perfectionism Questionnaire (Fairburn et al., 2003). Two of the most prominent measures of perfectionism are Frost et al.'s (1990) MPS-F and Hewitt and Flett's (1991) MPS-HF which are, therefore, discussed further below.

The MPS-F (Frost et al., 1990) is a 35-item questionnaire, that was designed to measure perfectionism through self-report. The questions make up six dimensions aimed at measuring different aspects of perfectionism: concern over mistakes, personal standards, parental expectations, parental criticism, doubts about actions, and organisation. An overall perfectionism score can be calculated by totalling the scores from all of the dimensions, except for the organisation dimension, as organisation shows the weakest intercorrelation with the other factors and has been deemed not necessary in calculating perfectionism (Frost et al., 1990). Higher scores in the subscales and overall measure purport higher levels of perfectionism. The psychometric properties of the MPS-F (Frost et al., 1990) will be discussed in further detail in the Methods chapter.

Following the development of the MPS-F (Frost et al., 1990), Hewitt and Flett (1991) developed their own MPS-HF, in which they suggested that perfectionism should be measured by three main dimensions: self-oriented perfectionism (setting unreasonably high personal standards for oneself and one's behaviour), other-oriented perfectionism (holding unreasonably high standards for other people), and socially prescribed perfectionism (the perceived need to achieve standards set by close others). The questionnaire is a 45-item, self-report questionnaire that includes both intra- and interpersonal items. Similar to the MPS-F (Frost et al., 1990), higher scores in each factor indicate higher levels of perfectionism.

While both the MPS-F (Frost et al., 1990) and MPS-HF (Hewitt & Flett, 1991) provide their own instructions as to how to calculate their associated factors, many researchers have suggested that these measures, and other perfectionism measures, best fit a two-factor structure (Bieling et al., 2004; Frost et al., 1993; Sirois & Molnar, 2016). These two dimensions are referenced across the research by a range of terms including: perfectionistic strivings and perfectionistic concerns (Stoeber & Otto, 2006), positive strivings and maladaptive evaluation concerns (Frost et al., 1993), adaptive and maladaptive perfectionism (Rice et al., 1998), healthy and unhealthy perfectionism (Stumpf & Parker, 2000), positive and negative perfectionism (Terry-Short et al., 1995), functional and dysfunctional perfectionism (Rhéaume et al., 2000), active and passive perfectionism (Adkins & Parker, 1996), and conscientious and self-evaluative perfectionism (R. W. Hill et al., 2004). I will use the terms perfectionistic strivings and perfectionistic concerns to refer to the two factors of perfectionism as suggested by other current researchers (R. W. Hill et al., 2010; Sirois & Molnar, 2016; Stoeber & Otto, 2006). These terms will be explained in detail below.

It is worth noting that different conceptualisations of perfectionism exist depending on the researcher's theoretical background and perspective. For example, unlike the MPS-F (Frost et al., 1990) and MPS-HF (Hewitt & Flett, 1991), the Perfectionism Cognitions Inventory (Flett et al., 1998) examines perfectionism from a cognitive perspective and specifically measures how frequently an individual experiences perfectionistic thoughts. It can be used to assess state, rather than trait, perfectionism and may be useful in helping to establish whether cognitive-behavioural therapy could be beneficial in reducing difficulties with perfectionism (Flett & Hewitt, 2015). The current research focuses on perfectionism from a multidimensional trait perspective which suggests that it remains relatively stable throughout a person's lifetime (Sirois & Molnar, 2016). This is consistent with current

literature examining perfectionism and NSSI as well as related literature examining perfectionism and its relationship to mental and physical wellbeing. However, even when examining perfectionism from this perspective, differences exist depending on which measure of perfectionism is used, and the resulting factors decided upon, and therefore using different measures of perfectionism in future research may help to increase our understanding.

Perfectionistic Strivings and Perfectionistic Concerns

Perfectionistic strivings refers to the setting of high personal standards that are frequently unreasonable, excessive and require perfection. When using the MPS-F (Frost et al., 1990), this is measured by examining the personal standards subscale score. It is also indicated by the self-oriented perfectionism subscale in the MPS-HF (Hewitt & Flett, 1991) as well as other subscales in other existing perfectionism measures. Perfectionistic concerns refers to unreasonable critical evaluations of one's behaviour, excessive self-scrutiny, fixation on others' criticism, opinions and expectations, and an inability to be satisfied with one's success. Perfectionistic concerns can be measured by the concern over mistakes and doubts about actions subscales in the MPS-F (Frost et al., 1990), the socially prescribed perfectionism subscale in the MPS-HF (Hewitt & Flett, 1991) as well as other subscales in other existing perfectionism measures.

Researchers have sometimes included the MPS-F (Frost et al., 1990) parental expectations and parental concerns subscales when calculating perfectionistic concerns. However, more recent research, such as Rice et al.'s (2005) examination of parental and social influences on perfectionism, suggest that the parental expectations and concerns subscales may be antecedents for the development of perfectionistic concerns, but should not be used when measuring a person's level of perfectionistic concerns. Brocklesby (2017) found that while some researchers include the parental subscales in their perfectionistic

concerns measure, it is most commonly calculated by summing only the concern over mistakes and doubts about actions subscales. Overall, the main difference between perfectionistic strivings and perfectionistic concerns, therefore, is that perfectionistic strivings focuses on one's own excessive personal standards while perfectionistic concerns focuses on self-scrutiny, self-criticism, and other people's expectations for oneself.

Perfectionistic Strivings and Perfectionistic Concerns in Relation to Health and Wellbeing

Researchers have sought to understand how perfectionistic strivings and perfectionistic concerns may affect other areas of life, including physical health, mental health, and wellbeing (Sirois & Molnar, 2016). While researchers highlight the need for more research in this area (e.g., Hoff & Muehlenkamp, 2009; Miskey et al., 2012; Sirois & Molnar, 2016), current research suggests that perfectionistic strivings and perfectionistic concerns show associations with some areas of physical and mental health (Sirois & Molnar, 2016). The research described below highlights some of the ways in which perfectionism may affect people's health and wellbeing.

To investigate how perfectionism might relate to areas of psychological functioning, Chang et al. (2004) examined the relationship between perfectionistic strivings and perfectionistic concerns and psychological functioning in 150 Black and 150 White female university students. Using the MPS-F (Frost et al., 1990), they found that perfectionistic concerns was related to increased stress, negative affect and suicide ideation as well as less positive affect in both the Black and White students. Perfectionistic concerns was also positively related to less life satisfaction in White students. Perfectionistic strivings was positively related to increased positive affect and life satisfaction in White students and was not related to stress and negative affect for all students.

In an attempt to understand perfectionism's relationship to mental health, Bieling et al. (2004) used the MPS-F (Frost et al., 1990) and MPS-HF (Hewitt & Flett, 1991) to measure perfectionism and mental health factors in 198 psychology undergraduate students. They examined mental health factors through the Depression Anxiety and Stress Scales-21 (Lovibond & Lovibond, 1995) and the Test Anxiety Scale (Sarason, 1984). Bieling et al. (2004) found that maladaptive evaluative concerns had a stronger relationship with depression, anxiety, stress and test-taking anxiety than perfectionistic strivings. However, perfectionistic strivings was not negatively related to measures of psychopathology. They also found that perfectionistic strivings and maladaptive evaluative concerns were positively correlated. Overall, they concluded that their study supports other research suggesting that maladaptive evaluative concerns may be positively related to psychopathology, while perfectionistic strivings may be neither positively nor negatively related.

The relationship between perfectionism and psychopathology has been examined by Limburg et al. (2017) through a meta-analysis. Limburg et al. examined 284 studies that looked at the relationship between perfectionism and psychopathology, which included diagnoses of depression, anxiety disorders, obsessive-compulsive disorder, and eating disorders as well as symptoms of these disorders and psychopathology related outcomes, such as suicide ideation. Overall, Limburg et al. found that perfectionistic concerns was more strongly related to psychopathology than perfectionistic strivings, especially in nonclinical populations. Both perfectionistic strivings and perfectionistic concerns were significantly related to suicidal ideation and general psychological distress, however. They were also both strongly related to eating disorders. Further, perfectionistic strivings and perfectionistic concerns were positively correlated. Limburg et al. and Egan et al. (2011) highlight that perfectionism is a transdiagnostic factor with both perfectionistic strivings and perfectionistic concerns positively related to different types of psychopathology.

To better understand how perfectionism may affect other areas of life and wellbeing, Madigan (2019) conducted a meta-analysis examining the relationship between perfectionism and academic achievement. With the inclusion of 37 studies, Madigan found that perfectionism was related to academic achievement. Specifically, perfectionistic strivings demonstrated a small to medium positive relationship with academic achievement, while perfectionistic concerns demonstrated a small negative relationship with academic achievement.

As well as academic achievement, researchers have examined the relationship between perfectionism and academic expectations and satisfaction. Enns et al.'s (2001) examination of perfectionism in medical students found that perfectionistic strivings was positively related to conscientiousness, neuroticism, and self-reports of academic achievement and expectations. Perfectionistic concerns was positively related to symptoms associated with depression, hopelessness, suicidal ideation and neuroticism. Further, both perfectionistic strivings and perfectionistic concerns were associated with dissatisfaction with academic performance when academic performance was controlled for.

Perfectionism has shown associations with physical health difficulties. Using the MPS-HF (Hewitt & Flett, 1991) and the Perfectionistic Self-Presentation Scale (Hewitt et al., 2003), Shanmugasegaram et al. (2014) examined the relationship between perfectionism, Type D personality (negative affect and social inhibition) and illness-related coping styles in patients undertaking cardiac rehabilitation. They found that participants with higher levels of self-oriented and socially prescribed perfectionism, as consistent with the MPS-HF (Hewitt & Flett, 1991), reported higher levels of emotional preoccupation coping, which may negatively affect their adjustment and rehabilitation.

Fry and Debats (2011) examined the relationship between perfectionism and mortality in diabetic older adults. A sample of 385 older adults with Type 2 diabetes completed the

MPS-HF (Hewitt & Flett, 1991) and were tracked over six and a half years. During this study period, 117 of the participants died. Fry and Debats found that the risk of death was 29% lower for participants that scored higher on the self-oriented perfectionism dimension compared to participants that scored lower in self-oriented perfectionism. Fry and Debats suggest that those scoring higher on self-oriented perfectionism may demonstrate better management of diabetes than those with lower self-oriented perfectionism levels and thus may have improved survival.

Overall, current research suggests that perfectionistic strivings may be associated with positive, neutral and negative mental and physical health and wellbeing outcomes, depending on the outcome being examined (Bieling et al., 2004; Limburg et al., 2017; Madigan, 2019). Perfectionistic concerns is more consistently related to negative mental and physical health and wellbeing outcomes (Bieling et al., 2004; Limburg et al., 2017; Madigan, 2019). While further research is still needed, the current literature highlights the complex relationship that perfectionism may have with health and wellbeing outcomes in individuals and the importance of examining perfectionism from a multidimensional perspective.

An important limitation in the area of research examining perfectionism and health is that some of it is atheoretical (Sirois & Molnar, 2016). Evidence of a relationship between perfectionism and health outcomes has been increasingly demonstrated, but the theoretical underpinnings of these relationships are not fully understood. Clinical perfectionism demonstrates some theoretical underpinning as it is conceptualised from cognitive-behavioural principles. However, it focuses on the psychopathological form of perfectionism (Shafran et al., 2002) . While some aspects of perfectionism may have a neutral or positive association with health, other aspects show a negative relationship. Further increasing our understanding of the theory underlying these relationships may therefore lead to improved tools and interventions to support individuals with perfectionism.

Conclusion

Perfectionism may be conceptualised in a multitude of ways and a range of measures exist to account for these theoretical and conceptual standpoints (e.g., Frost et al., 1990; Hewitt & Flett, 1991; R. W. Hill et al., 2004; Slaney et al., 2001; Smith et al., 2016). Currently, however, many researchers agree that perfectionism is best conceptualised as a multidimensional construct and that two main factors appear to exist (Bieling et al., 2004; Frost et al., 1993; Sirois & Molnar, 2016). While the terms for these constructs can again vary, the current research will use perfectionistic strivings and perfectionistic concerns throughout. While neither of these is necessarily positive or negative, perfectionistic strivings appears to be more consistently related to positive or neutral health and wellbeing outcomes, with some relationship to negative outcomes (Bieling et al., 2004; Limburg et al., 2017; Madigan, 2019; Sirois & Molnar, 2016). Perfectionistic concerns appears to be more consistently related to negative health and wellbeing outcomes (Bieling et al., 2004; Limburg et al., 2017; Madigan, 2019; Sirois & Molnar, 2016).

Research suggests that perfectionism affects a significant proportion of the population and that a significant proportion of these individuals may suffer the negative effects of perfectionism (Flett & Hewitt, 2014). This includes increased suicidal ideation (Limburg et al., 2017; O'Connor, 2007). In regard to treatment, some researchers suggest that by targeting and modifying individuals' perfectionism, other difficulties such as eating disorders, may be improved (Sirois & Molnar, 2016; Steele & Wade, 2008). Understanding how perfectionism may be related to other areas of health and wellbeing may therefore help to prevent and treat a range of difficulties. It is, therefore, important to improve our understanding of the way in which perfectionism relates to other health, wellbeing and psychological factors and how this information can be used to improve assessments and interventions to provide effective support to individuals.

Chapter 3

Examining the Relationship Between NSSI and Perfectionism

NSSI and perfectionism show some similarities to each other and may positively relate to one another. Firstly, both NSSI and perfectionism have been linked to suicide and other mental health difficulties and disorders, such as depression (Bieling et al., 2004; Flett et al., 2014; Limburg et al., 2017; Miller & Smith, 2008; Nock et al., 2006; Sirois & Molnar, 2016). Secondly, both NSSI and perfectionism show similarities in how they can lead individuals to cope in private. Most NSSI acts are performed privately (Nock, 2008) and many individuals keep their behaviour hidden by not seeking treatment (Deliberto & Nock, 2008). Similarly, perfectionism has been found to be associated with negative coping factors such as avoidance and keeping personal distress hidden from others (Flett & Hewitt, 2002; Flett et al., 1994; Hamachek, 1978). Thirdly, both perfectionistic concerns and NSSI have been related to the use of poor or less adaptive problem-solving skills (Besser et al., 2010; Muehlenkamp & Kerr, 2010). With these similarities in mind, it is plausible that perfectionism may be a potential cause of NSSI engagement. The current chapter will provide an overview of existing research examining the relationship between NSSI and perfectionism.

Prior Research Examining NSSI and Perfectionism

Currently, a relatively small body of research exists examining the relationship between perfectionism and NSSI (e.g., Brocklesby, 2017; Claes et al., 2012; Hoff & Muehlenkamp, 2009; Miskey et al., 2012; O'Connor et al., 2010). Gyori and Balazs (2021) conducted a systematic review of this literature finding that all studies that met criteria have been published within the last 16 years. Gyori and Balazs' review includes a total of 15 studies examining the relationship between NSSI and perfectionism, that are written in the English language. The body of literature examining the relationship between perfectionism

and NSSI reveals some differences in results across studies, which will be discussed in more detail below. Overall, however, these studies suggest that perfectionism and NSSI demonstrate a relationship when perfectionism is measured as a multidimensional construct. A more detailed review of this research follows.

To investigate how perfectionism and NSSI might relate, Hoff and Muehlenkamp (2009) examined perfectionism, rumination, and NSSI engagement in United States undergraduate students. They looked to determine whether students' levels of perfectionism and rumination contributed to predicting NSSI engagement. A sample of 165 students completed the Deliberate Self-Harm Inventory (Gratz, 2001) and the MPS-F (Frost et al., 1990) to measure NSSI and perfectionism. Their results partially confirmed their hypothesis, in that only some aspects of perfectionism differed between these groups. Specifically, they found that individuals who had previously engaged in NSSI scored significantly higher on the perfectionism subscale of concern over mistakes (M = 15.93, SD = 5.11) compared to those who had not engaged in NSSI (M = 13.44, SD = 4.13), $F(1, 153) = 9.58$, $p < .01$. The perfectionism subscale of parental criticism also showed that individuals who had engaged in NSSI scored significantly higher (M = 5.12, SD = 2.35) than those who had not engaged in NSSI (M = 2.35, SD = 1.51), $F(1, 153) = 8.94$, $p < .01$. In contrast, individuals who had previously engaged in NSSI scored significantly lower on the perfectionism organisation subscale (M = 15.66, SD = 4.72) compared to those with no NSSI history (M = 18.84, SD = 4,13), $F(1, 153) = 18.35$, $p < .01$. Reporting high levels of organisation was significantly predictive of not engaging in NSSI, B = -.194, Wald = 15.68, $p < .01$, whilst rumination may increase vulnerability to NSSI.

Hoff and Muehlenkamp (2009) suggest that experiencing parental interactions that are critical and lack understanding, may increase one's risk of engagement in NSSI. Experiencing self-criticism and a concern over one's mistakes and perceived failures may

also increase the risk of NSSI engagement. Hoff and Muehlenkamp also suggest that NSSI may act as an attempt to control one's experiences and therefore those perceiving themselves as low in organisation may engage in NSSI in an effort to exercise control. Overall, Hoff and Muehlenkamp suggest that further research is needed to understand how perfectionism may contribute to NSSI engagement, but that different aspects of perfectionism may have significant effects on NSSI engagement. Yates et al. (2008) examined the relationship between perfectionism and NSSI cross-sectionally in 9th to 12th grade students and longitudinally in 6th to 12th grade students in the United States. Similarly to Hoff and Muehlenkamp, they found that parental criticism was positively related to NSSI engagement, both cross-sectionally and longitudinally. Yates et al. also found that adding parental alienation into the mediational analysis resulted in the direct relationship between parental criticism and NSSI becoming non-significant, suggesting that parental alienation accounted for the relationship between parental criticism and NSSI in their cross-sectional analysis.

Perfectionism and NSSI have also been examined in clinical populations (Claes et al., 2012; Varela-Besteiro et al., 2017). Claes et al. (2012) sought to examine the association between perfectionism and NSSI in women diagnosed with an eating disorder. Participants were diagnosed in accordance with the *DSM-IV* (American Psychiatric Association, 1994) and resulted in a sample of 95 women who were admitted to an inpatient treatment unit for eating disorders. They completed the Self-Injury Questionnaire (Claes et al., 2003) and subscales from the Dutch version (Soenens, Luyckx, et al., 2008; Soenens, Vansteenkiste, et al., 2008) of the MPS-F (Frost et al., 1990), to measure NSSI and perfectionism. Claes et al. (2012) found that those engaging in NSSI reported higher levels on the perfectionism subscale parental criticism ($M = 2.60$, $SD = 1.09$) than those not engaging in NSSI ($M = 2.10$, $SD = 0.78$), $F(1, 34) = 5.62$, $p < .05$. Individuals engaging in NSSI also reported higher levels of the factor maladaptive perfectionism/evaluative concerns perfectionism ($M = 3.92$, $SD =$

0.68) than those not engaging in NSSI ($M = 3.55$, $SD = 0.75$), $F(1, 34) = 5.58$, $p < .05$. Further, evaluative concerns perfectionism was found to mediate the relationships between parental criticism and NSSI. This suggests that evaluative concerns perfectionism may play a critical role in increasing or decreasing vulnerability to NSSI. Claes et al. (2012) suggest that while personal standards perfectionism was not positively related to NSSI, personal standards perfectionism is frequently found to be positively related to evaluative concerns perfectionism and may therefore be indirectly related to NSSI.

Similarly to Claes et al. (2012), Varela-Besteiro et al. (2017) examined the relationship between perfectionism and NSSI in individuals with eating disorders, specifically adolescents aged 12 to 17 years. Varela-Besteiro et al. found that those engaging in NSSI had significantly higher perfectionism scores compared to those not engaging in NSSI, as measured by the Eating Disorder Inventory-2 (Corral et al., 1998) perfectionism scales and the Child and Adolescent Perfectionism Scale (Flett et al., 1992) total score.

Chang et al. (2019) examined the relationship between perfectionism and NSSI in women with a sexual assault history. They found that evaluative concerns perfectionism was positively related to NSSI engagement even when controlling for sexual assault history. Similarly to Claes et al. (2012), Chang et al. (2019) found that positive strivings perfectionism was not associated with NSSI, and therefore does not appear to provide any protective factor to decrease likelihood of NSSI engagement. Further, positive strivings perfectionism was positively associated with evaluative concerns perfectionism.

The relationship that a specific method of NSSI, cutting, has with perfectionism was examined by Miskey et al. (2012). Miskey et al. aimed to examine risk factors such as perfectionism and personality traits and how these were associated. They predicted that self-evaluative perfectionism (otherwise termed perfectionistic concerns) would be positively associated with NSSI. Miskey et al.'s sample involved 292 undergraduate students who

completed the Deliberate Self-Harm Inventory (Gratz, 2001) and Perfectionism Inventory (R. W. Hill et al., 2004) to measure NSSI and perfectionism. They found that the perfectionism measure accounted for 31% of the variance in frequency of cutting. In particular, the frequency of cutting was positively associated with two of the perfectionism scales; perfectionistic rumination ($B = .81$, $p < .05$) and organisation ($B = .45$, $p < .05$), and negatively associated with concern over mistakes ($B = -.78$, $p < .01$). Miskey et al.'s findings are supportive of Hoff and Muehlenkamp's (2009) findings regarding rumination. However, Miskey et al.'s findings regarding concern over mistakes and organisation are in contrast to Hoff and Muehlenkamp's findings. While the significant associations found by Miskey et al. suggest that some aspects of perfectionism are linked with cutting, the differences between studies highlights the need for further investigation.

The relationship between NSSI and perfectionism in a New Zealand sample was examined both longitudinally and cross-sectionally by Brocklesby (2017). This provides increased confidence for causal claims to be made from the results than cross-sectional research alone. Brocklesby conducted an investigation into the relationship between perfectionism and NSSI in adolescents. Through data obtained by the Youth Wellbeing Study, adolescents (aged 13 to 17 years) attending New Zealand secondary schools in the Greater Wellington region completed the MPS-F (Frost et al., 1990), a shortened 22-item version of the MPS-F (Cox et al., 2002), and the Deliberate Self-Harm Inventory-short version (Lundh et al., 2007). When examined cross-sectionally, Brocklesby found that in a sample of 858 participants, the combined concern over mistakes and doubts about actions subscale scores ($r(858) = .31$, $p < .001$) and the combined parental expectations and parental criticism scores ($r(858) = .16$, $p < .001$) were positively associated with engaging in NSSI and the organisation ($r(858) = -.13$, $p < .001$) subscale was negatively associated with NSSI. A positive perfectionism factor was made up of the personal standards and organisation

subscales, while a negative perfectionism factor was made up of the concern over mistakes, doubts about actions, parental expectations and parental criticism subscales. Negative perfectionism ($r(858) = .26$, $p < .001$) was positively associated with NSSI while positive perfectionism ($r(858) = -.11$, $p < .001$) was negatively associated with NSSI. When separated by sex, the relationship between negative perfectionism and NSSI remained significant for female participants ($r(509) = .31$, $p < .001$), but not for male participants ($r(349) = .08$, $p = .14$). Brocklesby's results provide evidence towards the importance of examining perfectionism as a multidimensional construct and suggests that not only may some aspects of perfectionism increase one's risk of NSSI engagement, but other aspects may provide some protection from NSSI engagement. The results also highlight differences that may be present in female versus male samples.

Examining this relationship longitudinally, Brocklesby (2017) used cross-lagged panel correlations (Kenny, 1975) to analyse survey results at time one and time two, which were collected approximately one year apart. Brocklesby predicted that negative perfectionism would predict thoughts and engagement in NSSI (particularly in female participants), while positive perfectionism may help protect against NSSI. Brocklesby's first hypothesis was supported as they found that in female participants negative perfectionism at time one was associated with NSSI at time two ($r = .27$). NSSI at time one was also associated with negative perfectionism at time two ($r = .24$). They did not find any significant relationship for male participants, however, and positive perfectionism was not significantly related to NSSI over time. Finally, positive perfectionism at time one predicted an increase in negative perfectionism at time two for female participants. The results of Brocklesby's longitudinal research allow some causal claims to be made about the relationship between perfectionism and NSSI. Therefore, Brocklesby suggests that in female individuals, negative perfectionism predicts future thoughts of and engagement in NSSI.

O'Connor et al. (2010) looked at the relationship between perfectionism and self-harm (including those with suicidal intent) rather than NSSI specifically. However, their findings are discussed here due to the longitudinal aspect of the research, which to the best of my knowledge has been rarely used when examining this relationship, and its interactions with acute life stress. O'Connor et al. (2010) sought to examine this relationship in adolescents and their sample consisted of 737 adolescents attending school in Scotland. Of these participants, 515 responded at time two (six months later) and 15 respondents were removed due to lack of clarity as to whether they self-harmed between times one and two. Perfectionism was measured using the shortened, 14-item version of the Child and Adolescent Perfectionism Scale (O'Connor et al., 2009) which consists of three perfectionism dimensions, socially prescribed perfectionism (believing other people hold unrealistically high standards for them), self-oriented perfectionism-critical (being unreasonably critical of oneself and engaging in excessive self-scrutiny), and self-oriented perfectionism-striving (holding oneself to consistently high standards). O'Connor et al. (2010) found that socially prescribed perfectionism and self-oriented perfectionism-critical significantly predicted increased engagement in self-harm over time. Further, they found that those higher in socially prescribed perfectionism were more likely to engage in self-harm in response to stressful life events. This highlights that the threshold for engaging in self-harm in response to acute life stress is lower in individuals with higher levels of socially prescribed perfectionism.

The studies discussed above and included in Gyori and Balazs' (2021) systematic review include both strengths and limitations. Strengths include the use of validated measures to examine NSSI and perfectionism as well as clear definitions of NSSI allows for increased confidence in the results. Consistencies in results across studies adds further support to the findings and examination of perfectionism as a multidimensional construct allows further understanding as to how perfectionism and NSSI relate. Limitations also exist within and

across the studies. Many of the study samples were made up of mostly female participants providing limited understanding of how the relationship may affect male and nonbinary individuals. A range of perfectionism measures were used across the studies and while the MPS-F (Frost et al., 1990) was used most frequently, it can be difficult to compare results across studies. While different populations were examined to some extent, examination of the relationship in clinical populations was limited and frequently involved eating disorder patients as the main population. Research has predominantly involved a cross-sectional design rather than a longitudinal design. Finally, the majority of research has not sought to examine the potential processes and pathways between perfectionism and NSSI.

Importance of Investigating the Relationship Between NSSI and Perfectionism

The above studies suggest that a positive, significant relationship exists between NSSI and at least some forms of perfectionism (Brocklesby, 2017; Claes et al., 2012; Hoff & Muehlenkamp, 2009; Miskey et al., 2012; O'Connor et al., 2010). Brocklesby (2017) also suggests that perfectionism may be a significant factor in predicting future engagement in NSSI. As discussed earlier, NSSI is an important area of research due to the significant negative effects that it can have on a person's life and their increased risk of ending their life. By examining factors that may contribute to the engagement in NSSI, it is hoped that greater prevention and intervention can be developed to reduce NSSI engagement and the negative consequences associated with this. In seeking to understand more about perfectionism, we may further understand what promotes and protects individuals from engaging in NSSI. If perfectionism plays a significant role in promoting NSSI, then it seems likely that interventions may need to target perfectionism as well as NSSI to assist individuals in reducing this behaviour and maintaining long term change. This knowledge may also inform clinicians in predicting those most at risk of NSSI engagement and putting targeted preventative measures in place before this occurs. The ultimate importance of investigating

the relationship between perfectionism and NSSI is therefore to inform better interventions and supports for those at increased risk of engaging in NSSI.

Conclusion

Research examining perfectionism and NSSI thus far suggests that NSSI and perfectionism may be significantly, positively related and that perfectionism may predict future engagement in NSSI (Brocklesby, 2017; Claes et al., 2012; Hoff & Muehlenkamp, 2009; Miskey et al., 2012). An important component of the above research is that perfectionism is examined at a multidimensional level in order to help us critically understand any possible relationship between perfectionism and NSSI. However, the research in this area is limited with some inconsistencies between study results. Further, additional factors, such as the individual's sex (e.g., Brocklesby, 2017) may play an important role in understanding how and when perfectionism and NSSI relate to each other. The existing research examining NSSI and perfectionism specifically, has focused on examining this relationship from a quantitative perspective. The current study will use quantitative methods and analysis, however, interviews with participants will also provide material for qualitative analysis. In using a mixed methods approach, the current study aims to improve our understanding of the relationship between perfectionism and NSSI and the ways in which the relationship may affect the individual. This may provide a richness to the findings not always available through the sole use of quantitative methods

Chapter 4

Proposed Theories and Models of NSSI and how Perfectionism may be Related

Due to the prevalence of NSSI in society (e.g., Garisch & Wilson, 2015) and its relationship to a range of negative outcomes (e.g., Hamza et al., 2012), increasing our understanding of why people engage in NSSI is an important area of research. The research discussed above provides some evidence that a positive correlation exists between perfectionism and NSSI. Further, it suggests that those with higher levels of certain dimensions of perfectionism may be at greater risk of engaging in NSSI in the future (Brocklesby, 2017; Claes et al., 2012; Hoff & Muehlenkamp, 2009; Miskey et al., 2012). Examining how perfectionism relates to NSSI may therefore improve our understanding of why people engage in NSSI and lead to improved prevention and intervention tools to assist those at greater risk of, or already engaging in, NSSI.

Understanding the theoretical underpinnings of the relationship between perfectionism and NSSI is important in helping to improve our knowledge of this relationship. A key issue highlighted by Sirois and Molnar (2016), is that some of the research examining perfectionism and health thus far is atheoretical. Targeted and successful interventions may therefore be more difficult to develop as they are not always based on the theoretical understanding of this relationship and why differences may exist between individuals. Thus far, most research has measured perfectionism from a multidimensional perspective (Bieling et al., 2004; Claes et al., 2012; Hoff & Muehlenkamp, 2009; Sirois & Molnar, 2016). This appears to be more appropriate than solely measuring perfectionism as one dimension given the differences in findings between perfectionistic dimensions (Sirois & Molnar, 2016). In considering NSSI, Nock and Cha (2009) highlight that recent research has tended to focus on factors associated with NSSI, rather than working to develop the theoretical models that might explain why some individuals engage in NSSI and why NSSI is

correlated with other factors. This chapter will discuss some of the current models related to NSSI and suicide. A discussion of what led to the decision to use the IPTS (Joiner, 2005; Van Orden et al., 2010) to explain the mechanisms underlying the relationship between perfectionism and NSSI will be provided. Finally, a review of existing literature using this model will be presented.

Theoretical Models of NSSI

Psychological models have been proposed to explain the theoretical underpinnings of ongoing engagement in NSSI (e.g., Chapman et al., 2006, Hasking et al., 2016; Nock, 2009). Borsboom et al. (2021) has discussed the importance of having explanatory psychological theories in that well-specified theories allow effective clinical interventions to be developed.

The integrated theoretical model of the development and maintenance of self-injury was proposed by Nock (2009) in an attempt to explain some of the aetiology behind why people engage in NSSI. Nock (2009) proposes three key points through this model. Firstly, individuals engage in NSSI to regulate their emotions and cognitions as well as their social environment through communicating or influencing others. Secondly, predisposing factors, such as childhood abuse and genetic predisposition, affect an individual's intrapersonal and interpersonal skills which in turn increase an individual's risk of engaging in NSSI. Intrapersonal vulnerability can include factors such as poor distress tolerance, while interpersonal vulnerability can include factors such as poor communication skills. Thirdly when stressful life events occur, NSSI-specific vulnerability factors, such as social modelling and self-punishment, promote engagement in NSSI. These NSSI-specific vulnerability factors are key in promoting the engagement in NSSI, rather than alternative maladaptive behaviours, such as drug use. This model seeks to incorporate findings from across the NSSI literature to explain the range of factors that may increase an individual's likelihood of engaging in NSSI as well as the functions that NSSI might serve.

The cognitive-emotional model of NSSI (Hasking et al., 2016) is another model of NSSI. Hasking et al. posit that when an individual is in a perceived emotionally volatile situation, they may demonstrate five aspects which increase their likelihood of engaging in NSSI. These are: they have a tendency towards emotional reactivity; they possess negative self-schemas; they believe that engaging in NSSI would result in a more desirable mental state; they believe in their ability to engage in NSSI or underestimate their ability to avoid NSSI; and they may possess poor emotion regulation strategies so will engage in NSSI to avoid or modulate the situation or emotional response.

While the above models of NSSI have their strengths, they lack some key hypotheses as to how interpersonal factors may relate to NSSI. That is, Nock (2009) highlights poor communication skills and poor social problem-solving as interpersonal vulnerability factors, but does not discuss the cognitive results that these factors may have for an individual and name them as a key factor. Hasking et al. (2016) highlight representations of self, such as self-schemas, as a contributing factor to NSSI and do not name specific interpersonal factors that may contribute to negative representations of self or associated beliefs about this. Previous research suggests that it may be important to examine a theory that details how interpersonal factors may relate to NSSI. That is, as discussed earlier, many of the positive findings between perfectionism and NSSI have been found when examining different dimensions of perfectionism. These dimensions commonly include an individual's beliefs about others, such as; perceiving others to be overly critical of them, believing that they will lose the respect of others if they do not succeed, and that others set excessively high goals for them (Brocklesby, 2017; Claes et al., 2012; Hoff & Muehlenkamp, 2009; Miskey et al., 2012). The interpersonal factors and resulting cognitions and perceptions in the relationship between perfectionism and NSSI appear key, and the theories and models used to explain the underlying mechanisms of this relationship and improve our understanding appears to need a

central interpersonal component. One such model that focuses on the centrality of the interpersonal factors is the IPTS (Joiner, 2005; Van Orden et al., 2010).

The Use of Theories of Suicide in Perfectionism and NSSI Research

The Interpersonal Theory of Suicide

As suggested by the name, the IPTS (Joiner, 2005; Van Orden et al., 2010) is a theory of suicide. It incorporates a range of factors, including NSSI, and seeks to explain how interpersonal factors can lead to suicide attempts. Joiner et al. (2012) readily acknowledges the complicated relationship between NSSI and suicide in that, while many distinctions exist between the two behaviours, engagement in NSSI also increases the risk for suicidal behaviour. Through the conceptualisation of the IPTS, Joiner (2005) and Van Orden et al. (2010) seek to explain both what may lead an individual to suicide and how NSSI may be related. The IPTS proposes that when an individual experiences both the desire and capability to carry out suicidal behaviour, a suicide attempt may be made. Four main hypotheses in the model provide a causal pathway to suicide and suicidal behaviour. The first hypothesis suggests that experiencing thwarted belongingness and perceived burdensomeness can lead to passive suicidal ideation. The IPTS defines thwarted belongingness as a feeling of loneliness and an absence of reciprocal care. Perceived burdensomeness is defined as the perception of being a liability to others as well as feelings of self-hatred. Joiner et al. (2012) and Van Orden et al. (2010) describe thwarted belongingness and perceived burdensomeness as dynamic factors that can change based on both an individual's inter- and intrapersonal experiences. Experiencing both thwarted belongingness and perceived burdensomeness is purported to increase a person's risk of suicidal ideation more than experiencing only one of these factors.

The second hypothesis suggests that when individuals believe their feelings of thwarted belongingness and perceived burdensomeness are permanent, a sense of hopelessness develops (Joiner et al., 2012; Van Orden et al., 2010). This hopelessness leads

to an active desire for suicide. The third hypothesis suggests that suicidal desire will turn into suicidal intent when an individual experiences a reduced fear of death. Finally, the fourth hypothesis states that as well as the desire to engage in suicidal behaviour, the individual will have increased pain tolerance and capability to engage in this behaviour. Overall, therefore, the IPTS suggests that a suicide attempt is most likely to be made when an individual experiences thwarted belongingness, perceived burdensomeness, hopelessness that these factors will not change, a lowered fear of death and increased tolerance for pain.

With these hypotheses in mind, the IPTS (Joiner et al., 2012; Van Orden et al., 2010) highlights NSSI as a key factor in reducing a person's fear of death (hypothesis three) and increasing their pain tolerance (hypothesis four). NSSI is therefore proposed to increase a person's capability for suicide. Joiner et al. state that biological and genetic vulnerabilities can also contribute to an individual's acquired capability for suicide. Joiner et al. (2012) highlights that while NSSI may increase a person's risk of suicidal behaviour, engagement in suicidal attempts is a greater risk factor. When a person attempts to complete suicide, they both increase their acquired capability for suicide and demonstrate a desire to complete suicide. NSSI, as per its definition, does not include the desire for suicide and thus, while increasing a person's capability to attempt suicide in the future, the individual will also need to experience a desire to attempt suicide.

Escape Theory

While the IPTS (Joiner et al., 2012; Van Orden et al., 2010) is a theory of suicide rather than a theory of NSSI, previous research examining perfectionism and NSSI has also used a theory of suicide in an attempt to explain the relationship between perfectionism and NSSI. Hoff and Muehlenkamp (2009) examined whether escape theory (Baumeister, 1990) may help to explain the relationship between perfectionism and NSSI. Escape theory (Baumeister, 1990) posits that an individual experiences perceived failures as due to their

own short comings and becomes subsequently distressed, which may present as depression or anxiety. The individual then ruminates in these states. The individual finds the distress overwhelming which leads to a worsened ability to problem-solve and suicide presents as the only solution to end the distress. In relation to NSSI therefore, instead of using suicide as a solution to end the distress, NSSI may be used as a temporary solution to reduce the distress and as an attempt to cope. Baumeister (1990) also suggests that personality and cognitive traits may increase an individual's susceptibility for cognitive and emotional experiences that increase the likelihood of suicidal behaviour.

Hoff and Muehlenkamp's (2009) study, as described previously, found that participants with a history of NSSI scored significantly higher on the concern over mistakes and parental criticism perfectionism subscales and significantly lower on the organisation perfectionism subscales than those with no NSSI history. In relationship to escape theory (Baumeister, 1990), Hoff and Muehlenkamp suggest that further examination of the relationship between perfectionism and NSSI needs to be undertaken, but that those with lower organisation scores may perceive their emotional experiences as disorganised, leading to distress, which may then lead to NSSI. This could provide relief to the individual as they feel more organised and in control, as is consistent with escape theory (Baumeister, 1990). That is, an individual uses NSSI or suicide to cope or escape when they become highly distressed and less able to problem solve.

Use of the IPTS in the Current Research

Hoff and Muehlenkamp's (2009) research using escape theory (Baumeister, 1990) shows strengths in using a theory to explain the mechanisms underpinning this relationship. However, it also highlights that the cognitive processes, rather than the emotional distress resulting from those processes, may be most important. The IPTS (Joiner, 2005; Van Orden et al., 2010) may provide more detail around these processes through their hypotheses

incorporating loneliness, self-hate and hopelessness when examining thwarted belongingness and perceived burdensomeness. With Hoff and Muehlenkamp's research in mind, as well as alternative theories of NSSI, some of which have been discussed above (Hasking et al., 2016; Nock, 2009), the decision was made to use the IPTS (Joiner, 2005; Van Orden et al., 2010) to examine the relationship between perfectionism and NSSI. Not only does this theory suggest key interpersonal factors that may help to explain the positive relationship between dimensions of perfectionism and NSSI, it also incorporates a relationship between NSSI and suicide. While the current research is focussed on NSSI, as has been highlighted in the previous chapters, one of the critical reasons that NSSI research is so important is due to the negative outcomes that can result from NSSI engagement, such as increased risk of suicide. Using the IPTS to further understand the mechanisms underlying the relationship between perfectionism and NSSI is therefore aimed to increase our understanding to allow improvement in clinical interventions and outcomes for reducing engagement in NSSI. Ultimately this could also lead to improved outcomes in reducing self-harm with suicide ideation.

IPTS Research

The IPTS (Joiner et al., 2012; Van Orden et al., 2010) has been used widely across the literature examining suicidal thoughts and behaviours. Chu et al. (2017) conducted a meta-analysis of studies examining the relationship between IPTS constructs and suicidal thoughts and behaviours and were able to include 114 reports (122 samples) in their analysis. To be included in the analysis, studies had to meet criteria which included being published in the English language and reporting or providing sufficient information to calculate at least one effect size examining the relationship between the IPTS constructs and suicidal thoughts and behaviours. Research using the IPTS has so far included a range of populations such as college students (Brackman et al., 2016), lesbian, gay and bisexual youth (Baams et al.,

2015), eating disorder patients (Forrest et al., 2016), and older adults (Parkhurst et al., 2016), as well as samples from different countries (e.g., Glaesmer et al., 2017). The IPTS has also been used to examine its relationship with a range of factors, including chronic pain (Wilson et al., 2013, 2017), depressive symptoms (Campos et al., 2016), and emotion dysregulation (Anestis et al., 2011).

Overall, Chu et al.'s (2017) meta-analysis found weak to moderate positive relationships between increased thwarted belongingness and more severe suicidal ideation (r = .37), greater suicide risk (r = .33), and suicide attempt history (r = .11). They also found weak to moderate positive relationships between perceived burdensomeness and more severe suicidal ideation (r = .48), greater suicide risk (r = .42), and suicide attempt history (r = .25). Chu et al. (2017) tested interaction effects and found that the interaction of thwarted belongingness and perceived burdensomeness was significantly correlated with suicide ideation and risk (rs = .12 - .14). The interaction between thwarted belongingness, perceived burdensomeness and capability for suicide was also significantly related to a greater number of suicide attempts and suicide risk (rs = .06-.11). Chu et al. (2017) highlight that their findings support the IPTS (Joiner et al., 2012; Van Orden et al., 2010) hypotheses, however, the effect sizes ranged from weak to moderate.

As is consistent with the original purpose of the IPTS (Joiner, 2005; Van Orden et al., 2010) model, research has focused on how the IPTS relates to suicide. However, some research has begun to investigate the relationship between components of the IPTS, namely, thwarted belongingness, perceived burdensomeness, and NSSI (Assavedo & Anestis, 2016; Chu et al., 2016; Edwards, 2019). Chu et al. (2016) examined the relationship between NSSI history and suicide ideation as mediated by thwarted belongingness and perceived burdensomeness. Undergraduate university students in the United States participated in the research with 67.3% of the 49 participants indicating a lifetime history of NSSI engagement.

They completed measures over three time points with three weeks between each time point. Chu et al. (2016) found that NSSI was positively related to thwarted belongingness, perceived burdensomeness and suicide ideation at all three time points. Both thwarted belongingness and perceived burdensomeness mediated the relationship between NSSI and suicide ideation at baseline, however only perceived burdensomeness was a significant mediator at follow-up. Chu et al.'s (2016) findings highlight some support for the IPTS (Joiner, 2005; Van Orden et al., 2010) and suggest that a positive relationship may exist between thwarted belongingness, perceived burdensomeness and NSSI.

The relationship between NSSI frequency, thwarted belongingness and perceived burdensomeness has also been examined. Assavedo and Anestis (2016) examined the relationship between NSSI frequency and thwarted belongingness and perceived burdensomeness with a sample of 999 undergraduate university students. They found a positive significant relationship between NSSI frequency and both thwarted belongingness and perceived burdensomeness. However, once depression, borderline personality disorder symptoms, and sex were controlled for, only the relationship between NSSI and thwarted belongingness remained significant. They found that depression and borderline personality disorder symptoms partially mediated the relationship between NSSI frequency and thwarted belongingness and fully mediated the relationship between NSSI and perceived burdensomeness. Overall, Assavedo and Anestis suggest that NSSI not only contributes to acquired capability for suicide, but may also contribute to one's desire for suicide.

The IPTS, Suicide and Perfectionism Research

To the best of my knowledge, the IPTS (Joiner, 2005; Van Orden et al., 2010) has not previously been used as a theoretical basis to explain the mechanism underlying the relationship between perfectionism and NSSI. It has, however, been used to examine the relationship between perfectionism and suicide (Rasmussen et al., 2012; Wang et al., 2013).

Rasmussen et al. (2012) sought to examine whether perceived burdensomeness would act as a mediator between maladaptive perfectionism and suicidal ideation. A sample of 214 American college students completed the Almost Perfect Scale-Revised (Slaney et al., 2001), the Interpersonal Needs Questionnaire (Van Orden et al., 2012) with only the perceived burdensomeness scale being measured, as well as measures of depression. Rasmussen et al. found that maladaptive perfectionism significantly predicted suicidal ideation, ß = .18, $t(211) = 2.70$, $p = .008$ and maladaptive perfectionism significantly predicted perceived burdensomeness, ß = .41, $t(211) = 6.61$, $p < .001$. When controlling for maladaptive perfectionism they also found that perceived burdensomeness significantly predicted suicidal ideation, ß = .35, $t(211) = 4.94$, $p < .001$. A regression analysis was conducted and showed that after controlling for perceived burdensomeness, the relationship between maladaptive perfectionism and suicidal ideation was no longer significant, ß = .03, $t(211) = .47$, $p = .636$. Rasmussen et al.'s results therefore provided support for their hypothesis that perceived burdensomeness may mediate the relationship between maladaptive perfectionism and suicidal ideation. Rasmussen et al. suggest that individuals with high levels of maladaptive perfectionism may set unrealistically high expectations for themselves and, when these are not met, may lead to feelings of perceived burdensomeness. They also suggest that these findings add further support to the IPTS (Joiner, 2005; Van Orden et al., 2010) due to the positive relationship found between perceived burdensomeness and suicidal ideation.

Conclusion

The IPTS (Joiner, 2005; Van Orden et al., 2010) is a widely-used theory within suicide research. While the current research focuses primarily on NSSI, the interpersonal factors specified by the IPTS, as well as the inclusion of NSSI in the model and its relationship to suicide, may enable greater understanding of the relationship between perfectionism and NSSI. As highlighted by Assavedo and Anestis (2016) and Chu et al.

(2016), NSSI may not only contribute to suicide ideation through increasing one's acquired capability for suicide, but also relates to levels of thwarted belongingness and perceived burdensomeness. With increased understanding of the mechanisms that underly these relationships, better clinical interventions may be developed to support those at risk of, and currently engaging in, NSSI.

Previous research examining perfectionism and NSSI suggests that focusing on criticisms from others and perceptions that others hold excessively high standards, may increase one's risk of NSSI. The interpersonal aspects of this relationship may therefore relate to the interpersonal aspects of the IPTS (Joiner, 2005; Van Orden et al., 2010), thwarted belongingness and perceived burdensomeness. While to the best of my knowledge the IPTS has not been used as an explanation for why perfectionism and NSSI are correlated, it has been used in examining the relationship between perfectionism and suicide ideation (Rasmussen et al., 2012). The current study will therefore examine whether the IPTS provides some explanation of the direction and mechanisms underlying the relationship between perfectionism and NSSI.

Chapter 5

Current Research

With the above review of literature in mind, the overall aim of the current research is to examine the relationship between perfectionism and NSSI in a New Zealand sample, and test the IPTS (Joiner, 2005; Van Orden et al., 2010) as an explanation of this relationship. This relationship will be examined quantitatively as shown in Figure 1 below, and qualitatively through face-to-face interviews. As consistent with the current literature, perfectionism will be examined multidimensionally through perfectionistic strivings and perfectionistic concerns to examine their relationship with NSSI, as shown in Figures 2 and 3. However, researchers continue to investigate whether two dimensions of perfectionism is the most accurate number of dimensions and, if so, how perfectionistic strivings and perfectionistic concerns should be constructed (Sirois & Molnar, 2016). An overall perfectionism measure and its relationship to NSSI will therefore also be examined.

Figure 1

Mediation Model for the Hypothesised Relationship Between Overall Perfectionism and NSSI Mediated by Thwarted Belongingness and Perceived Burdensomeness

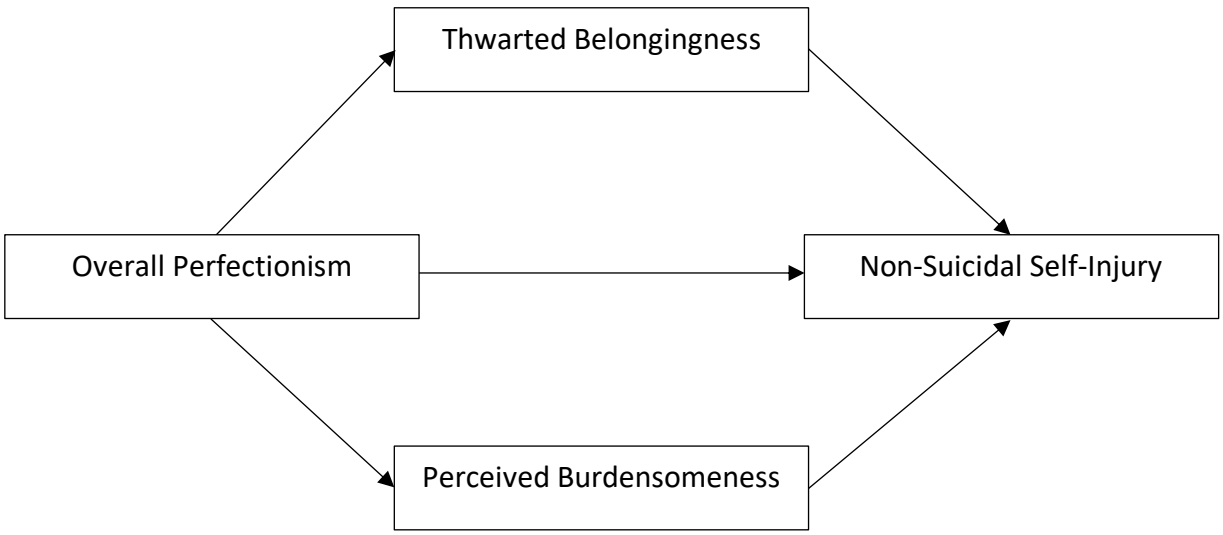


Figure 2

Mediation Model for the Hypothesised Relationship Between Perfectionistic Strivings and NSSI Mediated by Thwarted Belongingness and Perceived Burdensomeness

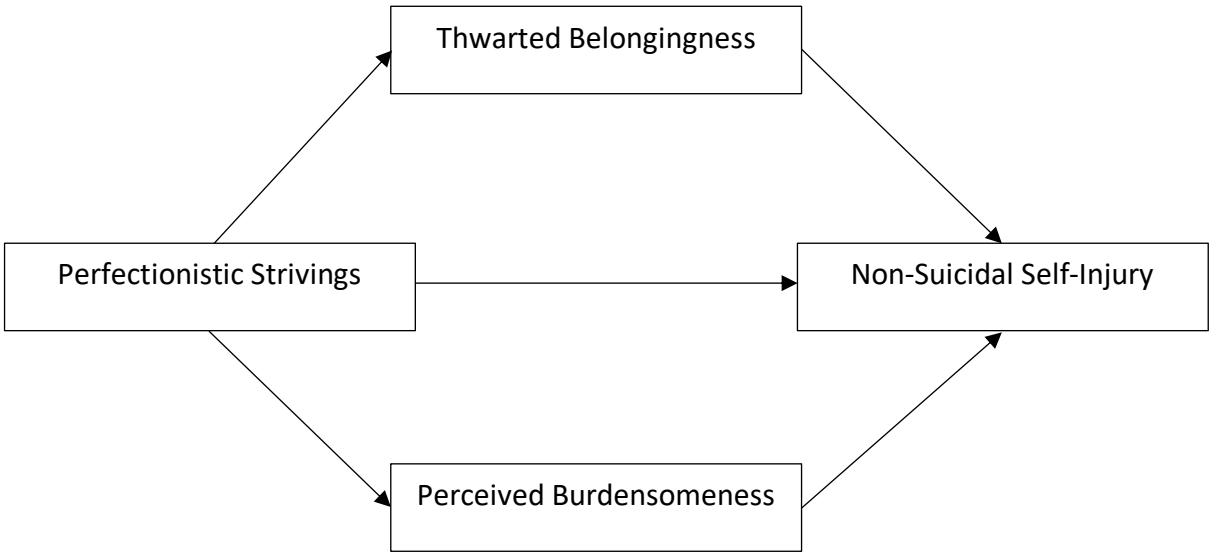
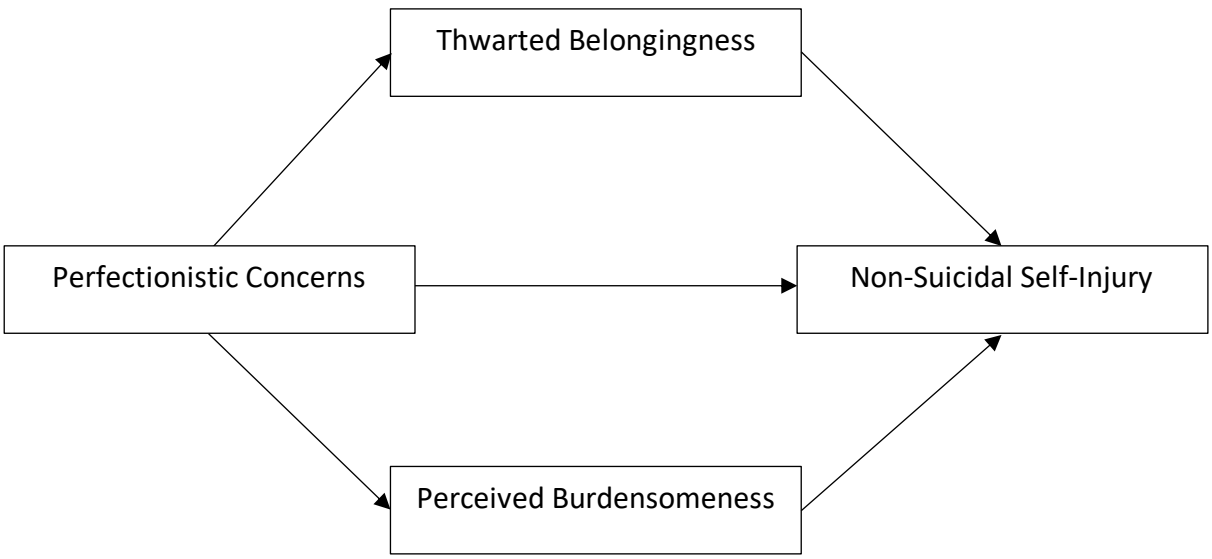


Figure 3

Mediation Model for the Hypothesised Relationship Between Perfectionistic Concerns and NSSI Mediated by Thwarted Belongingness and Perceived Burdensomeness



Quantitative Aims

Hypotheses 1, 2 and 3

I predict that overall perfectionism, perfectionistic strivings and perfectionistic concerns will be positively related to NSSI (Hypotheses 1, 2 and 3, respectively). I suggest that overall perfectionism will be positively related to NSSI (Hypothesis 1) as individuals who hold themselves to unreasonably high standards and engage in excessive self-scrutiny and preoccupation with criticisms and expectations from others may be at increased risk of engaging in maladaptive behaviour in the form of NSSI. Prior research appears to have focused on examining the different dimensions of perfectionism and their relationship to NSSI (Brocklesby, 2017; Claes et al., 2012; Hoff & Muehlenkamp, 2009; Miskey et al., 2012). However, I predict that the inclusion of these dimensions in an overall perfectionism measure will result in a positive relationship between perfectionism and NSSI.

The positive relationship predicted between perfectionistic strivings and NSSI (Hypothesis 2) may be more complicated due to the mixed findings of perfectionistic strivings and its relationship to health and wellbeing. However, perfectionistic strivings has been associated with factors such as neuroticism, dissatisfaction with academic performance, and emotional preoccupation coping (Enns et al., 2001; Shanmugasegaram et al., 2014). Perfectionistic strivings is also positively associated with perfectionistic concerns and is not negatively correlated with psychopathology (Bieling et al., 2004). I suggest that consistently holding oneself to unrelenting and unreasonably high standards may also lead to maladaptive behaviour, in the form of NSSI.

I suggest that a positive relationship will exist between perfectionistic concerns and NSSI (Hypothesis 3), as individuals who are highly critical of their own behaviour, engage in excessive self-scrutiny, and focus on others' criticism and expectations of them, are more likely to engage in NSSI. This is consistent with some of the previous research examining the

relationship between perfectionism and NSSI, in which some of the subscales that make up perfectionistic concerns increase an individual's risk of NSSI engagement (Brocklesby, 2017; Claes et al., 2012; Hoff & Muehlenkamp, 2009).

Hypotheses 4 to 9

While the IPTS (Joiner, 2005; Van Orden et al., 2010) does not appear to have been used previously to examine the relationship between perfectionism and NSSI, I argue that it may play an important role. That is, I look to test the IPTS' capacity to account for some of the relationship between perfectionism and NSSI through the key interpersonal factors of thwarted belongingness and perceived burdensomeness. I suggest that higher levels of overall perfectionism, perfectionistic strivings and perfectionistic concerns may increase an individual's risk of experiencing thwarted belongingness and perceived burdensomeness. That is, those with high overall perfectionism may be at increased likelihood of experiencing thwarted belongingness (Hypothesis 4) and perceived burdensomeness (Hypothesis 5) for the reasons as follows.

Those with high perfectionistic strivings may be at an increased likelihood of experiencing thwarted belongingness (Hypothesis 6), as the focus on high standards and excessive self-expectations may increase loneliness and reduce the formation of positive relationships. Focusing on achieving one's own excessively high expectations and perceived lack of achievements may come at the potential cost of relationships. Individuals may also not feel a sense of belonging and understanding from others who do not hold themselves to the same high expectations. Those with high perfectionistic strivings may also be at increased likelihood of experiencing perceived burdensomeness (Hypothesis 7), as individuals may perceive themselves as a liability to others, when they do not meet their expectations. They may also experience feelings of self-hate when they fail to meet their high standards and believe that others feel similarly about them.

Those high in perfectionistic concerns may be more likely to experience thwarted belongingness (Hypothesis 8), as a preoccupation with others' expectations and criticism, may prevent formation of meaningful relationships and increased loneliness. Believing that others are holding them to high expectations, those high in perfectionistic concerns may feel that they cannot meet others' demands and are not able to belong as part of a group. Individuals who are preoccupied with others' expectations and criticisms of them, as well as being exceedingly critical of themselves, may not form close and meaningful relationships as they believe that others evaluate them as negatively as they do themselves. Further, perfectionistic concerns may also increase the likelihood of experiencing perceived burdensomeness (Hypothesis 9), as self-scrutiny, criticism and preoccupation with others' judgements may increase the likelihood of being perceived as a burden. Not being able to live up to others' perceived standards may promote feelings of self-hate and disappointment, and individuals may believe that others also feel this way towards them.

Hypotheses 10 and 11

The IPTS (Joiner, 2005; Van Orden et al., 2010) states that thwarted belongingness and perceived burdensomeness can lead to passive suicidal ideation and that NSSI may increase a person's pain tolerance and capability for suicide. Research examining a direct relationship between thwarted belongingness and perceived burdensomeness and NSSI appears limited, however, Chu et al. (2016) and Assavedo and Anestis (2016) demonstrate that a positive relationship may exist. Heath et al.'s (2009) findings also provide some support in showing that this relationship may exist, as they concluded that those engaging in NSSI, report significantly lower levels of friends' support. I predict that thwarted belongingness will be positively related to NSSI (Hypothesis 10), as when experiencing feelings of loneliness and an absence of reciprocal care, individuals may be more likely to engage in NSSI, a frequently private behaviour, in an attempt to cope with and manage these

feelings. I also predict that perceived burdensomeness will be positively related to NSSI (Hypothesis 11), as when feeling like a burden to others, experiencing self-hatred, and seeing oneself as a liability to others, individuals may be more likely to engage in NSSI. This may be done as a way to cope with and manage these feelings, communicate these feelings to others, and possibly punish oneself.

Hypotheses 12, 13 and 14

With the above hypotheses and explanations in mind, I predict a mediated relationship will occur as seen in Figures 1, 2, and 3. Specifically, overall perfectionism, perfectionistic concerns and perfectionistic strivings increase the likelihood of engaging in NSSI through the mediator variables thwarted belongingness and perceived burdensomeness (Hypotheses 12, 13 and 14).

Qualitative Aims

The qualitative portion of the study is aimed to improve understanding of individuals' experiences of perfectionism, NSSI, and the relationship between them. Alongside the quantitative research, the qualitative interviews aim to add depth and richness about the relationship between NSSI and perfectionism that the survey does not provide opportunity for. The qualitative portion of the study aims to improve understanding of the way in which perfectionism and NSSI may affect people's daily lives. It also aims to illustrate how individuals view NSSI and perfectionism as well as how individuals manage and process difficulties that arise from this relationship. It is possible that participants may also reveal a lack of concern for this relationship or suggest positive aspects of their experiences with perfectionism and NSSI. Finally, the interviews provide opportunity for differences and similarities between individuals' experiences to be described and explored.

Hypotheses Summary

1. Overall perfectionism will be positively related to NSSI.
2. Perfectionistic strivings will be positively related to NSSI.
3. Perfectionistic concerns will be positively related to NSSI.
4. Overall perfectionism will be positively related to thwarted belongingness.
5. Overall perfectionism will be positively related to perceived burdensomeness.
6. Perfectionistic strivings will be positively related to thwarted belongingness.
7. Perfectionistic strivings will be positively related to perceived burdensomeness.
8. Perfectionistic concerns will be positively related to thwarted belongingness.
9. Perfectionistic concerns will be positively related to perceived burdensomeness.
10. Thwarted belongingness will be positively related to NSSI.
11. Perceived burdensomeness will be positively related to NSSI.
12. The relationship between overall perfectionism and NSSI will be partially mediated by thwarted belongingness and perceived burdensomeness.
13. The relationship between perfectionistic strivings and NSSI will be partially mediated by thwarted belongingness and perceived burdensomeness.
14. The relationship between perfectionistic concerns and NSSI will be partially mediated by thwarted belongingness and perceived burdensomeness.

Chapter 6

Methods

Research Design

This research used a two-stage methodology to examine and understand the relationship between NSSI and perfectionism. Stage one consisted of a cross-sectional correlational design in the form of a voluntary, online survey. Stage two consisted of face-to-face semi-structured interviews. Participants first completed the stage one survey before a small subset of participants engaged in the follow-up interview with the primary researcher.

A two-stage methodological design was employed to allow for a broader understanding of the relationship between NSSI and perfectionism. By recruiting a larger number of participants to complete the survey and by analysing the results quantitatively, numerous hypotheses could be tested to try to establish whether relationships exist between the variables tested. By subsequently engaging a small number of these participants in a follow-up interview, participants were able to provide richer detail around the hypothesised relationship between NSSI and perfectionism. It also provided opportunity for some of the participants' voices to be heard and for them to discuss some of the experiences, concerns and features of their own NSSI and perfectionism for which the survey did not allow.

The current project was preregistered on the *Open Science Framework* (Centre for Open Science, 2011). Preregistration involves detailing the research plan before beginning the study and committing that plan to a public repository (Sullivan et al., 2019). In doing so the research process is transparent to the reader and any exploratory or additional results reported in the study can easily be distinguished from the original hypotheses and analyses (Lakens, 2019; Nosek et al., 2018). The hypotheses, methods, and analysis plan were therefore determined at the beginning of the current research conceptualisation. Any deviations from the preregistration will be highlighted in the current research with an

explanation as to why the change was made. The preregistration can be viewed on the project page (https://osf.io/6uv5w/?view_only=808891990d3640f1901c73961ffe5d14). As the study is now completed, the raw data and scripts used for the current study are also included, which allows for reproducibility of the current research.

Following an outline of the ethical considerations, the quantitative method and results will be presented, followed by the qualitative method and results, for ease of reading.

Ethical Considerations

The project was reviewed and approved by the Massey University Human Ethics Committee (Northern, Application NOR 17/31). To ensure that ethical principles were fully considered in the current project, several stages were worked through during project conceptualisation. The research team first discussed potential ethical issues and considerations for the project, which are detailed in the subsections below. The Code of Ethical Conduct for Research, Teaching and Evaluations Involving Human Participants (Massey University, 2017) was referred to during this process to ensure the project was in line with Massey University's ethical principles for human research. Cultural consultation was also sought from Mr Jhanitra Gavala, a Kaupapa Māori psychology lecturer at Massey University, to provide further support in ensuring Te Tiriti o Waitangi was considered in the project and that cultural considerations were addressed in the project.

The online ethical application process for the current Massey University research project consisted of a risk assessment, followed by a full application. A review meeting by the human ethics committee was attended in person. Minor changes to the project were made following this meeting and this resulted in approval from the human ethics committee for the current project. Further minor amendments made by the researcher were approved via email by the Acting Chair of the Northern Ethics Committee.

Consent, Privacy and Confidentiality

Participants were asked to view all information sheets prior to beginning the survey and interview. These information sheets provided details about the project and participants rights (see Appendices A and C). Before beginning the survey questions, participants were asked to select a box as to whether they consented to participate in the survey. Participants who attended the interview were asked to complete both pre- and post-interview consent forms. This process was to ensure participation was voluntary and participants gave fully informed consent.

Participants completed the online survey anonymously. Upon the completion of the stage one survey, participants were able to enter an optional prize draw to win a voucher. Participants were asked to input their email address if they wished to enter the prize draw, and this was collected separately from their survey answers. They also had the opportunity to input their email for a summary of the results upon research completion and this again was collected separately from their survey answers. Participants were given the option to input their email address for more information regarding the follow-up interview and were instructed that in doing so their email address would be connected to their survey answers. All identifiable electronic data was stored on a password protected computer. Identifiable data will be deleted after seven years by my primary supervisor and a de-identified copy of the dataset shared with other researchers who wish to reproduce or extend on the analyses. It will not be possible to identify any individuals in the de-identified dataset (see Data Accessibility Statement in Chapter 7).

Participants who sought to arrange an interview, communicated solely with the primary researcher. The interviews were conducted in person in a private office at the School of Psychology buildings at Massey University, Albany. No information was sought from sources other than the participant, however, in line with cultural guidelines, interview

participants were able to bring a support person to their interview. None of the interview participants chose to bring a support person.

Interview consent forms were stored in a locked cupboard. Participants were informed that a transcription service may be used to prepare the transcripts and that any persons involved would be required to sign a confidentiality agreement. Ultimately, a transcription service was not used, and all transcripts were transcribed solely by the primary researcher. Once the transcriptions were finalised, the original recording was erased. Participants who wished to view their transcripts were sent the password protected document to an email address of their choosing. A separate follow-up email was sent providing the password to the transcript document and participants were instructed that it was their responsibility to keep this safe from other people. Gender-neutral pseudonyms have been used for all interview participants and to further protect anonymity in the transcripts, names, places, and other potentially identifiable details have been changed or excluded. Finally, participants were informed before the beginning of the interview that if they experienced significant distress during the interview a clinical psychologist may be invited into the room.

Vulnerability, Risk and Psychological Support

Participants for both the survey and interview were considered potentially vulnerable populations, as many of them would have previously or currently engaged in NSSI. Given the potentially distressing nature of NSSI, I was aware that completing the survey could be upsetting for some participants and that they may experience emotions such as embarrassment and shame when recalling their experiences with NSSI. A list of support services was therefore provided both at the beginning and end of the survey. These services are free (e.g., helplines) or low-cost options (e.g., speaking with a general practitioner) that are available nationwide. This was also accompanied by the encouragement to seek support from a trusted friend/family member, and/or their general practitioner or to call 111 if it was

an emergency, in which they felt that they or someone else was at risk. It was considered unlikely that survey participants would experience significant distress prompted by the survey. This is supported by prior research such as Gould et al.'s (2005) study in which suicide screening did not appear to produce iatrogenic effects in high school students. Similarly, Whitlock, Pietrusza and Purington (2013) found that college students who completed questionnaires examining NSSI, suicide and psychological distress did not experience increased risk of engaging in negative behaviour. Further, individuals who found the survey difficult, were more likely to engage in self-reflection.

It was predicted that interview participants were more likely to experience discomfort, sadness, or distress during the interview stage of the research than during the survey as this involved speaking with the primary researcher face-to-face about their experiences with NSSI. All participants were therefore provided with contact information for support services as outlined in the survey section above. They were also provided with additional support service information including Massey University's Health and Counselling Centre, which is available to current Massey University students, and details for the Centre for Psychology, which is a paid service available to the public. Further, the participants and researcher were able to stop the interview at any time and participants could choose to skip any questions, which they did not wish to answer. Finally, support was available in the form of a senior clinical psychologist, who could be consulted and brought into the room, if the participant experienced significant distress.

Regarding my own safety, a senior clinical psychologist was aware of the start and completion time of my interviews. They were also available during the interview, should I wish to consult them. My supervisors, which include a senior clinical psychologist, were available to discuss any of my concerns prior to and following the interview and I attended weekly supervision with my research supervisors during this time.

Cultural Considerations

Mr Jhanitra Gavala, a Kaupapa Māori psychology lecturer at Massey University, was consulted during the project formation to provide cultural consultation. This involved documentation of cultural considerations and discussion around these and additional considerations. Changes were made to reflect the most appropriate bicultural practice, and these were discussed with the research supervisors. Te Tiriti o Waitangi was considered regarding the project to ensure that appropriate recruitment, research result dissemination and cultural consultation took place.

The online survey was written in English as the standardised scales used did not have Te Reo Māori translations. Most of the survey questions required tick box answers, however, if participants responded to written answers in Te Reo Māori, it was planned that consultation would take place with Māori colleagues to try and include these answers. No responses in Te Reo Māori were received. The interview questions and responses needed to be given in the English language as I, the person conducting the interviews, do not speak Te Reo Māori. Participants could choose to bring a support person to the interview to wait outside of the interview room or be physically present in the interview. Participants were able to open and close the interview in a way that they saw culturally appropriate to them. We planned that if a participant indicated they preferred a kaumatua to conduct the opening and closing of the interview I would make arrangements accordingly. Ultimately, no participants requested this.

NSSI has been identified as a prevalent behaviour affecting Māori and non-Māori New Zealanders. By including Māori and non-Māori participation in the study, it is aimed that a range of experiences will be represented to further inform us about NSSI and perfectionism in New Zealand and promote more effective interventions in the future. The results of the current study will be disseminated back to participants so that the knowledge is shared with both them and their communities.

Participant Eligibility Criteria

The online survey required participants to be between 18 and 35 years of age, proficient in the English language, living in New Zealand, able to give fully informed consent, and having access to the internet to complete the survey. The use of screening tools was limited during the survey and interview, and participants were instead invited to use their own judgment as to whether they were eligible. They were also able to exit the survey or stop the interview at any time if they no longer wished to continue. The only screening tool used was when the participants completed the age demographic question at the beginning of the online survey. In this instance, those who indicated that they were 17 years or younger or older than 35 years were unable to complete the survey and were directed to a page indicating that they were ineligible for the survey. The age requirement was chosen as research suggests that younger participants are more likely to have engaged in NSSI than older participants (when examining 14- to 94-year-olds; Plener et al., 2016). Due to the survey asking about NSSI, a minimum participant age of 18 years was chosen as participants would be more able to independently access supports if they needed to do so compared to younger adolescents and children. The maximum age of 35 years was chosen to provide opportunity for substantial variability of people engaging in NSSI. Participants also needed to be in New Zealand to increase the likelihood that they would be able to participate in the follow up interview if they wished to do so. In recruiting a local sample, support services could be more appropriately recommended. Finally, using a New Zealand sample also adds to the current, largely North American evidence base (Gyori & Balazs, 2021).

To participate in the follow-up interview, participants had to have completed the online survey and indicated that they would like more information about the interview. Participants were informed that the interview would involve discussing their experiences with

NSSI and perfectionism. Their survey answers were checked to ensure that they had indicated engaging in NSSI during the last two years prior to being invited to an interview.

Meta-Theoretical Stance

A realist, or critical realist, stance has been taken in the current study regarding ontology and epistemology (Haig & Evers, 2015; Maxwell & Mittapalli, 2010; Wiltshire & Ronkainen, 2021; Wong et al., 2013). A realist perspective posits that a reality objectively exists in the world and scientific theories seek to examine and explain reality. However, our understanding of reality is affected by our own perspectives, and we cannot determine that we have accurately captured an objective view of reality through scientific theories. Using a realist stance in a mixed methods project has both strengths and limitations (Allmark & Machaczek, 2018; Maxwell & Mittapalli, 2010). However, in the current study, a realist approach allows for the testing of theories, primarily through the survey, combined with a greater depth of understanding, provided by the interviews. Using both statistical and thematic analysis the current study therefore attempts to increase our understanding of the relationship between perfectionism and NSSI from a realist stance.

Chapter 7

Quantitative Survey Method

Recruitment

It was aimed that at least 138 young adults aged between 18 and 35 years would be recruited for stage one. Based on the results from the limited prior research in this area, I hypothesised that a moderate strength correlation ($r = 0.3$) exists between perfectionism and NSSI in the wider population. Using Uitenbroek's (1997) statistical analysis tool, I estimated that at least 138 participants would be required to reveal a correlation with 95% statistical power. Recruitment would stop at 400 participants or at the end of the predetermined data collection date, whichever came first. While the minimum number of participants needed was estimated at a number much less than 400, I chose to stop recruitment at 400 to ensure there was an adequate sample size for the more complex analyses.

Following data collection and analysis, a sensitivity analysis was carried out in G*Power (Faul et al., 2007, 2009). This sensitivity analysis determines what effect sizes the current research has 80% power to detect, given the sample size collected and data analysis completed. Sensitivity analyses for Hypotheses 1 to 11 revealed that the final sample size was sufficient to detect relatively small effect sizes at 80% power within these analyses. I have not reported power analyses for the logistic regression and structural equation modelling as power analyses for these methods is more complex and requires a range of arbitrary input parameters. However, the magnitude of uncertainty due to sampling error is reflected in the confidence intervals and p values for coefficients.

The survey was created using Qualtrics (Qualtrics, n.d.), which is an online survey tool, to which Massey University has a paid subscription. Participants were able to access the survey by following the link provided on all of my advertisements (see Appendix A). The survey was advertised on Massey University's *Research Projects and Results* webpage which

is a public webpage (see Appendix B). It was also sent via email to the Massey University psychology graduate email list. A Facebook page was created dedicated to the current project and the advertisement for the study was shared on Facebook. I gained permission from course coordinators and lecturers to advertise the study on Stream (the online learning management system used for Massey University courses) for individual psychology papers at Massey University. I also offered the course coordinators and lecturers the option of me speaking directly to the class to advertise, which I did for one course. An additional statement accompanied the survey advertisement when this was distributed to courses taught by members of the research team (see Appendix C). This highlighted to students that their choice to participate or not participate in the survey and/or interview would not impact their grades or their relationship with any of the researchers. Finally, once participants had completed the survey, the link to the survey was provided and they were encouraged to share it with others who might wish to take part.

Participants

To participate, potential participants volunteered for the study and self-identified as to whether they met all of the participation criteria. By the pre-determined survey closing date, 231 participants were recorded as having participated in the study. Consistent with the preregistered analysis plan, participants were removed from the data set if they: did not consent to the study; indicated that they were not aged between 18 and 35 years; or did not provide data on the key study variables (i.e., questions measuring perfectionism and NSSI). This resulted in a final sample size of 213 and these participants' responses were used for data analysis.

The participants ranged from age 18 to 35 years with a mean age of 23.87 years (*SD* = 4.156). The gender and ethnicity breakdown for the sample can be seen in Table 1. As well as age, gender and ethnicity, which were used as control variables in the study and will be

discussed at the end of this chapter, additional demographic information was obtained to allow us greater understanding of the generalisability of the findings. Participants were able to indicate both their highest level of educational attainment and employment status and these can also be viewed in Table 1.

Table 1

Percentages for Demographic Information

	%
Gender	
Female	81.7
Male	14.6
Gender diverse	3.8
Ethnicity	
New Zealand European	76.1
Other	15.5
Chinese	3.8
Indian	1.9
Māori	1.4
Samoan	0.5
Tongan	0.5
Did not disclose	0.5
Cook Island Māori	0
Niuean	0

Highest level of educational attainment	
No qualification	1.9
NCEA Level 1 Certificate	0.5
NCEA Level 2 Certificate	2.3
NCEA Level 3 Certificate	24.4
Tertiary Diploma/Certificate	15
Bachelor Degree	30.5
Postgraduate/Honours Degree	14.1
Masters Degree	8.9
Doctorate Degree	0.5
Overseas Secondary School Qualification	1.4
Don’t know	0.5
Employment status	
Employed full-time	27.2
Employed part-time	11.3
Student	53.1
Unemployed	1.9
Other	5.6
Did not disclose	0.9
Employer	0

Measures

The survey was made up of three existing questionnaires as well as demographic questions (see https://osf.io/6uv5w/?view_only=808891990d3640f1901c73961ffe5d14). It was aimed to be completed within 10 and 25 minutes. The median participant completion time for the initial sample was 8.8 minutes.

Demographic Information

Participants were asked their age, gender, ethnicity, employment status, and highest level of educational achievement. They were able to skip all of these questions except their age, as this acted as a screening question to check their eligibility for the study.

For gender, male was coded as 0, female as 1, and gender diverse as 2. To facilitate its use in analyses, gender was dummy coded, and male was used as the reference group. For ethnicity, participants were asked to identify their ethnicity as one of the following, 1= New Zealand European, 2 = Māori, 3 = Samoan, 4 = Cook Island Māori, 5 = Tongan, 6 = Niuean, 7 = Chinese, 8 = Indian, and 9 = other. Ethnicity was then dummy coded for analysis purposes. As no participants identified as Cook Island Māori or Niuean, dummy codes were not created for these groups. New Zealand European was used as the reference group. The gender and ethnicity codes used above deviated from the preregistration. A gender diverse category and additional ethnicity categories were included to capture greater diversity within the sample. Age was treated as a continuous variable ranging from 18 to 35.

Perfectionism

The Multidimensional Perfectionism Scale (MPS-F; Frost et al., 1990) was used to measure perfectionism. It allows measurement of an overall perfectionism score as well as a perfectionistic strivings score and perfectionistic concerns score. It is a 35-item questionnaire requiring each question to be answered using a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). Examples of these items include “I should be upset if I make a mistake”

and “I am very good at focusing my efforts on attaining a goal”. These 35 items make up six subscales: concern over mistakes, personal standards, parental expectations, parental criticism, doubts about actions, and organisation. Six of the 35 items were removed from the current survey, as these items make up the organisation subscale. The organisation subscale has demonstrated poor intercorrelation with the other five scales (Frost et al., 1990) and is not used to calculate the overall perfectionism score, perfectionistic strivings score or perfectionistic concerns score.

Overall perfectionism is calculated by summing the scores from all five subscales (concern over mistakes, personal standards, parental expectations, parental criticism, and doubts about actions). Perfectionistic strivings is calculated by summing the score from the personal standards subscale only. Perfectionistic concerns is calculated by summing the scores of two subscales; concern over mistakes and doubts about actions. Higher scores equal higher perfectionism. Some researchers measure perfectionistic concerns by summing the scores of parental expectations and parental criticism as well as concern over mistakes and doubts about actions. This was also considered in the current study and highlighted in the preregistration as a possible additional set of analyses, however, perfectionistic concerns is commonly calculated by summing only the two subscales, concern over mistakes and doubts about actions (e.g., Claes et al., 2012), and thus was used in the current research.

The MPS-F (Frost et al., 1990) has been widely used, having been adapted into multiple languages and used with a range of clinical and non-clinical populations (Burgess et al., 2016; Gelabert et al., 2011; Piotrowski & Bojanowska, 2021; Purdon et al., 1999). As reported by Frost et al. (1990) the six subscales demonstrate reliability through high correlations with each other with the following Cronbach’s alpha values for each subscale: concern over mistakes (α = .88); personal standards (α = .83); parental expectations (α = .84); parental criticism (α = .84); doubts about actions (α = .77); and organisation = (α =

.93). The overall perfectionism measure produced a reliability alpha of .90. Frost et al.'s (1990) results demonstrated good reliability for the subscales and overall perfectionism score, however, the organisation subscale resulted in poor intercorrelation with the other five scales. Ha et al. (2010) completed a meta-analysis of studies having used the MPS-F and found similar reliability indicating that scores on the subscales and total scores are reliable, with the doubts about actions subscale showing the lowest reliability (as consistent with Frost et al.'s (1990) report). In regard to validity, the MPS-F has shown to be closely related to other prominent measures of perfectionism including the MPS-HF (Hewitt et al., 1991; Frost et al., 1993). While the MPS-F six-factor structure has support (Parker & Adkins, 1995), more recent research suggests a two-factor structure may exist in prominent perfectionism models including the MPS-F, as well as the MPS-HF (Hewitt & Flett, 1991). The current study therefore examines the MPS-F overall perfectionism score as well as perfectionistic strivings and perfectionistic concerns as consistent with more recent research.

In the current sample, the MPS-F resulted in a Cronbach's alpha value of .928 suggesting good internal consistency. The sample also produced a Cronbach's alpha value of .906 for perfectionistic concerns and .857 for perfectionistic strivings, again supporting good internal consistency.

Thwarted Belongingness and Perceived Burdensomeness

The Interpersonal Needs Questionnaire (Van Orden et al., 2012) was used to assess participants' levels of thwarted belongingness and perceived burdensomeness as it is the main questionnaire used in relation to the IPTS (Joiner, 2005; Van Orden et al., 2010). It is a 15-item questionnaire requiring each question to be answered using a 7-point Likert scale (1 = *not at all true for me* to 7 = *very true for me*). Examples of these items include "These days, I think I am a burden on society" and "These days, I feel disconnected from other people". Items one to six sum to make the perceived burdensomeness score while items 7 to 15 sum to

make the thwarted belongingness score. Higher scores equal higher levels of perceived burdensomeness and thwarted belongingness. Items 7, 8, 10, 13, 14 and 15 are negatively worded items and were therefore reverse coded before analysis.

The Interpersonal Needs Questionnaire (Van Orden et al., 2012) is a measure that originated as a 25-item questionnaire (Van Orden et al., 2008). After further factor analysis and refinement, it was subsequently published as a 15-item questionnaire which has been used in the current research (Van Orden et al., 2012). The Interpersonal Needs Questionnaire has demonstrated reliability across a range of populations including young adults, older adults, clinical and non-clinical populations (Van Orden et al., 2012). R. M. Hill et al. (2015) examined five versions of the Interpersonal Needs Questionnaire involving different numbers of items. They found that the 15-item version and 10-item version demonstrated the most consistent factorial validity across three samples, which included college students and adolescents in an inpatient psychiatric unit. Cronbach's alpha values suggested good internal consistency with the perceived burdensomeness subscale ranging from .85 to .90 and the thwarted belongingness subscale ranging from .81 to .87 across the three samples. In the current sample, the Interpersonal Needs Questionnaire resulted in a Cronbach's alpha value of .934 suggesting good internal consistency. The perceived burdensomeness subscale resulted in a Cronbach's alpha value of .951 while the thwarted belongingness subscale resulted in a Cronbach's alpha value of .888, both suggesting good internal consistency.

NSSI

The Deliberate Self-Harm Inventory (Gratz, 2001) was used to measure participants' engagement in NSSI. The questionnaire consists of 17 yes/no questions assessing engagement in different types of self-harm. An example of one of these questions is "Have you ever intentionally (i.e., on purpose) cut your wrist, arms, or other area(s) of your body (without intending to kill yourself)?". The original questionnaire asked participants if they

had ever engaged in any of the NSSI methods, however, for the current study I have modified this to engagement over the past two years. This modification allows measurement of more proximal levels of perfectionism, thwarted belongingness, and perceived burdensomeness in relation to NSSI engagement. It also allows participants to potentially remember more details around their experiences for the follow up interview, should they wish to participate in it. Participants that answered yes to any of the questions were then asked how many times they had engaged in that behaviour over the past two years. This was recorded as the frequency of engagement in NSSI. As stated in the preregistration, this was not used for the testing of hypotheses, but rather was gathered for possible further exploratory analysis (which was not undertaken in the current study due to the size of the project). The range of NSSI frequency is reported in the results section below. The final item in this questionnaire asked participants to indicate if they had engaged in any additional methods of NSSI over the past two years that were not stated in the previous 16 questions and, if so, what these methods were.

The Deliberate Self-Harm Inventory (Gratz, 2001) includes additional follow-up questions including, how old the person was when they first did this, when the last time the person engaged in this behaviour was, how many years has the person been engaging in the behaviour, and whether the behaviour has ever resulted in hospitalisation or injury severe enough to require medical treatment. As I did not plan to use this data in the analysis, I chose not to ask participants these questions. This shortened the overall length of the survey and meant that data was not unnecessarily collected when it would not be used. Future research could include these follow up questions to further inform clinical interventions.

Participants were divided into two groups, self-harmers versus non-self-harmers depending on whether they answered yes to any of the 17 questions or no to all questions, respectively. A dichotomous self-harm score was then created with 0 (*no self-harm indicated)* and 1 (*engaged in at least one form of self-harm in the past two years)* and this formed the

dependent variable in most of the analyses. Alternative analysis approaches for NSSI were considered. Frequency data was not chosen due to the highly skewed distribution that could result. It is likely that many participants would indicate a small number of times that they have engaged in NSSI, and a smaller proportion of the participants would indicate a large frequency of NSSI engagement. It is unlikely that a normal or other obvious distribution would result from this data. Counting the different types of NSSI methods used was also considered. However, this measure would not necessarily indicate the severity of engagement, as individuals using multiple methods of NSSI may cause less bodily damage than those using one method that requires hospital treatment, for example.

The Deliberate Self-Harm Inventory (Gratz, 2001) was created by Gratz to produce a measure that was targeted at capturing NSSI as opposed to also including self-harm with suicidal intent. Gratz (2001) highlighted the inconsistency in previous measures around measuring NSSI specifically and thus created the Deliberate Self-Harm Inventory to produce a psychometrically supported measure of NSSI. Gratz found that the Deliberate Self-Harm Inventory demonstrated reliability with a Cronbach's alpha value of .82 measuring internal consistency. Gratz also found adequate test-retest reliability. Regarding validity, the Deliberate Self-Harm Inventory was moderately correlated with the other self-harm and borderline personality measures. Fliege et al. (2006) tested a German translation of the Deliberate Self-Harm Inventory and found similar internal consistency and test-retest reliability as Gratz as well as validity in the measure. Lundh et al. (2007) created a modified version of Gratz's Deliberate Self-Harm Inventory to be more quickly and easily completed by adolescents, in a study of 15-year-olds. A nine-item version of the Deliberate Self-Harm Inventory has also been used (Bjärehed & Lundh, 2008), again in adolescents, asking participants about their deliberate self-harming behaviour in the past six months. Bjärehed and Lundh (2008) report internal consistency Cronbach's alpha values of .66 and .85 at times

one and two, respectively. In the current sample, the Deliberate Self-Harm Inventory resulted in a Cronbach's alpha value of .745 when analysing the dichotomous self-harm items. This value suggests good internal consistency. Use of the Deliberate Self-Harm Inventory (Gratz, 2001) may also be supported due to its question format in which multiple methods of NSSI are specified (Lundh et al., 2007; Muehlenkamp et al., 2012). In providing participants with multiple clear examples of NSSI, participants may be more accurate in their responses (Heath, Schaub, et al., 2008).

Procedure

A copy of the entire survey can be found on the project page (https://osf.io/6uv5w/?view_only=808891990d3640f1901c73961ffe5d14). Once participants clicked on or typed in the Qualtrics link to the survey, they were immediately shown the survey information sheet (see Appendix D). Following this, participants were asked the yes/no question of whether they consented to participating in the survey under the conditions set out in the information sheet. By clicking yes participants were able to continue with the study. An instruction sheet was then displayed asking participants to carefully read each item and to answer as honestly and accurately as they can. It was also highlighted again that they could decline to answer any questions. The support services information was displayed at this point to again highlight to participants that if they had concerns for themselves or others that they could stop the survey and use any of the recommendations listed to seek support. The main survey questions were then displayed in the following order: demographic questions, questions related to perfectionism, questions related to thwarted belongingness and perceived burdensomeness, and questions related to NSSI.

Following these questions, participants were shown the final stages of the survey. Participants were informed about the follow-up interview and asked the yes/no question as to whether they would like more information about this. It was stated that by providing their

email address, which they were asked to do if they selected yes, that their survey answers would be linked to their email address. Participants were then shown the support services details again, in case they wanted to access these having now completed the survey. They were then thanked for their participation and asked to share the link to the survey with others that might wish to participate. Participants were then asked if they would like to enter the optional prize draw to win one of 30 Amazon vouchers worth 25 US Dollars and if so, to provide their email address on the subsequent separate survey page which was recorded separately from their survey answers. Following the prize draw yes/no question, participants were asked a yes/no question as to whether they would like to receive a summary of the findings from the research project. Participants that selected yes to either of these questions were then asked to input their email address before finally being thanked for their time in completing the survey.

Data Analysis

Preregistered statistical analyses were used to analyse the survey data. The preregistered research project information can be found on the project page (https://osf.io/6uv5w/?view_only=808891990d3640f1901c73961ffe5d14). The total of missing data in the final sample was 5.69%. Single expectation-maximisation imputation was used for missing response items. The hypotheses were examined using a combination of Welch's *t*-tests, simple linear regression, logistic regression, and structural equation modelling. The use of multiple analyses afforded increased confidence in the robustness of the results. Using 29 different analytic teams, Silberzahn et al. (2018) demonstrated that different statistical analyses can produce different results, even when the data set remains constant.

The primary analysis of the mediation models utilised logistic regression with the PROCESS SPSS add-on (Hayes, 2017). These hypotheses were firstly examined without any

covariates controlled. Secondly, the robustness of findings was examined by running each analysis while controlling for gender, ethnicity, and age. When doing so, effects of the covariates on both mediating and dependent variables was included.

Following these analyses, structural equation modelling was used as a second technique to test the hypotheses. Structural equation modelling explicitly models measurement error and attempts to control it (Westfall & Yarkoni, 2016). Using structural equation modelling as one the analysis methods in the current research therefore allows measurement error to be accounted for. Rosseel's (2012) lavaan, an R package, was used to conduct the structural equation modelling. It was preregistered that the MLM estimator would be used as this is a robust variant of the maximum likelihood estimator. Further, each model would examine the indirect effects of the IV on the DV via each mediator by creating a parameter for each indirect effect, and then assessing its significance via a nonparametric bootstrap achieved using the se = 'bootstrap' option in lavaan. Contrary to the preregistration, the MLM estimator was not used. The MLM estimator is the maximum likelihood estimation with robust standard errors and Satorra-Bentler test statistics. With the use of bootstrapping to calculate the standard errors the robust standard errors were superfluous. Lavaan could therefore not use the MLM estimator in conjunction with bootstrapping. The ML estimator was therefore used along with bootstrapping and the Satorra-Bentler test statistics. A seed of 42 was set before each analysis. The hypotheses are not about the fit of the models to the respective covariances matrices, so fit statistics are reported but not used to judge whether the hypotheses were supported or not.

The data analysis plan explained above was devised with the following in mind. The initial set of analyses, comprised of Welch's *t*-tests and simple linear regression models, examined whether the bivariate relationships were present. Multiple linear and logistic regression models added controls for the confounding variables, facilitating increased

confidence in causal inferences being made. Finally, structural equation modelling included controls for the confounding variables while also controlling for the effects of measurement error, which could otherwise bias estimates.

Structural equation modelling accounts for measurement error, however, does not directly model NSSI as dichotomous, as the models are estimated based on nominal assumption of multivariate normality. The use of bootstrapping and correction factors, however, improve robustness to this assumption. The logistic regression models do not account for measurement error; however, they more directly measure NSSI as dichotomous and do not assume normality of any of the variables or errors. In undertaking the above mix of analyses, the strengths of each creates a robust test of the hypotheses and increases the credibility of the findings.

The quantitative analyses described above were used to determine whether relationships were statistically significant. It is also important to look at the practical significance of these results (Kirk, 1996). The qualitative portion of the study will also contribute to understanding the clinical significance of these results. Participants chose to discuss what was relevant for them and what impacts their lives, including whether they perceived a relationship between their perfectionism and NSSI.

Data Accessibility Statement

A de-identified copy of the survey dataset is available on the project page (https://osf.io/6uv5w/?view_only=808891990d3640f1901c73961ffe5d14), in accordance with the information provided to participants prior to completing the survey. It is not possible to identify any individuals in the de-identified dataset. The availability of the de-identified dataset allows other researchers to reproduce or extend on the current analyses. Qualitative data has not been made available due to the highly individualised nature of the data and difficulties in ensuring anonymity when sharing complete transcripts.

Assumptions Testing

Statistical models come with a set of underlying assumptions that are made about the data (Field, 2013; Flatt & Jacobs, 2019). When these assumptions are satisfied it suggests that some forms of bias have been reduced and that the statistical results are in line with what the model is designed to test. When the assumptions are violated, the results may need to be interpreted with caution (Field, 2013). Consistent with the preregistration plan, the results have been reported below regardless of any breaches of assumptions. However, an exploratory examination of the validity of the distributional assumptions of each confirmatory analysis can be found in Appendix E. All of the observations are independent.

Confounding Variables

A confounding variable is a variable related to both the independent and dependent variables which may bias the result and produce a spurious correlation (Mackinnon et al., 2000; McNamee, 2003; Rohrer, 2018). Specifically, the confounding variable must be causally related to the dependent variable and correlated with the independent variable without being affected by it. In the current study for example, a confounding variable must be correlated with perfectionism and cause engagement in NSSI. Confounding variables can result in either underestimation or overestimation of the effect and can therefore significantly impact research results (McNamee, 2003; Rohrer, 2018). In experimental research, potential confounding variables are reduced due to random assignment of participants to different conditions (Austin, 2011; MacKinnon et al., 2000). When researchers want to examine causality using observational data, however, confounding variables need to be considered and controlled (McNamee, 2003; Rohrer, 2018). While this is an important part of data research design and data collection and analysis, it is also important to consider that controlling for covariates that are not in fact confounding factors can also bias the research (MacKinnon et al., 2000; Rohrer, 2018). As the current research uses observational data, confounding

variables have been considered and controlled for. These confounding variables are age, gender, and ethnicity. MacKinnon et al. (2000) highlights that confounding variables are frequently demographic variables. The current analyses will be carried out both with and without covariates controlled for. The effects of controlling for these covariates will therefore be reported in the quantitative results chapter.

Firstly, age has been determined as a confounding variable in the current study. Rates of NSSI may differ across different age groups (Plener et al., 2016). In adults in the United States, Klonsky (2011) found a lifetime prevalence rate for NSSI of 5.9%. When examining adolescents however, Giletta et al. (2012) found 21.9% of individuals between 14 and 19 years of age had engaged in at least one episode of NSSI within the past six months. Plener et al. (2016) found that younger age groups had higher lifetime prevalence rates of NSSI than older age groups, with participants ranging from 14 to 94 years. Regarding perfectionism, Curran and Hill (2017) examined differences in perfectionism across birth cohorts from 1989 to 2016. They found that when using the MPS-HF (Hewitt & Flett, 1991) all three types of perfectionism have increased over time. As our sample includes participants from ages 18 to 35 years, this suggests that 18-year-olds might have higher rates of perfectionism than 35-year-olds, which Curran and Hill suggest may be due to perceptions of increasing demands placed on individuals by themselves and others and holding others to these demands, over time. Age will therefore be controlled for in the current study.

Secondly, gender will be controlled for in the current research. As discussed previously, research suggests that females have higher rates of engagement in NSSI than males, although this can vary depending on which method of NSSI is used and whether the sample is clinical or community based (Bresin & Schoenleber, 2015; Heath, Schaub, et al., 2008). The prevalence of perfectionism in females versus males does not appear to have been as widely examined and some studies have found differences between these groups (e.g.,

Stallman & Hurst, 2011), while others have not (e.g., Stoeber & Stoeber, 2009). Stallman and Hurst (2011) found that females scored significantly higher than males in MPS-F (Frost et al., 1990) measured perfectionism. Females scored significantly higher than males in the subscales organisation and high standards. Results are limited and mixed in this area, however, as there are some findings that gender may affect perfectionism, gender will be controlled for in the current study.

Finally, ethnicity has been determined as a confounding variable in the current research. Research such as Muehlenkamp et al.'s (2012) study review suggest that NSSI is present across a range of countries. However, rates of NSSI may differ between ethnicities. For example, Muehlenkamp and Gutierrez (2007) showed that Caucasian participants had significantly higher rates of self-harm than non-Caucasian participants in the United States. In Fitzgerald and Curtis' (2017) New Zealand university sample, they found that New Zealand European and New Zealand Māori participants were at greater risk of NSSI engagement than all other ethnicities. Regarding perfectionism, Castro and Rice (2003) examined rates of perfectionism in Asian American, African American and Caucasian American students. Asian Americans scored significantly higher than the other groups on the concern over mistakes, parental criticism and doubts about actions subscales, and higher on the personal standards subscale than Caucasian Americans. Asian Americans and African Americans scored significantly higher on the parental expectations subscale than Caucasian Americans. While research appears to be limited regarding differences in perfectionism across ethnicities, these findings suggest that perfectionism may differ across ethnicities. A tentative inference is therefore being made in the current study that perfectionism may differ across ethnicities in New Zealand and ethnicity is therefore controlled for in the current study.

Chapter 8

Quantitative Results

Primary Hypotheses

Descriptive Statistics

Descriptive statistics for the key variables are presented in Table 2. In the sample of 213 participants, 43.7% identified as not having engaged in NSSI in the past two years and 56.3% identified having engaged in at least one form of NSSI in the past two years. Of those participants that indicated having engaged in NSSI, frequency of engagement within the sample ranged from 1 to over 100 acts over the past two years.

Welch's t-test

Welch's independent samples t-tests were conducted to test five preregistered hypotheses.

Hypothesis 1 was tested, that overall perfectionism would be positively related to NSSI. The results supported Hypothesis 1 as there was a significant difference in overall perfectionism scores between those who had engaged in NSSI ($M = 97.158$, $SD = 19.513$) and those who had not ($M = 81.634$, $SD = 17.172$, $t(207.56) = 6.164$, $p < .001$, $d = 0.838$) with those who had engaged in NSSI showing a significantly higher average overall perfectionism score (as shown in Figure 4). The effect size, $d = 0.838$, is considered to be a large effect size as Cohen's (1988) *d* values of 0.2, 0.5 and 0.8 indicate small, medium and large effect sizes, respectively.

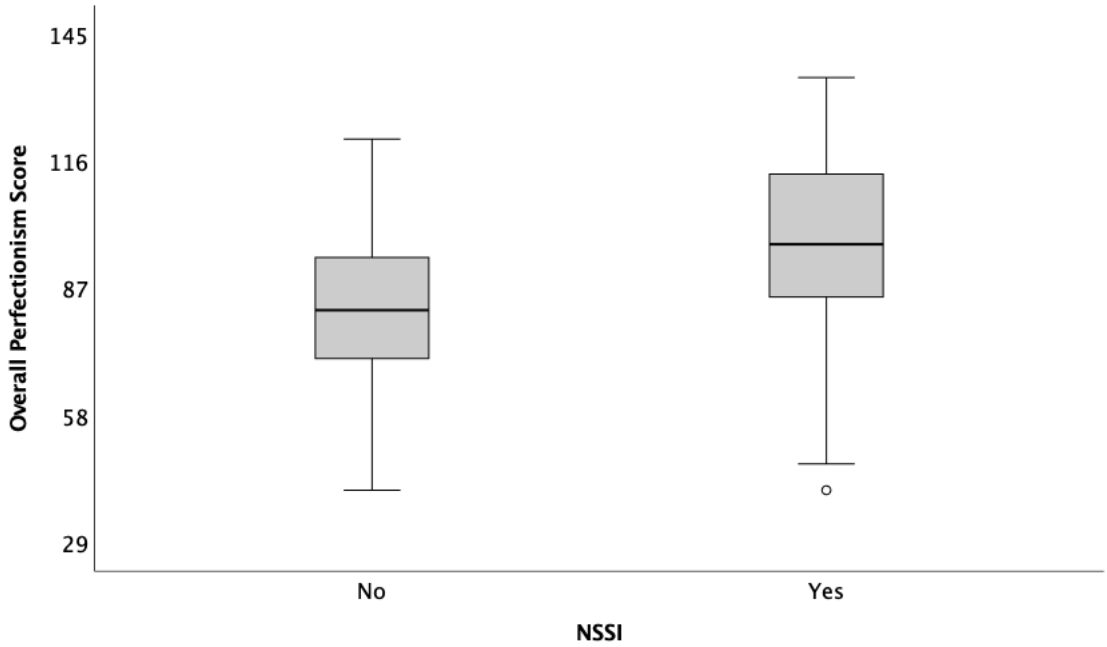
Table 2

Mean and Standard Deviations for the Key Variables

Variable	*M*	*SD*	Possible score range
Overall perfectionism	90.39	20.03	29 – 145
Perfectionistic strivings	25.54	5.69	7 – 35
Perfectionistic concerns	40.93	10.91	13 – 65
Thwarted belongingness	29.62	11.17	9 – 63
Perceived burdensomeness	14.18	8.90	6 – 42

Figure 4

Box-and-Whisker Plot Comparing the Median, Lower and Upper Quartile, and Minimum and Maximum Overall Perfectionism Scores for Those That Have and Have Not Engaged in NSSI

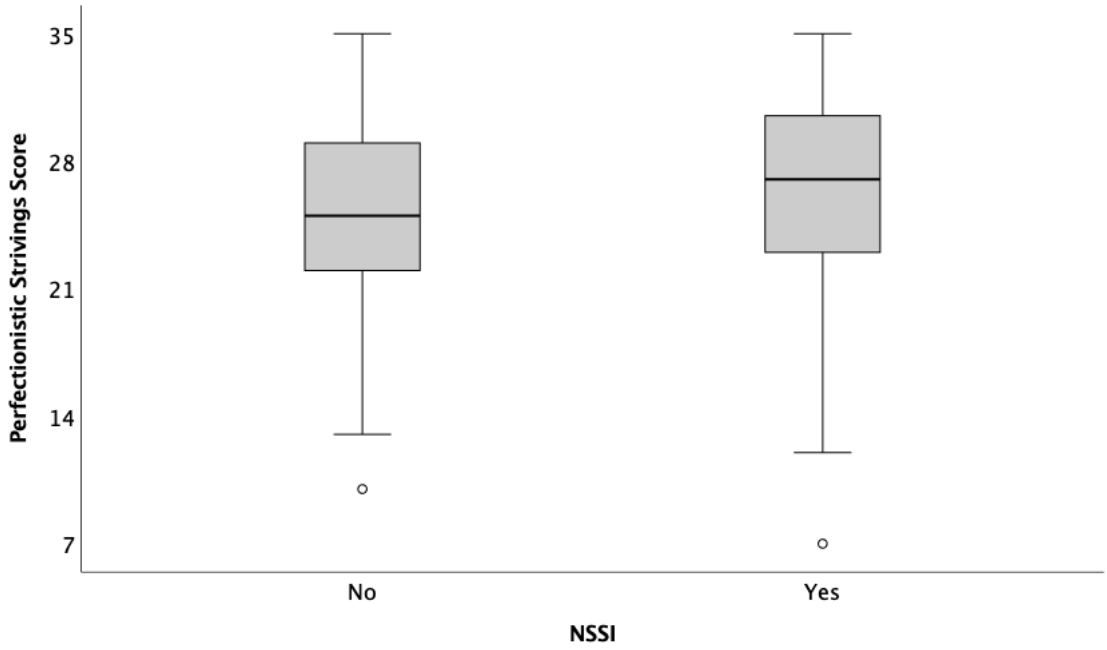


Note. One outlier is shown as it is outside the whiskers of the box plot. This outlier is a data value that is 1.5 times the interquartile range below the first quartile.

The second hypothesis predicted that perfectionistic strivings would be positively related to NSSI. The results supported Hypothesis 2 as there was a significant difference in perfectionistic strivings scores between those who had engaged in NSSI (M = 26.250, SD = 5.851) and those who had not (M = 24.634, SD = 5.375, t(204.95) = 2.093, p = .038, d = 0.286) with those who had engaged in NSSI showing a significantly higher average perfectionistic strivings score (as shown in Figure 5).

Figure 5

Box-and-Whisker Plot Comparing the Median, Lower and Upper Quartile, and Minimum and Maximum Perfectionistic Strivings Scores for Those That Have and Have Not Engaged in NSSI

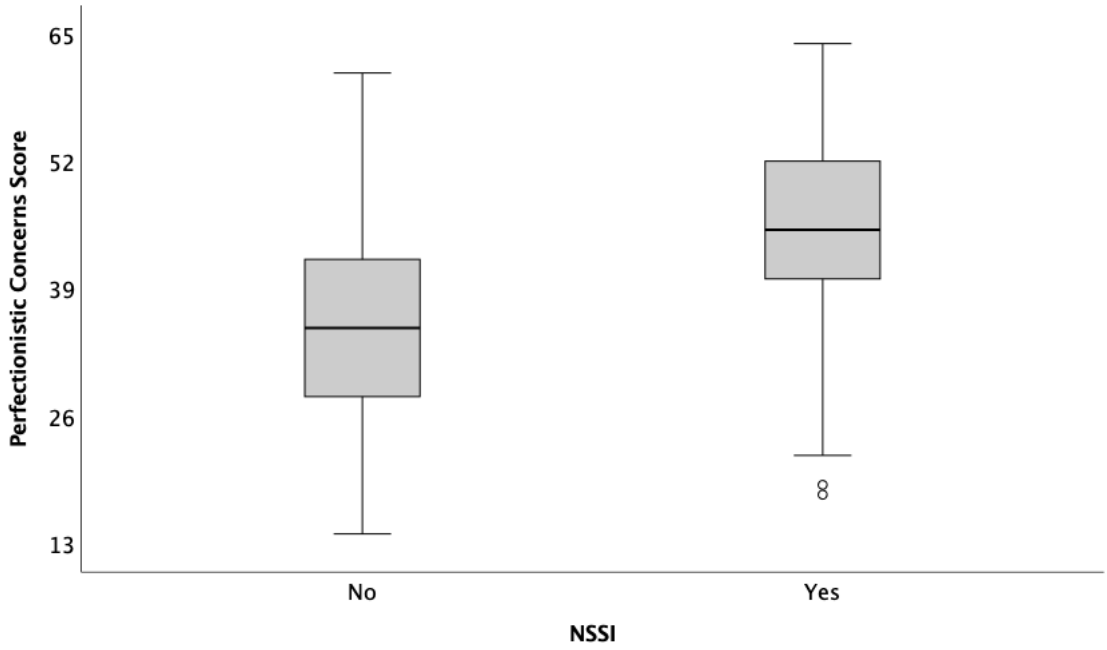


Note. Two outliers are shown in the plot. These outliers are data values that are 1.5 times the interquartile range below the first quartile.

The third hypothesis predicted that perfectionistic concerns would be positively related to NSSI. The results supported Hypothesis 3 as there was a significant difference in perfectionistic concerns scores between those who had engaged in NSSI (M = 45.100, SD = 9.793) and those who had not (M = 35.548, SD = 9.913, t(196.77) = 7.011, p < .001, d = 0.970) with those who had engaged in NSSI showing a significantly higher average perfectionistic concerns score (as shown in Figure 6).

Figure 6

Box-and-Whisker Plot Comparing the Median, Lower and Upper Quartile, and Minimum and Maximum Perfectionistic Concerns Scores for Those That Have and Have Not Engaged in NSSI

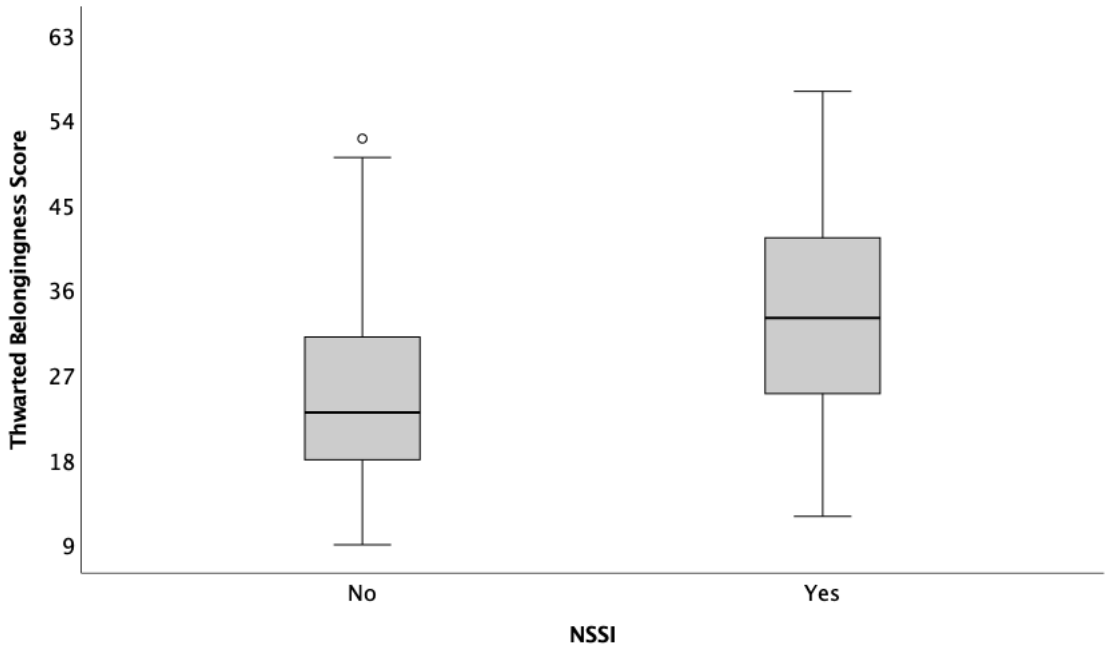


Note. Two outliers are shown in the plot. These outliers are data values that are 1.5 times the interquartile range below the first quartile.

Hypotheses 4 to 9 were tested by another analysis type and are therefore discussed below. Hypothesis 10 predicted that thwarted belongingness would be positively related to NSSI. The results supported the hypothesis as there was a significant difference in thwarted belongingness scores between those who had engaged in NSSI ($M = 33.233$, $SD = 10.631$) and those who had not ($M = 24.957$, $SD = 10.107$, $t(202.38) = 5.794$, $p < .001$, $d = 0.795$) with those who had engaged in NSSI showing a significantly higher average thwarted belongingness score (as shown in Figure 7).

Figure 7

Box-and-Whisker Plot Comparing the Median, Lower and Upper Quartile, and Minimum and Maximum Thwarted Belongingness Scores for Those That Have and Have Not Engaged in NSSI

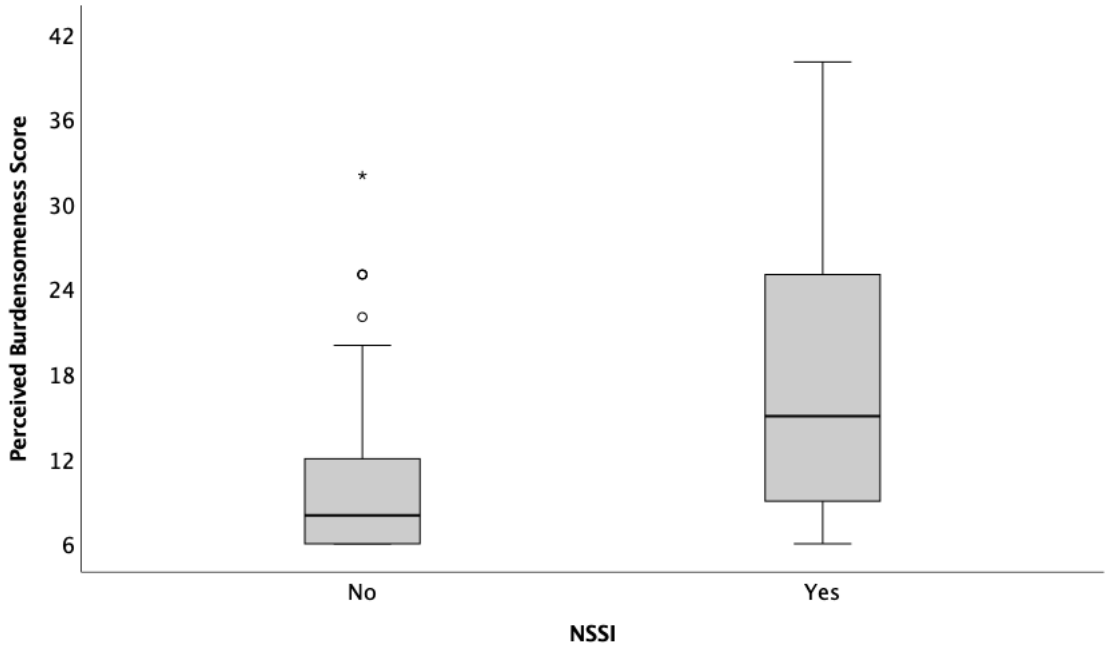


Note. One outlier is shown in the plot. This outlier is a data value that is 1.5 times the interquartile range above the third quartile.

Hypothesis 11 predicted that perceived burdensomeness would be positively related to NSSI. The results supported the hypothesis as there was a significant difference in perceived burdensomeness scores between those who had engaged in NSSI (M = 17.408, SD = 9.664) and those who had not (M = 10.011, SD = 5.528, t(195.59) = 7.032, p < .001, d = 0.911) with those who had engaged in NSSI showing a significantly higher average perceived burdensomeness score (as shown in Figure 8).

Figure 8

Box-and-Whisker Plot Comparing the Median, Lower and Upper Quartile, and Minimum and Maximum Perceived Burdensomeness Scores for Those That Have and Have Not Engaged in NSSI



Note. Four outliers are shown in the plot. The three outliers represented by circles are data values that are 1.5 times the interquartile range above the third quartile. The outlier represented by the asterisk indicates that the data value is 3 times the interquartile range above the third quartile.

Simple Linear Regression

Simple linear regression was used to test six of the hypotheses. Statistical significance was determined at the 0.05 alpha level.

Hypothesis 4 stated that overall perfectionism would positively predict thwarted belongingness. The simple linear regression found that 16.6% of variance in thwarted belongingness was accounted for by overall perfectionism ($R^2 = .166$). The results supported the hypothesis as the model was significant, $B = .227$, $SE = .035$, $r = .407$, $t = 6.47$, $p < .001$. That is, for every one-point increase in overall perfectionism score (on a scale from 29 to 145 points), participants on average have an increase of .227 in thwarted belongingness score (on a scale from 9 to 63 points).

Hypothesis 5 stated that overall perfectionism would positively predict perceived burdensomeness. The simple linear regression found that 21.1% of variance in perceived burdensomeness was accounted for by overall perfectionism ($R^2 = .211$). The results supported the hypothesis as the model was significant, $B = .204$, $SE = .027$, $r = .459$, $t = 7.50$, $p < .001$. That is, for every one-point increase in overall perfectionism score (on a scale from 29 to 145 points), participants on average have an increase of .204 in perceived burdensomeness score (on a scale from 6 to 42 points).

Hypothesis 6 stated that perfectionistic strivings would positively predict thwarted belongingness. The simple linear regression found that almost none of the variance in thwarted belongingness was predicted by perfectionistic strivings ($R^2 = .000$). The results do not support the hypothesis as the model was non-significant, $B = .021$, $SE = .135$, $r = .011$, $t = 0.156$, $p = .876$.

Hypothesis 7 stated that perfectionistic strivings would positively predict perceived burdensomeness. The simple linear regression found that 0.50% of the variance in perceived burdensomeness was predicted by perfectionistic strivings ($R^2 = .005$). The results do not

support the hypothesis as the model was non-significant, $B = .114$, $SE = .107$, $r = .073$, $t = 1.064$, $p = .289$.

Hypothesis 8 stated that perfectionistic concerns would positively predict thwarted belongingness. The simple linear regression found that 25.3% of variance in thwarted belongingness was accounted for by perfectionistic concerns ($R^2 = .253$). The results supported the hypothesis as the model was significant, $B = .515$, $SE = .061$, $r = .503$, $t = 8.45$, $p < .001$. That is, for every one-point increase in perfectionistic concerns score (on a scale from 13 to 65), participants on average have an increase of .515 in thwarted belongingness score (on a scale from 9 to 63 points).

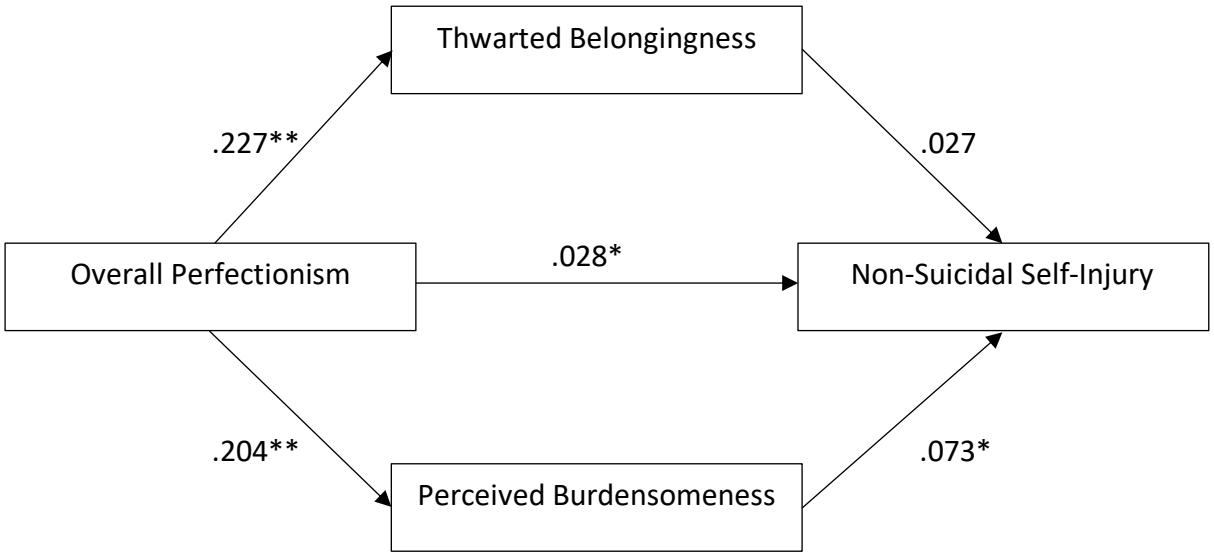
Hypothesis 9 stated that perfectionistic concerns would positively predict perceived burdensomeness. The simple linear regression found that 24.6% of variance in perceived burdensomeness was accounted for by perfectionistic concerns ($R^2 = .246$). The results supported the hypothesis as the model was significant, $B = .405$, $SE = .049$, $r = .496$, $t = 8.30$, $p < .001$. That is, for every one-point increase in perfectionistic concerns score (on a scale from 13 to 65), participants on average have an increase of .405 in perceived burdensomeness score (on a scale from 6 to 42 points).

Logistic Regression

Logistic regression was used to test Hypotheses 12, 13 and 14. The PROCESS (Hayes, 2017) add-on was used with SPSS to enable the testing of mediation models. An alpha level of 0.05 was used to determine statistical significance. The hypotheses would be considered to be supported if the indirect effects on NSSI via thwarted belongingness and perceived burdensomeness are both statistically significant at the .05 alpha level.
Hypothesis 12 stated that the relationship between overall perfectionism and NSSI would be partially mediated by thwarted belongingness and perceived burdensomeness (as shown in Figure 9). The direct effect of overall perfectionism on thwarted belongingness was positive

Figure 9

Unstandardised Regression Coefficients for the Relationship Between Overall Perfectionism and NSSI Mediated by Thwarted Belongingness and Perceived Burdensomeness



Note. *$p < .05$. **$p < .001$.

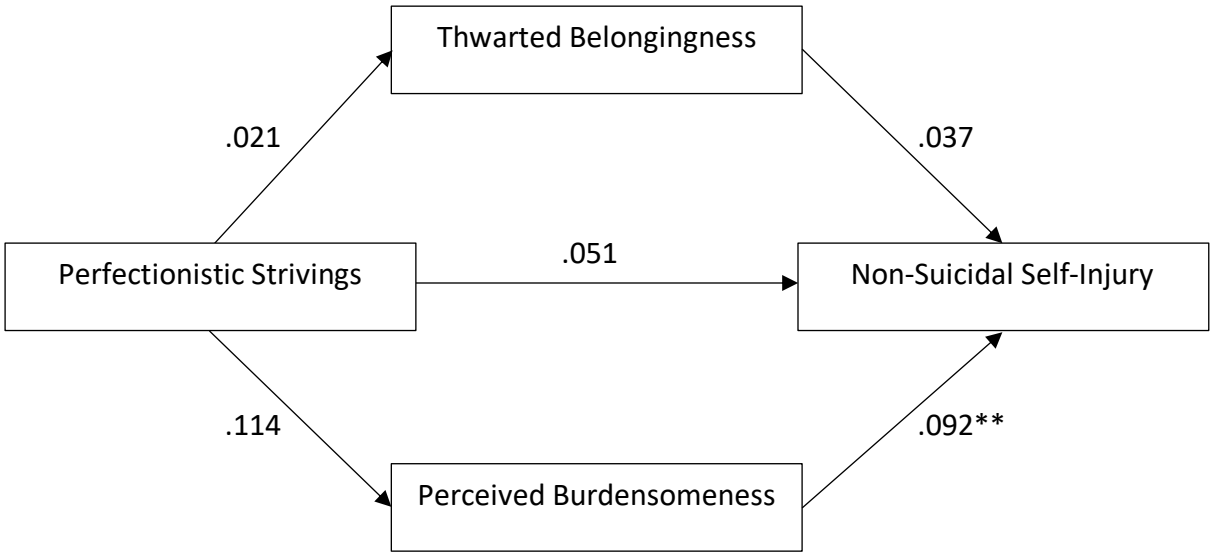
and significant ($B = .227$, $SE = .035$, $p < .001$). The direct effect of overall perfectionism on perceived burdensomeness was positive and significant ($B = .204$, $SE = .027$, $p < .001$). The direct effect of thwarted belongingness on NSSI was positive but not significant ($B = .027$, $SE = .019$, $p = .164$) in the model. The direct effect of perceived burdensomeness on NSSI was positive and significant ($B = .073$, $SE = .028$, $p = .008$). The direct effect of overall perfectionism on NSSI was positive and significant ($B = .028$, $SE = .009$, $p = .003$). The indirect effect of overall perfectionism via thwarted belongingness ($IE = .006$) was positive, but non-significant, 95% CI [-.002, .016]. The indirect effect of overall perfectionism via perceived burdensomeness ($IE = .015$) was positive and statistically significant, 95% CI [.005, .028].

Overall Hypothesis 12 is not supported as the indirect effect of overall perfectionism via thwarted belongingness was non-significant. However, there was evidence of a relationship between overall perfectionism and NSSI that was partially mediated by perceived burdensomeness.

Hypothesis 13 stated that the relationship between perfectionistic strivings and NSSI would be partially mediated by thwarted belongingness and perceived burdensomeness (as shown in Figure 10). The direct effect of perfectionistic strivings on thwarted belongingness was not significant (B = .021, SE = .135, p = .876). The direct effect of perfectionistic strivings on perceived burdensomeness was not significant (B = .114, SE = .107, p = .289). The direct effect of thwarted belongingness on NSSI was positive but not significant (B = .037, SE = .019, p = .051) in the model. The direct effect of perceived burdensomeness on

Figure 10

Unstandardised Regression Coefficients for the Relationship Between Perfectionistic Strivings and NSSI Mediated by Thwarted Belongingness and Perceived Burdensomeness



Note. **p < .001.

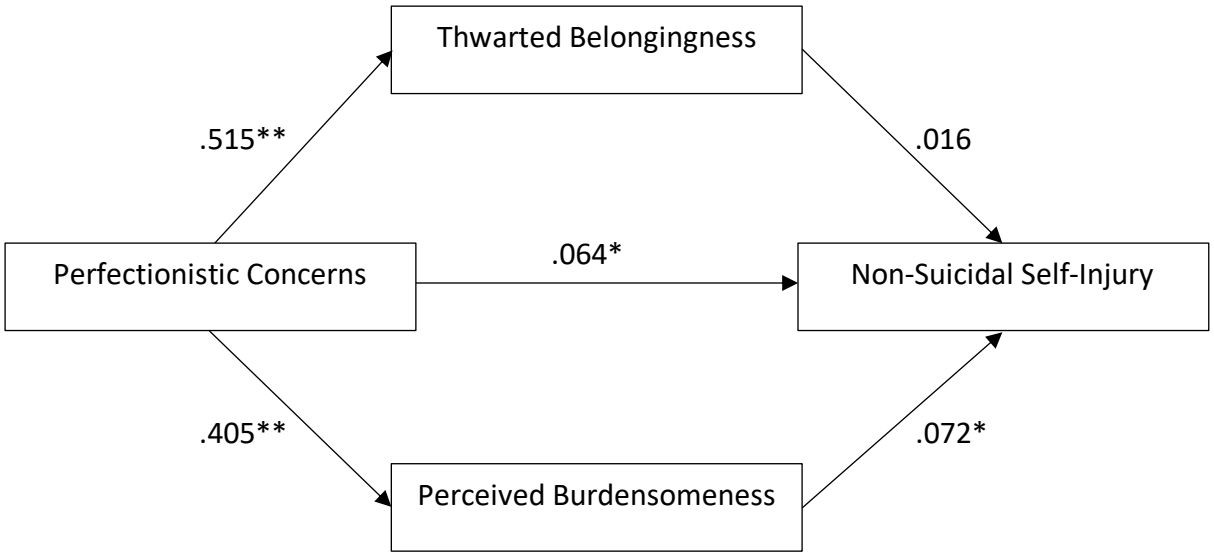
NSSI was positive and significant (B = .092, SE = .027, p < .001). The direct effect of perfectionistic strivings on NSSI was positive but not significant (B = .051, SE = .028, p = .066). The indirect effect of perfectionistic strivings via thwarted belongingness (IE = .001) was positive, but non-significant, 95% CI [-.010, .015]. The indirect effect of perfectionistic strivings via perceived burdensomeness (IE = .011) was positive but non-significant, 95% CI [-.008, .036].

Overall Hypothesis 13 is not supported as the indirect effects of perfectionistic strivings via thwarted belongingness and perceived burdensomeness are non-significant.

Hypothesis 14 stated that the relationship between perfectionistic concerns and NSSI would be partially mediated by thwarted belongingness and perceived burdensomeness (as shown in Figure 11). The direct effect of perfectionistic concerns on thwarted belongingness

Figure 11

Unstandardised Regression Coefficients for the Relationship Between Perfectionistic Concerns and NSSI Mediated by Thwarted Belongingness and Perceived Burdensomeness



Note. *p < .05. **p < .001.

was positive and significant (B = .515, SE = .061, p < .001). The direct effect of perfectionistic concerns on perceived burdensomeness was positive and significant (B = .405, SE = .049, p < .001). The direct effect of thwarted belongingness on NSSI was positive but not significant (B = .016, SE = .020, p = .410) in the model. The direct effect of perceived burdensomeness on NSSI was positive and significant (B = .072, SE = .028, p = .009). The direct effect of perfectionistic concerns on NSSI was positive and significant (B = .064, SE = .018, p < .001). The indirect effect of perfectionistic concerns via thwarted belongingness (IE = .008) was positive, but non-significant, 95% CI [-.012, .032]. The indirect effect of perfectionistic concerns via perceived burdensomeness (IE = .029) was positive and statistically significant, 95% CI [.009, .056].

Overall Hypothesis 14 is not supported as the indirect effect of perfectionistic concerns via thwarted belongingness was non-significant. However, a relationship between perfectionistic concerns and NSSI is supported and that relationship is supported to be partially mediated by perceived burdensomeness.

Primary Hypotheses with Covariates Controlled

The primary tests of hypotheses above were conducted again by controlling for age, ethnicity and gender. This allowed for more credible, albeit still tentative, causal inferences to be made. One participant was excluded from this testing as they did not provide their ethnicity in the online questionnaire. Hypotheses 1, 2, 3, 10, 11, 12, 13 and 14 used multiple logistic regression while Hypotheses 4, 5, 6, 7, 8 and 9 used multiple linear regression. The coefficients for the covariates are not included below for the sake of brevity. However the tables presenting these can be generated using the syntax accessible on the preregistered page associated with the current research.

Multiple Logistic Regression

Firstly, Hypothesis 1 was tested, that overall perfectionism would be positively related to NSSI. When holding age, ethnicity and gender constant, a one unit increase in overall perfectionism score was associated with a 4.7% increase in the odds of engaging in NSSI (B = .046, SE = .009, Wald = 25.810, odds ratio = 1.047, $p < .001$). Hypothesis 1 was therefore supported in this additional analysis with controls.

Hypothesis 2 was tested, that perfectionistic strivings would be positively related to NSSI. When holding age, ethnicity and gender constant, a one unit increase in perfectionistic strivings score was associated with a 5.1% increase in the odds of engaging in NSSI (B = .050, SE = .026, Wald = 3.832, odds ratio = 1.051, $p = .050$). Hypothesis 2 was therefore supported in this additional analysis with controls.

Hypothesis 3 was tested, that perfectionistic concerns would be positively related to NSSI. When holding age, ethnicity and gender constant, a one unit increase in perfectionistic concerns score was associated with a 10.3% increase in the odds of engaging in NSSI (B = .098, SE = .018, Wald = 31.117, odds ratio = 1.103, $p < .001$). Hypothesis 3 was therefore supported in this additional analysis with controls.

Hypothesis 10, that thwarted belongingness would be positively related to NSSI, was tested. When holding age, ethnicity and gender constant, a one unit increase in thwarted belongingness score was associated with a 7.7% increase in the odds of engaging in NSSI (B = .074, SE = .016, Wald = 22.715, odds ratio = 1.077, $p < .001$). Hypothesis 10 was therefore supported in this additional analysis with controls.

Hypothesis 11, that perceived burdensomeness would be positively related to NSSI, was tested. When holding age, ethnicity and gender constant, a one unit increase in perceived burdensomeness score was associated with a 13.4% increase in the odds of engaging in NSSI

(*B* = .125, *SE* = .024, Wald = 26.891, odds ratio = 1.134, $p < .001$). Hypothesis 11 was therefore supported in this additional analysis with controls.

Hypothesis 12 was tested, that the relationship between overall perfectionism and NSSI would be partially mediated by thwarted belongingness and perceived burdensomeness. When holding age, ethnicity and gender constant, the direct effect of overall perfectionism on thwarted belongingness was positive and significant (*B* = .219, *SE* = .036, $p < .001$). The direct effect of overall perfectionism on perceived burdensomeness was positive and significant (*B* = .208, *SE* = .028, $p < .001$). The direct effect of thwarted belongingness on NSSI was positive but not significant (*B* = .024, *SE* = .019, $p = .211$) in the model. The direct effect of perceived burdensomeness on NSSI was positive and significant (*B* = .076, *SE* = .028, $p = .007$). The direct effect of overall perfectionism on NSSI was positive and significant (*B* = .027, *SE* = .010, $p = .005$). The indirect effect of overall perfectionism via thwarted belongingness (*IE* = .005) was positive, but non-significant, 95% CI [-.003, .016]. The indirect effect of overall perfectionism via perceived burdensomeness (*IE* = .016) was positive and statistically significant, 95% CI [.006, .031]. Overall Hypothesis 12 was not supported in this additional analysis with controls as consistent with the Hypothesis 12 testing without controls, however, perceived burdensomeness remained a significant partial mediator.

Hypothesis 13 was tested, that the relationship between perfectionistic strivings and NSSI would be partially mediated by thwarted belongingness and perceived burdensomeness. When holding age, ethnicity and gender constant, the direct effect of perfectionistic strivings on thwarted belongingness was negative but not significant (*B* = -.012, *SE* = .136, $p = .932$) in the model. The direct effect of perfectionistic strivings on perceived burdensomeness was positive but not significant (*B* = .114, *SE* = .109, $p = .301$) in the model. The direct effect of thwarted belongingness on NSSI was positive but not significant (*B* = .033, *SE* = .019, $p =$

.085) in the model. The direct effect of perceived burdensomeness on NSSI was positive and significant (B = .094, SE = .027, p < .001). The direct effect of perfectionistic strivings on NSSI was positive but not significant (B = .045, SE = .028, p = .109). The indirect effect of perfectionistic strivings via thwarted belongingness (IE < -.001) was negative, but non-significant, 95% CI [-.016, .011]. The indirect effect of perfectionistic strivings via perceived burdensomeness (IE = .011) was positive and non-significant, 95% CI [-.009, .038]. Overall Hypothesis 13 was not supported in this additional analysis with controls as consistent with the Hypothesis 13 testing without controls.

Hypothesis 14 was tested, that the relationship between perfectionistic concerns and NSSI would be partially mediated by thwarted belongingness and perceived burdensomeness. When holding age, ethnicity and gender constant, the direct effect of perfectionistic concerns on thwarted belongingness was positive and significant (B = .515, SE = .064, p < .001). The direct effect of perfectionistic concerns on perceived burdensomeness was positive and significant (B = .421, SE = .051, p < .001). The direct effect of thwarted belongingness on NSSI was positive but not significant (B = .014, SE = .020, p = .476) in the model. The direct effect of perceived burdensomeness on NSSI was positive and significant (B = .075, SE = .028, p = .007). The direct effect of perfectionistic concerns on NSSI was positive and significant (B = .063, SE = .019, p = .001). The indirect effect of perfectionistic concerns via thwarted belongingness (IE = .007) was positive, but non-significant, 95% CI [-.013, .030]. The indirect effect of perfectionistic concerns via perceived burdensomeness (IE = .032) was positive and statistically significant, 95% CI [.010, .061]. Overall Hypothesis 14 was not supported in this additional analysis with controls as consistent with the Hypothesis 14 testing without controls, however, perceived burdensomeness remained a significant partial mediator.

Multiple Linear Regression

Hypothesis 4 was tested, that overall perfectionism would be positively related to thwarted belongingness. Multiple linear regression found that overall perfectionism alone predicted 16.4% of the variance in thwarted belongingness ($R^2 = .164$). Adding the control variables of age, ethnicity and gender, explained an additional 0.3% of the variance ($R^2 = .003$). Overall the model explains 16.7% of the variance. When holding age, ethnicity and gender constant, overall perfectionism significantly predicted thwarted belongingness score *(B* = .219, *SE* = .036, β = .395, *t* = 6.04, *p* < .001). That is, for every one-point increase in overall perfectionism score (on a scale from 29 to 145 points), participants on average have an increase of .219 in thwarted belongingness score (on a scale from 9 to 63 points). Hypothesis 4 was therefore supported in this additional analysis with controls.

Hypothesis 5, that overall perfectionism would be positively related to perceived burdensomeness, was tested. Overall the model explains 21.5% of the variance. When holding age, ethnicity and gender constant, overall perfectionism significantly predicted thwarted belongingness score *(B* = .208, *SE* = .028, β = .468, *t* = 7.37, *p* < .001). Hypothesis 5 was therefore supported in this additional analysis with controls.

Hypothesis 6 was tested, that perfectionistic strivings would be positively related to thwarted belongingness. Overall the model explains 2% of the variance. When holding age, ethnicity and gender constant, perfectionistic strivings did not significantly predict the thwarted belongingness score *(B* = -.012, *SE* = .136, β = -.006, *t* = -0.085, *p* = .932). Hypothesis 6 was therefore not supported in this additional analysis with controls as consistent with Hypothesis 6 testing without controls.

Hypothesis 7, that perfectionistic strivings would be positively related to perceived burdensomeness was tested. Overall the model explains 1.3% of the variance. When holding age, ethnicity and gender constant, perfectionistic strivings did not significantly predict

thwarted belongingness score *(B* = .113, *SE* = .109, β = .072, *t* = 1.038, *p* = .301). Hypothesis 7 was therefore not supported in this additional analysis with controls as consistent with Hypothesis 7 testing without controls.

Hypothesis 8, that perfectionistic concerns would be positively related to thwarted belongingness, was tested. Overall the model explains 25.4% of the variance. When holding age, ethnicity and gender constant, perfectionistic concerns significantly predicted thwarted belongingness score *(B* = .515, *SE* = .064, β = .505, *t* = 8.06, *p* < .001). Hypothesis 8 was therefore supported in this additional analysis with controls.

Hypothesis 9 was tested, that perfectionistic concerns would be positively related to perceived burdensomeness. Overall the model explains 25.3% of the variance. When holding age, ethnicity and gender constant, perfectionistic concerns significantly predicted thwarted belongingness score *(B* = .421, *SE* = .051, β = .517, *t* = 8.24, *p* < .001). Hypothesis 9 was therefore supported in this additional analysis with controls.

Structural Equation Modelling with Covariates Controlled

Structural equation modelling was conducted as a second analysis technique to test Hypotheses 1 to 14 controlling for the covariates age, ethnicity and gender. This was undertaken to allow us to account for the effects of measurement error. The estimator ML was used. Lavaan (Rosseel, 2012), an R package, was used to conduct the structural equation modelling. Each model tested the indirect effects of the independent variable on the dependent variable via each mediator. This is tested by creating a parameter for each indirect effect and then assessing its significance via a nonparametric bootstrap achieved using the se = 'bootstrap' option in lavaan (Rosseel, 2012). Similarly, to the regression analyses above, the preregistered inferential criteria stated that the mediational hypotheses will be considered supported if the indirect effect is significant. The hypotheses are not about the fit of the models to the respective covariances matrices, so fit statistics are reported below but were not

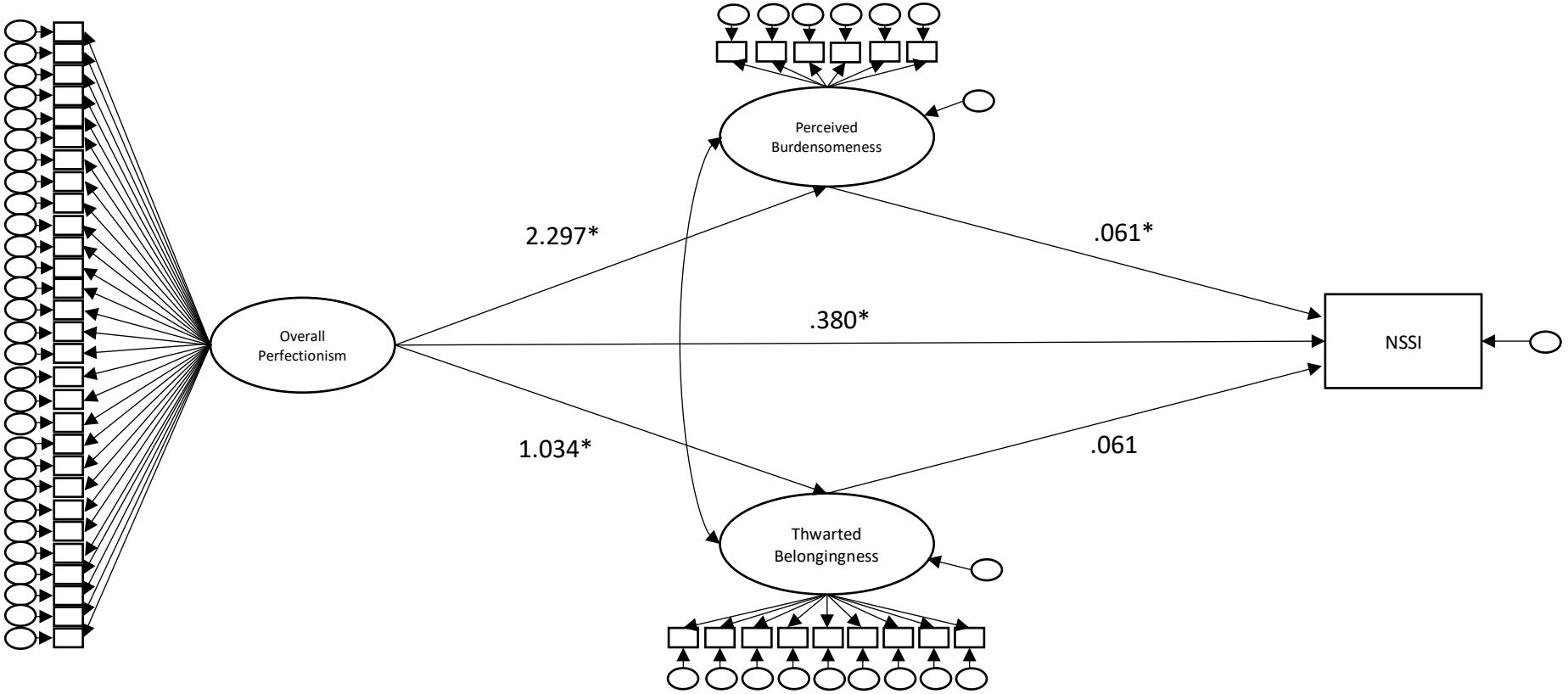
used to judge whether the hypotheses are supported or not. The Satorra-Bentler scaled chi-square (SB χ^2), Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA) will be reported for each model, however, with a chi-square p value > 0.05, CFI > 0.95, and RMSEA < 0.06 interpreted as indicating good fit (Hu & Bentler, 1999).

The first structural equation model tested is displayed in Figure 12 below. This tested Hypothesis 12 as well as Hypotheses 1, 4, 5, 10 and 11. Hypothesis 12 predicted that the relationship between overall perfectionism and NSSI would be partially mediated by thwarted belongingness and perceived burdensomeness.

The direct effect of overall perfectionism on thwarted belongingness was positive and significant (B = 1.034, SE = .376, z = 2.746, p = .006). This supports Hypothesis 4. The direct effect of overall perfectionism on perceived burdensomeness was positive and significant (B = 2.297, SE = .703, z = 3.267, p = .001). This supports Hypothesis 5. The direct effect of thwarted belongingness on NSSI was positive but not significant (B = .061, SE = .065, z = 0.936, p = .349). This does not support Hypothesis 10. The direct effect of perceived burdensomeness on NSSI was positive and significant (B = .061, SE = .030, z = 2.037, p = .042). This supports Hypothesis 11. The direct effect of overall perfectionism on NSSI was positive and significant (B = .380, SE = .166, z = 2.292, p = .022). The indirect effect of overall perfectionism via thwarted belongingness (B = .063, SE = .073, z = 0.863, p = .388) was positive, but non-significant. The indirect effect of overall perfectionism via perceived burdensomeness (B = .140, SE = .090, z = 1.554, p = .120) was positive, but non-significant. This does not support Hypothesis 12. The total effect of overall perfectionism on NSSI was positive and significant (B = .584, SE = .186, z = 3.142, p = .002). This supports Hypothesis 1.

Figure 12

Structural Equation Model Path Diagram Showing Unstandardised Parameter Estimates for the Relationship Between Overall Perfectionism and NSSI Mediated by Perceived Burdensomeness and Thwarted Belongingness



Note. Item and error labels have been omitted for brevity.

*$p < .05$.

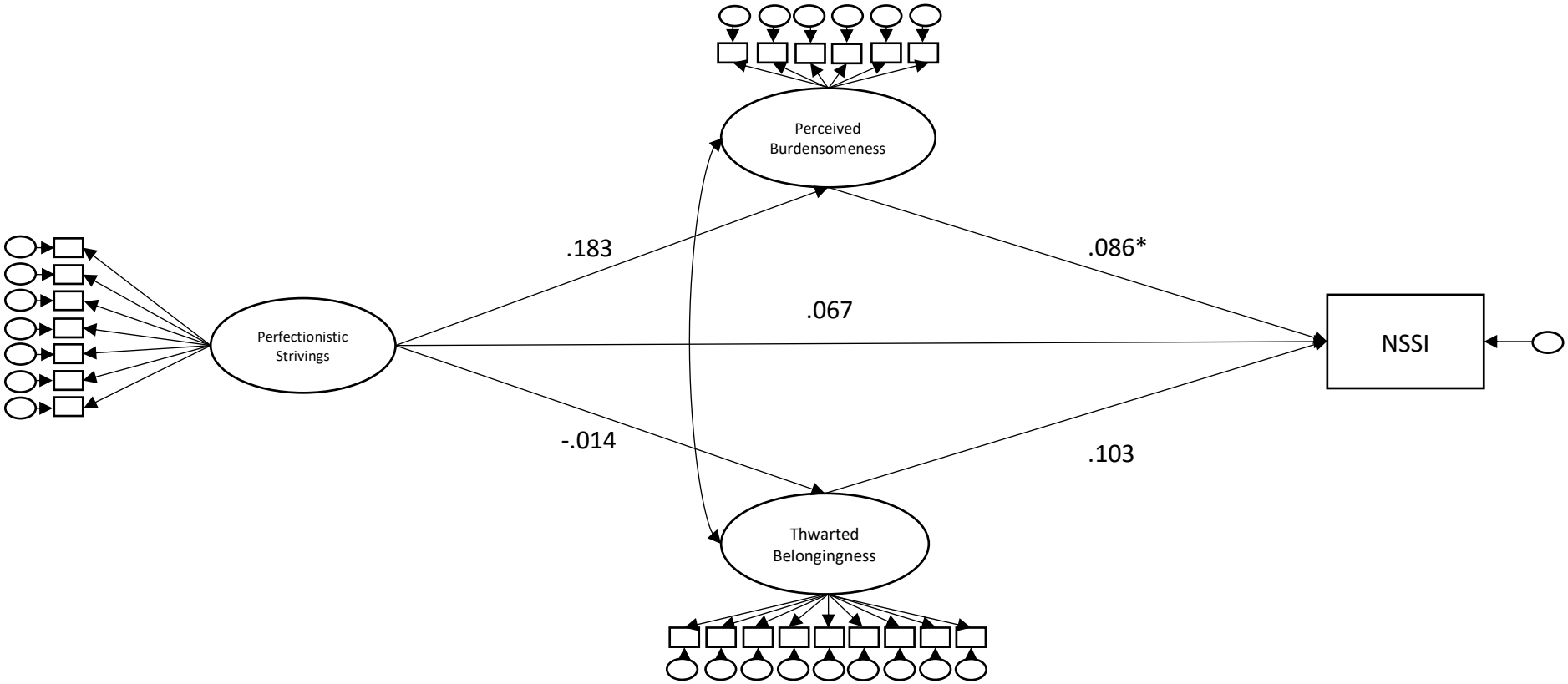
In regard to the fit statistics, the model resulted in SB χ^2 = 1570.582, *df* = 1318, $p <$ .001. The CFI = 0.523 and RMSEA = 0.046 with associated CI = (.036, .055) which did not fit the data well.

The second structural equation model tested is displayed in Figure 13 below. This tested Hypothesis 13 as well as Hypotheses 2, 6, 7, 10 and 11. Hypothesis 13 predicted that the relationship between perfectionistic strivings and NSSI would be partially mediated by thwarted belongingness and perceived burdensomeness.

The direct effect of perfectionistic strivings on thwarted belongingness was negative but non-significant (*B* = -.014, *SE* = .092, *z* = -0.155, *p* = .877). This does not support Hypothesis 6. The direct effect of perfectionistic strivings on perceived burdensomeness was positive but not significant (*B* = .183, *SE* = .158, *z* = 1.153, *p* = .249). This does not support Hypothesis 7. The direct effect of thwarted belongingness on NSSI was positive but not significant (*B* = .103, *SE* = .068, *z* = 1.525, *p* = .127). This does not support Hypothesis 10. The direct effect of perceived burdensomeness on NSSI was positive and significant (*B* = .086, *SE* = .030, *z* = 2.840, *p* = .005). This supports Hypothesis 11. The direct effect of perfectionistic strivings on NSSI was positive but not significant (*B* = .067, *SE* = .052, *z* = 1.296, *p* = .195). The indirect effect of perfectionistic strivings via thwarted belongingness (*B* = -.001, *SE* = .011, *z* = -0.130, *p* = .896) was negative, but non-significant. The indirect effect of perfectionistic strivings via perceived burdensomeness (*B* = .016, *SE* = .015, *z* = 1.013, *p* = .311) was positive, but non-significant. This does not support Hypothesis 13. The total effect of perfectionistic strivings on NSSI was positive, but not significant (*B* = .081, *SE* = .052, *z* = 1.564, *p* = .118). This does not support Hypothesis 2.

Figure 13

Structural Equation Model Path Diagram Showing Unstandardised Parameter Estimates for the Relationship Between Perfectionistic Strivings and NSSI Mediated by Perceived Burdensomeness and Thwarted Belongingness



Note. Item and error labels have been omitted for brevity.

*$p < .05$.

In regard to the fit statistics, the model resulted in SB χ^2 = 587.020, *df* = 405, *p* < .001. The CFI = 0.901 and RMSEA = 0.051 with associated CI = (.042, .060) which did not fit the data well.

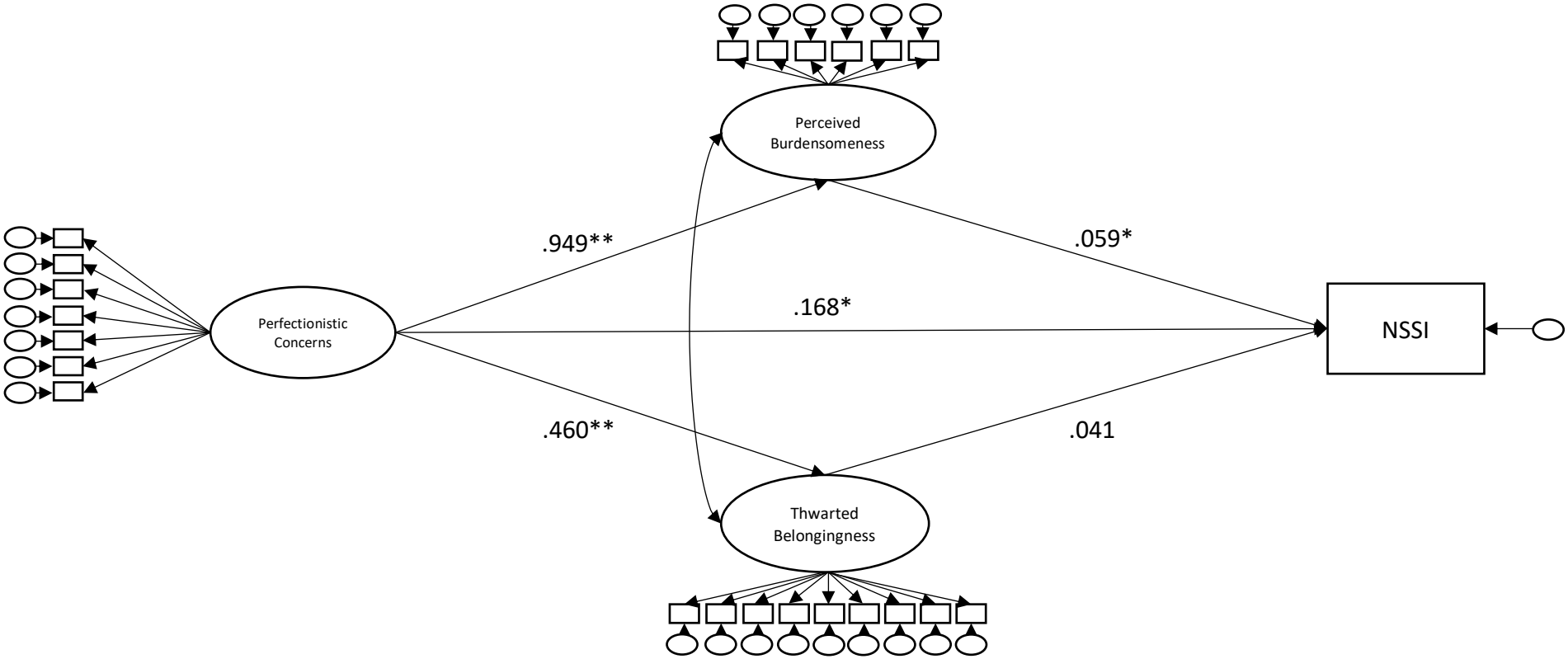
The third structural equation model tested is displayed in Figure 14 below. This tested Hypothesis 14 as well as Hypotheses 3, 8, 9, 10 and 11. Hypothesis 14 predicted that the relationship between perfectionistic concerns and NSSI would be partially mediated by thwarted belongingness and perceived burdensomeness.

The direct effect of perfectionistic concerns on thwarted belongingness was positive and significant (*B* = .460, *SE* = .101, *z* = 4.564, *p* < .001). This supports Hypothesis 8. The direct effect of perfectionistic concerns on perceived burdensomeness was positive and significant (*B* = 0.949, *SE* = .122, *z* = 7.755, *p* < .001). This supports Hypothesis 9. The direct effect of thwarted belongingness on NSSI was positive but not significant (*B* = .041, *SE* = .068, *z* = 0.605, *p* = .545). This does not support Hypothesis 10. The direct effect of perceived burdensomeness on NSSI was positive and significant (*B* = .059, *SE* = .030, *z* = 1.978, *p* = .048). This supports Hypothesis 11. The direct effect of perfectionistic concerns on NSSI was positive and significant (*B* = .168, *SE* = .050, *z* = 3.371, *p* = .001). The indirect effect of perfectionistic concerns via thwarted belongingness (*B* = .019, *SE* = .031, *z* = 0.612, *p* = .541) was positive, but non-significant. The indirect effect of perfectionistic concerns via perceived burdensomeness (*B* = .056, *SE* = .031, *z* = 1.847, *p* = .065) was positive, but not significant. This does not support Hypothesis 14. The total effect of perfectionistic concerns on NSSI was positive and significant (*B* = .243, *SE* = .039, *z* = 6.266, *p* < .001). This supports Hypothesis 3.

In regard to the fit statistics, the model resulted in SB χ^2 = 945.383, *df* = 606, *p* < .001. The CFI = 0.828 and RMSEA = 0.061 with associated CI = (.054, .069) which did not fit the data well.

Figure 14

Structural Equation Model Path Diagram Showing Unstandardised Parameter Estimates for the Relationship Between Perfectionistic Concerns and NSSI Mediated by Perceived Burdensomeness and Thwarted Belongingness



Note. Item and error labels have been omitted for brevity.

*$p < .05$. **$p < .001$.

Chapter 9

Quantitative Discussion

The overall aim of the current research was to contribute to improving our understanding of the relationship between perfectionism and NSSI. This has been examined both quantitatively and qualitatively while also examining the relationship from a theoretical perspective through the IPTS (Joiner, 2005; Van Orden et al., 2010). The current chapter will discuss the quantitative survey results. The qualitative interview method and findings will be discussed following this chapter. Finally, a concluding discussion chapter will compare key findings from both the quantitative and qualitative discussion sections to examine how they relate and differ to each other.

Discussion of the Survey Results

Due to the number of hypotheses and different analysis methods used, the hypotheses are restated below. Table 3 provides a summary as to whether the hypothesis was or was not supported by each analysis type.

It should be noted that all the hypotheses in the current study remained supported/unsupported between testing with and without controlling for covariates. As this was found across all the results, the covariates are not highlighted in the discussion. While the current findings did not change depending on whether covariates were controlled for, this has not always been the case in previous research. For example, Brocklesby (2017) found that their negative perfectionism factor was significantly associated with NSSI in female but not male participants. Controlling for these covariates in the current study therefore provides us with some confidence that the estimates were not confounded by age, ethnicity, or gender.

Hypotheses

1. Overall perfectionism will be positively related to NSSI.
2. Perfectionistic strivings will be positively related to NSSI.
3. Perfectionistic concerns will be positively related to NSSI.
4. Overall perfectionism will be positively related to thwarted belongingness.
5. Overall perfectionism will be positively related to perceived burdensomeness.
6. Perfectionistic strivings will be positively related to thwarted belongingness.
7. Perfectionistic strivings will be positively related to perceived burdensomeness.
8. Perfectionistic concerns will be positively related to thwarted belongingness.
9. Perfectionistic concerns will be positively related to perceived burdensomeness.
10. Thwarted belongingness will be positively related to NSSI.
11. Perceived burdensomeness will be positively related to NSSI.
12. The relationship between overall perfectionism and NSSI will be partially mediated by thwarted belongingness and perceived burdensomeness.
13. The relationship between perfectionistic strivings and NSSI will be partially mediated by thwarted belongingness and perceived burdensomeness.
14. The relationship between perfectionistic concerns and NSSI will be partially mediated by thwarted belongingness and perceived burdensomeness.

Table 3

Summary of Hypotheses Support Across Different Analyses

Hypothesis	Primary analysis	Primary analysis with covariates controlled	Structural equation modelling
One	Supported	Supported	Supported
Two	Supported	Supported	Not supported
Three	Supported	Supported	Supported
Four	Supported	Supported	Supported
Five	Supported	Supported	Supported
Six	Not supported	Not supported	Not supported
Seven	Not supported	Not supported	Not supported
Eight	Supported	Supported	Supported
Nine	Supported	Supported	Supported
Ten	Supported	Supported	Not supported
Eleven	Supported	Supported	Supported
Twelve	Not supported (but partially mediated by perceived burdensomeness)	Not supported (but partially mediated by perceived burdensomeness)	Not supported
Thirteen	Not supported	Not supported	Not supported
Fourteen	Not supported (but partially mediated by perceived burdensomeness)	Not supported (but partially mediated by perceived burdensomeness)	Not supported

Note. The primary analysis included Welch's *t*-tests, simple linear regression, logistic regression, multiple linear regression, and multiple logistic regression. The covariates that were controlled for were age, ethnicity, and gender.

Perfectionism and NSSI (Hypotheses 1, 2 and 3)

Hypotheses 1, 2 and 3 addressed the overall aim of the study, which was to improve our understanding about how perfectionism and NSSI are related. The overall perfectionism score was achieved by summing five of the MPS-F (Frost et al., 1990) subscales (concern over mistakes; personal standards; parental expectations; parental criticism; and doubts about actions). Consistent with the current literature and understanding of perfectionism (Bieling et al., 2004; Frost et al., 1993; Sirois & Molnar, 2016), perfectionism was also measured as a multidimensional construct through the examination of perfectionistic strivings (consisting of the personal standards subscale) and perfectionistic concerns (consisting of the subscales concern over mistakes and doubts about actions). While the current study did not analyse each subscale individually, some previous research has examined perfectionism in this manner (e.g., Hoff & Muehlenkamp, 2009) and, therefore, specific subscales will be referred to below when applicable.

Hypothesis 1

The findings of this study support Hypothesis 1, that overall perfectionism is positively related to NSSI. It was predicted that the unreasonably high standards held by a person as well as their excessive self-scrutiny and preoccupation with criticisms and expectations from others, could lead to maladaptive behaviour in the form of NSSI. Prior research has focused on examining the two main dimensions of perfectionism as well as specific subscales, such as those used in the MPS-F (Frost et al., 1990), rather than overall perfectionism. Despite the lack of research examining overall perfectionism, the current findings appear similar to previous research, demonstrating that a positive relationship exists

between overall perfectionism and NSSI (Hypothesis 1). This is because the overall perfectionism measure includes the subscales concern over mistakes, doubts about actions, parental criticism, and parental expectations, which have been found to be positively related to NSSI in some research (Brocklesby, 2017; Claes et al., 2012; Hoff & Muehlenkamp, 2009). While Hypothesis 1 was supported in the current research, it may be important to note that more of the subscales that make up this measure are associated with perfectionistic concerns than perfectionistic strivings. It could be argued therefore that the tentative positive relationship found between overall perfectionism and NSSI is due to a positive relationship existing between perfectionistic concerns and NSSI (Hypothesis 3) which was supported by all three analysis types as well as prior research. However, a positive relationship between perfectionistic strivings and NSSI (Hypothesis 2), was also tentatively supported in the current research, although it was not supported by structural equation modelling.

Hypothesis 2

A positive relationship between perfectionistic strivings and NSSI was hypothesised due to the prediction that holding oneself to unreasonably and excessively high standards may lead to maladaptive behaviour in the form of NSSI. The current findings tentatively suggest that a positive relationship between perfectionistic strivings and NSSI may exist, however, this does not appear to be consistent with the current research in this area. Claes et al. (2012) found that perfectionistic strivings, measured by the Dutch version (Soenens, Luyckx, et al., 2008; Soenens, Vansteenkiste, et al., 2008) of the MPS-F (Frost et al., 1990), was not significantly related to NSSI. Claes et al. (2012) did find a positive association between perfectionistic strivings and perfectionistic concerns, however, and suggested that perfectionistic strivings may indirectly lead to engagement in NSSI through increases in perfectionistic concerns. Hoff and Muehlenkamp (2009) also did not find a significant relationship between perfectionistic strivings and NSSI, as measured by the MPS-F (Frost et al., 1990) personal standards subscale. As this is a relatively new area of study it is possible

that differences in the populations sampled and ways in which NSSI and perfectionism have been measured could account for the findings, however, given the limited research, this is currently unclear. Further, inconsistencies currently exist regarding the relationship between other perfectionism subscales and NSSI; namely, Miskey et al.'s (2012) findings regarding concern over mistakes and organisation which are in contrast with Hoff and Muehlenkamp's (2009) findings.

Hypothesis 3

The positive relationship found between perfectionistic concerns and NSSI (Hypothesis 3) is consistent with most of the current literature. This finding supports the prediction that those who unreasonably critically evaluate their own behaviour, excessively self-scrutinise, and fixate on others' expectations, opinions, and criticisms of them are more likely to engage in NSSI. The perfectionistic concerns measure was made up of concern over mistakes and doubts about actions. Claes et al. (2012) also measured perfectionistic concerns with these subscales (terming it evaluative concerns perfectionism) and found a positive relationship between the perfectionistic concerns measure and NSSI. Brocklesby (2017) also found a positive relationship between a combined concern over mistakes and doubts about actions score and NSSI. Hoff and Muehlenkamp (2009) found a positive relationship between concern over mistakes and NSSI, but not between doubts about actions and NSSI. Finally, in contrast to the current findings, Miskey et al. (2012) found that concern over mistakes was negatively associated with NSSI frequency.

Overall, the current findings of a positive relationship between perfectionistic concerns and NSSI appears similar to previous literature (Brocklesby, 2017; Claes et al., 2012; Hoff & Muehlenkamp, 2009), apart from Miskey et al. (2012). The findings are also in line with more general findings regarding perfectionistic concerns and health and wellbeing, in which perfectionistic concerns is frequently associated with negative outcomes (Bieling et al., 2004; Limburg et al., 2017; Madigan, 2019; Sirois & Molnar, 2016).

Summary (Hypotheses 1, 2 and 3)

The support for Hypotheses 1, 2 and 3 suggests that those who possess higher levels of perfectionism are more likely to engage in NSSI. The current findings suggest that this is true regardless of the type of perfectionism that one possesses, although the relationship may be stronger with perfectionistic concerns than perfectionistic strivings. These findings provide evidence of a relationship between NSSI and perfectionism, however, they do not tell us *why* this relationship exists. The hypotheses below therefore examine whether the IPTS (Joiner, 2005; Van Orden et al., 2010) explains this.

Perfectionism, Thwarted Belongingness and Perceived Burdensomeness (Hypotheses 4 to 9)

Hypotheses 4 and 5 predicted that overall perfectionism would be positively related to thwarted belonginess and perceived burdensomeness, respectively. The current results support Hypothesis 4, that higher levels of overall perfectionism are related to higher levels of feeling lonely and an absence of reciprocal care (thwarted belongingness). They also support Hypothesis 5, that higher levels of overall perfectionism are related to higher levels of self-hate and feeling like a liability to others (perceived burdensomeness). The support for these hypotheses begins to suggest that the IPTS (Joiner, 2005; Van Orden et al., 2010) may explain the relationship between perfectionism and NSSI, subject to subsequent findings.

While overall perfectionism was found to be positively related to thwarted belongingness and perceived burdensomeness, perfectionistic strivings was not (Hypotheses 6 and 7) and perfectionistic concerns was (Hypotheses 8 and 9). This suggests that the perfectionistic concerns subscales (concern over mistakes and doubts about actions) may account for the relationship between overall perfectionism and thwarted belongingness and perceived burdensomeness. When they are not included in the perfectionism measure being tested, such as when testing perfectionistic strivings, the positive relationship between perfectionism and thwarted belongingness and perceived burdensomeness is no longer

present. Again, this provides some support that the IPTS (Joiner, 2005; Van Orden et al., 2010) may explain the relationship between perfectionism and NSSI, however, only when perfectionistic concerns is examined.

The perfectionistic strivings dimension is aimed to provide a measure of a person's excessive and unreasonably high standards and self-evaluation. The items used in the MPS-F (Frost et al., 1990) reflect this with items including "It is important to me that I be thoroughly competent in everything I do". While *others* are referred to in the final two items, it is still in the context of self-evaluations "Other people seem to accept lower standards from themselves than I do" and "I expect higher performance in my daily tasks than most people." While I predicted that the relationship between perfectionistic strivings and thwarted belongingness and perceived burdensomeness would exist, it is perhaps not surprising that it has not been found in the current study. While I had predicted that holding oneself to unreasonably high standards might impact a person's thoughts and feelings about belonging and being burdensome, it appears that perfectionistic strivings may be so intrapersonally focused, that it does not affect the way in which an individual views relationships with anyone other than themself. Perfectionistic concerns, unlike perfectionistic strivings, has a stronger interpersonal and relational aspect that relates to how others perceive them. Some of the items used in the MPS-F (Frost et al., 1990) to measure this include "The fewer mistakes I make, the more people will like me" and "People will probably think less of me if I make a mistake". This may further explain why Hypotheses 8 and 9 are supported in the current study.

The current findings are similar to those of Sommerfeld and Malek (2019) who examined how perfectionism moderates the relationship between thwarted belongingness and perceived burdensomeness and suicidal ideation in adolescents. While there are many differences in this study compared to the current study, they examined the relationship between an overall perfectionism measure and thwarted belongingness and perceived

burdensomeness, similarly to the current research. Sommerfeld and Malek used the Child and Adolescent Perfectionism Scale (Flett et al., 2016) to measure perfectionism and found that the total perfectionism score for adolescent participants was not significantly related to thwarted belongingness or perceived burdensomeness. While this result does not support the findings for Hypotheses 4 and 5, Sommerfeld and Malek found that their perfectionistic concerns measure (termed socially prescribed perfectionism) was significantly related to thwarted belongingness and perceived burdensomeness, while their perfectionistic strivings measure (termed self-oriented perfectionism) was not. This pattern is similar to that demonstrated by Hypotheses 6 to 9 and may add some support to our suggestion that it is the perfectionistic concerns subscales that may be key in establishing why a relationship was found in the current study between overall perfectionism and thwarted belongingness and perceived burdensomeness.

Wang et al. (2013) also found a positive, significant relationship between perfectionistic concerns (termed discrepancy) and perceived burdensomeness and thwarted belongingness. Wang et al.'s study used the Almost Perfect Scale-Revised (Slaney et al., 2001) to measure perfectionism and this was completed by Asian international university students studying in the United States. The relationship between perfectionistic concerns and perceived burdensomeness (Hypothesis 9) specifically, has also been examined by Rasmussen et al. (2012). In agreement with the current findings, Rasmussen et al. found a positive relationship between perfectionistic concerns (which they termed maladaptive perfectionism) and perceived burdensomeness. Rasmussen et al. used the Almost Perfect Scale-Revised (Slaney et al., 2001) to measure perfectionistic concerns, rather than the MPS-F (Frost et al., 1990). Rasmussen et al. explained their findings by suggesting that the unreasonably high standards and overly critical behaviour that comes with maladaptive perfectionism may lead to feeling like a burden on others when the person feels incompetent and cannot reach their goals. The current study's findings of a positive relationship between

perfectionistic concerns and perceived burdensomeness (Hypothesis 9) is thus in line with Rasmussen et al.'s findings and the current suggestion that excessively self-scrutinising, experiencing feelings of failure and having a preoccupation with other's judgements can lead to feeling like a burden. Further, Sommerfeld and Malek (2019) and Wang et al.'s findings are not only similar to Hypothesis 9, but also Hypothesis 8 and the suggestion that those with a preoccupation with others' expectations and criticisms, as well as being exceedingly self-critical, may not form close and meaningful relationships, which may lead to feelings of loneliness and a lack of sense of belonging.

Summary (Hypotheses 4 to 9)

Hypotheses 4, 5, 8, and 9 were all supported in the current study while Hypotheses 6 and 7 were not supported. The current study provided evidence that both overall perfectionism and perfectionistic concerns are positively related to thwarted belongingness and perceived burdensomeness. Perfectionistic strivings did not demonstrate this relationship. These findings are consistent with previous literature suggesting that those who consistently hold themselves to high standards are not more likely to experience thwarted belonginess or perceived burdensomeness, and that those who are focused on others' expectations and criticisms and are highly critical of themselves are more likely to experience thwarted belongingness and perceived burdensomeness. These findings provide some indication that constructs from the IPTS (Joiner, 2005; Van Orden et al., 2010) may explain the relationship between perfectionism and NSSI.

Thwarted Belongingness, Perceived Burdensomeness and NSSI (Hypotheses 10 and 11)

Hypothesis 10

As predicted, a positive relationship was found between thwarted belongingness and NSSI. As this finding was supported by the Welch's *t*-test and multiple logistic regression, but not structural equation modelling, this provides tentative support that those with higher levels of thwarted belongingness are more likely to engage in NSSI. This prediction is similar

to the relationship predicted by the IPTS (Joiner, 2005; Van Orden et al., 2010) in which those who experience greater thwarted belongingness may experience increased passive suicidal ideation. This also adds support to the idea that the IPTS may explain the relationship between perfectionism and NSSI. Heath et al. (2009) found that those who engage in NSSI report significantly lower levels of friend support than those who do not engage in NSSI and, therefore, this sense of loneliness and thwarted belongingness supports my prediction that higher levels of thwarted belongingness may lead to an increased likelihood of engaging in NSSI.

The findings for Hypothesis 10 appear similar to the limited current literature. Assavedo and Anestis (2016) found a positive relationship between NSSI frequency and thwarted belongingness in undergraduate university students. This relationship remained significant when controlling for sex, depression, and borderline personality disorder symptoms. Chu et al. (2016) found that NSSI history was associated with higher levels of thwarted belonginess in young adults across three time points.

Hypothesis 11

A positive relationship was also found between perceived burdensomeness and NSSI and this finding was supported by all three tests, the Welch's *t*-test, multiple logistic regression, and structural equation modelling. This provides support that those with higher levels of perceived burdensomeness are more likely to engage in NSSI. Similar to Hypothesis 10, the prediction that increased perceived burdensomeness may increase the likelihood of engaging in NSSI is similar to the relationship predicted by the IPTS (Joiner, 2005; Van Orden et al., 2010) in which those who experience greater perceived burdensomeness may experience increased passive suicidal ideation. This finding also supports the idea that the IPTS may explain the relationship between perfectionism and NSSI. These hypothesised reasons are in line with Heath et al.'s (2009) findings in which participants endorsed

motivations for engaging in NSSI as to relieve/escape unwanted thoughts and feelings, feel a sense of control, communicate hurting, and punish oneself.

The positive relationship found between perceived burdensomeness and NSSI (Hypothesis 11) is similar to Chu et al.'s (2016) findings in which a history of NSSI was associated with higher levels of perceived burdensomeness across three time points. However, while Assavedo and Anestis' (2016) initial findings also resulted in a positive relationship between NSSI frequency and perceived burdensomeness, they found that once controlling for sex, depression and borderline personality symptoms, the relationship was no longer significant. Assavedo and Anestis suggest that even though individuals that engage in NSSI may experience higher perceived burdensomeness, this may be explained by depression and borderline personality disorder symptoms.

Summary (Hypotheses 10 and 11)

Both Hypotheses 10 and 11 were supported in the current study, although support was more tentative for Hypothesis 10. To the best of my knowledge, the current study is one of a small number of studies that have directly examined a relationship between thwarted belongingness and perceived burdensomeness and NSSI, respectively. These findings also add support that the constructs specified in the IPTS (Joiner, 2005; Van Orden et al., 2010) may explain the relationship between perfectionism and NSSI, before the final mediation hypotheses are considered below.

Perfectionism and NSSI Mediation Models (Hypotheses 12, 13 and 14 Fourteen)

Hypothesis 13

Beginning with Hypothesis 13, no support was found for the mediation model. When comparing this to Hypotheses 6 and 7 it follows that this model was not supported. Hypotheses 6 and 7 were not supported when predicting a positive relationship between perfectionistic strivings and thwarted belongingness and perceived burdensomeness, respectively. As the relationship between perfectionistic strivings and thwarted belongingness

and perceived burdensomeness is key in predicting the mediation model (Hypothesis 13), it is therefore expected that Hypothesis 13 would not be supported. As highlighted above, perfectionistic strivings may not affect one's thoughts about how they relate with others and their interpersonal relationships. Rather it may only affect a person's relationship with themselves regarding their thoughts, standards and how they judge themselves. Thoughts of being a burden and not belonging may therefore not relate to holding oneself to excessively high standards, as the focus may be on meeting one's own goals rather than concern about what others think of them.

Hypotheses 12 and 14

Hypotheses 12 and 14 were also not supported, however, the relationships between overall perfectionism and NSSI (Hypothesis 12) and perfectionistic concerns and NSSI (Hypothesis 14) were both found to be partially mediated by perceived burdensomeness. As perceived burdensomeness was found to partially mediate the predicted relationships in Hypotheses 12 and 14, but not Hypothesis 13, it suggests that the subscales that comprise perfectionistic concerns (concern over mistakes and doubts about actions) may be key in explaining this result. That is, the overall perfectionism score is made up of the perfectionistic concern and perfectionistic strivings subscales as well as parental criticism and parental expectations, and as Hypothesis 13 was not supported, it suggests that the perfectionistic strivings subscale (personal standards) may not contribute to the positive relationship that was found. This is similar to the findings for Hypotheses 4 to 9.

The significant indirect effects found in Hypotheses 12 and 14 suggests that overall perfectionism and perfectionistic concerns increase the likelihood of engaging in NSSI through the mediator variable perceived burdensomeness. Those that have higher scores of overall perfectionism and those with higher scores of perfectionistic concerns, are more likely to engage in NSSI, because of the positive relationship that overall perfectionism and perfectionistic concerns have with perceived burdensomeness. For Hypothesis 12, this

suggests that those who hold themselves to unreasonable and excessively high standards, demand perfection from themselves, are overly critical of their own behaviour and fixate on others' criticisms and expectations for them, may be more likely to perceive themselves as a burden when they are unable to meet these standards and expectations. This perceived burdensomeness may then make the individual more likely to engage in NSSI for reasons such as to cope, punish oneself or communicate to others (Klonsky, 2007b; Nock & Prinstein, 2004). Similarly, for Hypothesis 14, those who are unreasonably critical of their own behaviour, excessively self-scrutinise, are unable to be satisfied with their own success, and focus on criticism, opinions, and expectations of others, may be more likely to perceive themselves as a burden when they do not meet their expectations. Perceiving themselves as a burden may then make the individual more likely to engage in NSSI.

While it appears, to the best of my knowledge, that I am the first to examine these mediation models (Hypotheses 12, 13 and 14), our findings show some similarities to the current related research. Rasmussen et al. (2012) found that perceived burdensomeness mediated the relationship between perfectionistic concerns (termed maladaptive perfectionism in their study) and suicidal ideation. While suicidal ideation and NSSI are distinct, as discussed previously, they show some similarities and Rasmussen et al.'s study therefore shows some similarities for the mediating role that perceived burdensomeness may have as found in the study. Further, my finding that only perceived burdensomeness and not thwarted belongingness partially mediated the relationship between different dimensions of perfectionism and NSSI appears similar to some of the current literature in which perceived burdensomeness and not thwarted belongingness is suggested to be more robustly associated with suicidal ideation (Bryan et al., 2012; Chu et al., 2016; Van Orden et al., 2008). Again, while this research is focused on suicide ideation and not NSSI, it shows some similarities, and it appears that it is currently the most closely related research to the current study.

Overall, the IPTS (Joiner, 2005; Van Orden et al., 2010) therefore, shows some ability to explain the underlying mechanisms for the relationship between perfectionism and NSSI.

Summary (Hypotheses 12, 13 and 14)

Overall, none of Hypotheses 12, 13 and 14 were supported, however, both Hypotheses 12 and 14 were found to be partially mediated by perceived burdensomeness. This suggests that those who experience higher levels of overall perfectionism and/or perfectionistic concerns are more likely to perceive themselves as a burden when they are unable to meet their expectations. Those perceiving themselves as a burden are then more likely to engage in NSSI. Constructs from the IPTS (Joiner, 2005; Van Orden et al., 2010) are therefore able to explain some of the relationship between perfectionism and NSSI.

Chapter 10

Qualitative Interview Method

Recruitment

At the end of the stage one questionnaire a short paragraph was displayed to participants advertising the stage two follow-up interview (see https://osf.io/6uv5w/?view_only=808891990d3640f1901c73961ffe5d14). This paragraph detailed to participants that the follow-up interview would involve speaking about their experiences with NSSI and perfectionism and would take up to 60 minutes. Participants were instructed that they would need to travel to Albany, Auckland, and would receive a $40 MTA voucher as a thank you. Participants were informed that by inputting their email address their stage one survey answers would be linked to their email address which would assess their eligibility. Participants were then asked if they wanted to receive further information about this interview and had the option to select a yes or no tick box. Participants who selected no were directed to the end of the survey while participants who selected yes were asked to provide their email address in a text box.

It was planned that if the above advertisement did not result in enough participants for stage two, then stage two would also be advertised through the same psychology papers as stage one, as well as on the Massey University *Research Projects and Results* webpage and via email to the Massey University psychology graduate email list. Participants who were interested in completing stage two would have to first complete stage one, before assessing whether they were eligible to participate in stage two. This additional advertising did not need to be undertaken, as the minimum number of required interviewees was obtained from the stage one survey advertisement.

Participants

Participants who completed stage one and indicated that they would like further information about stage two were sorted into two groups; those who had engaged in NSSI

during the past two years, and those who had not. This was done by examining their survey responses (as was communicated to participants in the explanatory paragraph at the end of stage one and in the information sheet displayed to individuals at the beginning of the survey). Participants self-selected as to whether they had experience with perfectionism. Participants that had engaged in NSSI in the past two years were sent an email by the primary researcher, explaining why they were receiving the email as well as two attachments, the interview information sheet (see Appendix F) and the interview questions sheet (see Appendix G). The email provided participants with information regarding how to contact me, or my supervisors, with any questions. It also outlined how participants could reply to the email to arrange an interview time and that there would be a limited number of interviews conducted. Finally, it was also stated that if individuals no longer wished to proceed with an interview, then they did not have to reply to the email and I would assume that no response indicated that they did not wish to proceed. This process made it as easy as possible for participants to decline an interview, without having to engage with the researcher.

The interview information sheet included the following sections: project description, invitation to attend an interview, project procedures and identification, data management, participant's rights, primary researcher and supervisor contact details, a list of support services, and the ethics application number and contact details for the Massey University Human Ethics Committee.

The interview questions sheet consisted of the four main questions that I would ask participants at their interview. This provided transparency to the participants as to the topics that they would be asked to speak about during the interview, so that they could decide whether they wished to participate. It also allowed participants the opportunity to think about these questions and how they might answer these questions if they wished to do so. The four questions were:

1) Tell me a little bit about your (current) self?

2) Tell me about your experiences with perfectionism?

3) Tell me about your history of non-suicidal self-injury?

4) Tell me about how your experiences of perfectionism and non-suicidal self-injury affect each other. How are they related/do you see a relationship between the two?

Twenty-seven individuals were emailed regarding the follow-up interview. Three additional participants were not contacted, as one email addresses returned an error message and two individuals were identified as close contacts of the researcher. These close contacts were not invited to participate in an interview, as the interview contained some questions that could be related to safety and risk, as well as a duty for me to involve a senior clinical psychologist if I was concerned for their safety. It was decided, therefore, that I would not invite them to interview, as our relationship outside of the research could cause difficulties if they disclosed a risk to themselves and/or others.

Out of the 27 individuals contacted, six individuals indicated that they would like to participate in an interview. In addition to these six individuals, one individual organised a time for their interview, but later cancelled and declined to schedule a future time. Two individuals stated that they would like to participate, but could not do so, due to living outside the Auckland area. The six interviewees will now be referred to using the following gender-neutral pseudonyms: Nic, Lee, Jamie, Sam, Taylor, and Casey. Accordingly, participants will be referred to by the pronouns they/them in the thematic analysis results and discussion sections. The age range of the six participants was 18 to 26 years (M = 21.67, SD = 2.88). Four of the participants identified as female, one as male and one as gender diverse. Regarding ethnicity, five of the participants identified as New Zealand European and one participant identified as Other. The age criteria and recruitment method used in the current study resulted in some of the participants being current or past university students.

Braun and Clarke (2013) provide guidelines for interview participant size. They suggest that a small project should aim to recruit six to 10 interview participants and a large project should be limited to approximately 400 participants. Their guidelines purport that a Doctor of Clinical Psychology thesis constitutes a large project, however, the current project uses a mixed methods approach. Fugard and Potts (2015) highlight that there are few guidelines from qualitative researchers as to interview participant sizes. They suggest that while Braun and Clarke (2013) have made recommendations, there may be limited evidence to support these guidelines, other than these sizes being manageable for the researcher, while also providing enough data to analyse potential themes.

Malterud et al. (2016) propose that rather than suggesting a standard sample size that should be aimed for, the concept of information power should be used. They suggest that the greater the information power a sample holds, the lower number of participants is needed. Information power can be determined by five aspects: study aim, sample specificity, use of established theory, quality of dialogue, and analysis strategy. A study with higher information power may therefore have a narrow study aim, dense sample specificity, use applied theory, have strong dialogue, and use case analysis. With these factors in mind, the current study's aim is specific in examining perfectionism and NSSI, but has some breadth in allowing participants to discuss a range of factors related to this. The participants all identified as being able to discuss their own experiences with NSSI and perfectionism. The current research is driven by theory regarding perfectionism, NSSI and how these relate. All of the participants were able to discuss their experiences for the 60-minute interview. I, the interviewer, also had some theoretical and clinical experience with perfectionism and NSSI enabling me to engage in the interview with participants. Finally, the thematic analysis was cross-case. Ultimately, I decided that a minimum qualitative sample of six participants would be appropriate.

Once the six interviews were completed, I waited to see if I received any further emails from stage one participants who requested follow-up interview information. I received

no further replies and, therefore, I stopped seeking further interview participants, as I had met my minimum number required. An email was sent to all of the remaining individuals who had requested further information informing them that the interviews were now complete and thanking them for participating in stage one.

Procedure

Participants arranged an interview time at the School of Psychology offices in Albany, Auckland. Participants were invited to bring a support person to the interview; however, no participants chose to do so. Participants were invited into a private office space, where I introduced myself and offered them something to drink. Participants were asked to read the information sheet and were given the opportunity to ask any questions. Three out of the six participants chose to be sent a copy of their transcript to review.

I gave participants a copy of the consent form (see Appendix H) and all participants signed the pre- and post-interview consent forms before and after the interview, respectively. Five out of the six participants wished to receive a summary of the results upon completion of the research.

I began the interview by turning on the audio recorder and then asking the four broad questions highlighted above in the order given. I aimed to spend no more than 10 minutes on question one and approximately 15 minutes on the three remaining questions. I allowed the participant to speak as much or as little as they wanted to and asked follow-up questions and provided prompts and examples if the participant was unsure about what to discuss. Many of the additional questions were clarifying questions to ensure that I had correctly understood the participant. Additional questions within the four broad questions also helped to gain further detail and included “How would you define perfectionism?” and “Have you noticed a link between perfectionism and NSSI in other people?”. I provided some prompts when asking the first broad question “Tell me a little bit about your current self”. These included “For example what your goals are, what you’re good at, what you like doing in your spare

time". The prompts and the first question also allowed for some initial rapport to be built, before I asked questions about perfectionism and NSSI.

Once the interview neared the end, the participant was invited to add anything they wished to say before turning off the audio recorder. I checked in with the participants around how they were feeling, whether they had any questions, and what they were planning on doing after they left the interview, to ensure that they had support people available. The participant was provided with the post-consent form to sign as well as the opportunity to change their answer as to whether they would like to receive their transcript and a summary of the results. I highlighted the support services available to participants included on the back of the interview information sheet, which they took away from the interview. I also provided participants with information about Massey University's Health and Counselling Centre (see Appendix I) and details for the Centre for Psychology. While the Massey University Health and Counselling Centre would only be available to current Massey University students and staff, the Centre for Psychology was available to all participants, although they would have to pay for this service. Finally, interviewees were thanked for their participation and were given their $40 MTA vouchers as a thank you.

Once the audio recordings had been transcribed, the respective transcripts were password protected and emailed to the three participants that requested to view them. I asked that if the participant found an error or identified something that they did not want me to use, they should strike through it on the word document and return it. No redactions were made by the participants that chose to read the transcripts. As agreed with participants as part of the interview consent form, if I did not receive a reply within seven days, then their transcript could be used in full.

Thematic Analysis

Thematic analysis is a method of qualitative analysis used in psychological research and wider research areas such as healthcare and education (Braun & Clarke, 2013; Fugard &

Potts, 2015). While thematic analysis can be completed in many ways, it is ultimately a method to identify themes within the data (which, in the current study, is participant interviews and the subsequent transcripts; Braun & Clarke, 2006). The current research relied heavily on Braun and Clarke's (2006) descriptions of six proposed phases of thematic analysis, which will be described in more detail in the Data Analysis section below. As leaders in this field, Braun and Clarke's (2006) approach to thematic analysis provides guidance as to how this analysis can be completed in a deliberate manner. Thematic analysis is a flexible method of analysis with the ability to be used within a range of theoretical approaches (Braun & Clarke, 2006; Clarke & Braun, 2018). Thematic analysis demonstrates strengths in capturing depth and meaning while allowing for the complexities of the data to be communicated to the reader (Braun & Clarke, 2006; Guest et al., 2012).

The six interviews were analysed using thematic analysis. Braun and Clarke (2006) developed guidelines to provide a clear theoretical and methodological basis for the way in which thematic analysis can be carried out. This not only develops some consistency in carrying out thematic analysis, but also allows the researcher to better explain to the reader what was undertaken and any deviations that were taken and for what purpose. An outline of these phases and how they were used in the current research are as follows.

Phase one involves becoming familiar with the data. This process began during the transcription phase as I transcribed the interviews and reviewed these looking for errors when compared to the audio recording. Once I had completed this checking process, I re-read these transcripts multiple times to familiarise myself with them and made brief initial notes in the margins of the transcripts. I also noted down any initial overall thoughts about each interview at this stage and reflections on any of my own experiences during the interviews. I wrote these down at this stage, as I had only recently completed the interviews and wanted to ensure that I had these notes while the experience was still recent.

During phase two codes were generated. I read through the interviews line-by-line

making notes on features of each line. These features included interviewees' descriptions and experiences of emotions, experiences with a range of topics and relationships, examples and experienced situations, and language that they used. I began to colour code repeated and opposing codes at this point. I also highlighted statements that provided a good example of a particular code so that they could be later reviewed as possible quotes. I went through these transcripts more than once to try to gather as many codes as possible. Phase three consisted of collating these codes into preliminary themes. At this stage I created a large list of themes and attached to these were the associated quotes and information that related to these.

Phase four involved a deeper review of the themes. This was firstly done to ensure that the themes were reflective of the codes. Themes were then examined to establish whether any themes should be merged or removed, and a thematic map was created to provide a current outline of the themes and how they related to one another. During phase five these themes were further refined, defined, and named. Each theme was individually analysed and connections between the themes were considered, to understand how they relate to one another. Finally, phase six included choosing which extracts best conveyed the meaning for each theme. I noted how other relevant literature related to my themes and ensured that the themes were clear in conveying the interview data and representing the interviewees as best as possible.

While Braun and Clarke's (2006) six phases of thematic analysis provide a clear structure for researchers to work through, back and forth movement between the phases is expected throughout the process. Once I had created a first draft of my themes, I went back through the transcripts examining my codes and preliminary themes that I had created. It was at this point that I more closely examined an earlier theme and associated codes that I had not further developed. I was able to further develop and combine this theme with other codes to create an additional theme, that provided missing information to the thematic map.

Trustworthiness and Reflections on the Analysis Process

While the current research has taken steps to ensure the thematic analysis has been conducted in as accurate a way as possible, such as following Braun and Clarke's (2006) recommendations, trustworthiness of qualitative research is sometimes highlighted as a potential limitation (Shenton, 2004). Guba (1981) outlined four aspects of trustworthiness that correspond to terms used to measure trustworthiness of quantitative analysis. The qualitative terms are as follows with the corresponding quantitative term in brackets: credibility (internal validity), transferability (external validity and generalisability), dependability (reliability), and confirmability (objectivity). Credibility refers to whether the qualitative findings are in line with reality, while transferability refers to whether the findings are applicable to other contexts and populations (Merriam, 1998; Shenton, 2004). Dependability is concerned with whether similar findings would be achieved if the study were to be repeated, and confirmability refers to the objectivity a researcher strives to hold (Shenton, 2004).

Regarding credibility (Guba, 1981; Shenton, 2004), the current research used four broad questions conceptualised with input from my research supervisors. All participants from the quantitative survey were invited to enquire about the qualitative interviews and had opportunities prior to the interview and during the interview to stop participating. One of my supervisors examined one of the anonymised transcripts in full to provide additional scrutiny and perspective. My supervisors both read my analysis and discussion on multiple occasions to provide and discuss feedback. I wrote some reflective commentary while undertaking the analysis, including noticing when I had unintentionally led a participant. This resulted in careful consideration when coding this section and ultimately was not used in my analysis. Participants were invited to read their transcripts and redact any sections. No redactions were made by the participants who chose to read these.

Information about the interview and participant sample in the current study are provided to inform transferability. I was the sole interviewer, however I consulted with my research supervisors. Massey University is the only organisation affiliated with the current project. To the best of my knowledge, qualitative research examining the relationship between perfectionism and NSSI has not been specifically examined, however, it is likely that related concepts will have been discussed in the wide field of qualitative research. Similar future projects carried out in different environments may, therefore, provide more information as to the transferability of the current research.

The project process has been documented in detail to allow for future replication and for the reader to assess the dependability of the project. Since completing the interviews, I have gone on to complete the practical components of the Doctor of Clinical Psychology programme, as compared with the research component, and worked closely with a range of clients, including some who have experienced difficulties with perfectionism and NSSI. If I were to conduct these interviews again, while my four broad questions would be the same, it is likely that some of my follow-up questions may be different. It is possible that my analysis would also have some differences. However, when conducting these interviews, I tried to provide the interviewee with as much space to talk as possible and with as little commentary as possible and thus I think that much of what was discussed would still arise, if I were to conduct the interviews again.

Finally, regarding confirmability, thematic analysis was chosen as the method of analysis through discussion with my supervisors. Supervision was taken throughout the project around conducting this analysis. Braun and Clarke's (2006) phases of thematic analysis were followed including following a lengthy process in initially familiarising myself with the data and then moving back and forth between the phases depending on my own reviewing of the themes and consultations with my supervisors.

While the thematic analysis in the current study has been undertaken with the intent to ensure trustworthiness and deliberate methodological and theoretical decisions have been made, limitations exist and will be discussed in Chapter 12.

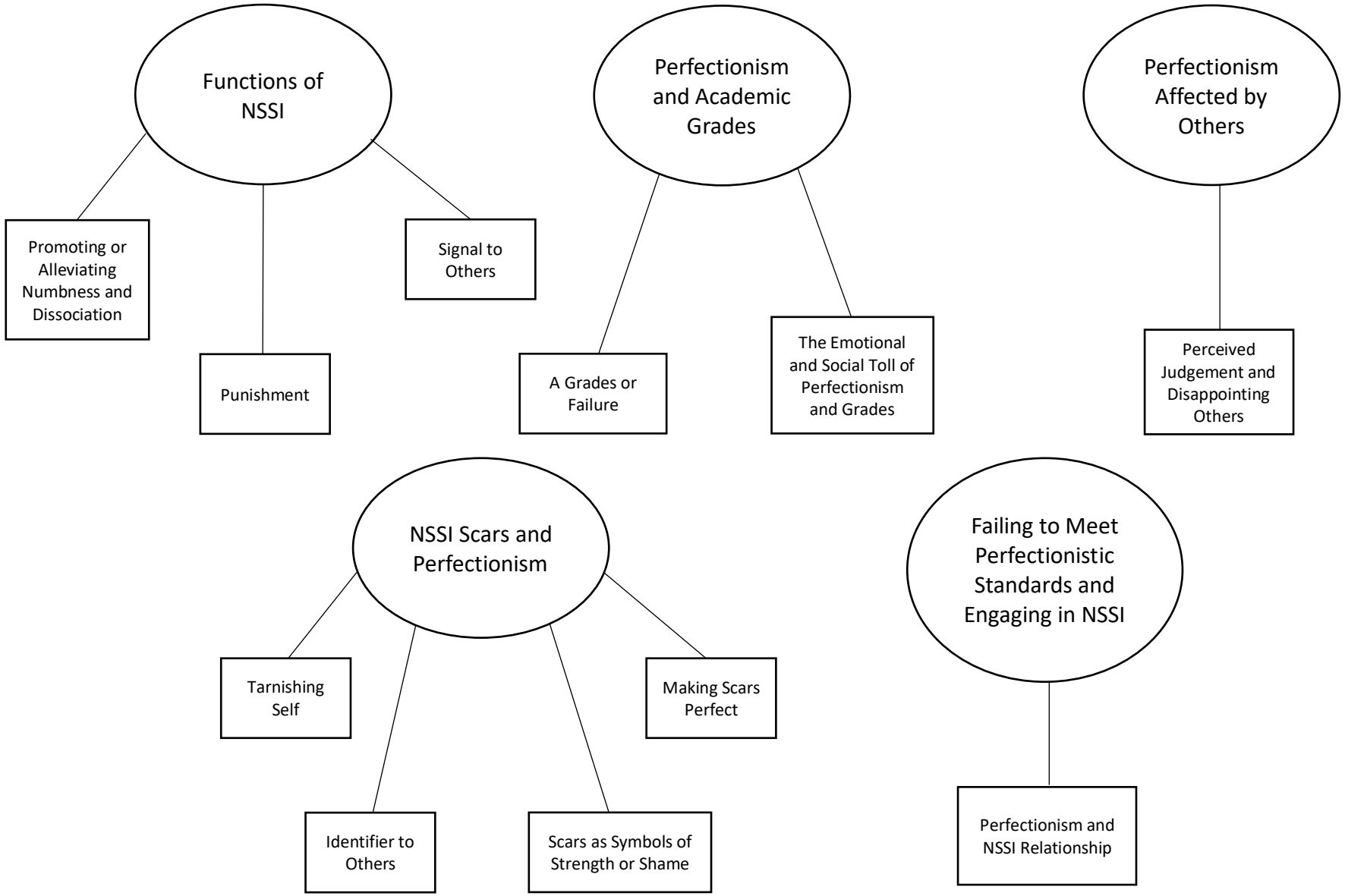
Chapter 11

Qualitative Results and Discussion

Thematic analysis resulted in the abstraction of five main themes as seen in Figure 15 below. Each theme and their subthemes are presented in the current chapter. It should be noted that during the interviews some of the participants used the terms NSSI and self-harm interchangeably. The full name, non-suicidal self-injury, was said by the interviewer during the interview to ensure that the definition of NSSI was clear to the participants. Further, all of the participants received information sheets outlining the definition of NSSI, and completed the Deliberate Self-Harm Inventory (Gratz, 2001) in which NSSI is differentiated from self-harm with suicidal intent. Due to the current interchangeability of self-harm terms in society and research (as discussed earlier), it is perhaps not surprising that participants used the term self-harm at times rather than NSSI.

Figure 15

Thematic Map Illustrating the Five Main Themes and Subthemes



Theme One: Functions of NSSI

In talking about NSSI, all the participants discussed the *function* of their engagement in NSSI. Three prominent functions were identified: promoting or alleviating numbness and dissociation; punishing oneself; and signaling to others. Some of the participants identified multiple functions of their engagement in NSSI while others described only one function.

Promoting or Alleviating Numbness and Dissociation

Engagement in NSSI was described as having a direct effect on feelings of numbness and dissociation and was highlighted as an important reason to engage in NSSI for some participants. Emphasis was placed on the immediate effect that NSSI can have on one's emotional state and the relief that it can bring. Lee provided detail of how experiencing emotional numbness led to engaging in NSSI for the first time. Lee described numbness as a new, unpleasant, and undesirable experience, and identified this numbness as what promoted their engagement in NSSI in an attempt to "feel better" (Lee). Once they started to consider NSSI as a possible means to stop feeling numb, they described experiencing a focused determination and "craving" (Lee) to carry it out.

> *Lee: For a couple days I just felt completely numb, I'd never really felt like that ever before, I think that was probably yeah, the lowest point that I'd been at.*

> *Lee: I was driving home one evening and didn't feel like I felt anything, like an empty shell and when I got home, like on the way home, I started to think about like you know for some reason, I don't know how the thought got into my head, but it just started to become really tantalising the idea of like cutting myself.*

Lee: You know next thing I can do to make myself feel better is this and it did feel better, it felt a lot better, and I never understood how anyone ever wanted to do that to themselves until I felt the same way

Lee's first engagement with NSSI provided feelings of temporary relief and even "ecstasy" (Lee), leading to engaging in NSSI again two days later. However, this second experience did not result in the same feelings of relief and instead acted as a "wake up call" (Lee) to seek support from their doctor.

Jamie and Casey described the use of physical pain and a visible mark on the skin as tools to bring them back to being in the present. Similar to Lee, Casey described the function of NSSI as helping them to "feel something" (Casey), while Jamie described using it to test reality.

Casey: I do have problems with dissociation, and it made me feel something, that was a big thing, and sometimes I did it because it actually sort of felt nice

Jamie: It was the weirdest thought and stupid, but I always I never thought that I would make it to year 12… I kinda thought that I'd be dead before then as weird as that is like I never intended to kill myself, I just never thought I'd make it to that point and like when I did I self-harmed essentially just to make sure that it was real and I was here.

These descriptions depict NSSI as a grounding technique. A way to be immediately brought to the present, to feel less numb and dissociated, and to ensure that what they are currently experiencing is real. Lee and Casey highlight the positive experiences that they

have had engaging in NSSI, however, many of the participants stated that this is not always the case and whether the experience was positive or not can change with each act.

While Lee, Casey and Jamie described NSSI as a way to alleviate numbness and dissociation, Nic described it as a way to *promote* numbness. Nic identified the function of their engagement in NSSI as to encourage feeling numb.

> *Nic: It would put me into this sort of meditative numbness, this kind of everything that was going on in my head would just go blank and the pain would be gone for a little while at least.*

Nic described how they continued to engage in NSSI as a "coping method" (Nic) for their emotional and mental health difficulties. Unlike Lee, Nic continued to experience the desired result from NSSI, in this case feeling numb, and continued to use NSSI to achieve this result. The immediate relief that NSSI can bring appears to be a strong motivating factor for continued engagement. Nic highlighted that even though they have learnt other "skills" (Nic) to help manage distress, it can be difficult not to engage in NSSI, given that it has been effective in the past, even if providing only temporary relief.

The use of NSSI as a way to promote and/or alleviate feelings of numbness and dissociation does not appear to be unique to the current study participants (Nock & Prinstein, 2004; Weierich & Nock, 2008). Nock and Prinstein (2004) examined the functions of NSSI with adolescent psychiatric inpatients and found that "To stop bad feelings" (52.9%) was reported most frequently, followed by "To feel something, even if it was pain" (34.1%), and fourth most frequently reported was "To relieve feeling numb or empty" (30.6%). The reasons for engagement in NSSI expressed by some of the participants in the current study echo these sentiments of wanting to feel anything as long as it was not numbness, as well as wanting to escape other feelings and experience a state of numbness for a while.

Using NSSI to enter a dissociative state and feel numb has been reported in previous research (Chapman et al., 2006; Gratz et al., 2002; Weierich & Nock, 2008). Nic discussed that engaging in NSSI could reduce the physical "pain" (Nic) for a time which suggests that they may not experience the physical pain resulting from NSSI in a prominent way. Others have reported that a lack of pain while engaging in NSSI can signal dissociation and a shift in attentional awareness (McKenzie & Gross, 2014). That is, the difficult thoughts that Nic described experiencing, may be temporarily quietened after engaging in NSSI, as an attentional shift away from these thoughts occurs. McKenzie and Gross (2014) emphasise the heterogeneity of NSSI engagement between individuals, including the function of NSSI and whether the individual experiences pain while harming themselves. McKenzie and Gross' model, adapted from Gross and Thompson (2007), states that using NSSI to modify feelings of numbness and dissociation is a form of emotion regulation in which attentional deployment occurs. By engaging in NSSI in this way, an individual can distract and disrupt their attention and focus their attention on stimuli that will elicit a desired emotional response.

Weierich and Nock (2008) have also highlighted the role that numbness has in relation to NSSI when examining NSSI in relation to childhood sexual abuse and posttraumatic stress symptoms. They found that NSSI was significantly related to avoidance/numbing symptoms. This may support the idea that NSSI is used as a way to promote or alleviate feelings of numbness. Similar to Jamie's experience, Straker's (2006) study of self-harm and scars identified the way in which NSSI can be used to check reality, with one participant identifying their self-harm scar as a reminder that they are in fact a real person. Jamie's engagement in NSSI to confirm that they are experiencing real life shows similarities to Straker's example in which NSSI, or the scars it can leave behind, can be used as reliable proof of current existence.

Punishment

A second function of NSSI identified was using it as a form of punishment. Reasons for punishing oneself using NSSI included: not achieving a goal that participants set for themselves, not meeting the expectations that they had for themselves, and not meeting expectations that were held by someone else. Participants who identified NSSI as a form of punishment, highlighted that engaging in NSSI was *deserved* as they had not met their goals and expectations. NSSI as a punishment was therefore viewed as a fit and suitable consequence by participants.

> *Sam: Yeah it's distracting and sometimes it's like aw cause I feel like I deserve it yeah it's pretty why I do it I guess.*

> *Jamie: Depending on what's been happening I might feel like I deserve it… because I didn't do well, I didn't achieve something or no one cares*

Using NSSI as self-punishment has been identified as a prominent reason for engaging in NSSI, with Nock and Prinstein's (2004) finding that "To punish yourself" (31.8%) was the third most frequently endorsed reason for engaging in NSSI. McKenzie and Gross (2014) suggest that using NSSI as a form of self-punishment is a form of emotion regulation in which individuals change cognitions about themselves. Chapman et al. (2006) explains this as an individual using NSSI to avoid the difficult experiences of shame and negative self-beliefs as once an individual has punished themselves, feelings of guilt and shame are reduced. Casey highlighted how punishment through NSSI can lead to more positive feelings, or a reduction in negative feelings, in line with Chapman et al.'s description. However, Casey also stated that this experience is not always consistent, and that sometimes engaging in NSSI can result in feeling worse.

Casey: When someone, if someone told me I wasn't good enough at something or maybe if I felt bad about myself, I would then go and self-harm, or if I just felt really bad at something, I would just go and self-harm and that was my way of me saying yeah you're really not good enough at it, punish yourself, be mean to yourself, or make yourself feel better, cause it made me feel better sometimes and it made me feel worse sometimes

Similarly, as Sam highlights, despite providing an immediate desirable outcome, using NSSI as a form of punishment can later compound the difficulties that they already faced.

Sam: I do it and I feel a bit better and then the next day I'm just like aw I'm such an idiot and I just like give myself a real hard time for doing it.

Participants were clear in stating that this punishment was self-motivated, that they chose to engage in NSSI for this reason, and that it was usually kept secret from others. While punishment is usually conceptualised as occurring between at least two people, the form of self-punishment described by the participants appears to be an intrapersonal process that participants engage in only for reasons related to oneself. However, the reason that a participant feels that they need to be punished may be due to interpersonal factors, as highlighted by Casey in which they stated that someone else stating that they were not "good enough" (Casey) could lead them to engaging in NSSI.

Burke et al. (2021) examined the relationship between NSSI and self-punishment cognitions through the defective self model of NSSI (Hooley at al., 2010). The defective self model of NSSI suggests that some individuals carry out NSSI to punish themselves and/or as

a response to self-critical cognitions. This model proposes that both self-critical and self-punitive cognitions are positively related to core beliefs about being flawed and deserving to be punished. The idea that the self is flawed was discussed by some of the participants including Casey "I'm just so much flaw" (Casey), who identified using NSSI for punishment reasons. While it is possible that core beliefs of being flawed could be related to self-punishment in some participants, the focus was on it being *deserved* in the interviews and further discussion around this would need to be undertaken.

McKenzie and Gross (2014) again state that using NSSI as self-punishment is a form of emotion regulation. Specifically, it promotes cognitive change and can modify how one appraises the situation. By engaging in self-punishment, individuals may be able to experience some relief by reducing the focus on their high-level awareness to a low-level awareness (Baumeister, 1988). That is, instead of focusing on the more complex demands individuals hold for themselves, they can focus simply on bodily sensations such as those experienced when engaging in NSSI.

Signal to Others

While the first two functions described above were more intrapersonally focused, some participants also identified an interpersonally focused function for engaging in NSSI. Participants varied in how much they shared their engagement in NSSI with others. Some described actively trying to keep their NSSI secret, while others had told a small number of people.

Two of the participants described that a function of their NSSI had been to attempt to signal to others. While both participants did not tell other people about their NSSI for some time, they discussed that they *wanted* others to know. Taylor stated that part of their engagement in NSSI was done as a signal to others. Specifically, Taylor wanted other people to realise that they were experiencing difficulties and needed support, without having to

verbalise it. Taylor stated that feeling weak and imperfect prevented help seeking and that engaging in NSSI was one way that they could convey to others that they needed support.

> *Taylor: I think towards the end I just wanted someone to notice how hard I'm trying. I was just like just recognise my efforts, like recognise that I'm not a perfect human please help me.*

> *Taylor: Definitely cutting was the main drive was to show people that I'm not ok.*

> *Taylor: In a way asking people for help in my mind is something that shows vulnerability, that portrays to people that I am not perfect… kinda make signs that people can see that I'm not ok without having to say it… I didn't have a coping mechanism and I didn't know how to ask for help, so I kind of created ways that people came to me with the help without asking.*

Nic also described wanting help from others and wishing that others would see their NSSI and provide this support. In a similar way to Taylor, seeking this support verbally was difficult and by others seeing their NSSI, Nic could let others know that they needed help without having to ask for it. However, Nic also described wanting to keep their NSSI hidden, so that they were not made fun of by their peers. This conflict between wanting supportive people to know, but not wanting bullying peers to find out, further complicates using NSSI as a way to communicate one's current difficulties.

> *Nic: To an extent quite a lot of it was an attempt to communicate the sheer amount of pain that I was feeling, but I could not communicate verbally. To an extent I kept it very hidden, so it wasn't so much you know I almost always had that kind of secret*

thought in my head going I really wish someone would see this and help me. But I certainly did keep it very hidden from others as much as possible because of course that was weird and already something that I had been picked on before I was doing it, because I had kind of started showing depressive symptoms to others to other kids and they would make self-harm jokes, even before it had even become an idea so in my head.

Engaging in NSSI was seen as a sign of strength by some of the participants. Both Taylor and Nic identified that NSSI could be viewed as a sign of strength when verbally communicating was too difficult. Taylor discussed that it takes strength to harm oneself and by self-harming, they could both communicate to others that they needed support, while also demonstrating that they were trying to manage on their own. Taylor stated that it showed more strength to engage in NSSI than to verbally ask someone for help, as asking for help is a more obvious sign of imperfection and weakness. Taylor's description of engaging in NSSI demonstrates the struggle, and attempted solution, involved in both communicating competence, whilst asking for help.

Taylor: Cutting also is to show myself that because I pride like, there is a part of me that I pride myself in the strength of a human being that I am. It's wrong in so many ways and consciously I understand that, but cutting it takes courage, so by cutting myself I was like yes I'm still courageous and I still have the strength to be OK.

While Nic may have originally viewed NSSI as a sign of strength, they stated that their opinion had changed over time. Nic stated that if they reengaged in cutting behaviour today, they would see it as a sign of weakness.

Nic: In my head that if I was to start again that would be some kind of failure, that would be a kind of weakness to start again, which I know is the complete opposite to what I previously thought.

The use of NSSI as a to signal to others has been found in other research (McKenzie & Gross, 2014; Nock & Prinstein, 2004). Nock and Prinstein (2004) found that "To let others know how desperate you were", "To get attention", and "To get help" were all identified by 14.1% of adolescents as reasons for engaging in NSSI. "To get your parents to understand or notice you*"* was also endorsed by 13% of participants and may relate to using NSSI as a signal to others. McKenzie and Gross (2014) state that using NSSI in this way is a form of emotion regulation in which situation modification occurs. That is, through the use of NSSI, individuals may modify the situation around them so that the associated emotions are also modified. For example, using NSSI as a distress signal could result in others acting in a more caring manner towards them (Nock, 2008). However, Nic and Taylor highlight that this behaviour may be more nuanced than simply signaling to others that they need support. Nic and Taylor describe endorsing contradictory motivations; wanting help, while also needing to keep it hidden from those that might not understand. Similarly, using NSSI as a method to seek support, but also using it as an attempt to manage on one's own. Nic and Taylor highlight the contradictions and ambivalence involved in using NSSI as a signal to others and emphasise the complexity involved in understanding NSSI.

Theme One Summary

The range of reasons given for engaging in NSSI illustrate how important it is to understand the functions of NSSI for each individual. The above subthemes all align with the emotion regulation functions highlighted by McKenzie and Gross (2014): attentional deployment (numbness and dissociation), cognitive change (punishment), and situation modification (signal to others). It appears from the current study's participants, as well as

prior research (e.g., McKenzie & Gross, 2014), that the functions and outcomes of engaging in NSSI can vary in a multitude of ways. Firstly, different people have different goals and desires for engaging in NSSI, such as promoting versus alleviating numbness. Secondly, even when the action is the same, engagement in NSSI can produce different outcomes, such as increasing versus decreasing dissociation. Thirdly, NSSI does not always result in an individual's desired outcome, as demonstrated by Lee and Casey's descriptions of positive feelings after one act and negative feelings after another. Finally, even when an immediate improvement is felt, many participants experience delayed feelings of regret and disappointment for engaging in NSSI.

Theme Two: Perfectionism and Academic Grades

Academic grades were identified by four participants as an area of their life that is affected by their perfectionism. When talking about their experiences with perfectionism and its relationship to academic grades, participants emphasised two prevalent experiences: grades less than an A standard were frequently seen as failing grades; and the emotional and social toll that comes with holding oneself to such perfectionistic academic standards. Some of the participants also discussed other areas in which perfectionism affects their lives such as art and sports. I am focussing here on grades as a common instance as it was discussed in detail and emphasised by many of the participants.

A Grades or Failure

Due to the age criteria and recruitment method in the current study, some of the interview participants were current or past university students. Many of the participants stated that they aimed for consistent A grades both in individual assessments and as an overall grade for each university paper. One participant highlighted a similar pattern in high school where they aimed for excellence in their assessments and achieving less than this was extremely disappointing and upsetting. While aiming for A grades in university papers may not initially appear problematic, the participants described their high standards as such that anything less

than an A grade is treated as a failure. This dichotomous thinking places an incredibly high standard on the participant and discredits any work in which they have achieved a B+ or less.

> *Sam: I have quite a problem when it comes to my grades. If I get like anything that's not an A I will be destroyed for ages. I've like, pretty much if I've ever gotten a B or a B+ or something I will like withdraw from that paper and then have to like call up and when I've come to my senses and like get put back in, it's just so stupid. Yeah, but I'm working on it.*

> *Jamie: With uni as well I put what I would consider pretty high standards on myself and when I don't get them, I get quite upset and so like I sort of aim for like As… when I handed in my first thing the first like assessment I handed in this semester, it was worth five percent of the entire thing, like five percent, and I got a B+ and I cried for an hour, I was so upset that it wasn't an A, but yeah I dunno that's just me.*

> *Taylor: Academia if I like the other day I got a C and I was just devastated, I was like I'm quitting uni like I can't do this, but then my partner comes in goes crap like that's what I got for pass like C's get degrees and I'm like I don't care… I sat there for probably a good half an hour going oh my god oh my god even like if I get a B+*

Jamie and Sam highlight that despite achieving a relatively high grade (B+), this was perceived as a failure to meet their standards and something to be "destroyed" (Sam) and "upset" (Jamie) about. Similarly, Taylor achieving a C grade and the resulting disappointment about not achieving highly led to considering leaving university.

By setting the unrelenting standard of needing to achieve an A grade in all assessments and papers, participants appear to become fixated on the presence, and more

importantly the absence, of an A. The participants frequently focused on the heightened emotional experiences that they would go through when receiving anything less than an A grade, with little acknowledgement of any positive feelings when an A was achieved. When achieving a B+, the participants did not appear to acknowledge any of the work that they had put into their assessment. Further, despite the difference between a B+ and A- often being very small, and not necessarily a reflection of a person's past and future capabilities, participants do not appear to acknowledge this, at least not initially.

Rice et al.'s (2016) discussion provides a selective overview of perfectionism in academic settings. In this, a student describes how perfectionism can negatively impact how one's academic performance is perceived, how a B- may be seen as painfully inadequate (while others see a B- as an acceptable grade), and how distressing it can be when academic standards are not met. Similar to the current study's participants, obtaining a grade viewed as less than excellent can evoke a highly emotional response of being upset and distressed, as well as making one feel inadequate, while those with less perfectionistic standards may not understand this reaction (Rice et al., 2016). While possessing high levels of perfectionism may be associated with high academic performance, negative factors such as negative moods prior to examinations, test-related anxiety, as well as self-criticism may also be present and can also lead to lower academic performance (Rice et al., 2016). The academic pressure and expectations held by some individuals for themselves appears intense and as demonstrated by participants such as Sam, Jamie and Taylor, not meeting these standards can result in an immediate and emotionally overwhelming reaction.

Schuler (2000) examined the relationship between perfectionism and gifted adolescents in a mixed methods study. Schuler found that 87.5% of the gifted adolescents were perfectionists and that perfectionists could be divided into two types; normal perfectionists and neurotic perfectionists. Neurotic perfectionists indicated that grades were key in defining them, that they felt pressure to maintain their high grades, and that they

experienced constant concerns about making mistakes. This was in contrast to normal perfectionists who stated that doing their best was more important than their grades and that making mistakes is part of the process. The current study participants highlight the pressure they put on themselves to maintain high grades and the devastation that comes with achieving a lower grade. It is possible that some of these participants experience a fear of making mistakes and a fear of failure. When these individuals then achieve a lower grade, an automatic fear response occurs which results in the overwhelming emotional response described.

Bieling et al. (2003) examined the relationship between perfectionism and academic achievement in undergraduate university students. They found that students higher in perfectionism set higher standards of achievement for their exams. They were less likely to meet their goals and more likely to experience negative affect related to the exam regardless of whether they had met their standard. Bieling et al. also highlight that these perfectionistic related responses could lead to significant distress over time. The current study's participants show some similarities to those in Bieling et al.'s study. High standards are set for academic work, such unreasonably high standards mean that it is likely they will fail to meet their standards 100% of the time, a negative affect can result, and this can lead to significant distress. Interestingly, Bieling et al. report that a negative affect may occur even if the exam goal was met.

Finally, Madigan's (2019) meta-analysis, examining the relationship between perfectionism and academic achievement, found that perfectionism was significantly related to academic achievement and that perfectionistic strivings and perfectionistic concerns displayed opposite results in this relationship. That is perfectionistic strivings was positively related to academic achievement while perfectionistic concerns was negatively related. This suggests that not only do the current participants experience negative emotions and cognitions about their academic achievement, but for those higher in perfectionistic concerns

their perfectionism may also be having a significant negative effect on their achievement. Madigan suggests that the negative outcomes commonly found with perfectionistic concerns, such as procrastination, may be contributing to this worse academic achievement.

Sam, Jamie and Taylor discussed their disappointment in detail during the interviews with little time spent on any positive feelings associated with meeting their goals. The focus on perceived failure may therefore detract from any positive emotions associated with achieving highly. Extreme emotional reactions around not achieving an A grade are therefore perhaps not surprising when the focus is on meeting their exact standards rather than doing well. Engaging in black and white thinking patterns may also make this more difficult as grades may be categorised as being acceptable, and anything less as failure. This dichotomous thinking style has been highlighted as a maintaining factor in clinical perfectionism as individuals either perform acceptably or fail, without any intermediary flexibility (Egan et al., 2013; Shafran et al., 2002).

The Emotional and Social Toll of Perfectionism and Grades

Many of the participants highlighted the negative emotional and social consequences that can result from having perfectionist academic standards. This section expands on the emotional element touched on in the first subtheme and the subsequent recovery process described by these participants. As highlighted in the quotes above, participants described feeling strong negative emotions that were intense enough for them to consider withdrawing from university papers and university altogether.

> *Sam: pretty much if I've ever gotten a B or a B+ or something I will like withdraw from that paper and then have to like call up and when I've come to my senses and like get put back in, it's just so stupid. Yeah, but I'm working on it.*

Having these strong negative emotions of sadness and disappointment about not reaching one's high standards appears emotionally draining and time consuming. Even before handing in an assignment, Nic described a process of convincing themselves that it is acceptable to hand in an assignment that is less than perfect.

> *Nic: it's a matter of convincing myself that it's not the end of the world if it's not perfect and not achieving my own academic goals is a big difficulty.*

Participants' initial reactions to lower than expected grades appear to be overwhelming. It also appears difficult to avoid and challenge this immediate response. Jamie described it as a part of who they are and thus it seems unavoidable and unchangeable. Once participants have emerged from this state, they described a period of reflection where they are able to look at the grade they achieved more fairly. The cycle of not meeting their grade expectations, feeling overwhelmed and upset, before being able to accept their grade therefore continues. Keeping high academic standards can be unrelenting for those high in perfectionism and dichotomous thinking perpetuates the idea that anything less than an A grade is a failure, rather than a slightly lower grade. Bieling et al. (2003) found that in a sample of undergraduate university students, perfectionism was positively associated with standards set for future exam achievement, and thus an unrelenting cycle continues. Bieling et al. also found that those high in perfectionism were less likely to lower their expectations based on their past performance and therefore negative affective states may be more likely. These findings echo some of the statements made by the current participants in regard to the ongoing cycle of setting unrealistically high standards, becoming upset when these are not met, and continuing to hold the same or higher standards for themselves in the future.

Researchers such as Shafran et al. (2002) suggest that perfectionism can result in an individual's overdependence on self-evaluation in a specific area. Shafran et al. suggest that

when these standards are not met, the individual's self-evaluation is negatively affected, and they are self-critical, perceiving themselves as a failure. This is in line with the suggestion above in which not obtaining an A grade results in intense negative emotions because it is regarded as a failure, not only to not achieve their standards, but also for themselves as a person, as their self-evaluation depends on achieving in this area. Individuals then continue to strive for these high standards against which to evaluate themselves.

Participants also discussed how their high academic standards can affect them interpersonally as well as intrapersonally. Nic and Sam described the difficulties of having to work with others on group projects, when the group members appeared to have lower standards for their work. Both participants mention difficult social interactions resulting from this as well as taking on more work themselves so that they can hand in a piece of work that meets their own standards.

> *Nic: I would probably be not just a self-described perfectionist, but one described by others. Most people find it quite visible in terms of any kind of academic work that I do and any kind of projects*

> *Nic: When it comes to facts, I will do everything in my power to make sure that the correct ones are what's written and what's communicated to people and that can cause some social difficulties in terms of, just when it comes to assignments and group work for example, and like let's just hand it in as it is, ugh.*

> *Sam: I was doing a group project and like the stuff that other people had done were like real shit and I was like I can't, I can't like let you guys submit this like it is bad and we got into like an argument about it and I just got really stressed about it and*

then like just did the whole thing myself, because I was like annoyed with how like lack of effort that everyone was putting in and like they just did not care

In a similar way to the current participants' experiences with group work, some of Schuler's (2000) participants also described a sense of responsibility for making sure group work was completed to a high standard. They also stated that their need to control this work to get a good grade meant that they worked harder and spent more time on group assignments than other members of the group.

Theme Two Summary

Achieving well academically was described by many participants as an integral component of their perfectionism and where their perfectionism can be most difficult to manage. Focus on achieving A grades was described as important and non-negotiable in helping them to meet their own standards. While little time was spent discussing what happens when they do meet these grade standards, participants discussed the intense emotions and reactions that they can experience when they achieve anything less than an A. The participants also discussed the social repercussions that holding such high academic standards can have. This included having difficulties with other group members during group projects and feeling unfairly burdened with improving others' work to enable them to achieve an A grade. The black and white thinking that may be present for the current participants appears to apply to grades such that an A grade is expected and acceptable, but anything less is a failure. While the participants can subsequently acknowledge that their reactions are intense when faced with a lower grade, they explain that in the moment, a lower grade is incredibly upsetting and overwhelming.

Theme Three: Perfectionism Affected by Others

All of the participants discussed how they hold themselves to perfectionistic standards, however, they also frequently discussed the effects that *others* have on their

perfectionism. The main concern discussed was the difficulty around perceived judgment and disappointing others.

In conjunction with a need to meet their own high standards, some participants described the additional pressure of meeting what they perceive as other people's high standards. Many of the participants could not describe what these standards were, rather they described a worry about how others *might* perceive them, regardless of whether they had any evidence to support this. Lee described the internal struggle between looking their best at all times so as not to be judged negatively versus acknowledging that other people are unlikely to pay much attention to this. Lee also described an internal battle with perfectionism between the "rational self" (Lee) and the "emotional self" (Lee). This description highlights a strong division between different parts of Lee which appears to cause ongoing difficulties as Lee attempts to manage this.

> *Lee: I suppose it's my standards, but its perhaps influenced by you know anxiety about maybe how I'm perceived*

> *Lee: My rational self kind of says no one really probably cares that much, but my emotional self says it's gotta be this is the way I want to be perceived yeah and it definitely causes a bit of undue stress.*

Lee describes a lose-lose situation in regard to anxiety as Lee experiences anxiety both when trying to live up to others' standards and when trying to relax these standards. Casey also highlights the difficulties of striving for someone else's unspecified standards of perfectionism. When the standard is undefined, individuals may feel that they are continually falling short of others' expectations even if others have not expressed this to them and it is possible that they may interpret others' love and support as conditional.

Casey: It's needing to be what others expect is their perfect idea of me, but I have no idea what that is

Along with concerns of being judged, some of the participants discussed the negative effects of observably disappointing others by not meeting their high standards. Participants indicated that the negative emotions that come with making mistakes can be difficult to manage and that getting "told off or in trouble… really affects me" (Lee). Avoiding disappointing both oneself and others appeared to be an important part of many participants' experiences. Disappointing someone else was described as an error, a mistake and an example of the participant failing to meet and uphold the high standards that are expected of them. Further, others confirming participants' own worries and fears, that they are not achieving highly, can be distressing and upsetting.

Taylor: I'm more the one that's competitive and want to strive for the best and don't want to disappoint people.

Casey: If someone told me I wasn't good enough at something or maybe if I felt bad about myself, I would then go and self-harm

Casey described how others' expectations and image of them affect not only their emotional wellbeing, but also their sense of autonomy. Growing up, even small, low-risk choices were impacted by others' standards such that everyday choices were seen as either right or wrong.

Casey: I never could get books out from the library because it might not be right because it might not be right… like it might be judged like what I like isn't right.

Participants described not only the negative emotions that they experience when disappointing others, but also taking responsibility for others' feelings. Taylor described having "expectations of people" (Taylor) and wanting others' reactions towards them to be "perfect" (Taylor).

Taylor: it's more their feelings or their reactions towards me that really like I want that to be perfect as well like harmonious.

While our actions can influence how others may react, participants described feeling responsible for controlling how others react and wanting this to be perfect. Sam even described a feeling of responsibility for their therapist and not wanting to disappoint them by engaging in NSSI.

Sam: I don't wanna like disappoint my therapist because she gets like so disappointed every time I do it.

Researchers have recognised that some individuals with perfectionism are concerned about others' expectations and have incorporated items in perfectionism measures to account for this (Flett et al., 1998; Frost et al., 1990; Hewitt & Flett, 1991). One of the most commonly used measures, the MPS-HF (Hewitt & Flett, 1991), involves three main dimensions, one of which is socially prescribed perfectionism. Socially prescribed perfectionism centres on the standards an individual perceives significant others as placing on them and includes items such as "I find it difficult to meet others' expectations of me",

"Anything that I do that is less than excellent will be seen as poor work by those around me", and "People expect more from me than I am capable of giving". These examples demonstrate some of the similarities between the current participants' concerns and difficulties, such as perceiving it as difficult to meet others' expectations, and those identified by Hewitt and Flett (1991).

Those high in socially prescribed perfectionism may be at greater risk of depressive symptoms and a sense of social hopelessness (Smith et al., 2018). Smith et al. (2018) describe how perceiving oneself as consistently disappointing others, not meeting their expectations and receiving disapproval can reduce an individual's sense of acceptance and connectedness. Casey described engaging in self-harm when they are told that they are not good enough, which in Casey's case, demonstrates the direct negative psychological difficulties that can occur when an individual perceives themselves as not meeting others' expectations.

Lee's concerns around self-presentation and meeting others' expectations are again echoed in a measure of perfectionism, that being the Perfectionistic Self-Presentation Scale (Hewitt et al., 2003). This measure focuses on appearing perfect and avoiding appearing imperfect to others. Items in this measure include "I judge myself based on the mistakes I make in front of others", "Failing at something is awful if other people know about it", and "I strive to look perfect to others". This presentation aspect of perfectionism appeared to be described by a few of the participants in which they described a lot of time and care being put into their appearance, since this will be seen by others.

Theme Three Summary

The effects that others can have on a person's perfectionistic standards has been recognised by researchers and included in measures of perfectionism (e.g., Hewitt & Flett, 1991). The main difficulties that the current participants described include both the perceived judgment participants anticipate from others and difficulties with disappointing others. The perceived judgment can affect how individuals present themselves and make decisions.

Further, it can cause confusion when the individual does not know what the perfectionistic standard is that others supposedly hold them to. When participants do disappoint others by not meeting their standards, participants can become upset and, as described by Casey, this can directly lead to engaging in NSSI. Some of the participants describe feeling responsible for ensuring all interactions and emotions are harmonious and perfect and the consequent impracticalities of pursuing this. While these perfectionistic standards appear difficult to manage, researchers also highlight that the long-term effects of this may lead to other difficulties and psychopathologies (Smith et al., 2018).

Theme Four: NSSI Scars and Perfectionism

Scars can form as a result of engaging in certain types of NSSI, such as cutting (Todd et al., 2012). While the participants were not asked directly about bodily scars, all participants referred to scars during the interview process. Additionally, references to perfectionism appeared to be prevalent throughout participants' descriptions of their NSSI scars. Scars were discussed in four main contexts: tarnishing oneself; scars acting as an identifier to others; scars being symbols of strength and shame; and making scars perfect.

Tarnishing Self

Scars resulting from NSSI were viewed by some participants as physical imperfections; "a tarnish on myself" (Lee). Feelings of regret, shame and disappointment were all expressed when talking about these NSSI scars for two primary reasons. Firstly, participants described regret and disappointment about the permanence of these scars and how this meant that they could never be physically perfect again. Secondly, feelings of regret and shame were expressed about these scars having been self-created and therefore these physical imperfections were created by them. Participants stated that their feelings about engaging in NSSI can change over time. While NSSI may therefore feel desirable in the moment, the permanent physical imperfection left behind can later invoke feelings of self-

hatred. The negative feelings towards the scar can last longer than the temporary relief sometimes experienced when engaging in NSSI.

> *Lee: So it's sort of like yeah kind of a really odd vain pursuit of perfectionism, or it seems like now it's in vain because I've scarred myself I guess, so I suppose it frustrates me thinking about it that I did that and it's kind of like ah that was silly yeah.*

> *Casey: Whenever I self-harmed it would do its purpose for that time and then a few months later I'd hate the scar because then I'm flawed, just that little bit more flawed, and I'm covered in all these flaws and then I've got another flaw and then I'm just so much flaw.*

The challenges of living with scars has been identified in prior research including B. C. Brown et al. (2008) who examined participants' quality of life with skin scarring. In this study, participants obtained their scars in a range of ways including from surgery, acne and trauma, with only one participant obtaining a scar through deliberate self-harm. Half of the participants reported lowered self-confidence and increased consciousness due to their scars. 21% percent of participants reported experiencing anxiety, half of participants reported experiencing low mood and despair, and 26% reported experiences of anger, annoyance and frustration in relation to their scars and other people's reactions.

Lee and Casey's descriptions of feeling more imperfect and flawed due to their scars may contribute further to what may be a vicious cycle involving perfectionism, NSSI and scarring. While an individual may feel some relief during the self-harming episode, the resulting scar may prompt the participant to feel more imperfect, increasing negative feelings about themselves and possibly contributing to future engagement in NSSI. The effect that

perfectionism can have on self-harm scars is described in Stirling's (2020) autoethnography of self-harm scars in the therapy room. Stirling discusses the difficulties of possessing self-harm scars not only due to their distinctiveness, but also due to working as a therapist. Stirling describes experiencing difficulties revealing her scars, especially when she perceives them as a "professional imperfection" (p. 4). While Lee and Casey do not share this exact concern about working as a therapist with NSSI scars, the notion that the scars are an imperfection appears similar and further demonstrates that the scars can affect many areas of life when they are viewed as tarnishing oneself.

Lee and Casey's feelings of regret around their self-inflicted scars may also show similarities with Dyer et al.'s (2013) research. Dyer et al. found that female patients that had engaged in NSSI that resulted in scarring reported significantly more negative body image concerns compared to patients that obtained scars not from NSSI. Self-inflicted scars may therefore add additional difficulties to the body image concerns that frequently accompany scars.

Identifier to Others

NSSI scars were not only identified as a physical imperfection, but also as a visual cue that they had acted imperfectly and faulted both themselves and others. Lee identified this as a significant negative result of having scars, as it suggests to others that they have had difficulties. In an attempt to avoid others knowing that they engage in NSSI, Jamie identified that they give forethought to engaging in NSSI such that they are "careful with where it is" (Jamie) so that the scar is not visible to others.

> *Lee: It's sort of a tangible reminder I suppose to myself that I fucked up… I've messed up or you know I've faulted in some way and I've you know I've cut my body*.

Lee: You know the way that people see it and perceive it all and then it's kind of like a really obvious kind of like badge that I'm, that I've, you know fucked up at some point mentally

Lee: That's the thing that bothers me the most about them is how other people might think.

The negative impact that identifiable self-harm scars can have on individuals is further supported by Ismail et al.'s (2008) case report. In the report, participants had scars on their arms resulting from self-harm. These scars were seen as distinctive self-harm scars as they appeared as a series of straight lines, often the result of cutting oneself. Participants undertook a resurfacing process to modify their self-harm scars. The treatment did not intend to remove all scarring from their arms, but rather to replace the self-harm scars with a different scarring pattern, more similar to those seen in patients that have received treatment for burns. Ismail et al. stated that both participants were satisfied with their results as the new scarring is less recognisable as a scar resulting from self-harm. The stigma and psychological difficulties that the patients experienced with having self-harm scars was improved through the scar modification process. Ismail et al.'s participants' experiences appear similar to what Lee and Jamie describe in not wanting others to see their scars and being concerned about what others might think. The ongoing difficulties that scars can create for individuals is therefore clear with individuals concerned about the particular stigma that may result from people seeing their distinctive self-harm scars.

Scars as Symbols of Strength or Shame

Some of the interview participants discussed what their scars represent to them. These responses varied greatly from scars being viewed as symbols of strength to symbols of shame. Two of the participants discussed how cutting symbolises their own strength.

Jamie: I almost feel like it makes me stronger.

Taylor: Cutting it takes courage so by cutting myself I was like yes I'm still courageous and I still have the strength to be OK.

It appears that some participants identified the strength that they possess by being able to engage in self-inflicted pain and also that they have survived difficult times in their life. Their scars from engaging in NSSI therefore act as continuous reminder that they are strong and have demonstrated this strength in a physical form.

Taylor: I like scars because it shows the strength of a human being that I am.

In contrast to Taylor, Lee did not view their NSSI scars as positive symbols. They described their scars as visual prompts that lead to feeling "a little bit of shame" (Lee) when they "see [them] in the mirror" (Lee). Lee described their scars as a permanent negative reminder to themselves that they have made a mistake and that these are visible to others is the most difficult aspect of having scars.

Sam viewed their scars differently again, placing little importance on them and almost disregarding them entirely. When describing their different methods of NSSI, including overdosing and cutting, they highlighted the long-term negative health consequences that overdosing has caused, compared to the superficial damage from scars.

Sam: I've got like liver damage and stuff so yeah it's like a bit different than just some scars you know.

Despite the current participants obtaining their NSSI scars from the same method, cutting, the meaning that each of them places on these scars varies greatly. Ismail et al.'s (2008) participants sought to replace their scars with less easily identifiable scars. Perhaps an element of shame accompanied these scars as Ismail et al. described how the participants experienced an increase in self-confidence and no longer chose to conceal their scars once they had been modified. Researchers have highlighted the shame that those who engage in NSSI can feel (Rosenrot & Lewis, 2020) and the assumptions that others can make when they learn that someone self-harms (Chaney, 2020).

Alternatively, a level of acceptance is highlighted by some researchers as a part of their healing journey (Lewis & Mehrabkhani, 2016). While this may not be necessary for everyone that has engaged in NSSI, Taylor's conceptualisation of NSSI scars as a sign of strength appears to demonstrate a level of acceptance in that Taylor does not hold shame or regret around possessing these scars. While the shame around scars that some of the current participants described may represent one end of a spectrum, the strength that others have found symbolised in the scars may represent the other end. In contrast, Sam's description of almost dismissing these scars may demonstrate sitting in a neutral middle ground, showing an acceptance that the scars are permanent, but that they do not represent more than they are, the result of healed wounds.

Making Scars Perfect

One participant discussed how they perceive their perfectionism as directly affecting *how* they engage with NSSI. In regard to cutting, Jamie discussed how they consider what the cut will look like to ensure that it results in a shape that is acceptable to them; "I always do it in a straight line" (Jamie). They will also determine where to cut based on whether it is a "pure" (Jamie) surface of their body.

Jamie: With cutting I suppose I never want to put it like on a surface that's already so like pure because it stands out too much, so with like one of my most recent ones it's down here [points] and it's almost gone, but you know that like crease when you bend over, I like put in it the crease cause there's already a crease there so it's not like a clear surface already yeah.

Jamie: It follows the I dunno the curve of the crease

Similar to cutting, Jamie identified bruises as another way that their perfectionism affects their NSSI. While Jamie stated that they never "intentionally bruise" (Jamie) themself to create a new bruise, they prolong and modify bruises. Specifically, when Jamie noticed a bruise, usually obtained through sport, Jamie would further bruise themselves to make this into an acceptable shape.

Jamie: And then when I do have a bruise though if it's not a perfect like circle or something, like if it's a funny shape, I'll try to make it into a circle. And then I suppose with cutting I always do it in a straight line and yeah.

Jamie: Yeah ways that I'd like accept I suppose and not necessarily just like a circle, maybe if it's like a like a I dunno an oval or something, but if it's in like a I dunno this sort of shape [gestures], like a squiggle, I'm just like no this ain't right.

While this relationship between NSSI and making scars perfect was only discussed by one participant, it was particularly noteworthy due to illustrating how NSSI and perfectionism can intersect in a direct, but different, manner from what other participants described. The way in which Jamie physically engages in NSSI through cutting and bruising

appears to be directly influenced by how the resulting cut or bruise will look. Jamie identified this as relating to their perfectionism and ideas around acceptable, symmetrical, visually pleasing shapes.

Both Frost et al. (1990) and Hamachek (1978) have discussed a neatness and precision aspect to perfectionism. The MPS-F (Frost et al., 1990) organisation subscale examines the tendency to be organised, neat and orderly, while Hamachek describes a type of perfectionism in which individuals act with precision and engage in a painstakingly effortful process to attempt perfection. These descriptions of neatness and precision may relate to Jamie's experiences of wanting their scars to be symmetrical and to follow the curves and straight lines of their body depending on where the cut is being done. Jamie discussed a focus on organisation, making sure things are in a "logical sequence" (Jamie) and organised. Jamie also discussed presentation and how others would consider Jamie's handwriting to be "neat and up and down" (Jamie). Jamie described perfectionism as something that "flows over into several aspects of my life and the things I do" (Jamie) and it appears that this neatness, organisation and sense that things are in order is an important part of Jamie's perfectionistic experience. It perhaps makes sense therefore that this same forethought and precision is exercised when Jamie makes marks on their skin.

Theme Four Summary

Some participants express regret with the knowledge that these scars were self-created and in their pursuit of perfectionism they irreversibly scarred their body. As an identifier to others, these scars can also be distressing as these imperfections are visible to the outside world. However, not all participants identified their NSSI scars as something to be ashamed of. One participant disregarded their physical scars altogether while others refer to them as a permanent symbol of strength. While many of the participants described how perfectionism affects what they think about their scars, one participant discussed the direct relationship between perfectionism and NSSI in the way in which they carry out NSSI itself. The

importance of making a mark on their body that is perfect and acceptable to them revealed that if they were going to engage in creating imperfections on their body, these marks needed to be as perfect as possible. The participants varied widely in how the view their NSSI scars and how they engage with NSSI when making these scars. While many identify perfectionism as playing a role in their scars, this did not result in a universal effect, but rather illustrated the different ways that perfectionism can affect one's actions and sense making.

Theme Five: Failing to Meet Perfectionistic Standards and Engaging in NSSI

Participants were asked to discuss whether they view perfectionism and NSSI as related or not and, if so, any experiences they have had of perfectionism and NSSI affecting each other. Most of the participants stated that they perceive a link between their experiences of perfectionism and NSSI. The participants described a direct relationship between failing to meet their own or other people's high standards and expectations and engaging in NSSI. The focus on achievement, obtaining consistent A grades (as discussed in theme two) and not being good enough at something were discussed as prominent reasons for carrying out NSSI.

> *Jamie: Sometimes when, I suppose, I don't feel like I, not got my way, but I don't achieve something I wanted to achieve, I might like I suppose essentially like bruise myself or something*

> *Casey: If someone told me I wasn't good enough at something or maybe if I felt bad about myself, I would then go and self-harm, or if I just felt really bad at something, I would just go and self-harm… it was definitely, definitely triggered by that main trigger was if someone told me I wasn't good enough at something or if I didn't feel good enough at something.*

Sam: Yeah like last week, I think the reason I self-harmed was cause I was doing a group project and like the stuff that other people had done were like real shit and I was like I can't, I can't like let you guys submit this like it is bad and we got into like an argument about it and I just got really stressed about it and then like just did the whole thing myself, because I was like annoyed with how like lack of effort that everyone was putting in… and then so I had a meltdown because I had to get everything done before I had to go to work and no one was helping me… I self-harmed and then I went to work

As discussed in theme one, participants identified using NSSI as a form of self-punishment, as a signal to others, and to modify feelings of numbness and dissociation. They also described how engaging in NSSI can result in feeling better or worse each time they engaged in it. While theme one focused on the function of engaging in NSSI, the current theme provides more insight into the precipitating factors leading to this engagement, which many participants highlighted was not meeting perfectionistic standards. Jamie stated that not achieving a goal could result in engaging in NSSI. Casey described a similar experience in which not meeting their or others' standards can result in engaging in NSSI, frequently as a means to punish oneself. While these participants illustrate a clear relationship between how not meeting high standards can lead to engaging in NSSI, Casey also emphasised that the pressure to achieve to a high level is so omnipresent that it even extends to how well they engage in NSSI.

Casey: I feel not good enough at it [NSSI] and it was actually really hard to do the survey because I thought I'm not good enough at it, cause whenever I did it I always did it in places where people would never see it

Despite Casey's description of holding themselves to consistently high standards they highlight their own self-doubt about their ability to do this stating "I'm not even good enough at being a perfectionist to be a perfectionist" (Casey). Having doubts about whether they are perfectionist enough may demonstrate an all-encompassing perfectionism framework in which even the notion of perfectionism itself is not immune.

Nic also highlighted how perfectionism affected how they viewed the act of NSSI itself. When describing how their perfectionistic motivation affected their NSSI they stated that an element of engaging in NSSI was about "getting it right, getting better at it, becoming stronger, kind of reducing that pain response" (Nic).

Theme four highlighted how Jamie's perfectionism also affects the act of NSSI itself in wanting their bruises and scars to be perfect and aesthetically acceptable to them. While accidental injury is not classified as NSSI, Jamie also discussed how their relationship between perfectionism and accidental injuries exists. This adds understanding to the idea that one is deserving of harm and punishment for not meeting one's expectations.

> *Jamie: I woke up and I had this random scratch on the side of my face which is almost gone and I don't have I have no idea why, like maybe like my nails were slightly sharp and I cut myself in my sleep or something, but I kinda looked at it and I was like yeah I probably deserve that. I dunno that was the first thing that ran through my head*

When asked about what they had done to deserve a scratch, Jamie stated that a recent assessment was marked at a B level and when given the opportunity to resubmit it, Jamie was only able to improve this to a B+ grade. Jamie therefore identified that rather than wondering where the scratch came from, their immediate thought was that the injury was deserved due to a recent failure to meet their expectations. Obtaining an accidental injury,

such as a bruise, was similarly justified as deserved for not achieving highly, however this also then led to further NSSI through prolonging the bruise.

> *Jamie: If I'm in like general pain from, I dunno, general sport or something, I might, depending on what's been happening, I might feel like I deserve it or something and I might like prolong the pain or something or if I already have a bruise I'll like press into it or something to keep it there for longer.*

> *Jamie: Because I didn't do well I didn't achieve something or no one cares or something like that.*

Sam discussed how their relationship between perfectionism and NSSI is not always as direct and immediate as failing to meet an expectation and subsequently engaging in NSSI, but rather a downward spiral exists from perfectionism to NSSI.

> *Sam: I spiral when my grades go bad, like it'll be the grades and then it'll be I'll be thinking about something else and then something else and then something else and then the next think you know I'm in the hospital, so it just kicks it all off and then I just kind of like go out of control.*

When asked about some of these "something else" (Sam) thoughts, Sam stated that they are thoughts that others think they are a "loser" (Sam) and "not going to amount to anything" (Sam) and that they "really get into my own head" (Sam). These thoughts appear to play a significant role in how Sam feels about themselves, despite a potential lack of supporting evidence, and can result in engagement in NSSI.

Sam stated that they had identified a relationship between perfectionism and NSSI before the interview as their "therapist always brings it up like how I spiral after every bad grade I get" (Sam). The catalyst for Sam's NSSI therefore appears to be frequently linked to grades and the high standard that they hold for themselves. Sam also discussed how meeting their own standards can reduce the likelihood of engaging in NSSI as achieving academically allows them to feel more able to cope with current university stressors and feel less overwhelmed by the demands and standards that they hold themselves to.

> *Sam: Yeah cause usually like if my grades are staying high and I'm keeping on top of my course load and I'm not getting like super overwhelmed.*

In the descriptions above, participants describe a number of different but related ways in which they experience a relationship between perfectionism and NSSI. Overall, each describes the high standards and expectations they (and sometimes others) hold themselves to and how, when these are not met, NSSI may result. This relationship has also been alluded to in the other themes. In theme one for example, NSSI as a form of punishment has been undertaken when a participant does not meet a goal or expectation set by themselves or others, while in theme four the scars left behind from NSSI can act as a permanent reminder that the individual is not and will never be perfect. While quantitative research has shown some relationships between different aspects of perfectionism and NSSI (Brocklesby, 2017; Claes et al., 2012; Hoff & Muehlenkamp, 2009; Miskey et al., 2012), including the current research, this focuses on separating two aspects of perfectionism, perfectionistic strivings, and perfectionistic concerns. The current participants did not appear to describe perfectionism in this way. Rather, they indicated when perfectionistic goals and expectations are being met, thoughts of NSSI lessen. When perfectionistic goals and expectations are not met, however, NSSI becomes a more prominent thought and can lead to engagement.

Theme Five Summary

Most of the current participants perceived a relationship between their experiences of perfectionism and NSSI. Many of these participants described engaging in NSSI as a direct consequence of not achieving a high standard that they or someone else had set for them. Engaging in NSSI after failing to meet a high standard may serve a variety of functions including punishment or to feel numb. Even accidental injuries were justified as deserved by one of the participants for failing to obtain an A grade. It appears that perfectionism can also affect NSSI in other ways, such as how one carries out the act itself to ensure the mark left is neat and precise, as well as ongoing negative effects the scars can have in promoting feelings of being flawed and imperfect. The relationship between perfectionism and NSSI therefore appears complex and varied depending on the individuals and their interpretations. It also appears that for some of the participants, a greater understanding of their perfectionistic standards helped them in seeking to reduce engagement in NSSI.

Overall Themes Summary

The participants all offered their unique stories and perspectives on NSSI, perfectionism, and how the two may relate. It was clear that significant differences existed between each person's experiences, however, many commonalities were also identified across their accounts. Each participant identified a function of NSSI engagement, and these functions varied across participants. The relationship between perfectionism and obtaining high academic grades was highlighted as a significant factor for some and could take not only an emotional toll on the individual, but also a social one. While not all participants identified having expectations imposed on them by others, many identified concerns about what others *might* think of them if they did not attain and maintain their own high standards, regardless of whether they had evidence to support this. The scars obtained through NSSI appeared to be another important aspect of engaging in NSSI, specifically how this was related to perfectionism. While most discussed the way in which the scars are a visual illustration of

their imperfections, one participant discussed how perfectionism affects the act of engaging in NSSI. Finally, most participants explained how they viewed perfectionism and NSSI to directly relate to one another. It seems that many of the participants engaged in NSSI when they did not achieve a high standard and that this may be a difficult cycle to break.

Chapter 12

Combined Discussion

The current research sought to improve our understanding of the relationship between NSSI and perfectionism. Research examining this area has thus far been limited and findings have been mixed (Brocklesby, 2017; Claes et al., 2012; Hoff & Muehlenkamp, 2009; Miskey et al., 2012), however, these studies have suggested that a positive significant relationship exists in some form between NSSI and perfectionism. Another key aim of the current study was to examine this relationship from a theoretical perspective, using the IPTS (Joiner, 2005; Van Orden et al., 2010). This offered the potential to provide further insight into the underlying processes behind the perfectionism and NSSI relationship; an area that currently appears to be lacking (Sirois & Molnar, 2016). It is hoped that the current research will contribute to developing meaningful assessment, prevention, and intervention tools for those with difficulties in this area. This combined discussion will consider the implications of the quantitative and qualitative results when taken together and explore the clinical implications of this research. The strengths and limitations of the current research will also be discussed. Finally, directions for future research will be outlined and suggested in pursuit of further understanding in this area.

Implications of the Combined Quantitative and Qualitative Results

Both the quantitative and qualitative stages of the research found a relationship between perfectionism and NSSI. The quantitative results revealed this through indicating statistically significant positive relationships between overall perfectionism and NSSI, and perfectionistic concerns and NSSI. In the interviews, participants identified a relationship between their perfectionism and NSSI, and through qualitative analysis two themes were identified: failing to meet perfectionistic standards and engaging in NSSI; and NSSI scars and perfectionism. When examining these findings together, it demonstrates that participants' interpretation of their lived experiences (described in the qualitative research) is supported by

larger-scale statistical analyses (demonstrated in the quantitative analysis). Furthermore, the current findings suggest that not only is the relationship between perfectionism and NSSI statistically significant (demonstrated quantitatively), but that the relationship has noticeable effects on individuals' daily living (demonstrated qualitatively). This provides us with some confidence that the current study is sensitive enough to reveal a relationship that individuals identify as existing in their lives and which is worth further examination, especially given that it creates difficulties in individuals' living.

The quantitative analysis revealed the strength of the positive relationship found within the sample; however, it did not provide us with information regarding the immediate and long-term effects of having higher levels of perfectionism and engaging in NSSI. Although the observational nature of the data makes any causal inferences necessarily tentative, the quantitative results are *consistent* with the theory that perfectionism has an impact on the likelihood of engaging in NSSI. Furthermore, the qualitative results highlight the immediate and long-term distress that this relationship can cause. For example, the scars that can result from NSSI act as an ongoing reminder to some individuals that they are imperfect. Some individuals also perceive their scars as signals to others that they are imperfect and have made mistakes.

Examining the quantitative and qualitative results together may also provide a better understanding of the process that individuals go through when engaging in NSSI related to perfectionism. For example, the quantitative results showed that those with beliefs such as "If I fail at work/school, I am a failure as a person" (Frost et al., 1990) are more likely to engage in NSSI. The qualitative findings suggest a process in which some participants who were university students view academic failure as any grade less than an A grade, and that the distress that this causes can lead some participants to engage in NSSI as a form of deserved punishment. The distress caused by a grade less than an A can also initiate a downward spiral in which participants experience increasing levels of distress and ultimately engage in NSSI.

It is easier to understand how receiving a B+ grade might lead someone to engage in NSSI considering that beliefs such as "If I fail at work/school, I am a failure as a person" underlie this process. These results demonstrate that some individuals experience a direct relationship between achieving a lower grade and engaging in NSSI, while others may experience their perfectionistic standards as one of several factors leading them to engage in NSSI.

The qualitative results produced some unexpected findings that add further understanding to the quantitative results. For example, the quantitative analyses revealed a positive relationship between perfectionism and NSSI and I hypothesised that some participants may discuss the difficulties of not meeting their own standards, and subsequently engaging in NSSI due to this distress. What the quantitative survey did not reveal, however, was that for some individuals, the relationship between NSSI and perfectionism exists in such a way that the act of NSSI itself is affected by perfectionism. That is, as described by one participant, calculated and deliberate decisions are made by them before an act of NSSI is executed to ensure that the cut and subsequent scar match preexisting lines and curves of the body and that the possible subsequent scar will not cause them future distress by looking imperfect. This is an aspect of the relationship between NSSI and perfectionism that the quantitative results do not explicitly highlight due to the survey questions asked, but that adds further understanding to these results when combined with the qualitative findings.

Using a mixed methods approach also allows us to understand how the positive relationship between perfectionism and NSSI affects people in their daily living. That is, while statistically significant, is the relationship practically significant? If the statistical finding does not appear relevant to people's day-to-day lives, then it begs the question as to whether it should be an area of future focus for research and interventions. The qualitative analysis in the current study found that most of the participants had already identified a relationship between their levels of perfectionism and NSSI and were able to provide examples as to how this affects them. Further, one participant highlighted this as an area of

focus in their therapy and the deliberate effort that they had made and continued to make in reducing their engagement in NSSI when their standards were not met.

Not only did the qualitative findings suggest that the results are practically significant, but the statistical analyses also demonstrated practical significance. Cohen's (1988) *d* is one way in which practical significance can be statistically measured with values of 0.2, 0.5 and 0.8 indicating small, medium and large effect sizes, respectively (Kirk, 1996). Cohen's *d* was calculated for hypotheses 1, 2, 3, 10 and 11 and the effect size was large for all of the hypotheses except hypothesis 2. That is, overall perfectionism, perfectionistic concerns, thwarted belongingness, and perceived burdensomeness demonstrated statistically and practically significant positive relationships with NSSI, while the positive relationship between perfectionistic strivings and NSSI was statistically, but not practically, significant. These findings highlight the real-world effects of these relationships.

The interview participants were not asked about thwarted belongingness or perceived burdensomeness as it was decided instead to focus on the broader topics of NSSI and perfectionism. Participants could have talked about thwarted belongingness and perceived burdensomeness of their own accord when talking about NSSI and perfectionism. However, neither of these concepts were identified as themes in the qualitative analysis. One of the participants discussed a period of loneliness when first engaging in NSSI which could relate to thwarted belongingness. Another participant discussed making a mistake that impacted someone else when first engaging in NSSI which could relate to perceived burdensomeness. It is possible, therefore, that these concepts were alluded to by participants during the interviews, however, they did not emerge as prominent themes during the analysis. Given the quantitative findings regarding the partially mediating role of perceived burdensomeness, it could be advantageous to ask participants to consider these concepts in a future study to improve our understanding as to how the IPTS (Joiner, 2005; Van Orden et al., 2010) fits as a theoretical underpinning of the relationship between perfectionism and NSSI.

However, the IPTS (Joiner, 2005; Van Orden et al., 2010) does not fully account for the relationship between perfectionism and NSSI. The qualitative portion of the study may therefore provide us with new ideas and theories to explain this relationship. For example, some of the interview participants identified that their perfectionistic tendencies might make them more likely to perceive themselves as not meeting their own standards. When this occurs, some participants suggest that they should be punished for this. NSSI is one such method of punishment that these individuals can carry out on themselves without needing to involve others. It is important to note however that the interview participants described a range of reasons for engaging in NSSI, some in direct contrast to each other. This suggests that any theory positing a set number of variables to explain NSSI, such as the IPTS (Joiner, 2005; Van Orden et al., 2010), may not fit for all people.

Conclusion

The quantitative findings are key in demonstrating a relationship is present within the current sample as well as the strength of this relationship. However, the effect that this has on an individual's life, which is at the core of this relationship, is difficult to translate in the current survey. The use of qualitative analysis allows for the discussion to be able to convey parts of the lived experiences for these individuals, including the ongoing difficulties with rarely meeting one's standards, the continued engagement in NSSI to manage distress, and the difficult emotions that individuals can be left experiencing in the long term. The feelings of shame, strength, and imperfection are not readily captured by the current survey and the qualitative analysis allows us to be reminded of the effects that the statistically significant relationship can have on people's lives. While this thematic analysis uses a relatively small sample, it demonstrates the rich data that may be captured through qualitative studies in a growing area that has thus far largely only been a focus of quantitative research.

Clinical Implications

In identifying a positive relationship between perfectionism and NSSI, the current research has important implications for clinical assessment, case formulation, and treatment of young adults. Perceived burdensomeness may also play a key role in this relationship, as shown in the mediation models, and incorporating this into interventions may further assist positive outcomes. Current clinicians will already have experience supporting clients with high levels of perfectionism who engage in NSSI, however, this research provides further evidence for, and explanation of, this relationship and its presence in young adults in New Zealand. It also highlights the importance that a thorough assessment, case formulation, and targeted intervention may play in supporting individuals to reduce their NSSI engagement. Without understanding how an individual's perfectionism affects them and the functions of their NSSI, it will be difficult to improve this. This is demonstrated clearly by the variety of statements made in the participant interviews as while one participant described coping using NSSI as a strength, another described it as a weakness.

Many of the participants described a strong link between not meeting their expectations and subsequently engaging in NSSI. While the current study does not examine intervention and treatment methods, it does highlight the potential importance of perfectionism-focused treatment to decrease engagement in NSSI. That is, for many of the current participants, if the distress of not meeting their high standards was reduced, the likelihood of engaging in NSSI might also be reduced. Similarly, if treatment is focused on reducing engagement in NSSI without addressing the difficulties with perfectionism, then it is possible that this treatment may be less successful or that the distress will continue and NSSI will be replaced with another harmful method to manage the difficulties associated with perfectionism. Interventions currently exist to help individuals manage perfectionism (e.g., Arpin-Cribble et al., 2008) and NSSI (e.g., Fleischhaker et al., 2011) individually. Targeting these presentations together and understanding how they relate to one another suggests the

possibility of improving treatment outcomes for some individuals and improving clients' experienced life satisfaction. If clinicians can facilitate an individual's understanding of how their perfectionism may lead to engagement in NSSI, individuals may feel more in control of their emotions and actions and may be able to work towards reducing engagement in NSSI more effectively. Miskey et al. (2012) suggest, for example, that values-based therapeutic work may allow participants greater understanding as to how to live more in line with their personality and values. This in turn may decrease engagement in activities that do not align with their values and ultimately decrease distress that could otherwise lead to engaging in NSSI.

The importance of perceived burdensomeness should also be recognised as having additional clinical relevance when supporting those with perfectionism and NSSI engagement, given the significant partial mediation effect of perceived burdensomeness on the perfectionism and NSSI relationship. Endorsement of perceived burdensomeness has been identified as a target for intervention in research due to the role it can play in suicide ideation and suicidal behaviour (R. M. Hill & Pettit, 2019; Teismann et al., 2016; Van Orden at el., 2006). R. M. Hill and Pettit (2019) conducted a trial of the LEAP intervention treatment, an online programme using cognitive-behavioural therapy principles. In their sample of 80 adolescents, participants who completed the intervention scored significantly lower in perceived burdensomeness at post-intervention and follow-up time points than those in the control group. It is important to note that perceived burdensomeness measures an individual's perceptions of being a burden, rather than evidence that they are a burden to others. Cognitive-behavioural therapy may therefore encourage a reduction in perceived burdensomeness through working together to modify an individual's negative perceptions of themselves. Employing therapeutic interventions that support clients to reduce their levels of perceived burdensomeness, therefore, appears both important and achievable and could aim to reduce people's difficulties with perfectionism and NSSI.

The individuality of each participants' experience is a key reason why I wanted to incorporate a qualitative aspect in the current study. That is, while some participants may score similarly on quantitative measures, their reasoning and the experiences of these similarities may be significantly different. This finding is important clinically as it reinforces the importance of thorough assessment in order to develop effective therapeutic interventions for each individual. This was demonstrated clearly in the fourth theme of the current research, wherein some participants identified having scars from NSSI engagement as shameful, while others identified it as a symbol of strength. Establishing how the client interprets NSSI is therefore important in helping them develop their own narrative and ensuring this can be utilised in an effective way for maintaining and improving their well-being going forward. Similarly, while some participants identified their high standards as a factor that promotes difficulties in their life, others did not view it as such, and therefore again therapeutic intervention must be tailored to the individual. While discussing how to reduce one's perfectionistic standards may be readily accepted by some individuals, this may cause significant distress for others who view their perfectionism as a key to their success, despite the distress that also accompanies it.

As well as informing treatment, this research can help to better inform clinicians as to who may be at higher risk of developing difficulties with NSSI and encourage preventative tools to assist individuals most at risk of future engagement in NSSI. For those high in perfectionism, clinicians can consider preventative tools and behaviours to manage the difficulties associated with perfectionism and assist individuals most at risk of engaging in NSSI before engagement begins. This could include providing distress tolerance skills and using cognitive-behavioural therapy to shift some of the dichotomous beliefs frequently associated with perfectionism (e.g., Shafran et al., 2002). Similarly, individuals with high levels of perfectionism who begin expressing increased endorsement of feeling like a burden, may be at increased risk of engaging in NSSI and clinicians can work with clients to reduce

this perceived burdensomeness before it leads to consideration of NSSI and suicide behaviours. This awareness of which individuals are at increased risk can allow clinicians to be more alert to potential future difficulties.

Overall, the clinical implications for the current research suggest that it is important for clinicians to have an awareness of the relationship between perfectionism and NSSI to enable effective treatment for their clients. However, individualised assessment, formulation and treatment plans may be important. Differences exist in both how perfectionism and NSSI affect individuals and how individuals view their own perfectionism and engagement in NSSI. Neither perfectionism nor NSSI are viewed as strictly positive or negative and individuals' conceptualisations of these concepts can be complex and dynamic. Further, the role that perceived burdensomeness may play in this relationship should not be overlooked and may provide an important treatment target and a possible indicator that a client may be at increased risk.

Strengths and Limitations

The current study demonstrates both strengths and limitations. By using a mixed method design, the quantitative results reveal statistically significant relationships in a relatively large sample, while the qualitative findings extend these results to enable a deeper exploration of people's lived experience. For ease of reading the strengths and limitations related to the quantitative aspects of the study will be presented first followed by consideration of qualitative strengths and limitations.

Quantitative Strengths and Limitations

The quantitative study was the primary component of the current research. To create the survey, reliable and valid measures were used; the MPS-F (Frost et al., 1990), the Interpersonal Needs Questionnaire (Van Orden et al., 2012), and the Deliberate Self-Harm Inventory (Gratz, 2001). The survey was intended to be completed within a reasonable time without extraneous questions, therefore some additional questions from the Deliberate Self-

Harm Inventory were removed. This may have contributed to the high completion rate and was supported by the median completion time of 8.8 minutes.

The data analysis used in the current study provided some key strengths. Multiple methods of analysis were used; Welch's *t*-tests, simple linear regression, logistic regression, and structural equation modelling. This allowed for the robust statistical analysis of the hypotheses while minimising the effects of measurement error (Silberzahn et al., 2018; Westfall & Yarkoni, 2016). Ultimately, the use of multiple analyses allows for the determination of the robustness of findings across multiple reasonable analysis specifications.

Another strength of the current study was the use of preregistration. While primarily used for the quantitative methods and analyses, the qualitative methods and analysis were also preregistered. Preregistration creates a public record of the methodological and analytical decisions made prior to data collection. In doing so, it provides clarity between what is confirmatory analysis, planned exploratory analysis, and unplanned exploratory analysis (Nosek et al., 2019). Preregistration also highlights when outcomes have been selectively reported by the researcher. The current study included some minor deviations from the preregistration, which have been clearly outlined in the previous sections, and this allows the reader to understand when and why these occurred. The strength of this preregistration is in enabling transparency and adds further support to the results found in the current research.

Along with these strengths, the quantitative portion of the study also had some limitations. The survey sample was not representative of the New Zealand population as 81.7% of the sample identified as male, 76.1% identified as New Zealand European, and 54% of the sample identified having attained a bachelor degree or higher. The way in which New Zealand European, female, university-educated individuals experience the relationship between perfectionism and NSSI may be different than other groups such as what perfectionistic standards they are aiming for and are expected of them. The results may therefore be limited in their generalisability to the New Zealand population and may be

impacted by the above characteristics. Although the study was available to those living anywhere in New Zealand, a recruitment bias may be present given much of the advertising was promoted at Massey University and local community Facebook pages. The sample are thus more likely to be of a similar demographic and educational background, that is not representative of the wider New Zealand population. A self-selection bias may also be present as completing the survey was voluntary. Individuals may therefore have similar characteristics and interests in the topic advertised, again not necessarily representing the wider population. A self-report bias may also be present considering the personal and potentially sensitive topics asked about in the survey and participants may have over or under-represented their NSSI and endorsement of perfectionism, perceived burdensomeness and thwarted belongingness.

The current study included hypotheses pertaining to causal effects, such as through the use of the IPTS (Grosz et al., 2020; Joiner, 2005; Van Orden et al., 2010). The inferences about these causal claims however come with uncertainty due to the cross-sectional correlational design (for more information around the transparency of making causal claims in cross-sectional research see Grosz et al., 2020). Some important confounding variables were statistically controlled for in the current study. However, future longitudinal research may allow for increased confidence in making causal inferences due to ruling out some additional alternative explanations for the relationships. It was decided in the current study that the covariates controlled for would be gender, age and ethnicity. As discussed in the method section, this was due to the differences in NSSI engagement and levels of perfectionism across age (e.g., Plener et al., 2016), gender (e.g., Stallman & Hurst, 2011), and ethnicity (e.g., Fitzgerald & Curtis, 2017). It may be beneficial to include additional control variables in future research examining the relationship between perfectionism and NSSI.

Qualitative Strengths and Limitations

The qualitative portion of the study was designed as a complementary analysis to the quantitative portion. The trustworthiness of the analysis process has been discussed in a previous chapter and highlights the ways in which the current thematic analysis strives to be as accurate as possible (Guba, 1981; Shenton, 2004). While it was hypothesised that a positive relationship between perfectionism and NSSI would be found in the quantitative analysis, it was unclear what the qualitative analysis would find, because even if some participants revealed this relationship in their survey results, it may not be something that they are aware of in their daily lives. It was therefore important to use relatively broad and open questions to facilitate the participant discussions. This was a strength of the study in that it provided the participants with the ability to interpret and discuss the topics in individualised ways. All six of the participants answered each of the four prompts, speaking about their experiences and thoughts of the topic. Using a semi-structured, in-depth interview technique allowed participants to answer the four broad questions as they interpreted them, while also allowing for follow-up questions affording greater depth of exploration of some answers and discussions. It also allowed for clarification when an answer was unclear to the interviewer.

A strength of the qualitative portion of the study was the unanticipated answers that participants gave. For example, some of the participants highlighted how possessing scars from engaging in NSSI made them feel imperfect, with a physical representation of their imperfections visible on their skin. In many ways this answer was expected and anticipated when discussing the relationship between perfectionism and NSSI. What was not anticipated was that one participant would describe how perfectionism affects the physical act of self-harming, in that even while distressed, the need for the resulting scar to be perfect and acceptable meant that planning and forethought went into how NSSI was carried out and how the resulting scar would look.

A significant strength of using thematic analysis is the ability to examine both similarities and differences between participants' experiences and interpretations. This was demonstrated in many of the five themes discussed, such as how NSSI scars can be seen as a symbol of strength by some and a symbol of shame by others. In discussing both similarities and differences, it emphasises the range of experiences individuals have and how meaning making can differ, even when the acts are similar. This also highlights the importance of exploring the relationship between perfectionism and NSSI in different ways, as while two participants may look very similar in the statistical analysis, their lived experiences and ongoing difficulties may be very different.

While qualitative analysis, specifically thematic analysis, demonstrates numerous strengths, it is not without limitations. The trustworthiness of the analysis process has been discussed for its strengths, however, not all desirable aspects of trustworthiness have been met as follows (Guba 1981; Shenton, 2004). Advertisement for the interview was primarily undertaken at Massey University and local Facebook groups, and participants had to travel to the Albany, Auckland location. The participants may therefore be from a similar demographic and educational background compared to the wider population. Similarly to the quantitative limitations discussed, the characteristics of the interview sample will affect how an individual experiences perfectionism and NSSI. Four of the six interview participants identified as female and five of the participants identified as New Zealand European. The standards that these individuals discussed holding for themselves and those held for them by others may be very different to those of different genders and ethnicities and thus interview discussions may have had different foci with a more varied sample. The transferability of these results should therefore be considered. I, the researcher and investigator, am relatively new to conducting thematic analysis. While I have had support from my experienced supervisors, my interpretive ability may be limited by my inexperience and knowledge of the current area.

Factors relating to the interview may have affected how participants answered the questions and spoke to the interviewer. The interview was the first and only meeting between the interviewer and the participant, and the participants were asked personal and emotive questions. Participants may therefore have felt some discomfort in providing particular details, and one participant highlighted that they did not want to talk about a particular experience during the interview. Participants were also made aware that if the interviewer was concerned for their safety, or the safety of someone else, then a clinical psychologist may be brought into the room. Again, participants may have therefore modified their answers or chosen not to disclose some details out of concern that this would occur. Finally, participants may have engaged in social desirability bias, in which they provided answers in line with what they believed was socially acceptable and what the interviewer wanted to hear. This may have been most likely in the questions in which they were asked to discuss whether they thought a relationship existed between perfectionism and NSSI. By asking participants to explain why they thought this relationship did or did not exist and to provide examples, it was hoped that this bias would be reduced, however, participants were told the interview questions in advance and may have preprepared answers that they thought the interviewer would most like to hear.

Due to the time and size constraints of the project, not all aspects of the quantitative design were examined in the qualitative design. That is, the IPTS (Joiner, 2005; Van Orden et al., 2010), was not discussed during the participant interviews, and therefore thwarted belongingness and perceived burdensomeness were not explicitly asked about or discussed, although participants could have discussed this spontaneously. Given the quantitative results regarding the role that perceived burdensomeness may play in the perfectionism and NSSI relationship; asking such questions may have offered further exploration of the relationship between perceived burdensomeness, perfectionism, and NSSI. Alternative follow-up questions may also have been beneficial to ask during the interviews, but as these were asked

spontaneously and there were no follow-up interviews, further details could not be gathered from participants.

Finally, as illustrated in my description of the qualitative analysis method, I engaged in a relatively structured process. That is, I aimed to provide the participant with equal time to discuss the three main questions and had some predetermined follow-up questions that I was prepared to ask. While I kept this structure in mind, I also provided the opportunity for participants to discuss as much or as little as they wanted, so equal time was not always spent on each question. I think that having a relatively structured process can have limitations, in that it may place boundaries on the participant discussion, if I am conscious of moving them to the next question when the allotted time has passed. It may also encourage me to respond with the predetermined follow-up questions rather than responding to what the participant is saying. However, once I was in the room with the participants, I was more flexible in the time allotted and provided participants with more freedom to continue discussing one question or moving on to the next. I also did not ask all of the participants the predetermined follow-up questions depending on what they had already discussed. Additionally, as the interview participants completed the quantitative survey prior to the interview, they had all been exposed to measures of perfectionism, thwarted belongingness, perceived burdensomeness and NSSI before the interview. The statements used to measure these concepts in the survey portion of the research may have influenced participants in how they thought of and described these concepts during the interview. Overall, while I think some of the limitations of the structured process may have been reduced, limitations still exist in this portion of the research.

Conclusion for the Study Strengths and Limitations

The current study offers several theoretical, methodological, and analytical strengths and limitations. The quantitative component offers a robust, multi-analytical investigation, minimising potential confounding effects. The qualitative component of the study extended

the findings of the quantitative component. This provided greater depth of analysis and as well as flexibility for participants to discuss unanticipated answers. While the current study has some limitations, it also offers some important insights into the relationship between perfectionism and NSSI using a preregistered, mixed method approach.

Directions for Future Research

Both the prior and current research examining the relationship between perfectionism and NSSI suggest that a relationship exists, and more research should be conducted to further understand this relationship. The research in this area is currently limited, and inconsistencies between studies suggests that there is greater understanding to be gained by continuing to examine this area. The current study used the IPTS (Joiner, 2005; Van Orden et al., 2010) as a theoretical basis for this relationship and the current study found that perceived burdensomeness partially mediated the relationship between perfectionism and NSSI. Further research into this relationship would demonstrate its replicability as the current study appears to be one of a limited number to examine it thus far. If more is understood about what promotes NSSI, such as a combination of high levels of perfectionistic concerns and perceived burdensomeness, then more targeted interventions can be developed. Further examining this relationship to reveal how many of those individuals then go on to attempt suicide may provide even greater understanding of what interventions are needed to reduce this. While the IPTS showed strengths in providing a greater understanding of how perceived burdensomeness may partially mediate the relationship between perfectionism and NSSI, thwarted belongingness did not appear to partially mediate this relationship. Retesting of this model should therefore be undertaken for the purposes of examining whether perceived burdensomeness continues to play a significant role in this relationship and whether thwarted belongingness remains unrelated.

As discussed earlier in the current chapter, the qualitative findings from the current research may also provide some directions for future research that do not include the IPTS

(Joiner, 2005; Van Orden et al., 2010). For example, further examination of the link between perfectionism and NSSI used as punishment for not meeting one's own high standards may provide further insight into this relationship. Given that many participants described having this experience, it seems plausible that punishment may play an important role in the relationship between perfectionism and NSSI. However, as highlighted previously, due to the range in reasons that participants described for engaging in NSSI, this is unlikely to account for everyone's experience.

Given the promising findings of the current research, further research to replicate such findings within different populations appears to be an important direction for future studies. The current research sample consisted of New Zealand young adults and was not representative of the population in regard to ethnicity. Examining this relationship in an adolescent population is likely important given the high rates of NSSI in this age group (Fraser et al., 2017; Lucassen et al., 2011) and the possibility of increasing difficulties associated with social media, online videos and NSSI (R. C. Brown et al., 2018). It would also be beneficial to examine whether target intervention for those identified as high in perfectionistic concerns and perceived burdensomeness, could prevent engagement in NSSI and provide adolescents with skills to avoid engagement in NSSI as they age.

Further examination from a qualitative perspective may augment our understanding of the relationship between perfectionism and NSSI. The current study involved interviews with six individuals in Auckland, however, further interviews with different interviewees would likely contribute significantly to the current understanding. The IPTS (Joiner, 2005; Van Orden et al., 2010) has also shown some importance in explaining the underlying relationship between perfectionism and NSSI, however was not asked about during the participant interviews. Asking participants to discuss their experiences of perceived burdensomeness could contribute significantly to our understanding of how perceived burdensomeness partially mediates the relationship between perfectionism and NSSI.

One of the key goals of the current research was to allow clinical interventions to be informed and improved by its findings and provide support for those with high levels of perfectionism at greater risk of NSSI. Future research should therefore begin to examine interventions to target those with high levels of perfectionism that are engaging in NSSI. Future research could also examine preventative measures targeted at those with high levels of perfectionism, particularly perfectionistic concerns, who have not engaged in NSSI, but may be at increased risk of doing so. Given New Zealand's high rates of NSSI engagement (Fitzgerald & Curtis, 2017; Fraser et al. 2017; Garisch & Wilson, 2015), particularly in adolescents, developing more effective supports for those at risk of NSSI engagement should be a critical area of focus. These interventions could range from online work to face-to-face support and may be conducted in groups or one-on-one. Providing effective interventions is important as NSSI engagement is associated with negative health outcomes (Chester & Alexander, 2018), and an increased risk of suicide (Whitlock, Muehlenkamp, et al., 2013).

Conclusion

The current research found a positive relationship between perfectionism and NSSI. This effect was demonstrated both quantitatively, through statistically significant results across multiple analyses, and qualitatively, through the use of thematic analysis. The IPTS (Joiner, 2005; Van Orden et al., 2010) provides additional understanding as to how perceived burdensomeness may partially mediate this relationship. The findings of the current study may have particular relevance to clinical practice. Using interventions and treatment methods that accommodate and target the relationship between perfectionism and NSSI may produce better outcomes for a client's wellbeing. Further, with greater awareness of this relationship, clinicians may be better able to reduce the likelihood of these difficulties developing and provide tools to prevent this. It is hoped that the current research findings, along with recommendations for future research, will positively contribute to assisting young adults

manage the difficulties that can come from having high levels of perfectionism and engaging in NSSI, especially when perceiving oneself as a burden.

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Appendix A

Survey Advertisement Poster

Non-Suicidal Self-Injury and Other Mental Health Factors in Young Adults

Are you between 18 and 35 years of age?

Are you proficient in the English language and live in New Zealand?

If you answered **yes** to these questions, you may be eligible to participate in a clinical psychology research study.

The purpose of this study is to investigate the links between non-suicidal self-injury (NSSI), personality, and mental health factors. NSSI refers to the socially unacceptable destruction of one's own body tissue without the intent to commit suicide. NSSI is not uncommon in New Zealand and more research is needed to understand what factors promote and protect against engaging in NSSI.

Participants will be asked to fill out an **online survey**, which takes approximately **10-25 minutes** to complete. The survey includes questions about your own **experiences with NSSI** (if you have any – this is not necessary to participate) **and other personal beliefs and ways of thinking**. Participants who complete the survey can choose to participate in a random prize draw to **win one of 30 $25 USD Amazon vouchers**. The survey contains information about relevant services if you are experiencing psychological distress; you can also find a summary of useful services at https://www.health.govt.nz/your-health/services-and-support/health-care-services/mental-health-services/mental-health-services-where-get-help

If you wish to participate in the study described, please follow the link below.

https://qasiasingleuser.asia.qualtrics.com/jfe/form/SV_3EMZVaH2b5OjgEd

Appendix B

Massey University Research Projects and Results Advertisement

Non-Suicidal Self-Injury and Other Mental Health Factors in Young Adults

Emily Cory - This research is being conducted as a partial requirement for a Doctorate of Clinical Psychology.

I am currently seeking participants to complete an online survey.

The purpose of this study is to investigate the links between non-suicidal self-injury (NSSI), personality, and mental health factors. NSSI refers to the socially unacceptable destruction of one's own body tissue without the intent to commit suicide. NSSI is not uncommon in New Zealand and more research is needed to understand what factors promote and protect against engaging in NSSI.

Participants must be aged between 18 and 35 years, live in New Zealand and be proficient in the English language. If you meet these criteria, I warmly invite you to participate. You will be asked to fill out an online survey, which takes approximately 10-25 minutes to complete. The survey includes questions about your own experiences with NSSI (if you have any) and other personal beliefs and ways of thinking. Participants who complete the survey can choose to participate in a random prize draw to win one of 30 $25 USD Amazon vouchers. The survey also contains information about relevant services if you are experiencing psychological distress.

Appendix C

Survey Advertisement for Massey University Psychology Papers

Hi everyone, my name is Emily Cory and I am currently seeking participants to complete an online survey. This research is being conducted as a partial requirement for my Doctor of Clinical Psychology at Massey University, Albany.

The purpose of this study is to investigate the links between non-suicidal self-injury (NSSI), personality, and mental health factors. NSSI refers to the socially unacceptable destruction of one's own body tissue without the intent to commit suicide. NSSI is not uncommon in New Zealand and more research is needed to understand what factors promote and protect against engaging in NSSI.

Participants must be aged between 18 and 35 years, live in New Zealand and be proficient in the English language. If you meet these criteria, I warmly invite you to participate. You will be asked to fill out an anonymous online survey, which takes approximately 10-25 minutes to complete. The survey includes questions about your own experiences with NSSI (if you have any - this is not necessary to participate) and other personal beliefs and ways of thinking. Participants who complete the survey can choose to participate in a random prize draw to win one of 30 $25 USD Amazon vouchers. The survey also contains information about relevant services if you are experiencing psychological distress; you can also find a summary of useful services at https://www.health.govt.nz/your-health/services-and-support/health-care-services/mental-health-services/mental-health-services-where-get-help

I understand that you are all students of my supervisor. However, choosing to participate or not to participate will not impact your grades or your relationship with Dr Fitzgerald or me.

If you wish to participate in the study described, please follow the link below.
https://qasiasingleuser.asia.qualtrics.com/jfe/form/SV_3EMZVaH2b5OjgEd

Appendix D

Survey Information Sheet

Non-Suicidal Self-Injury and Other Mental Health Factors in Young Adults

Information Sheet

My name is Emily Cory. I am undertaking this project as a partial requirement for the Doctor of Clinical Psychology programme. The research is being supervised by staff within the School of Psychology; Dr John Fitzgerald and Dr Matt Williams.

Project Description

In this project, I am examining non-suicidal self-injury (NSSI), personality, and mental health factors in adults aged 18-35 years old. NSSI refers to the socially unacceptable destruction of one's own body tissue without the intent to commit suicide. NSSI is not uncommon in New Zealand and more research is needed to understand what factors promote and protect against engaging in NSSI.

Invitation

If you are aged between 18-35 and live in New Zealand I invite you to take part in this research. You do not need to have had experience with NSSI, but will need to be proficient in the English language and will need access to the internet to complete the online survey.

Project Procedures

You will anonymously fill out an online survey consisting of multiple choice and short written answers. It takes approximately 10-25 minutes to complete. The survey includes questions about your own experiences with NSSI (if you have any) and other personal beliefs and ways of thinking. Due to the nature of the topic, contact information for external mental health services will be displayed during the survey. Should you experience any psychological discomfort/distress we encourage you to seek support through these recommended services, a trusted friend/family member, and/or your general practitioner.

Those who complete the questionnaire can choose to participate in a random prize draw to win one of 30 $25 USD Amazon vouchers. You will need to provide an email address to participate in this prize draw as Amazon gift cards will be emailed to the winners. Email addresses provided for the prize draw will be kept separate from survey answers so that survey answers remain anonymous. Those who wish to view a summary of the results on research completion can note the link provided on this information sheet and/or enter their email address. Again, these email addresses will be kept separate from the survey answers so that survey answers remain anonymous. This research summary will be available via the School of Psychology Research Survey Results website page at: http://psych-research.massey.ac.nz

Optional Follow-up Interview

I am also seeking individuals who would be willing to participate in a follow-up interview, which involves a discussion of their experiences with NSSI. More information about this interview will be provided at the end of the survey and you will be asked to enter your email address. The interview will be conducted in Albany, Auckland and will take up to 60 minutes. You will be given a $40 MTA voucher as a thank you. If you enter your email address to receive more information about the follow-up interview, the research team will be able to link your survey answers to your email address.

Data Management

No one apart from the Massey research team will have access to identifiable information that you provide (e.g., your email address). Identifiable data will be securely stored on a password-protected computer for a seven-year period and then destroyed. A de-identified copy of the dataset may be shared with other researchers who wish to reproduce or extend on our analyses. It will not be possible to identify any individuals in the de-identified dataset.

Participant's Rights

You are under no obligation to accept this invitation; your participation is completely voluntary. If you decide to participate, commencing the survey implies consent. You have the right to:

- decline to answer any particular question;
- ask any questions about the study at any time during participation;
- be given access to view a summary of the project findings when it is concluded.

Project Contacts

If you have any questions about this research, please contact the researcher and/or supervisors of this project.

Researcher

Emily Cory

School of Psychology

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Email: emily.cory.1@uni.massey.ac.nz

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Wellington

New Zealand

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Dr Matt Williams

School of Psychology

Massey University

Albany

New Zealand

Email: M.N.Williams@massey.ac.nz

Te Kunenga ki Pūrehuroa

Massey University School of Psychology – Te Kura Hinengaro Tangata

Auckland, New Zealand

T +64 9 414-0800 ext 43116 : W psychology.massey.ac.nz

This project has been reviewed and approved by the Massey University Human Ethics Committee: Northern, Application NOR 17/31.

If you have any concerns about the conduct of this research, please contact Dr Ralph Bathurst, Acting Chair, Massey University Human Ethics Committee: Northern, email humanethicsnorth@massey.ac.nz

Appendix E

Assumptions Testing

Welch's *t*-test Hypotheses 1, 2, 3, 10 and 11

The Welch's *t*-test, simple linear regressions, and multiple linear regressions are forms of general linear models and assume normality of errors. However, this assumption is required only to guarantee correct Type I error rates and not required for parameter estimates to be unbiased, consistent, and efficient. Furthermore, the large sample size delivered a high level of robustness to any potential breaches of this assumption. I am therefore following the advice of Gelman and Hill (2007) in not reporting diagnostic of normality.

Simple Linear Regression Hypotheses 4 to 9

Figure B1

Scatterplot of Residuals Against Predicted Values for Hypothesis Four

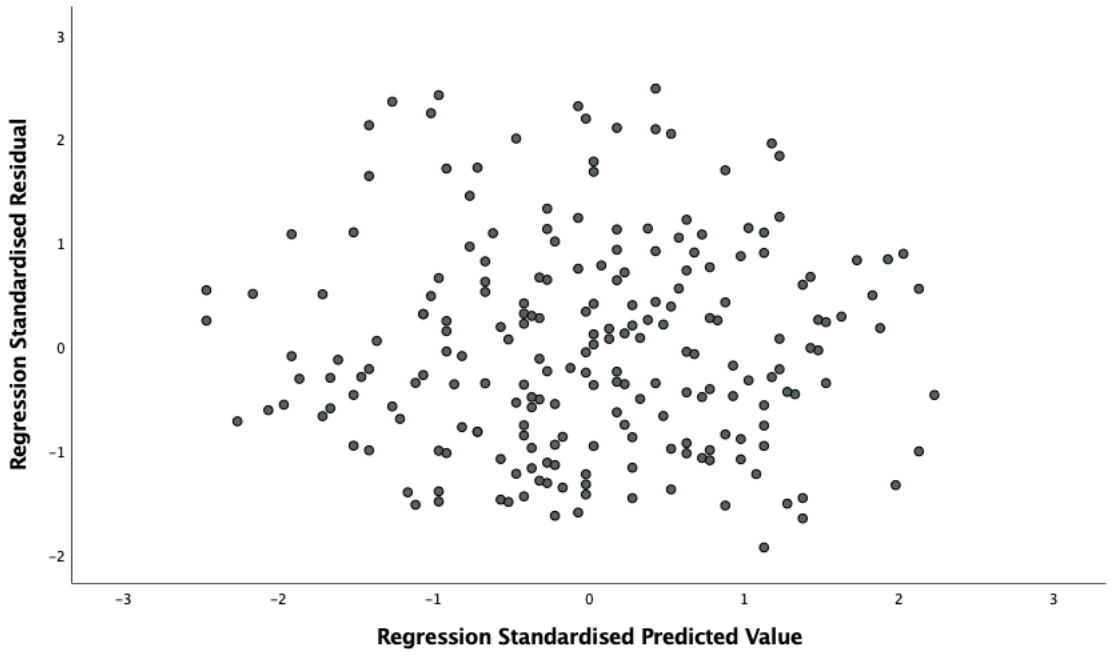


Figure B2

Scatterplot of Residuals Against Predicted Values for Hypothesis Five

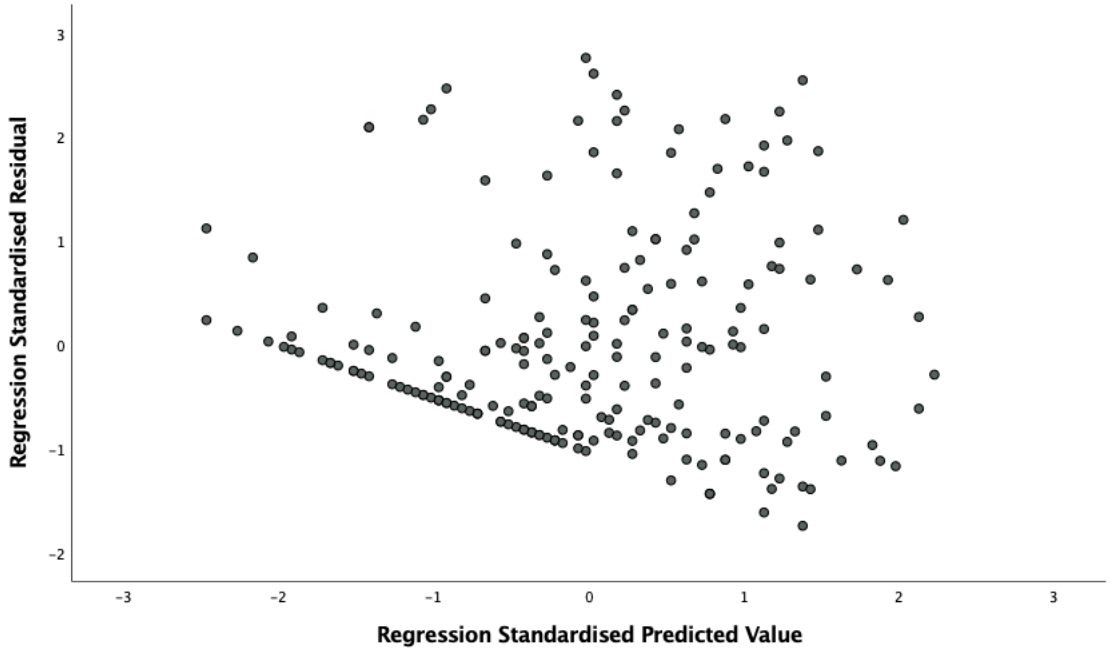


Figure B3

Scatterplot of Residuals Against Predicted Values for Hypothesis Six

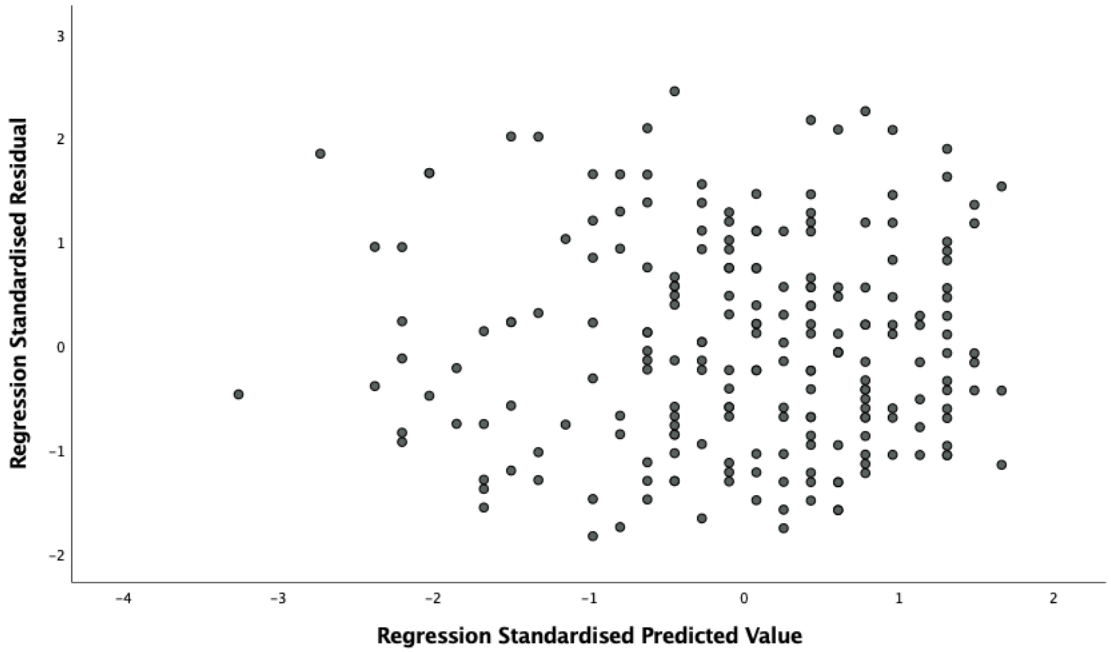


Figure B4

Scatterplot of Residuals Against Predicted Values for Hypothesis Seven

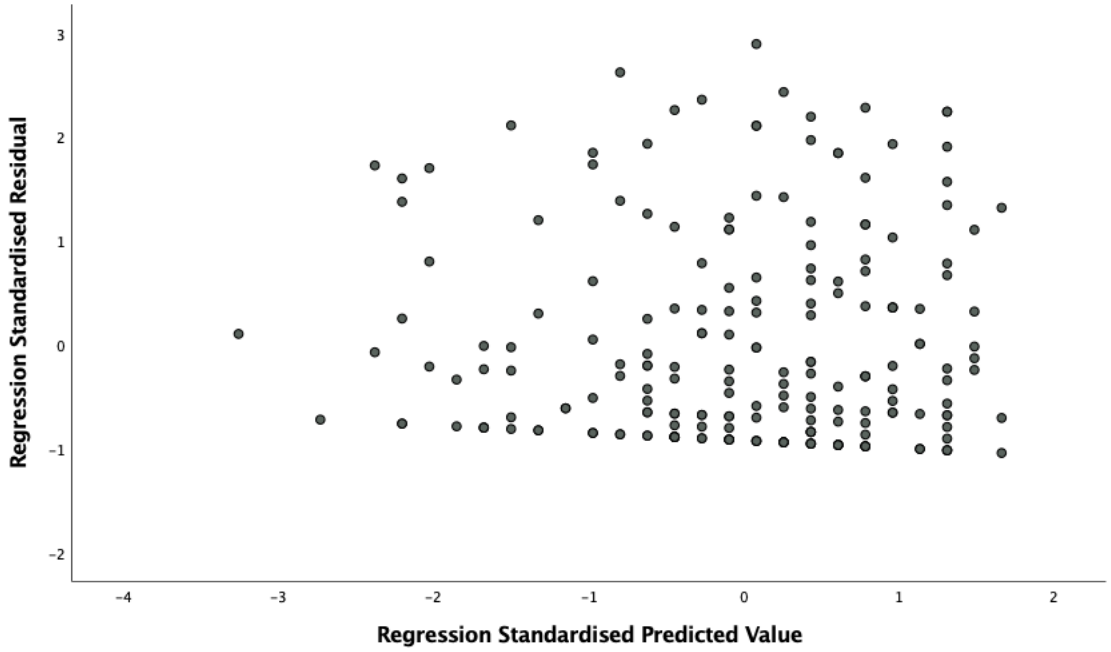


Figure B5

Scatterplot of Residuals Against Predicted Values for Hypothesis Eight

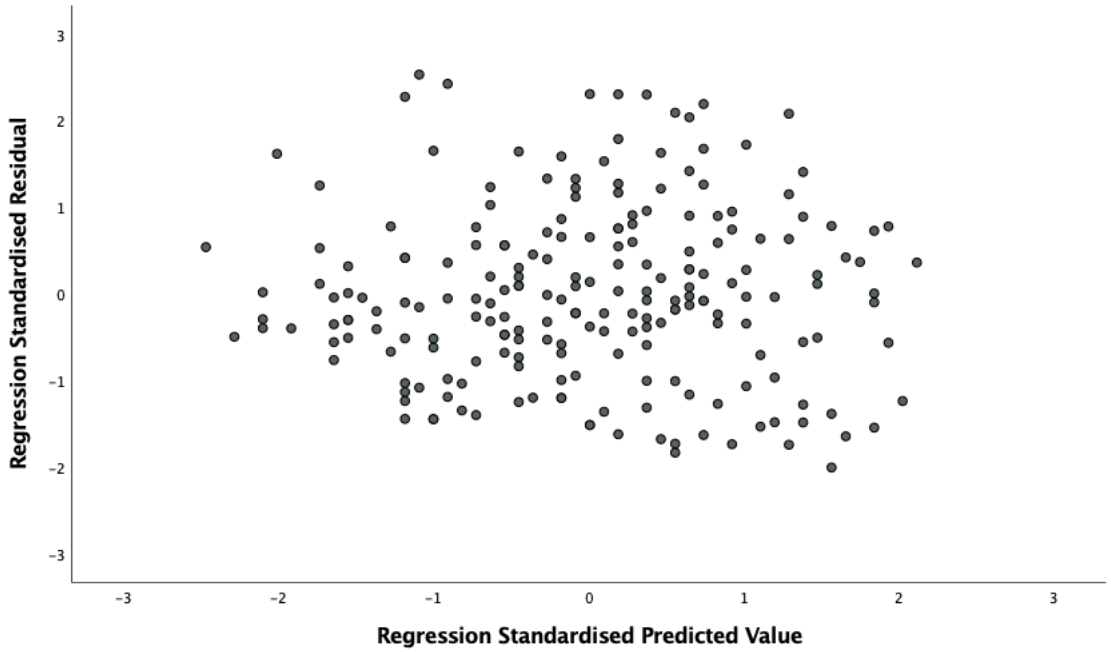
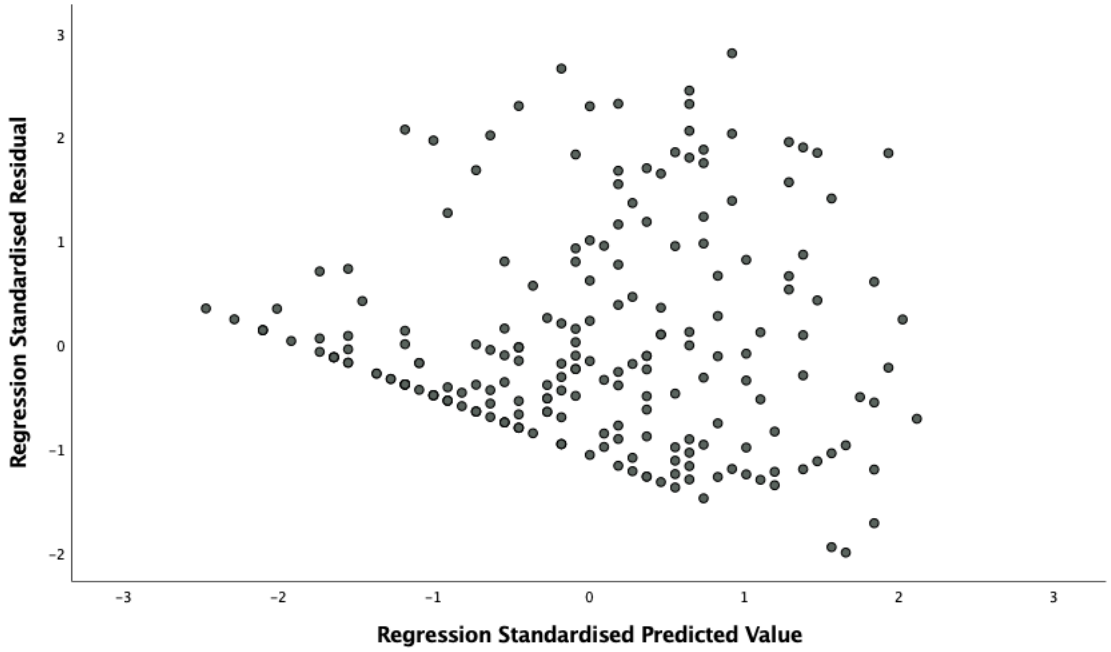


Figure B6

Scatterplot of Residuals Against Predicted Values for Hypothesis Nine



Multiple Linear Regression Hypotheses 4 to 9

Cronbach's alpha estimates less than one imply the existence of some measurement error and relate to the current assumptions testing. These estimates can be viewed in the quantitative method section of this thesis.

Figure B7

Scatterplot of Residuals Against Predicted Values for Hypothesis Four with Covariates Controlled

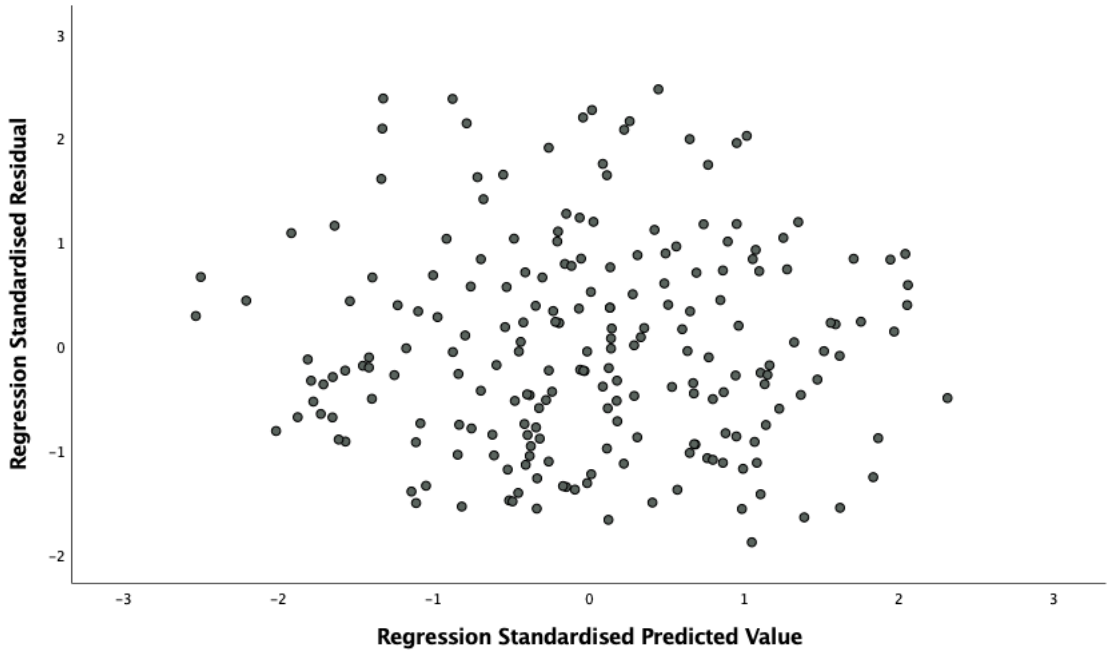


Figure B8

Scatterplot of Residuals Against Predicted Values for Hypothesis Five with Covariates Controlled

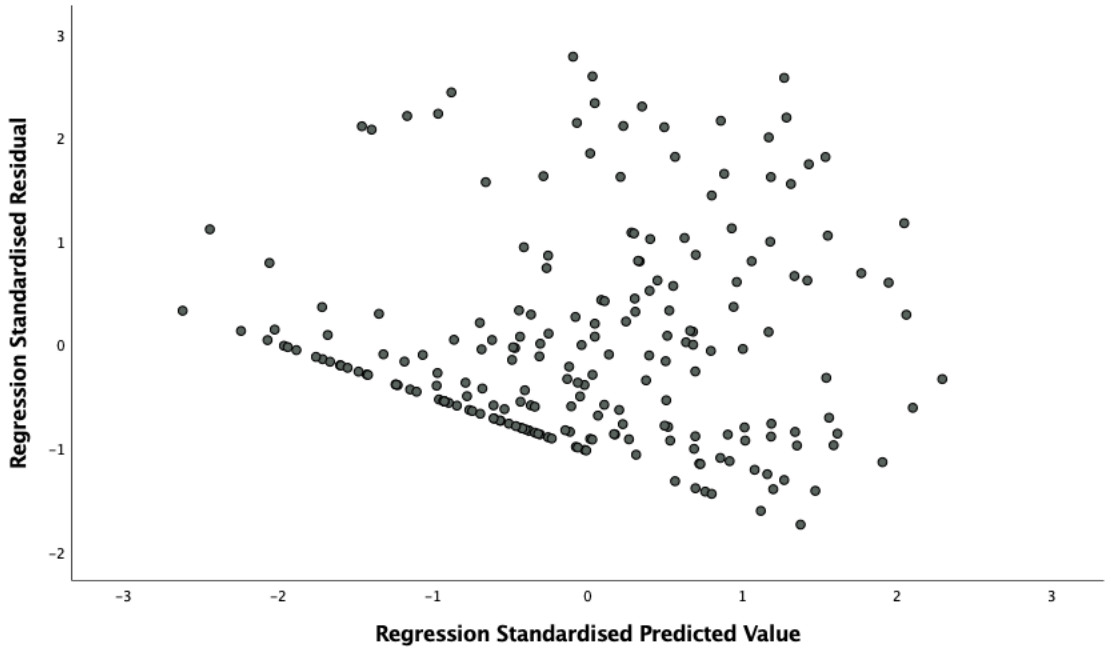


Figure B9

Scatterplot of Residuals Against Predicted Values for Hypothesis Six with Covariates Controlled

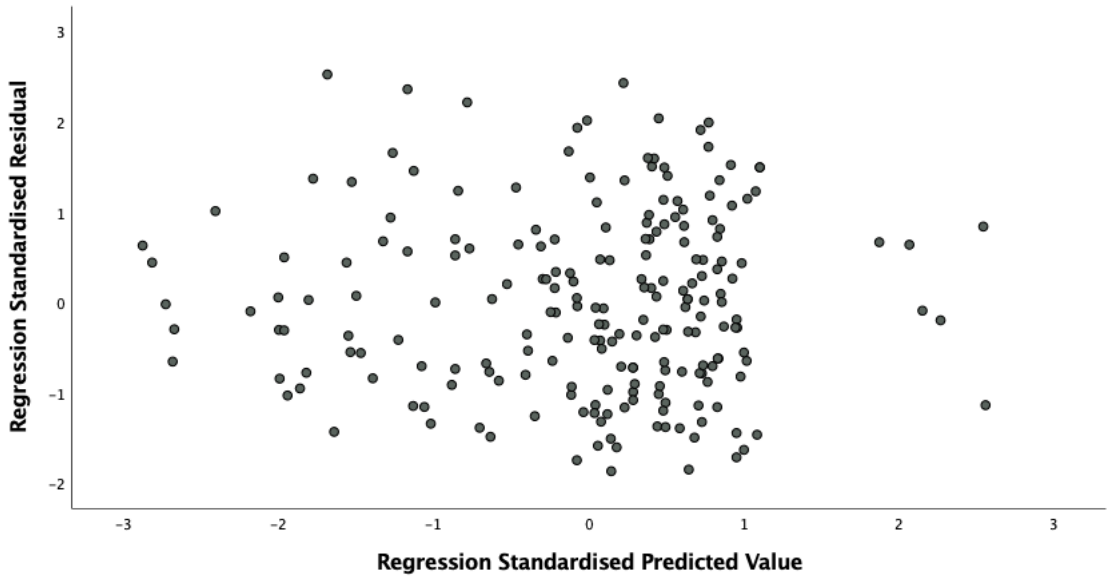


Figure B10

Scatterplot of Residuals Against Predicted Values for Hypothesis Seven with Covariates Controlled

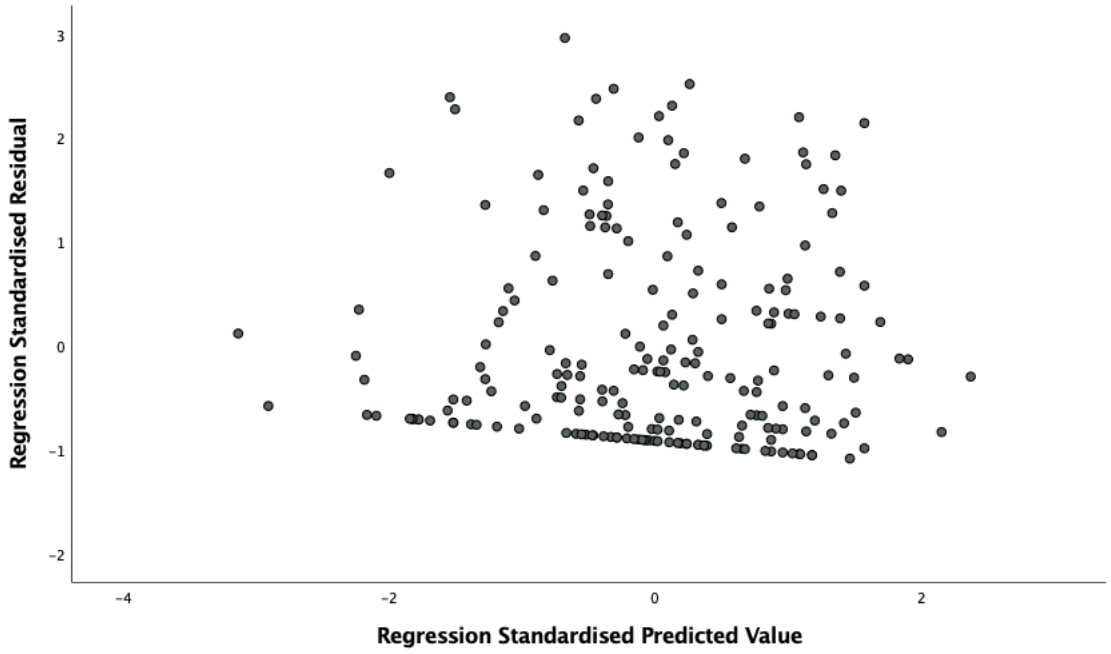


Figure B11

Scatterplot of Residuals Against Predicted Values for Hypothesis Eight with Covariates Controlled

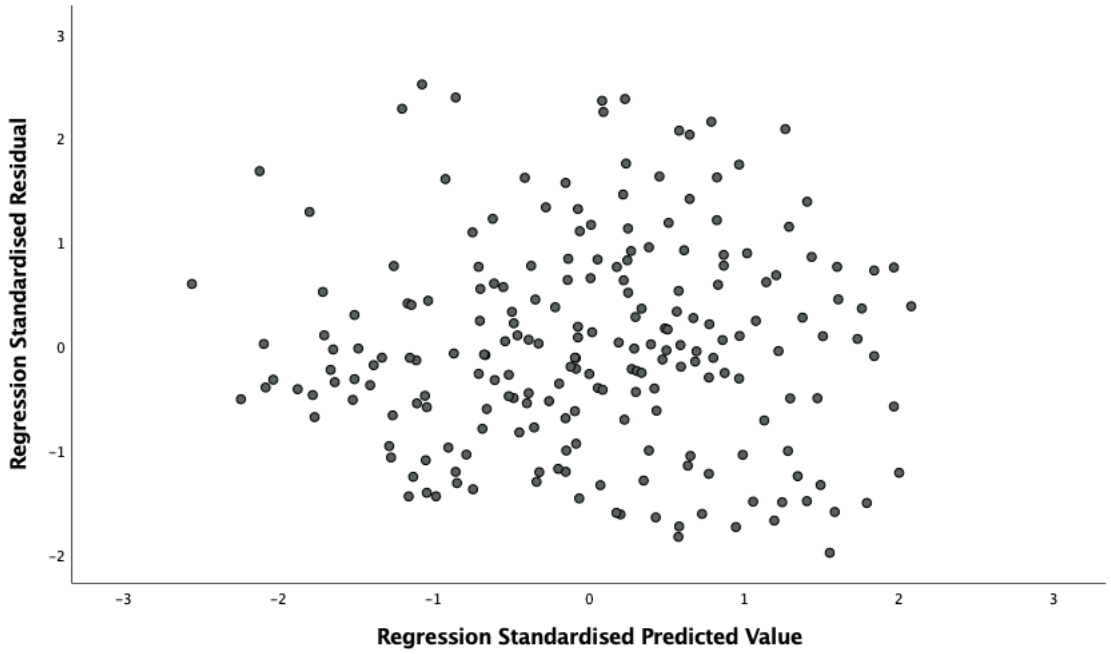
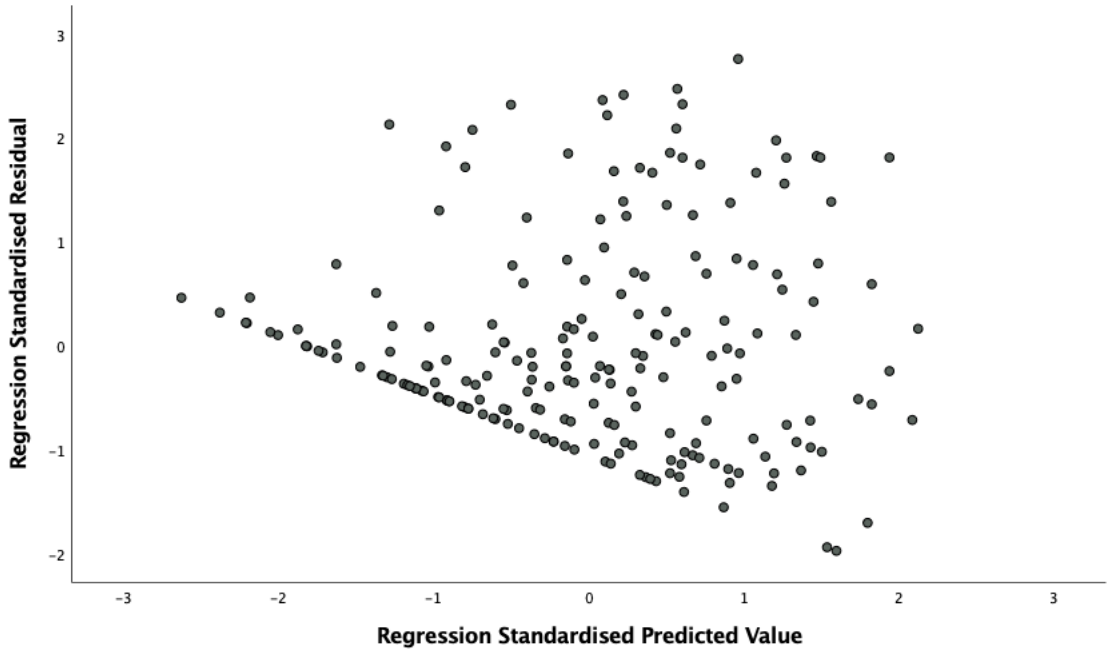


Figure B12

Scatterplot of Residuals Against Predicted Values for Hypothesis Nine with Covariates Controlled



Logistic Regression Hypotheses 12, 13 and 14

Table B1

Box-Tidwell Test

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Total_Perfectionism	-1.135	.675	2.830	1	.093	.321
	Thwarted_Belongingness	.450	.379	1.411	1	.235	1.569
	Perceived_Burdensomeness	-.592	.438	1.826	1	.177	.553
	Perfectionistic_Strivings	-.003	.878	.000	1	.997	.997
	Perfectionistic_Concerns_CMDA	.945	.810	1.359	1	.244	2.572
	Total_Perfectionism_x_Total_Perfectionism_LN	.208	.122	2.910	1	.088	1.231
	Thwarted_Belongingness_x_Thwarted_Belongingness_LN	-.099	.086	1.320	1	.251	.906
	Perceived_Burdensomeness_x_Perceived_Burdensomeness_LN	.175	.117	2.257	1	.133	1.192
	Perfectionistic_Strivings_x_Perfectionistic_Strivings_LN	-.003	.211	.000	1	.990	.997
	Perfectionistic_Concerns_CMDA_x_Perfectionistic_Concerns_CMDA_LN	-.186	.171	1.183	1	.277	.830
	Constant	6.164	5.962	1.069	1	.301	475.357

[a]. Variable(s) entered on step 1: Total_Perfectionism, Thwarted_Belongingness, Perceived_Burdensomeness, Perfectionistic_Strivings, Perfectionistic_Concerns_CMDA, Total_Perfectionism_x_Total_Perfectionism_LN, Thwarted_Belongingness_x_Thwarted_Belongingness_LN, Perceived_Burdensomeness_x_Perceived_Burdensomeness_LN,

Appendix F

Interview Information Sheet

Non-Suicidal Self-Injury and Other Mental Health Factors in Young Adults

Information Sheet for Follow-Up Interview

My name is Emily Cory. I am undertaking this project as a partial requirement for the Doctor of Clinical Psychology programme. The research is being supervised by staff within the School of Psychology; Dr John Fitzgerald and Dr Matt Williams.

Project Description

In this project, I am examining non-suicidal self-injury (NSSI), personality, and mental health factors in adults aged 18-35 years old. NSSI refers to the socially unacceptable destruction of one's own body tissue without the intent to commit suicide. NSSI is not uncommon in New Zealand and more research is needed to understand what factors promote and protect against engaging in NSSI.

Invitation to attend an interview

If you are aged between 18-35, are proficient in the English language, and live in the Auckland area I invite you to take part in the second stage of the research. You will need to have had experience with NSSI and perfectionism and will need to have completed stage one of this research, an online survey.

Project Procedures and Identification

Prior to the interview, the researcher will access your stage one answers through the email address that you provided. If selected to participate in the follow-up interview you will be invited to attend Massey University's School of Psychology building in Albany, Auckland. You will need to travel to this location, however, you will receive a $40 MTA voucher as a thank you and free parking will be available. You are welcome to bring a support person to the interview. Before beginning the interview, you will be provided with a copy of the current information sheet and be given an opportunity to ask questions. You will then be asked whether you consent to participate in the interview. The interview will take up to 60 minutes and can be stopped at any time. You will be asked questions by the principal investigator about yourself and your experiences with NSSI and perfectionism. You can say as much or as little as you would like and have the right to decline to answer any questions asked. Following the interview, you will be asked to re-consent to the use of your interview and the release of your transcript (which the researcher will prepare using your audio recording). You will also be asked whether you would like a copy of your transcript sent to you for review. This review will enable you to redact words and/or sections from your transcript. Redactions will be replaced by a statement outlining that a section has been removed at the request of the participant. You will have seven days to review your transcript once emailed to you. If you do not reply to the researcher with any redactions within seven days, then your transcript can be used in full by the researcher.

Due to the nature of the topic, contact information for external mental health services will be given at the end of the interview. Should you experience any psychological discomfort/distress we encourage you to seek support through these recommended services, a trusted friend/family member, and/or your general practitioner. If you experience significant distress during the interview a clinical psychologist may be invited into the interview. Interviews will be

conducted in a private office in the Massey University School of Psychology building to maintain anonymity. The interview will be audio recorded and later transcribed to ensure accuracy, however, a pseudonym will be used in all transcriptions to maintain participant anonymity.

Data Management

All research data, including audio recordings, transcriptions, and any identifying details, will be stored securely on a password protected computer. Participant confidentiality will be maintained at all appropriate times, however, limits to confidentiality mean that it may be necessary to reveal participant details (e.g., if you reveal a safety risk to yourself or someone else). Anonymised interview excerpts may also be included in research publications. All identifiable information will be deleted after seven years by my primary supervisor (Dr Fitzgerald). A professional transcription service may be used to prepare the transcripts. Any person involved in this task will be required to sign a confidentiality agreement. As soon as each transcription is finalised (when you have been given an opportunity to review) the original recording will be erased.

You will be sent a summary of the findings from the interviews. If you wish to view a summary of the complete results on research completion you can access this via the School of Psychology Research Survey Results website page at: http://psych-research.massey.ac.nz

Participant's Rights

You are under no obligation to accept this invitation; your participation is completely voluntary. If you decide to participate, you have the right to:

- decline to answer any particular question;

- withdraw from the study at any time until the end of the interview when you will be asked to re-consent to the use of your interview and the release of your transcript;
- ask any questions about the study at any time during participation;
- provide information on the understanding that your name will not be used unless you give permission to the researcher;
- ask for the recorder to be turned off at any time during the interview;
- be given access to a summary of the project findings when it is concluded.

If you would like to be considered to participate in the follow-up interview or have any questions about the research, please email Emily Cory on the email address below or her supervisors of this project.

Researcher

Emily Cory

School of Psychology

Massey University

emily.cory.1@uni.massey.ac.nz

Supervisors

Dr John Fitzgerald

School of Psychology

Massey University

Wellington

New Zealand

j.m.fitzgerald1@massey.ac.nz

Dr Matt Williams

School of Psychology

Massey University

Albany

New Zealand

M.N.Williams@massey.ac.nz

Support Services

Due to the nature of the topic, contact information for external mental health services is displayed below. Should you experience any psychological discomfort/distress we encourage you to seek support through these **recommended services, a trusted friend/family member, and/or your general practitioner**.

Lifeline: 0800 543 354 (available 24/7)

Youthline: 0800 376 633 (available 24/7, free txt available on 234 from 8am-midnight)

OUTline: 0800 688 5463

Suicide Crisis Helpline: 0508 828 865 (0508 TAUTOKO) (available 24/7)

Depression helpline: 0800 111 757 (available 24/7)

Rainbow Youth: (09) 376 4155

Samaritans 0800 726 666

If it is an emergency and you feel like you or someone else is at risk, please call 111.

This project has been reviewed and approved by the Massey University Human Ethics Committee: Northern, Application NOR 17/31. If you have any concerns about the conduct of this research, please contact Dr Ralph Bathurst, Acting Chair, Massey University Human Ethics Committee: Northern, email humanethicsnorth@massey.ac.nz

Appendix G

Interview Questions Sheet

Non-Suicidal Self-Injury and Other Mental Health Factors in Young Adults

Four Key Interview Questions

1) Tell me a little bit about your (current) self?

2) Tell me about your experiences with perfectionism?

3) Tell me about your history of non-suicidal self-injury?

4) Tell me about how your experiences of perfectionism and non-suicidal self-injury affect each other. How are they related?

Appendix H

Interview Consent and Transcript Release Form

Non-Suicidal Self-Injury and Other Mental Health Factors in Young Adults

PARTICIPANT CONSENT FORM AND AUTHORITY FOR THE RELEASE OF TRANSCRIPTS - INDIVIDUAL

PRE-INTERVIEW CONSENT

I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I agree to the interview being sound recorded.

I wish / do not wish to review the transcript of my interview.

I agree to participate in this study under the conditions set out in the Information Sheet.

Signature: ..... **Date:** .....

Full Name - printed .....

POST-INTERVIEW CONSENT

I agree that my interview may be used in the current research and the researcher will use my interview audio recording to prepare a written transcript.

I understand that I will have the opportunity to read the transcript of the interview(s) conducted with me if I have indicated this above. The transcript will be emailed to me and I will have the opportunity to redact any words/sections that I wish to do so. These sections will be replaced with a statement outlining that a section has been removed at the request of the participant. If I have not replied to the researcher within seven days of my transcript being emailed to me, then my transcript can be used in full by the researcher.

I agree that the edited transcript and extracts from this may be used in reports and publications arising from the research.

Signature: ..... **Date:** .....

Full Name - printed .....

Appendix I

Massey University Counselling Information

Massey University Albany Health + Counselling Centre

Te Whare Hauora & Awhina

Massey University Albany Health + Counselling Centre: http://www.massey.ac.nz/massey/student-life/services-and-resources/health-counselling-services/albany/albany-home.cfm

Health and Counselling at Massey University: http://www.massey.ac.nz/massey/student-life/services-and-resources/health-counselling-services/health-and-wellness_home.cfm

Location:

Level 2

Student Central

Albany, Auckland

Phone:

-On campus extension: 43700

-From off campus (09) 213 6700

Email: studenthealth@massey.ac.nz

Appendix J

Research Case Study

Appendix J includes a research case study. This was written during my internship year and was examined separately as part of the clinical training. In accordance with the Massey University Doctor of Clinical Psychology thesis requirements, the case study is included as additional information in the appendix of this thesis.

Massey University
Clinical Psychology

CASE STUDY 6

Research Case Study: How my Doctoral Research has Contributed to my Clinical Practice at the Centre for Psychology

Candidate : Emily Cory
Clinical Psychology Programme Massey University
Student ID : [redacted]
Setting : Centre for Psychology
Supervisors : Dr John Fitzgerald and Dr Matt Williams

This case was completed during internship at the Centre for Psychology in 2019 and represents the work of the candidate

---

Supervisor

Dr John Fitzgerald
Senior Lecturer in Clinical Psychology

Student

Emily Cory
[redacted]

Date : 4 November 2019

Abstract

The current case study focuses on the contributions that my doctoral research has made to my clinical practice as an intern psychologist. My doctoral research focuses on the relationship between perfectionism and non-suicidal self-injury (NSSI) in young adults. This year, I have been working as an intern psychologist at the Centre for Psychology, Massey University Albany. My clients have consisted mainly of young adults some of whom have engaged in NSSI and/or identify as having perfectionistic traits. This case study will firstly provide an overview of my doctoral research project. Following this, I will present a brief summary of my clinical psychology internship. Finally, a discussion and reflections section will focus on how my research has contributed to my clinical practice.

Doctoral Research Overview

I am supervised by Drs Matt Williams and Clifford van Ommen in completing my doctoral research titled, Non-Suicidal Self-Injury and Perfectionism in Young Adults.

Non-Suicidal Self-Injury, Perfectionism and Their Relationship

Non-suicidal self-injury (NSSI) is the engagement in non-socially sanctioned behaviour to deliberately destruct one's own body, without the intent to commit suicide (Claes & Vandereycken, 2007; Nock, 2009). NSSI is distinct from socially sanctioned behaviours that can inflict injury on the body, such as piercings and tattoos. NSSI can be carried out through a variety of methods. However; common methods include cutting, carving, burning, and scratching one's skin, as well as banging one's body (Gratz 2001, Klonsky, 2007). NSSI has been positively linked to suicide and suicide ideation (Hamza et al., 2012; Miller et al., 2007; Whitlock et al., 2013) as well as a range of psychiatric disorders and mental health difficulties (Miller & Smith, 2008). While it can be difficult to obtain accurate NSSI rates due to its private and highly personal nature, Garisch and Wilson (2015) found that 48.7% of New Zealand adolescents had a lifetime history of NSSI. Fraser et al. (2017) found that 20.6% of a sample of New Zealand adolescents had engaged in NSSI while an additional 9.6% of the sample had considered engaging in NSSI, but had not done so.

Perfectionism involves individuals setting unreasonably high demands and striving to reach expectations that are frequently unrealistic (Frost et al., 1990; Sirois & Molnar, 2016). Individuals may become overly focused on attaining a level of perfection that is self-imposed or perceived to be imposed by others, and if they fail to reach this level, engage in harsh self-criticism. It is frequently conceptualised as a personality trait, suggesting that it remains relatively stable throughout a person's lifetime (Sirois & Molnar, 2016). Current models outline different dimensions of perfectionism and factor analysis of existing measures of perfectionism suggests that there may be two underlying dimensions of trait perfectionism:

perfectionistic strivings and perfectionistic concerns (Sirois & Molnar, 2016). Perfectionistic strivings refers to individuals setting unreasonably high personal standards for themselves, which are both excessive and require perfection. Perfectionistic concerns focuses on unreasonable critical evaluations of one's behaviour, consistent self-scrutiny, preoccupation with criticism, evaluations and expectations of others, and the inability to be satisfied with one's successes. The relationship between perfectionism and health is currently understudied, however, it has been positively and negatively linked to a range of mental and physical health difficulties (Sirois & Molnar, 2016). Perfectionism has shown associations with physical health difficulties, such as worse adjustment for individuals with cardiovascular disease (Shanmugasegaram et al., 2014). High levels of perfectionistic concerns has also been associated with mental health problems, such as depression, binge eating, and suicide (Hewitt & Flett, 1991; Mackinnon et al., 2011; Roxborough et al., 2012).

NSSI and perfectionism show similarities through their links to suicide and other mental health difficulties (Flett et al., 2014; Miller & Smith, 2008; Sirois & Molnar, 2016). They also show similarities in how they can lead individuals to cope in private. Most NSSI acts are performed privately (Nock, 2008) and many individuals keep their behaviour hidden by not seeking treatment (Deliberto & Nock, 2008). Similarly, perfectionism has been found to be associated with negative coping factors such as avoidance and keeping personal distress hidden from others (Flett et al., 1994; Flett & Hewitt, 2002; Hamachek, 1978). Currently, there is limited research examining the relationship between perfectionism and NSSI (e.g., Claes et al., 2012; Hoff & Muehlenkamp, 2009). These studies suggest, however, that perfectionism and NSSI are related and when viewed as a multidimensional construct, dimensions of perfectionism vary in their relationship to NSSI.

Aims and Methodology

The overarching research aim is to examine the relationship between NSSI and perfectionism in young adults in New Zealand. Through this examination, it is aimed that the research will assist in developing firmer foundations on which to base meaningful and accessible interventions to help people who self-injure without suicidal intent. My hypotheses are that both perfectionistic concerns and perfectionistic strivings will be positively related to NSSI. Using the interpersonal theory of suicide (Joiner, 2005; Van Orden et al., 2010) as one of the theoretical foundations, I hypothesise that perfectionistic concerns will be positively related to thwarted belongingness and perceived burdensomeness. I also hypothesise that perfectionistic strivings will be positively related to thwarted belongingness and perceived burdensomeness.

The current research uses a two-stage methodology to examine and understand the relationship between NSSI and perfectionism. Stage one consisted of an online questionnaire and stage two consisted of semi-structured interviews. The research hypotheses, methods and analysis plans were pre-registered on the Open Science Framework (Centre for Open Science, 2011).

Stage One Methodology

Participants.

Stage one aimed to recruit at least 138 young adults aged between 18 and 35 years. I estimated that at least 138 participants would be required to reveal a correlation with 95% statistical power (Uitenbroek, 1997). It was pre-determined that recruitment would stop at 400 participants or at the end of the predetermined data collection date, whichever came first. Potential participants volunteered for the study and self-identified as to whether they met participation criteria. In order to participate, participants needed to: be aged between 18 and 35 years; have access to the internet to complete the online survey; be able to give fully

informed consent; possess English which is good enough to complete an English-language online survey; and live in New Zealand.

Procedure.

Participants accessed the Qualtrics (Qualtrics, n.d.) survey through the link provided in the advertisements. The survey began with the participant information sheet, consent form and instruction sheet. Due to the potentially sensitive nature of this topic and to provide support to participants, contact information for external mental health services was displayed following the instruction sheet. Participants had the right to decline to answer any questions. A reminder to call 111 in an emergency was also displayed. The survey aimed to take between 10 and 25 minutes to complete and consisted of multiple choice and short written answers. Firstly, participants completed demographic questions about their age, gender, ethnicity, employment status, and highest level of educational achievement. They then completed the Multidimensional Perfectionism Scale-F (Frost et al., 1990); the Interpersonal Needs Questionnaire (Van Orden et al., 2012); and the Deliberate Self-Harm Inventory (Gratz, 2001), respectively. After completing the survey questions, participants were asked whether they would like to enter their email address to be contacted about a follow-up interview. The support services details were then displayed again, and participants were invited to share the survey link with others. Participants were then directed to a separate page where they could enter the random prize draw and select to receive a summary of the findings of the research project. This separate page allowed participant emails to be kept separate from their survey answers.

Data Analysis.

Stage one will be analysed quantitatively. The primary analysis of the mediation models will be logistic regression with the PROCESS SPSS add-on (Hayes, 2017). I will use structural equation modelling as a secondary analysis technique to test the hypotheses as it

will allow us to account for the effects of measurement error. By using both regression and structural equation modelling, I can examine and report the consistency across results using different techniques.

Stage Two Methodology

Participants.

Stage two aimed to recruit between six and 10 participants who completed stage one. Included in the stage one advertisement was a small paragraph advertising a follow-up interview (stage two). Participants had the option to provide their email address to be contacted with more information about this interview. These participants needed to have engaged in NSSI at least once within the past two years and self-identify as to whether they had experiences with perfectionism.

Procedure.

Participants were invited to attend an interview in Albany Village where the Centre for Psychology and Massey University School of Psychology offices are located. Participants needed to travel to this location, however, free parking was provided, and participants received a $40 MTA voucher as a thank you. Interviews were conducted in a private therapy room at the Centre for Psychology to maintain anonymity. Participants were asked to read the participation information sheet before signing a consent form to begin the interview. The interview lasted approximately 60 minutes and involved participants responding to questions about themselves and their experiences with NSSI and perfectionism. Participants could say as much or as little as they liked and had the right to decline to answer any questions asked. Participants were asked to sign the consent form again at the conclusion of the interview to agree to the interview being used in the research. Contact information for mental health services was given to the participants, due to the potentially sensitive nature of the topic. If participants experienced significant distress during the interview a clinical psychologist may

have be invited into the room and participants were informed of this before beginning the interview. The interviews were audio recorded and later transcribed, however, pseudonyms have been used in transcriptions to maintain participant anonymity. Participants had the option of returning to the Centre for Psychology or providing their email address to receive a copy of their transcripts and make any redactions.

Data Analysis.

Stage two will involve thematic analysis. Thematic analysis is a method of qualitative analysis and focuses on identifying themes within the data (Braun & Clarke 2006; Braun & Clarke, 2013). While thematic analysis can be conducted in many ways, Braun and Clarke's (2006) six proposed phases of thematic analysis will be followed. This enables the analysis to be conducted in a deliberate manner with a clear theoretical and methodological basis. Through a semi-structured interview with each participant, the participants' own experiences and descriptions of perfectionism and NSSI may be heard. This will provide greater depth and richness in understanding the relationship between NSSI and perfectionism, which the survey does not allow for. Further, examination of themes across participants' descriptions will allow for commonalities and differences between experiences of NSSI and perfectionism to be highlighted and further understood. Stage two will therefore provide further support and/or explanation for unexpected outcomes in stage one.

Ethics Considerations

The current research obtained ethical approval from the Massey University Human Ethics Committee (Northern, Application NOR 17/31). Consultation with Mr Jhanitra Gavala, a Kaupapa Māori Psychology Lecturer at Massey University was sought prior to applying for ethical approval. This involved discussing cultural considerations related to my research and changes were made to reflect the most appropriate bicultural practice and considering Te Tiriti o Waitangi. Future consultation will be sought with Mr Nephi Skipwith

(School of Psychology Kaumātua) as the research process continues. Given the potentially distressing nature of NSSI, support materials were displayed to all participants that completed the survey and contact information for mental health services was given to all interview participants. All participants were instructed to read the participant information sheets prior to beginning stage one and two of the research and interview participants provided consent both before beginning the interview and upon completion of the interview. Once transcribed, all interview participants that indicated they would like to see their transcript were sent a copy of this and had seven days to redact any parts of their interviews. Pseudonyms were assigned to interview participants and identifying information was removed from interview transcripts. All identifiable information will be destroyed by my supervisor after seven years. Participants will be provided with a summary of the findings if they have indicated that they would like to receive this.

Clinical Psychology Internship

I began my internship in February 2019 at the Centre for Psychology, a private psychology clinic set up by Massey University, Albany. The Centre for Psychology accepts referrals for clients of all ages presenting with a wide range of difficulties. I have carried out assessments and treatment for clients aged between 10 and 50 years old, however most of these clients have been young adults (aged between 18 and 35 years old). These clients can self-refer to the clinic or be referred by other health professionals and organisations, such as General Practitioners and the New Zealand Defence Force. The following discussion and reflections relate to my internship at the Centre for Psychology over the past nine months and how my research has contributed to my clinical practice.

Prior Understanding of Perfectionism

In my clinical work thus far, I have worked with three clients who have identified strong perfectionistic ideals that have negatively contributed to their current difficulties. By

having a pre-existing knowledge of perfectionism from my research, I was able to better understand the experiences that my clients were describing as soon as the concept of perfectionism was raised, either by using the word "perfectionism" or by describing perfectionistic traits. I was aware of some of the positive effects that perfectionism can have, but also the negative effects of perfectionism and the difficulties that can arise when high standards are not met. In having this pre-existing knowledge of perfectionism from my research, I was able to feel more confident in discussing perfectionism with my clients. I felt comfortable asking a range of questions and exploring ideas such what happens when the client does not meet the standards that they set for themself and what they think their parents, colleagues, and friends expect of them. I think that overall, this pre-existing knowledge allowed me to better explore how perfectionism might be playing a role in the client's current presentation. I think that it also allowed me to be more open when trying to understand each client's experience of perfectionism, as my research interviews taught me how different perfectionism can be from one person to the next.

Awareness of the Clients' Ideas of Perfectionism

Having some prior understanding of perfectionism, I felt excited when I was able to discuss perfectionistic traits with clients. I was able to notice this however and attempted to be careful in how I spoke about perfectionism. While *I* might have been excited to talk about perfectionism, the client might not identify perfectionism as exciting, but rather a significant difficulty for them. In consultation with my supervisor, I learnt that referring to perfectionism with a client that did not refer to it this way may not always be helpful for the client, especially if they found it to be a pejorative term. I decided to term these perfectionistic ideals as "high standards" with one of my clients, who did not use the word "perfectionism". This client seemed comfortable with this label as it described their current experience. Conversely, one of my other clients quickly identified themselves as a perfectionist and

identified this as an area to work on during therapy, so I also used this term throughout our sessions.

Exploring my own Perfectionism

One of the reasons that I was interested in examining perfectionism in my research was due to my own perfectionistic traits. While I have primarily identified this as having high standards for myself, I explored a different aspect of perfectionism in one of my supervision sessions. I was working with a client with a form of anxiety when I discussed with a senior clinical psychologist how compliant the client had been in completing homework. When I was asked how much homework I had given the client, I realised that I had given them more homework than I would typically give a client. I had attributed this to the fact that the client had always seemed happy with any homework that I had given them and they had frequently completed additional tasks that I had not set for homework. When I explored this idea in supervision it was hypothesised that my own high expectations of myself and others might have contributed to the increased homework that I had given my client. The client's own high standards and desire to please others might have promoted them to complete the homework that they were given as well as additional homework. The combination of my high expectations and the client's desire to meet these expectations resulted in increasingly more homework being given and completed. I have since modified how I give clients homework. I have incorporated the phrase; "it's ok if you don't get a chance to look at this over the week as we can talk about it at the next session" when giving clients homework and I check in more frequently during the sessions to ensure that I am not moving too quickly (or slowly). I think that this understanding of my high standards has been extremely important in appropriately modifying my clinical practice this year. It also highlights how perfectionism can have widespread effects, as I am discovering in my research.

NSSI, Risk, and Safety

In examining NSSI, my research has provided me with the opportunity to learn about the differences between NSSI, self-harm with suicidal intent, and suicide attempts. By having an understanding of these different behaviours I also have an appreciation of the relationship that NSSI *does* have with suicide attempts when discussing safety with a client. When a client therefore tells me that they engage in self-harming behaviours, but strongly denies any intent to kill themselves, I am better able to understand the coping function that this behaviour might provide, but also the increased risk that this behaviour still carries. In my assessments at the Centre for Psychology I ask each client about whether they have thoughts of harming themselves, suicide, or harming others. I am careful to ask these three questions so as to try to capture NSSI behaviours as well as any suicidal behaviours and ideation. This allows me to have a better understanding of the client's coping strategies as well as gain a better understanding of any factors that might increase their risk of suicide. Having a better understanding of different types of self-harm before beginning my internship has therefore been helpful for my practice this year.

Research Interviews, Clinical Sessions and Rapport

My first- and second-year psychology placements provided me with invaluable experiences with clients, however my research interviews also provided me with a unique experience to lead me into my internship. My research interviews were not observed, but instead a clinical psychologist was nearby to provide support with safety if I thought that it was needed. This meant that I was in sole charge of asking each participant to talk for 60 minutes about perfectionism, NSSI and how these concepts might relate to each other. I was nervous and apprehensive about these interviews as I did not want to miss any signs that the client was at risk and I also wanted the participant to feel safe to talk about their experiences. One of the most important aspects of these interviews therefore was to build a good level of

rapport. I focused on this during my interviews and I was told by each of the participants that they had appreciated the opportunity to speak and be listened to and some of them told me that I was easy to talk to. While I am sure that I could now conduct a better interview with less nerves and more in-depth questions, I also think that this experienced helped me coming into my internship. These participants placed a lot of value in feeling heard and I do not think this would have happened if there was not a good level of rapport to allow the person to speak openly and feel valued and safe. I therefore kept this in mind when seeing my first clients at the Centre for Psychology, despite feeling nervous and unsure. During this internship process I have spent a lot of time learning new skills and modes of therapy, however I am regularly reminded, by my supervisor and my own experiences with clients, that rapport is critically important and can have a significant impact on whether therapy is successful.

Final Thoughts

Evidence based practice is a critical element of clinical psychology so as to ensure that our clients receive the most effective treatment available. By conducting my own research it provides me with a better understanding of what good scientific practice entails and allows me to be informed and appropriately critical when examining others' research in informing my practice. The additional understanding that I have gained around perfectionism and NSSI has helped me to have more in depth discussions with clients, however it has also reinforced to me the importance of reading and understanding relevant research to help practice effectively. My research process has also helped my growth as an intern psychologist by helping me to reflect on my own perfectionistic traits. It has been a valuable experience in understanding that what I bring into the therapy space can have significant effects on my clients and that self-reflections and supervision are critically important aspects of safe clinical practice.

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