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Self-Compassion and Its Relation to Nonsuicidal Self-Injury

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SELF-COMPASSION AND ITS RELATION TO NONSUICIDAL SELF-INJURY

PROFESSIONAL DISSERTATION

SUBMITTED TO FACULTY

OF

**THE SCHOOL OF PROFESSIONAL PSYCHOLOGY
WRIGHT STATE UNIVERSITY**

BY

JUSTIN MICHAEL WISEMAN, PSY.M.

**IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE
OF
DOCTOR OF PSYCHOLOGY**

DAYTON, OHIO

JULY 2018

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WRIGHT STATE UNIVERSITY
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June 8, 2017

I HEREBY RECOMMEND THAT THE DISSERTATION PREPARED UNDER MY SUPERVISION BY **JUSTIN MICHAEL WISEMAN** ENTITLED **SELF-COMPASSION AND ITS RELATION TO NONSUICIDAL SELF-INJURY** BE ACCEPTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PSYCHOLOGY.

Christopher Modica, Ph.D.
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Abstract

There have been relatively few studies that have empirically explored the relationship between self-compassion and nonsuicidal self-injury (NSSI). Previous studies have found that engagement in self-injurious behaviors is closely related to being self-critical (Glassman, Weierich, Hooley, Deliberto, & Nock, 2007; Hooley, Ho, Slater, & Lockshin, 2010). Therefore, it has been suggested that higher levels of self-compassion may be associated with less engagement in NSSI. The current study explored the relationship between self-reported self-compassion and past self-reported occurrences of NSSI. This study used Neff's (2003a) 12 item Self-Compassion Scale- Short Form (SCS-SF) to measure one's level of self-compassion and a Client Information/Demographics Questionnaire (SDS-CCMH) to determine past occurrences of NSSI. It was hypothesized that there would be significant mean differences in self-reported self-compassion scores in individuals who have self-reported occurrences of self-injury than those with no self-reported occurrences. Participants were divided into two groups: those who reported past occurrences of self-injury and those who reported no self-injury. This study involved two main analyses. The first analysis was a biserial Pearson's r correlation in order to determine if there was a significant association between NSSI (e.g. self-injury versus no self-injury) and self-compassion. The second analysis was an independent t -test to allow a direct examination of the hypothesis. Results from the study supported the hypothesis as those who reported past occurrences of self-injury had significantly lower self-compassion scores than those who reported no past occurrence of self-injury. The findings demonstrate and provide empirical data that one's level of self-compassion may play a significant role in one's decision to engage in self-injury.

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Dedication

This dissertation is dedicated to my parents, Sharon and Jim Wiseman. You have allowed me the freedom and opportunity to pursue my passions and curiosities. Your love, support, and encouragement has been instrumental in pursuit of my educational and career endeavors. I love you two more than you could ever know.

Chapter I

Self-compassion refers to the ability to be kind and understanding towards oneself in the face of personal mistakes, inadequacies, and painful life situations (Neff, 2003a). It is not uncommon for individuals to become harshly judgmental and self-critical when dealing with failure or difficulties. Self-compassion encompasses the recognition that personal mistakes, failure, and setbacks are part of the overall human condition. Additionally, being self-compassionate also implies that one is mindfully aware of painful thoughts and feelings rather than avoiding, suppressing or over-identifying oneself with them (Neff, 2003a, 2003b). According to Neff (2003a), self-compassion entails six interrelated components. Three of the components are positive indicators of self-compassion (e.g. self-kindness, common humanity, and mindfulness), while the other three components are negative counterparts (e.g. self-judgement, isolation, and over-identification).

Self-compassion involves a relationship with oneself that is characterized by kindness, empathic understanding, a sense of common humanity, and a balanced perspective of one's experiences, particularly when confronted with personal failings and mistakes (Neff, 2003a, 2003b). Research has consistently shown that this type of relationship with oneself is significantly associated with psychological functioning,

including greater life satisfaction (Barnard & Curry, 2011), increased happiness and positive affect (Neff, Kirkpatrick, & Rude, 2007), improved motivation (Breines & Chen, 2012), and enhanced interpersonal connectedness (Neff & Beretvas, 2013). Additionally, self-compassion has been found to have a protective effect in a range of mental difficulties including anxiety, depression, and stress (Macbeth & Gumley, 2012) as well as shame, self-criticism, and maladaptive coping (Warren, 2015).

Nonsuicidal self-injury (NSSI) is defined as the direct, deliberate, or intentional destruction of one's body tissue without suicidal intent (Klonsky, 2007). Common examples of NSSI include cutting, burning, scratching, and bruising of the skin (Klonsky, 2007; Sutherland, Dawczyk, De Leon, & Lewis, 2014). Research has found that NSSI can occur across a variety of diagnoses (e.g. mood, anxiety, substance use, eating, psychotic, and personality disorders), or it may also be found in individuals who do not meet diagnostic criteria for any mental health disorder as defined by the DSM-5 (Klonsky, 2007; Klonsky, Muehlenkamp, Lewis, & Walsh, 2011).

Although estimates of prevalence rates vary due to different definitions and methods used, rates of NSSI have markedly increased over the past decade (Muehlenkamp, Lewis, & Walsh, 2011). Additionally, NSSI has been found to occur more frequently than a wide range of other mental health disorders, including anorexia nervosa, bulimia nervosa, panic disorder, obsessive-compulsive disorder, and borderline personality disorder (Nock, 2010). Estimates of prevalence rates have varied across studies; however, studies among community samples have suggested that approximately 13-45% of adolescents and 4% of adults have engaged in NSSI (Nock & Favazza, 2009;

Nock 2010). The average age of onset is during early-to-mid adolescence, most frequently around the ages of 12-14 (Rodham & Hawton, 2009, p. 37).

There have been relatively few studies that have empirically explored the theoretical links between self-compassion and NSSI. However, in their study of self-compassion in online-accounts of NSSI, Sutherland, et al. (2014) found that the components of self-compassion (e.g. self-kindness, common humanity, and mindfulness) may operate to encourage acceptance of one's experience with NSSI, reduce related distress, and foster recovery from engaging in self-injury. Additionally, previous research has found that self-compassionate adolescents tend to have lower levels of NSSI, while adolescents expressing resistance to self-compassion have a greater tendency to engage in NSSI (Xavier, Pinto Gouveia, Cunha, 2016). Further, results from a series of studies have demonstrated that participants who engage in NSSI are much more highly self-critical than are healthy control participants (Glassman, Weierich, Hooley, Deliberto, & Nock, 2007; Hooley, Ho, Slater, & Lockshin, 2010). Similarly, people who engage in NSSI are also more highly self-critical than those who engage in more indirect forms of self-injury (e.g. abusing substances, depriving oneself of food, remaining in abusive relationships) but who do not engage in NSSI (St. Germain & Hooley, 2012). Gilbert (2010) has suggested that decreases in self-criticism and increases in self-kindness can reduce one's risk of self-injury, particularly in those with a diagnosis of Borderline Personality Disorder.

It also appears that self-compassion may be the antithesis to NSSI. According to Sutherland, et al. (2014) there is "evidence to suggest that self-criticism, characterized by the tendency to negatively judge and scrutinize oneself, confers risk for NSSI."

Accumulating evidence also suggests that self-compassion may be an effective emotion regulation strategy, particularly suited for targeting self-criticism, shame, and feelings of worthlessness that likely lead to anger, hostility, and self-harm (Warren, 2015).

Individuals who are high in self-compassion are not as distressed by negative events, have higher positive affect, have lower levels of self-criticism, and report greater life satisfaction than people who are low in self-compassion (Neff, 2013). Due to these findings in the research literature, it is suggested by this author that higher levels of self-compassion are associated with less engagement in NSSI.

Statement of the Problem

There are several gaps in the research literature to date. First, although research has shown that self-compassionate adolescents tend to have lower levels of NSSI (Xavier, Pinto-Gouveia, & Cunha, 2016), there have been few studies to examine the relationship between self-compassion and NSSI in adult populations. Additionally, despite research finding that the components of self-compassion operate to encourage acceptance of one's experience with NSSI, reduce related distress, and foster recovery from engaging in self-injury (Sutherland, et al., 2014), there have also been few studies that have explored the theoretical links between self-compassion and NSSI in clinical populations. Further, Gilbert (2010) has suggested that decreases in self-criticism and increases in self-kindness may reduce one's risk of self-injury, particularly in those with Borderline Personality Disorder; however, theoretical links of this nature have not been directly examined.

The Current Study

Due to the gaps in the research literature, this study will explore the relationship between self-compassion and occurrences of NSSI in an adult clinical population. More specifically, this study will explore the relationship between self-reported self-compassion and past self-reported occurrences of NSSI. The purpose of this study is to determine whether a relationship exists between one's level of self-compassion and their past engagement in NSSI. This study may be of particular importance due to research that has suggested that NSSI is an increasing public health concern with severe consequences (Klonsky, et al., 2011). This study may provide researchers, clinicians, and the general public with an understanding of why individuals may engage in this behavior as well as factors that may hinder engagement in NSSI.

Research Question and Hypothesis

One major hypothesis is proposed in this study. It is hypothesized that there will be significant differences between mean self-reported self-compassion scores in individuals who have self-reported occurrences of self-injury and those with no self-reported occurrences. Specifically, it is hypothesized that those who report some past occurrence of self-injury will have significantly lower self-compassion scores than those who report no past occurrence of self-injury.

This hypothesis is rooted in previous research that has found that self-compassionate adolescents tend to have lower levels of NSSI, while those that express resistance to compassionate feelings towards themselves have a greater tendency to engage in NSSI (Xavier, Pinto Gouveia, & Cunha, 2016). Additionally, in their study of self-compassion in online-accounts of NSSI, Sutherland, et al. (2014) found that the

components of self-compassion (e.g. self-kindness, common humanity, and mindfulness) may operate to encourage acceptance of one's experience with NSSI, reduce related distress, and foster recovery from engaging in self-injury. Further, it has been suggested that decreases in self-criticism and increases in self-kindness may reduce one's risk of self-injury, particularly in those with Borderline Personality Disorder (Gilbert, 2010). The findings of this study may (1) help determine whether self-compassion and different components of self-compassion play a role in NSSI; (2) highlight a conceptual framework to explain why some individuals self-injure, helping to identify what may protect against NSSI; and (3) provide further evidence for the use of compassion based interventions in the treatment of those who self-injure.

Chapter II

Literature Review

Nonsuicidal Self-Injury

The phenomenon of self-injury has concerned mental health professionals for decades (Klonsky, Muehlenkamp, Lewis, and Walsh, 2011). Of all human behavior, self-injury may be one of the most concerning and perplexing. Particularly puzzling are instances in which people hurt themselves with no intention of dying. Instances of nonsuicidal self-injury have been reported for centuries; however, they appear to have increased dramatically since the late 1980's (Nock & Favazza, 2009, p. 3). With this increase comes a greater need to understand why nonsuicidal self-injury occurs and what effective treatments can be used to address it. This section will define nonsuicidal self-injury, examine differences between nonsuicidal self-injury and suicide, and discuss prevalence, rates, and demographics associated with nonsuicidal self-injury.

What is nonsuicidal self-injury? Nonsuicidal self-injury (NSSI) refers to the deliberate, rather than accidental, destruction of one's body tissue without suicidal intent (Klonsky, 2007). NSSI is deliberate in that the definitive outcome of the self-injury occurs without intervening steps. For example, cutting one's own skin with a razor is deliberate self-injury whereas behaviors that indirectly lead to negative health outcomes through chemical processes in the body (e.g. smoking tobacco or overdosing on medication), are not considered to be NSSI (Nock & Favazza, 2009, p. 9). Common examples of NSSI include, but are not limited to, cutting, burning, scratching and

bruising of the skin (Klonsky, 2007; Sutherland, Dawczyk, De Leon, & Lewis, 2014). The most commonly cited method of self-injury described across virtually all studies involves skin cutting, scraping, or carving with most self-injury occurring on the arms, legs, and stomach. Skin cutting, scraping, or carving is thought to be engaged in by between 70% and 90% of persons who self-injure (Klonsky, 2007). This is followed by banging or hitting of body parts (21%-44%) and burning of the skin (15%-35%) (Rodham & Hawton, 2009, p.37; Nock, 2010; Klonsky, Muehlenkamp, Lewis, & Walsh, 2011). However, it should be noted that most people report using multiple methods of self-injury (Nock, 2010; Klonsky, 2011; Sutherland, Dawczyk, De Leon, & Lewis, 2014).

In the most recent revisions of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-V)*, NSSI appears in various sections, but occurs only one time as a symptom of a mental health diagnosis. Additionally, NSSI can be found in the form of a V-code (e.g. Personal History of Self-Harm) in the DSM-5 (American Psychological Association, 2013). Despite NSSI's lack of recognition in the DSM-5, research has found that NSSI can occur across a variety of diagnoses (e.g. mood, anxiety, substance use, eating, psychotic, and personality disorders), and may also be found in individuals who do not meet diagnostic criteria for any mental health disorder as defined by the DSM-5 (Klonsky, 2009; Klonsky, Muehlenkamp, Lewis, & Walsh, 2011). Presently, NSSI does not represent its own diagnosis, whereas some other maladaptive behaviors do (e.g. bulimia nervosa or substance abuse) (Klonsky, Muehlenkamp, Lewis, & Walsh, 2011).

Nonsuicidal self-injury versus suicide. Due to NSSI involving self-inflicted injury, such as the cutting of one's wrists, NSSI can be and often has been mistaken for suicide (Klonsky, Muehlenkamp, Lewis, & Walsh, 2011). However, there are key

differences between NSSI and suicidal behavior. Klonsky, Muehlenkamp, Lewis, and Walsh (2011) describe three key difference between NSSI and self-injury with suicidal intent. The first difference involves intent. NSSI carries non-lethal intent, whereas suicide carries lethal intent. A second key difference involves medical damage. Medical damage in NSSI is typically less severe and, in the overwhelming majority of cases, not life threatening; however, suicide attempts more frequently involve severe medical damage. Finally, NSSI and suicide differ in the frequency of the act. Suicide attempts tend to occur infrequently compared with NSSI. It is relatively unusual for someone to attempt suicide more than a few times; however, it is not uncommon for NSSI to be performed dozens or even hundreds of times (Klonsky, Muehlenkamp, Lewis, & Walsh, 2011).

While there are clear differences between NSSI and suicidal behavior, it should also be noted that NSSI and suicidality can often co-occur. Many individuals who engage in NSSI report concurrent suicidal ideation and attempt suicide. Additionally, it is not uncommon for an individual's history of NSSI to play a role in one's risk for suicide. Klonsky, Muehlenkamp, Lewis, and Walsh (2011) suggest that, "engaging in NSSI may help an individual habituate to acts of self-injury, become more capable of making a suicide attempt, and more likely to acts on suicidal thought." Similarly, Joiner's (2005) interpersonal-psychological theory of suicidal behavior (IPTS) suggests that individuals who encounter repeated and significant amounts of pain and provocation may develop the "acquired capability" for suicide. Although the acquired capability for suicide is not always synonymous with the desire for death, this particular risk factor, in combination with suicidal desire, substantially increases the likelihood of lethal self-injury (Joiner,

2005). Thus, individuals who engage in NSSI are at increased risk for suicide (Klonsky, Muehlenkamp, Lewis, & Walsh, 2011; Hooley & Germain, 2014).

Prevalence, rates, & demographics of nonsuicidal self-injury. NSSI is a serious and far from uncommon problem. Rates of NSSI have markedly increased over the past decade, especially among adolescents and young adults (Klonsky, Muehlenkamp, Lewis, & Walsh, 2011). Existing studies suggest that self-injury occurs more frequently than a wide range of other mental health disorders, including anorexia nervosa, bulimia nervosa, panic disorder, obsessive-compulsive disorder, and borderline personality disorder (Nock, 2010). Estimates of the prevalence of self-injury have varied broadly across studies. Studies among community samples suggest that approximately 13%-45% of adolescents and 4% of adults report having engaged in self-injury at some point in their lifetime (Nock & Favazza, 2009; Nock, 2010). Klonsky (2011) reported a lifetime prevalence rate of 5.9% in a sample of 439 adults drawn from a regionally and sociodemographic diverse sample. Within this sample, 2.7% had self-injured five or more times.

NSSI may begin at any age; however, it typically has an age of onset during early-to-mid adolescence (e.g. 12-14 years of age) (Rodham & Hawton, 2009, p. 37; Nock, 2010; Klonsky, Muehlenkamp, Lewis, & Walsh, 2011). Despite this, many individuals start to self-injure during young adulthood (Klonsky, Muehlenkamp, Lewis, & Walsh, 2011). According to Rodham and Hawton (2009, p. 37), young adults between the ages of 18 and 25 are thought to be in the highest risk group for engaging in NSSI. This is comparable to the prevalence estimate of 17% previously reported in a random survey of 3,000 U.S. college students (Whitlock, Eckenrode, & Silverman, 2006).

When looking at differences between clinical and nonclinical populations, it appears that research examining rates of NSSI in inpatient and clinical samples of adolescents have consistently shown that NSSI rates are significantly higher when compared with nonclinical samples (Klonsky, Muehlenkamp, Lewis, & Walsh, 2011). Specifically, prevalence rates of adolescent NSSI in community samples have ranged anywhere from 10% to 15% (Laye-Gindhu & Schonert-Reichl, 2005) while NSSI in inpatient and clinical samples have ranged from 40% (Darche, 1990) to 61% (DiClemente, Ponton, & Hartley, 1991). Similar to rates among adolescents, rates of NSSI in clinical samples of adults are higher than those in nonclinical samples. Briere & Gil (1998) found that the rate of NSSI in nonclinical samples of adults was 4%, while rates in adults in inpatient settings range from 4% to 21%.

Early research on NSSI has suggested that the behavior was predominantly engaged in by females. However, more recent research has shown that males and females differ to a much lesser degree than previously assumed. It may be that sex differences for NSSI only emerge when the frequency of the self-injurious behavior is considered (Klonsky, Muehlenkamp, Lewis, & Walsh, 2011). In a recent study examining NSSI in young adults, Whitlock, Powers, and Eckenrode (2006) found no significant sex differences for lifetime history of NSSI; however, when considering how often the behavior occurred, females engaged in more frequent NSSI.

Theories of nonsuicidal self-injury. The question of why people purposely and repetitively inflict severe harm on their own body is important to consider. The literature is full of speculative theories and explanations as to why people engage in NSSI. Generally speaking, authors Klonsky, Muehlenkamp, Lewis, and Walsh (2011) suggest

there are two broad categories of functions for why people engage in NSSI: (1) intrapersonal/automatic and (2) interpersonal/social. Intrapersonal functions refer to reinforcement that is self-focused, such as regulating one's emotions. Interpersonal functions refer to reinforcement by others, such as care from a loved one. Evidence from a review of the literature suggests that NSSI serves many purposes, but the most common functions are intrapersonal. The two main intrapersonal theories of NSSI that have been found prevalent throughout the literature are emotional regulation and self-punishment (Klonsky, Muehlenkamp, Lewis, & Walsh, 2011).

Emotional regulation. By far, the most commonly reported function of NSSI is regulation of negative emotions (Prinstein, Guerry, Browne, & Rancourt, 2009). Klonsky, Muehlenkamp, Lewis, and Walsh (2011) suggest that self-injurers experience more frequent and intensive negative emotions than noninjurers; thus, people who are in a constant struggle with overwhelming, negative emotions are more likely to try many ways cope, including self-injury. Intense emotions (e.g. anxiety, frustration, and anger) often precede NSSI and self-injurers have been found to report quick decreases in the intensity of these emotions as a result of engaging in NSSI (Klonsky, 2009; Klonsky, Muehlenkamp, Lewis, and Walsh, 2011). Klonsky's (2007) review of studies on the function of self-injury revealed that affect regulation was the only function examined in all studies. This review also found that most-self injurers identified the desire to alleviate negative affect as the reason for self-injuring. Similarly, Klonsky, Muehlenkamp, Lewis, and Walsh (2011) found that those who report the greatest reductions in negative emotions are also those who engage in NSSI most frequently.

Self-punishment. Another commonly reported function is self-punishment, also sometimes referred to as self-directed anger (Klonsky, Muehlenkamp, Lewis, & Walsh, 2011). Given that NSSI is a behavior in which a person abuses or attacks one's own body, this behavior may be likely to be performed as a form of self-punishment (Nock & Cha, 2009, pg. 70). Individuals who engage in NSSI have been found to report higher levels of self-criticism compared to those who do not self-injure (Glassman, Weirec, Hooley, Deliberto, & Nock, 2007; Klonsky, Muehlenkamp, Lewis, & Walsh, 2011). In a recent study involving college students, Smith, Steele, Weitzman, Trueba, and Meuret (2015) found that students who had endorsed recent NSSI behaviors reported the highest levels of self-disgust. According to Nock (2010), "self-hatred" and "anger at self" are reported as the thoughts/feelings precipitating nearly half of self-injury episodes in ecological momentary assessment (EMA) studies.

Research indicates that adolescents who engage in self-injury endorse such explanations as "I was angry at myself," and "I felt like a failure," and "I wanted to punish myself" (Laye-Gindhu & Shonert-Reichl, 2005). Swannell, et al. (2008) found that 84% of self-injuring adolescents on an inpatient unit reported that a motivation for their self-injury was to punish themselves for being bad. Additionally, Wedig and Nock's (2007) study of adolescents who self-injure and their parents revealed that these parents are significantly more hostile and critical in their comments about their children than are parents of noninjurers. This study also found that the combination of parent criticism and adolescent criticism was associated with a high risk of engaging in NSSI.

Furthermore, a highly self-critical cognitive style has been found to be the strongest predictor of prolonged pain endurance; thus, people who self-injure may regard

suffering and pain as something that they deserve (Hooley, Ho, Slater, & Lockshin, 2010). Although self-punishment is rarely the primary reason people give for engaging in NSSI, by inflicting self-pain, people with high levels of self-criticism may be able engage in a behavior that is both self-affirming and reduces their emotional distress (Claes, et al., 2011).

Self-Compassion

The concept of self-compassion has existed in Eastern philosophical thought for centuries; yet, it is just now beginning to gain popularity in Western psychology (Neff, 2003a). Put simply, self-compassion is compassion directed inward (Germer & Neff, 2013). This section will define what the process of self-compassion entails, explore the effects of self-compassion on psychological functioning, and discuss forms of therapy that foster self-compassion. Additionally, this section will discuss the role of self-compassion among those who engage in nonsuicidal self-injury (NSSI).

What is self-compassion? When reflecting on one's experience, it can often be concluded that one is likely much more critical and judging of themselves compared to others that they are close to, or even strangers (Neff, 2003a). Neff (2003a) has proposed that treating oneself with compassion is needed for optimal functioning and health. Self-compassion involves treating oneself with care and concern when facing personal mistakes, failures, inadequacies, and painful life situations (Neff 2003a, 2003b). Having self-compassion requires an individual to be forgiving to oneself and acknowledge that we are fully human and thus, limited and imperfect (Neff, 2003a). Compassion directed inward does not equate to being self-centered. Rather, being compassionate to oneself tends to enhance feelings of compassion and concern for others as being less critical and

judging of oneself allows for less criticizing and judgment of others (Neff, 2003a). Neff (2003a) conceptualizes that self-compassion consists of three basic, positive components: self-kindness; common humanity; and mindfulness. However, three negative, interrelated components may also exist. The three interrelated components are counterparts to the positive components and include self-judgement, isolation, and over-identification (Neff, 2003a).

The first component of self-compassion is self-kindness. Self-kindness refers to the tendency to extend care and understanding to oneself rather than being harshly judgmental or criticizing (Smeets, et. al., 2014). With self-kindness, one is able to soothe and nurture themselves rather than being judgmental or critical when faced with personal shortcomings or failures (Neff, 2003a). Self-compassionate individuals clearly identify their problems, shortcomings, and failures rather than avoiding or repressing them; however, they are able to do so without judgement or self-criticism. By avoiding self-condemnation, self-compassionate individuals are able to more accurately perceive and resolve maladaptive thoughts, feelings, and behaviors and do what is necessary to help themselves (Brown, 1999).

The second component of self-compassion is a sense of common humanity. While self-kindness allows a self-compassionate individual to bear the inevitability of failure, pain, and suffering, common humanity involves recognizing that one's experiences are part of a larger human experience and that we are not alone in our suffering (Neff, 2003a). Often when considering personal struggles and failures, individuals feel isolated and separated from others, feeling as if they themselves are the only one having a difficult time. Having these thoughts and feelings associated with isolation tend to make

one's suffering even worse. Rather than separating and isolating one's experiences, a self-compassionate individual is able to recognize that all people are imperfect, make mistakes, and experience serious challenges throughout life (Smeets, et al., 2014). With self-compassion, an individual is able to recognize that failure and imperfection are normal and part of the human condition. By remembering this, a self-compassionate individual will feel less isolated when struggling or in pain (Neff, 2003a).

The third and final component of self-compassion is mindfulness. In the context of self-compassion, mindfulness involves paying attention to our painful thoughts and emotions in the present moment and seeing them as they are- without avoidance, judgement, or criticism (Neff, 2003a). Kabat-Zinn (2003) proposed that mindful attention and awareness carries with it a position of open-hearted interest toward the experience of the present moment, regardless of how pleasant or unpleasant the experience may be. The ultimate goal of mindfulness is to be present to whatever one experiences in the moment (Newsome, Waldo, & Gruzka, 2012). One cannot ignore or deny suffering and pain, and feel compassion for it at the same time (Germer & Neff, 2013). Therefore, being mindful of our suffering is necessary for self-compassion as mindfulness encourages individuals to accept and tolerate their painful thoughts and emotions rather than trying to change them (Neff, 2003a).

Mindfulness also requires that one does not over identify with negative thoughts or feelings so that one gets caught up and swept away by their current emotional reactions (Germer & Neff, 2013). Getting caught up on one's negative feelings may narrow one's focus and create a negative self-concept, a process Neff (2003a) has termed as "over-identification". Over-identification with one's negative feelings can also lead to

other aspects of oneself being inaccessible (e.g. ability to explore alternative affective states) (Neff, 2003a). Taking a mindful approach to our difficult feelings and emotions can allow for greater clarity, perspective, and equanimity by realizing that all humans will experience negative feelings and emotions and that these will come and go (Neff, 2003a).

Self-compassion and psychological functioning. Numerous studies have found that treating oneself with compassion when facing personal suffering or failure promotes and enhances mental health. One of the most consistent findings throughout the literature and research is that self-compassion is significantly linked and correlated to less psychopathology, such as lower levels of depression and anxiety, and greater life satisfaction (Barnard & Curry, 2011; Neff, 2003b). Macbeth and Gumley's (2012) meta-analysis, examining the link between self-compassion and common forms of psychopathology (e.g. depression, anxiety, and stress) across 20 studies, supported these findings as increased levels of self-compassion were correlated with lower levels of mental health symptoms and conversely, lower levels of self-compassion were associated with higher levels of psychopathology. Additionally, research has found that practicing self-compassion for a short period can produce sustainable mental health changes (Shapira & Mongrain, 2010). Specifically, Shapira and Mongrain (2010) found that community adults experienced substantial declines in depressive symptoms up to three months and substantial increases in happiness up to six months after writing a compassionate letter to themselves once a day for a week concerning recent distressing events compared to a control group. Neff, Rude, and Kirkpatrick's (2007) study of undergraduate students also found that self-compassion had a significant positive

association with positive psychological strengths/qualities. In particular, their study found that self-compassion was positively correlated with self-reported measures of happiness, optimism, positive affect, wisdom, personal initiative, curiosity, exploration, agreeableness, and conscientiousness. Their study also found that self-compassion was negatively correlated with negative affect and neuroticism.

Research has also suggested that self-compassion enhances motivation. For example, Breines & Chen's (2012) study, consisting of four experiments, supported the hypothesis that responding to a moral transgression, personal weakness, or test failure with self-compassion resulted in making people more motivated to improve themselves and their performance. Their experiments are among the first to show that self-compassion can enhance motivation across a range of domains and populations. Additionally, Neff, Hsieh, and Dejitterat (2005) study with undergraduate students found that self-compassionate students were more likely to report having more intrinsic motivation to grow and understand new material. These students were also less likely to focus on avoiding negative performance evaluations in their academic work.

Self-compassion also has been shown to facilitate resilience by moderating individual's reactions to negative events. Leary, et. al. (2007) series of experimental studies asked individuals to recall unpleasant events, imagine hypothetical situations about failure, loss, and humiliation, perform an embarrassing task, and disclose personal information to another person who gave them ambivalent feedback. The results from this series of studies indicated that individuals with higher levels of self-compassion demonstrated fewer extreme reactions and fewer negative emotions than individuals who were low in self-compassion. Self-compassionate individuals were also more accepting

of their thoughts and had a greater tendency to put their problems into perspective than individuals with lower levels of self-compassion.

Research has also demonstrated that self-compassion is also particularly worthwhile and useful for student populations. In particular, college life is known for challenging a student's sense of well-being (Neely, et al, 2009). College life demands that students manage academic and social goals while also managing emotional reactions to success, disappointment, and failure. Self-compassion has been correlated as a predictor to university student's sense of well-being (Neely, et al. 2009). Additionally, Neff, Hsieh, and Dejjitrat (2005) suggest that self-compassion buffers students against the challenges of student life. For example, among students who had recently failed a midterm exam, self-compassionate students were more likely to engage in adaptive emotion-focused coping styles (e.g. seeking support and acceptance) rather than avoiding their failure. Furthermore, self-compassion has been found to moderate student's reactions and social difficulties in the transition from high school to college (Terry, Leary, & Mehta, 2012). Specifically, self-compassionate students appear to be able to handle social and academic struggles more effectively, experience less homesickness, experience lower levels of depression, and report less dissatisfaction with their decision to attend a university. Prior research with undergraduate students has also connected self-compassionate individuals to lower levels of procrastination (Williams, Stark, & Foster, 2008; Sirios, 2012) and less academic worry (Williams, Stark, & Foster, 2008).

Self-compassion has also been shown to be especially beneficial for undergraduate women. Smeets, et al. (2014) developed a 3-week group intervention specifically designed to help female undergraduate students deal with the challenges of

university life in a more self-compassionate way. Students in this study were either assigned to an intervention designed to teach self-compassion skills or an active time management skills control group. Results from their study indicated that those assigned to the self-compassion intervention demonstrated significantly greater increase in self-compassion, mindfulness, optimism, and self-efficacy compared to the control group. Those assigned to the self-compassion intervention also showed significantly greater decreases in rumination, while both interventions showed increases in life satisfaction and connectedness. Smeets, et al. (2014) concluded that the findings of their study suggested that a brief self-compassion intervention has potential for improving resilience and well-being.

Further, self-compassion appears to enhance interpersonal relationships. In a study of heterosexual couples, self-compassionate individuals were described by their partners as being more emotionally connected than those lacking in self-compassion. Additionally, self-compassionate individuals were also more likely to describe their partners as accepting and supportive of autonomy, less detached, less controlling, and less verbally or physically aggressive than those lacking self-compassion (Neff & Beretvas, 2013). According to Warren, Smeets, and Neff (2016), due to giving themselves care and support, compassionate individuals seem to have more emotional resources available to give to others; thus, enhancing interpersonal relationships.

Forms of therapy that foster self-compassion. Although self-compassion is a relatively new construct to Western psychology, there are many forms of therapy that foster self-compassion. Self-compassion has been found to be a particularly important factor in the effectiveness of mindfulness-based interventions, such as mindfulness-based

stress reduction (MBSR) and mindfulness-based cognitive therapy (MBCT) (Germer & Neff, 2013). For example, Kuyken et al. (2010) compared the effect of MBCT with maintenance anti-depressants on relapse of depressive symptoms. Their study found that increases in mindfulness and self-compassion across treatment mediated the effect of MBCT on depressive symptoms at 15-month follow-up. They also discovered that MBCT reduced the association between cognitive reactivity (i.e., the tendency to react to sad emotions with depressive thinking styles) and depressive relapse. In this study, increasing levels of self-compassion, not mindfulness, nullified this link. These findings suggests that increased levels of self-compassion may be a significant factor in changing habitual thought patterns so that depressive episodes are not re-activated. In addition, Shapiro, Astin, Bishop, and Cordova (2005) examined the effects of a short-term (8-week) MBSR program on health care professionals. The results of their study found that health care professionals who took the MBSR program reported significantly increased self-compassion and reduced levels of stress compared to a control group.

More recently, Neff and Germer (2013) developed an 8-week group intervention called Mindful Self-Compassion (MSC). This intervention is designed to teach individuals to become more self-compassionate. The MSC program teaches self-compassion through a variety of meditations and informal practices for use in daily life. Neff and Germer (2013) conducted a randomized controlled study of the MSC program comparing the outcomes of the treatment group versus a waitlist control group. Results found that MSC participants reported significantly greater increases in self-compassion, compassion for others, mindfulness, and life satisfaction. Results also found that MSC participants reported a significant decrease in depression, anxiety, stress, and emotional

avoidance. These results were maintained at six months and at one-year post intervention. This study demonstrated that teaching self-compassion appears to have a therapeutic effect.

Self-compassion and nonsuicidal self-injury. There have been relatively few studies that have empirically explored the theoretical links between self-compassion and NSSI. However, in their study of self-compassion in online-accounts of NSSI, Sutherland, et al. (2014) found that the components of self-compassion (e.g. self-kindness, common humanity, and mindfulness) may operate to encourage acceptance of one's experience with NSSI, reduce related distress, and foster recovery from engaging in self-injury. More specifically, these authors found that participants discussed being kind to themselves, seemed aware that they were not alone in their distress, discussed that suffering is part of the human condition, and appeared mindful of their present experiences.

Additionally, results from a study of adolescent males and females found that adolescents who were more kind and compassionate towards themselves tended to have lower levels of depressive symptoms and NSSI; however, adolescents that expressed resistance to compassionate feelings towards themselves had a greater tendency to engage in NSSI (Xavier, Pinto Gouveia, & Cunha, 2016). Further, results from a series of studies have demonstrated that participants who engage in NSSI are much more highly self-critical than are healthy control participants (Glassman, Weierich, Hooley, Deliberto, & Nock, 2007; Hooley, Ho, Slater, & Lockshin, 2010). Similarly, individuals who engage in NSSI are also more highly self-critical than are people who engage in more indirect forms of self-injury (e.g. abusing substances and depriving oneself of food) but

who do not engage in NSSI (St. Germain & Hooley, 2012). Gilbert (2010) has suggested that decreases in self-criticism and increases in self-kindness may reduce the one's risk of engaging in self-injury, particularly for those with Borderline Personality Disorder.

It also appears that self-compassion may be the antithesis to NSSI. According to Sutherland, et al. (2014) there is “evidence to suggest that self-criticism, characterized by the tendency to negatively judge and scrutinize oneself, confers risk for NSSI.”

Accumulating evidence also suggests that self-compassion may be an effective emotion regulation strategy, particularly suited for targeting self-criticism, shame, and feelings of worthlessness that likely lead to anger, hostility, and self-injury (Warren, 2015).

Individuals who are high in self-compassion are not as distressed by negative events, have higher positive affect, have lower levels of self-criticism, and report greater life satisfaction than people who are low in self-compassion (Neff, 2013).

Present Study

As mentioned previously, to date, there have been relatively few studies that have empirically explored the theoretical links between self-compassion and NSSI.

Additionally, there is also little to no empirical work exploring how the facets of self-compassion (e.g. self-kindness, common humanity, and mindfulness) relate to the context of NSSI. Furthermore, there is also very little empirical work demonstrating the effectiveness of compassion-based interventions provided to those who engage in NSSI.

Despite this, in this author's opinion, self-compassion relates to NSSI in two general ways. First, it is this author's opinion that having more self-compassion leads to less occurrences of NSSI. Research has demonstrated that having a higher level of self-compassion means that a person is more likely to be forgiving toward themselves, less

critical of themselves, and kinder towards their body (Neff, 2003a). Thus, this theoretically means that these same individuals are less likely to punish and harm themselves.

Secondly, it is this author's opinion that self-compassion is a form of coping with negative emotion. Negative emotion has been consistently associated with self-injury, as have poor coping skills (Prinstein, Guery, Browne, & Rancourt, 2009; Klonsky, Muehlenkamp, Lewis, and Walsh, 2011). Hence, when self-compassion is high this means that individuals are more apt to use more healthy coping skills, more apt to tolerate negative emotions, and less apt to use unhealthy coping skills. Thus, these individuals are less likely to engage in self-injury. For these two reasons, it is proposed that self-compassion may have a significant association with NSSI.

The purpose of the present study was to examine the relationship between self-compassion and occurrences of NSSI in a clinical population. More specifically, the present study explored the relationship between self-reported self-compassion and past self-reported occurrences of NSSI. In particular, one hypothesis was investigated. It was hypothesized that there would be significant differences in mean self-reported self-compassion scores in individuals who have self-reported occurrences of self-injury than those with no self-reported occurrences. Specifically, it was hypothesized that those who reported some past occurrence of self-injury would have significantly lower self-compassion scores than those who reported no past occurrence of self-injury.

This hypothesis is rooted in previous research that has found that self-compassionate adolescents tend to have lower levels of NSSI, while those that express resistance to compassionate feelings towards themselves have a greater tendency to

engage in NSSI (Xavier, Pinto Gouveia, & Cunha, 2016). Additionally, in their study of self-compassion in online-accounts of NSSI, Sutherland, et al. (2014) found that the components of self-compassion (e.g. self-kindness, common humanity, and mindfulness) may operate to encourage acceptance of one's experience with NSSI, reduce related distress, and foster recovery from engaging in self-injury. Further, it has been suggested that decreases in self-criticism and increases in self-kindness may reduce one's risk of self-injury, particularly in those with Borderline Personality Disorder (Gilbert, 2010).

The purpose for examining self-compassion and its' relation to engagement in NSSI was threefold. First, research in this area may help determine whether self-compassion and different components of self-compassion play a role in NSSI. Second, studying NSSI in relation to self-compassion may highlight a conceptual framework to explain why some individuals self-injure. This framework could help to identify what may protect against NSSI. Finally, examining self-compassion and its' relation to engagement in NSSI may provide further evidence for the use of compassion based interventions in the treatment of those who self-injure.

Chapter III

Methodology

Participants

Participants in this study were a sample of undergraduate and graduate students from a mid-size Midwestern university. Participants were 18 years of age or older whom had received outpatient mental health services located on the university's campus counseling center between the years 2012 and 2015. Services received on campus were free to students. Other than being a student at the principle investigator's university and being a client at the university's counseling center, there were no exclusionary criteria within the study.

Participants in this study were acquired through data that was already accessed and collected by the center. The data set provided to the author comprised of 731 total participants; however, the final data set was comprised of 588 participants based on data relevant to the study. Cases removed from the final data set were repeat administrations. Additionally, those participants associated with particular missing values on instrumentation utilized in the study and missing demographic information (e.g. birth date, gender, and race/ethnicity) were also removed. Table 1 provides the particular demographic variables (e.g. gender, race/ethnicity, religious preference) pertaining to the participants in this study.

Procedure

Approval from the author's institutional review board was obtained before beginning the study. Data that was already accessed and collected by the center was examined. The data examined was acquired by the center through the administration of two self-report measures: The Self-Compassion Scale- Short Form (SCS-SF) and the Client Information/Demographics Questionnaire (SDS-CCMH). The self-report measures were administered to each participant during the initial evaluation of services (e.g. intake) at the counseling center. Of all the data obtained, only data that was collected at the intake with the aforementioned measures were utilized in this study.

Instrumentation

Self-compassion scale- short form. Participants were given the 12-item Self-Compassion Scale- Short Form (SCS-SF; Neff, 2003a) during their initial evaluation of services at the university counseling center in order to measure levels of self-reported self-compassion. This scale has been used extensively to measure self-compassion. The SCS-SF contains positive and negative subscales which measure the different components of self-compassion. Each subscale is comprised of two items. The six subscales include: self-kindness; self-judgement; common humanity; isolation; mindfulness; and over-identification. The total self-compassion score is computed by reversing the negative subscale items and then adding all subscale scores. This study strictly utilized and analyzed the total scale score of the SCS-SF.

Responses on the SCS-SF are given on a five-point Likert-type scale from "Almost Never" to "Almost Always". Internal reliability as measured by coefficient alpha is reported at .92 and test-retest reliability is reported at .93 (Neff, 2003a). Neff

(2003a) reports evidence of concurrent and convergent validity of the scale, citing significant correlations with measures of social connection and therapist ratings, respectively. It shows discriminate validity in that the scale is not correlated with measures of social desirability.

Client information/demographics questionnaire. Participants were also given a client information/demographics questionnaire (SDS-CCMH) during their initial evaluation for services at the university counseling center. This questionnaire asks students to give various information regarding a number of areas including: referral information, background information, medical and developmental information, mental health history, substance use, and information regarding other areas of functioning (e.g. changes in weight, sleep patterns, and exercise habits). Within the measure, there is also an item that asks students about the number of past occurrences of nonsuicidal self-injury one has engaged in. This item states, “Have you ever purposely injured yourself without suicidal intent?”. Respondents are given five answer choices to choose from including “No”, “1 time”, “2-3 times”, “4-5 times”, and “more than 5 times”. Additionally, for the purposes of the study, attention was given to various items on this questionnaire including date of birth, gender, sex at birth, race/ethnicity, religious preference, and last incidence of self-injury without intent.

Analytic Considerations

Several preliminary steps were taken to begin to utilize the data for the proposed analyses. Participants in this study were divided into two groups based on their responses to the client information/demographics questionnaire (SDS-CCMH). The groups included: 1) those who had reported a past history of purposely injuring themselves

without suicidal intent and 2) those who had reported no prior history of purposely injuring themselves. For example, if a participant reported on the SDS-CCMH that they had purposely injured themselves without suicidal intent “1 time”, “2-3 times”, “4-5 times”, or “more than five times” they were placed in the first group. However, if participants reported on the SDS-CCMH that they had no prior history of purposely injuring themselves (e.g. “No”) they were placed in the second group. Thus, history of self-injury without suicidal intent comprised the independent variable in the study with two levels: prior history of self-injury versus no prior history of self-injury. Additionally, data from the Self-Compassion Scale- Short Form (SCS-SF) was also gathered. In particular, participant’s total self-compassion score on the SCS-SF was gathered. Self-compassion comprised of the dependent variable in the study as this author hypothesized that self-compassion would change based on manipulation of the independent variable.

This study involved two main analyses. The first analysis utilized was a biserial correlational analysis, which involved determining if a relationship existed between an individual’s history of self-injury and their level of self-compassion. A biserial correlation yields a Pearson’s r correlation coefficient for data that includes one dichotomous variable that is not a pure dichotomy. In this instance, history of self-injury was a dichotomous variable that was operationalized by the researcher, and was not a naturally occurring dichotomy. The second analysis utilized was an independent t-test, which allowed for a direct examination of the proposed hypothesis. In this t-test, the independent variable was history of self-injury, while the dependent variable was level of self-compassion.

It should be noted, the SCS-SF has recently come under criticism in the literature as having questionable psychometric properties. In particular, the scale's validity and factor structure has been questioned and scrutinized (Lopez, et al., 2015; Muris, 2016). According to Lopez, et al. (2015) the six factor structure (self-kindness, self-judgement, common humanity, isolation, mindfulness, over identification) proposed by Neff (2003) does not reliably exist and should not be summed into an overall self-compassion score. Instead, Muris (2016) suggests that only two factors, formed by positive and negative items, exist. The two existing factors include: 1) self-compassion; and 2) self-criticism. According to many researchers, self-kindness, common humanity, and mindfulness combine into a measure self-compassion, while self-judgement, isolation, and over identification combine into a measure of self-criticism (Lopez, et al., 2015; Muris, 2016; Muris & Petrocchi, 2016). It has been suggested in the literature that if one is to use the SCS-SF, one should measure the two factors separately and weigh them against one another (Lopez, et al., 2015; Muris & Petrocchi, 2016). Thus, two additional analyses were conducted for this study. The two additional analyses were independent t-tests as informed by Muris (2016). In the first of these t-tests, the positive subscales (e.g. self-kindness, common humanity, and mindfulness) of the SCS-SF were combined into one factor: self-compassion. Thus, the independent variable was history of self-injury, while the dependent variable was self-compassion. In the second t-test, the negative subscales (e.g. self-judgement, isolation, and over identification) of the SCS-SF were combined into one factor: self-criticism. Therefore, the independent variable was history of self-injury, while the dependent variable was self-criticism.

Table 1:

Participant Demographic Variables

Demographic Variable	No History of NSSI	History of NSSI	Total
	438	150	588
Gender			
Male	168	42	210
Female	266	107	373
Transgender	4	1	5
Race/Ethnicity			
White	305	119	424
African American/ Black	81	19	100
Asian American/ Asian	19	5	24
Hispanic/ Latino/a	8	1	9
American Indian/ Native Alaskan	3	0	3
Native Hawaiian/ Pacific Islander	1	0	1
Multi-racial	21	6	27
Religious Preference			
Christian	196	54	250
Catholic	58	10	68
Buddhist	5	2	7
Atheist	37	22	59
Agnostic	40	24	64
Jewish	5	1	6
Muslim	10	0	10
Hindu	4	0	4
Spiritualist	3	0	3
Pagan	0	3	0
Mormon	1	0	1
Wiccan	0	4	4
Quaker	1	0	1
Unitarian Universalist	1	0	1
Rastafarian	1	0	1
No Preference	72	27	99
Jehovah's Witness	1	0	1
Belief in god	1	1	1
Private	1	0	1
New Age	1	1	2

Chapter IV

Results

This chapter will present and explain the issues, analyses, and results related to the statistical analyses of the study.

Preliminary Analysis

Missing data analysis. Field (2013) has recommended that data be screened for missing values before it is analyzed; thus, before performing an independent t-test, data in this study was examined. Using SPSS, missing values were identified via visual scan for each measure utilized in the study. For the Self-Compassion Scale- Short Form (SCS-SF) the amount of missing values was 11, while the amount of missing values for Client Information/Demographic Questionnaire (SDS-CCMH) was 143. Although missing values were found for 11 participants on the SCS-SF, these participants were not removed from the study. Instead, mean imputation was automatically performed on the data set before this author received it for the 11 missing values. Mean imputation is a method in which the missing value on a certain variable is replaced by the mean of the available cases (Field, 2013); thus, the missing values on the SCS-SF for each of the 11 participants were replaced by the total mean of the remaining SCS-SF items. The 143 participants associated with missing values on the SDS-CCMH were removed from the data set, leaving 588 participants for the final data set. Because the missing values accounted for less than 0.2% of the final data set, the amount of missing values in this study was deemed appropriate.

Outliers. An outlier is a single case or score within the data set that does not follow the usual pattern (Field, 2013). When running an independent t-test one should ensure there are no significant outliers. Significant outliers have been shown to have impact on standard deviation and means; thus, reducing the accuracy of the results (Field, 2013). Therefore, the data set was screened for outliers based on scores from the Self-Compassion Scale-Short Form (SCS-SF). Total scale scores from the SCS-SF were converted to z scores. Any z score with an absolute value greater than 3.29 was considered an outlier and was removed from the study. For this study, there were no z scores above 3.29 and no cases were removed, leaving 588 valid cases.

Assumptions. Before running any analyses, particularly an independent t-test, one has to test for certain assumptions. Assumptions (e.g. normality, homoscedasticity, and independence) must be met in order to conduct an independent t-test. First, the assumption of normality was examined to determine if the dependent variable was approximately normally distributed within each group. This also commonly refers to the distribution of the residual values of the predictor values. Normality was assessed through calculating the skew and kurtosis statistics for the total self-compassion score from the Self-Compassion Scale- Short Form (SCS-SF) measure in SPSS. Skew and kurtosis statistics were transformed into z-scores. Z- scores for skew and kurtosis above the absolute value of 3.29 have been found to be problematic and suggest that the data set may not be normal (Field, 2013). For the present study, the kurtosis z-score statistic was -1.20 indicating the data was normally distributed; however, the skewness z-score statistic was 3.43 indicating that the data may not be normally distributed.

Conversely, it should be noted, that normality was also assessed through a Shapiro Wilk's test (e.g. Q-Q plot) to compare the scores in the sample to a normally distributed set of scores with the same mean and standard deviation. In the present study, values for each measure shown in the Q-Q plot created in SPSS appeared to be not significantly different from a normal distribution; thus, this suggested that the dependent variable was normally distributed within each group. Furthermore, a Kolmogorov-Smirnov test, which is a test that compares the sample's distribution to a perfectly normal, was utilized to assess normality. The Kolmogorov-Smirnov test found that the sample's distribution in the study was not statistically different from a perfectly normal distribution indicating that the data set was normally distributed.

Next, the assumption of homoscedasticity was examined. Homoscedasticity is an indication of whether the variance of the two groups are equal in the population at different levels of predictor values (Field, 2013). According to Field (2013), if variances for the outcome variable differ along the predictor variable then the estimates of the parameters within the study will not be optimal. Homoscedasticity was assessed using Levene's Test of Equality of Variances in SPSS, which compares whether variances are equal between groups. If Levene's Test of Equality of Variances is non-significant (e.g. $p > .05$) then variances are roughly equal and the assumption is acceptable; however, if the variances are significant (e.g. $p < .05$) then there are unequal variances and the assumption has been violated (Field, 2013). The results from Levene's Test of Equality of Variances found that the variances between the two groups was not statistically different ($p = .219$), which indicated the assumption of homoscedasticity was acceptable.

Finally, the assumption of independence was assessed to determine if the data (scores) were independent of each other (that is, scores of one participant are not systematically related to scores of the other participants). Although the independence assumption can ruin a study if it is violated, there is no way to use the study's sample data to test the validity of this prerequisite condition (Field, 2013). Independence was assessed through an examination of the design of the study. After examination of the study design, it was a reasonable conclusion to determine that the two groups in the study were independent of one another; thus, an independent t-test could be utilized.

Main Analyses

Descriptive statistics. Descriptive statistics (i.e. means, standard deviations, and range levels) were calculated for total levels of self-compassion found on the Self-Compassion Scale- Short Form (SCS-SF). Additionally, descriptive statistics were calculated for total level of self-compassion related to one's history of purposely injuring themselves without suicidal intent endorsed on the Client Information/Demographics Questionnaire (SDS-CCMH). The present study obtained a mean of 2.69 for the total scores on the SCS-SF (n=588). The standard deviation for the SCS-SF was .74 and scores ranged from 1.00 to 5.00. Additionally, the present study obtained a mean self-compassion score of 2.39 for those endorsing occurrences of self-injury on the SDS-CCMH (n=150), while the mean self-compassion score for those not endorsing self-injury on the SDS-CCMH (n=438) was 2.79. The standard deviation for self-injury occurrences was .73, while the standard deviation was .69 for those not endorsing self-injury. Scores for those endorsing self-injury ranged from 1.00 to 4.25, while scores for those not endorsing self-injury ranged from 1.00 to 5.00.

Correlational analysis. A biserial Pearson's r correlational analysis was conducted in order to determine if there was a significant association between NSSI (e.g. self-injury versus no self-injury) and self-compassion. A correlational analysis can determine if a statistically significant relationship is present between two variables and also the strength of that relationship. Results showed that there was a negative correlation between purposely injuring without suicidal intent and one's level of self-compassion. This relationship was statistically significant, $r(586) = -.24$, $p < 0.01$ (two-tailed). The results from the correlational analysis suggest that those individuals with higher levels of self-compassion are less likely to have a history of NSSI.

Independent t-test and effect size. In order to determine whether there was a significant difference in self-compassion scores between individuals who have past occurrences of self-injury and those individuals with no past occurrences of self-injury, an independent t-test was conducted. In this analysis, occurrences of self-injury was the independent variable (with two groups; those who have self-injured versus those who have not self-injured) and level of self-compassion was the dependent variable. Results showed that on average those who have self-injured ($M = 2.39$; $SD = .69$) had lower levels of self-compassion than those who have not self-injured ($M = 2.79$, $SD = .73$). This difference was found to be significant $t(586) = 5.915$, $p < .001$. After running the independent t-test, the effect size was calculated using Rosenthal's (1991) equation to determine the magnitude of the effect of self-compassion on self-injury. The effect size was calculated to be 0.25 and represented a small effect.

Additional Analyses

As mentioned in previous sections of this manuscript, the Self- Compassion Scale- Short Form (SCS-SF) has recently been questioned in the literature for having poor psychometric properties; thus, two additional t-tests were conducted for this study. The first t-test was conducted in order to determine whether there was a significant difference in self-compassion scores between those individuals who had past occurrences of self-injury and those individuals with no past occurrences of self-injury. In this analysis, occurrences of self-injury was the independent variable (with two groups; those who have self-injured versus those who have not self-injured) and level of self-compassion was the dependent variable. Results showed that on average those who have self-injured ($M= 2.73$; $SD= .83$) had lower levels of self-compassion than those who have not self-injured ($M= 2.99$; $SD= .83$). This difference was found to be significant $t(586) = 3.306$, $p < .001$.

The second t-test was conducted in order to determine whether there was a significant difference in self-criticism scores between those individuals who have past occurrences of self-injury and those individuals with no past occurrences of self-injury. In this analysis, occurrences of self-injury was the independent variable (with two groups; those who have self-injured versus those who have not self-injured) and level of self-criticism was the dependent variable. Results showed that on average those who have self-injured ($M= 3.96$; $SD= .88$) had higher levels of self-criticism than those who have not self-injured ($M= 3.41$; $SD= .99$). This difference was found to be significant $t(586) = -5.997$, $p < .001$.

It should be noted, an additional research question emerged in the process of conducting this study. This question concerned the time since an individual last engaged in NSSI and their level of self-compassion. On the Demographics Questionnaire (SDS-CCMH) participants are also asked, “When was the last time you purposely engaged in self-injury without suicidal intent”. Respondents are given six answer choices to choose from including “Never”, “Within the last two weeks”, “Within the last month”, “Within the last year”, “Within last 1-5 years”, and “More than 5 years ago”. Therefore, an ANOVA was run with time since last injuring as the independent variable and self-compassion as the dependent variable. In this ANOVA, individuals whom disclosed that they had never self-injured were included. Results showed that there was a significant difference between the time since last injuring and self-compassion $F(5, 582) = 6.782, p < .001$. Post-hocs were then performed with a Bonferroni correction. These results showed that the only significant differences were between “never” self-injuring versus injuring “within the last two weeks” ($p = .026$) and “never” self-injuring versus injuring “within the last year” ($p = .005$).

Further, an additional ANOVA was run removing those individuals whom have “never” self-injured. The total number of participants in this ANOVA was 148. Results showed that there was no significant difference between the time since last injuring and self-compassion $F(4, 143) = .660, p < .621$. Post-hocs were then performed with a Bonferroni correction. These results showed no significant differences between any groups.

For similar reasons that the additional t-tests mentioned above were conducted, this researcher also separated out the SCS-SF into the two factors (self-compassion and

self-criticism) as suggested by the literature. These factors were then used as the dependent variables in subsequent ANOVA's. An ANOVA was run with time since last injuring as the independent variable and the self-compassion factor as the dependent variable. In this ANOVA, individuals whom disclosed that they had "never" self-injured were included. Results showed that there was a significant difference between the time since last injuring and self-compassion $F(5, 582) = 2.853, p < .015$. Post hoc analyses with Bonferroni correction showed the only difference was between those whom have "never" injured versus those whom have injured "within the past year" ($p = .046$). Additionally, an ANOVA was run with time since last injuring as the independent variable and the self-criticism factor as the dependent variable. In this ANOVA, individuals whom disclosed that they had "never" self-injured were included. Results showed that there was a significant difference between the time since last injuring and self-criticism $F(5, 582) = 6.472, p < .001$. Post hoc analyses with Bonferroni correction showed the only difference was between those whom have "never" injured versus those whom have injured "within the last two weeks" ($p = .038$). Additionally, there was a difference those whom have "never" injured versus those whom have injured "within the last one to five years" ($p = .015$).

Further, two additional ANOVA's with the self-compassion and self-criticism factors were run removing those individuals whom have "never" self-injured. The total number of participants in the two ANOVA's was 148. Results showed that there was no significant difference between the time since last injuring and the self-compassion factor $F(4, 143) = .171, p < .953$. Post-hocs were then performed with a Bonferroni correction. These results showed no significant differences between any groups. Additionally, results

showed that there was no significant difference between the time since last injuring and the self-criticisim factor $F(4, 143) = 1.060, p <.379$. Post-hocs were then performed with a Bonferroni correction. These results showed no significant differences between any groups.

Chapter V

Discussion

To date, there have been relatively few studies that have empirically explored the theoretical links between self-compassion and nonsuicidal self-injury (NSSI). Additionally, there is little to no empirical work exploring how the facets of self-compassion (e.g. self-kindness, self-judgement, common humanity, isolation, mindfulness, and over identification) are utilized in the context of NSSI. Furthermore, there is very little empirical work demonstrating the effectiveness of compassion-based interventions provided to those who engage in NSSI.

This study examined the relationship between self-compassion and occurrences of NSSI in a clinical population. More specifically, this study explored the relationship between self-reported self-compassion and past self-reported occurrences of NSSI. The purpose of this study was to determine whether a relationship existed between one's level of self-compassion and their past engagement in NSSI. In particular, this study found that there was a significant difference in mean self-reported self-compassion scores in individuals who had self-reported occurrences of self-injury than those with no self-reported occurrences. More specifically, it was found that those who reported past occurrences of self-injury had lower self-compassion scores than those who reported no past occurrence of self-injury.

It should be noted, this study strictly found that there was a difference between mean self-reported self-compassion scores of those who have engaged in self-injury

versus those who have not engaged in self-injury. Thus, this study does not necessarily indicate that those who have low self-compassion will engage in self-injury; however, this study indicates there may be a relationship between having low compassion for oneself and engagement in self-injury.

This finding conceptually parallels to previous research that has demonstrated that self-compassionate adolescents tend to have lower levels of NSSI (Xavier, Pinto Gouveia, Cunha, 2016). Additionally, this finding conceptually parallels to previous research that has demonstrated that participants who engage in NSSI are much more highly self-critical than are healthy control participants (Glassman, Weierich, Hooley, Deliberto, & Nock, 2007; Hooley, Ho, Slater, & Lockshin, 2010). People who engage in NSSI are also more highly self-critical than are people who engage in more indirect forms of self-injury (e.g. abusing substances, depriving themselves of food, remaining in abusive relationships) but who do not engage in NSSI (St. Germain & Hooley, 2012). Due to these findings in the research literature and the results from the current study it is suggested that more self-compassion is associated with less engagement in NSSI.

Similarly, the findings from this study may also conceptually parallel to theories that have attempted to explain why individuals engage in NSSI. As mentioned previously in this manuscript, two main theories of NSSI have been found to be most prevalent in the research literature. These theories include: 1) emotional regulation; and 2) self-punishment (Klonsky, Muehlenkamp, Lewis, & Walsh, 2011).

The most commonly reported function of NSSI is regulation of negative emotions (Prinstein, Guerry, Browne, & Rancour, 2009). Klonsky, Muehlenkamp, Lewis, and Walsh (2011) have suggested that self-injurers experience more frequent intense,

negative emotions than noninjurers; thus, people who are in a constant struggle with overwhelming, negative emotions are more likely to try as many ways to cope, including self-injury. However, accumulating evidence has suggested that self-compassion may be an effective emotion regulation strategy, particularly suited for targeting self-criticism, shame, and feelings of worthlessness that likely lead to anger, hostility, and self-injury (Sutherland, et al., 2014; Warren, 2015). Additionally, self-compassion has been found to serve as a form of emotional regulation by improving one's abilities in identifying and accepting emotions, reducing emotional numbing, and diminishing chronic hyperarousal (Ogden, Minton, & Pain, 2006). This study found that those with a past history of NSSI had lower levels of self-compassion than those without a past history of NSSI; thus, one could make the argument that occurrences of NSSI may be due to difficulties regulating negative emotions. Therefore, it could be said that increases in self-compassion within individuals with a history of NSSI may lead to healthier coping, an ability to tolerate negative emotions, and less likelihood of further engaging in NSSI.

The theory of self-punishment, sometimes referred to as self-directed anger (Klonsky, Muehlenkamp, Lewis, & Walsh, 2011), suggests that an individual abuses or attacks their own body as a form of punishment towards oneself (Nock & Cha, 2009, pg. 70). Research has shown that "self-hatred" and "anger at self" are reported as the thoughts and feeling precipitating nearly half of the self-injury episodes in ecological momentary studies (EMA) studies (Nock, 2010). Additionally, studies have found that college students endorsing recent NSSI behaviors reported the highest level of self-disgust (Smith, et al., 2015), while other studies have shown that inpatient adolescent's motivation for self-injury was punishment towards oneself for being bad (Swannell, et

al., 2008) Further, supplementary analyses from this study found that those who have engaged in NSSI had higher levels of self-criticism and lower levels of self-compassion than those with no prior history of NSSI. However, individuals who are high in self-compassion have been found to have lower levels of self-criticism, higher positive affect, and greater life satisfaction than those low in self-compassion (Neff, 2013). Additionally, it has been suggested in the literature that decreases in self-criticism and increases in self-kindness may reduce one's risk in engaging in self-injury (Gilbert, 2010). Consequently, based on the findings from this study and suggestions from the research literature, one could make the argument that increased levels of self-compassion among those who have a history of self-injury may result in lower levels of self-criticism and less likelihood of engaging in further NSSI.

Supplementary analyses in this study also found that there were significant differences between time since last injuring and self-compassion. Specifically, these analyses found differences in self-compassion between those whom have never engaged in NSSI versus those who engaged in NSSI within the last two weeks as well as those who engaged in NSSI within the last year. However, when excluding those who have never engaged in NSSI, analyses found that there were no significant differences in levels of self-compassion between differing time periods of engaging in NSSI

These supplementary analyses add to the main findings of this study that indicate that lower levels of self-compassion are related to engagement in NSSI. However, findings from the additional analyses suggest that there are no real differences in levels self-compassion based on when an individual last engaged in NSSI. Based on this finding, one could argue that the detrimental effects of self-injuring on self-compassion

may wear off over the course of time. However, those who have injured within the last two weeks or within the last year may not be coping well; thus, self-compassion is lower within these individuals. It should be emphasized, these were purely additional analyses that were proposed over the course of the study and results are purely suggested to be complementary to the main findings of the study.

Implications

There are many implications for the findings of this study. First, findings from this study further demonstrate and provide empirical data to support the conclusion that one's level of self-compassion is relevant and may play a role in one's decision to engage in self-injury. NSSI has been found to have an age of onset during early-to-mid adolescence and is prevalent in multiple outpatient and inpatient populations and settings (Rodham & Hawton, 2009, p. 37; Nock, 2010; Klonsky, Meuhlenkamp, Lewis, & Walsh, 2011). The findings provide practitioners with an additional conceptual framework to explain why some individuals may choose to engage in self-injury.

Additionally, knowledge of self-compassion and how higher levels may reduce engagement in NSSI provides a rationale for the use of compassion-based interventions in the treatment of those who self-injure. Self-disgust and being highly self-critical are common characteristics for those that self-injure or have previously injured (Glassman, Weierich, Hooley, Deliberto, & Nock, 2007; Hooley, Ho, Slater, & Lockshin, 2010), and poor coping skills have been consistently associated with engagement in self-injury (Prinstein, Guery, Browne, & Rancourt, 2009; Klonsky, Meuhlenkamp, Lewis, and Walsh, 2011). Therefore, according to Van Vliet and Kalnins (2011), compassion-based interventions and techniques may help those engaging in NSSI become aware and

tolerant of their moment-to-moment experience. Additionally, these interventions and techniques can help these individuals learn self-compassionate ways of soothing themselves in the face of emotional distress and counteract self-directed criticism through self-directed warmth, understanding, and kindness.

Furthermore, the findings from this study provide mental health clinics a rationale for assessing one's level of self-compassion at intake or initial evaluations as it may be a protective factor against engagement in NSSI. In particular, it may be clinically relevant for mental health professionals treating adolescent, young adult, and clinical populations to assess levels of self-compassion as NSSI has been found to be most prevalent among these groups. NSSI typically has an age of onset during early-to-mid adolescence (e.g. 12-14 years of age) (Nock, 2010), but many individuals may start to self-injure during young adulthood (Klonsky, Meuhlenkamp, Lewis, & Walsh, 2011). Young adults between the ages of 18 and 25 are thought to be in the highest risk group for engaging in NSSI (Rodham and Hawton, 2009, p. 37). Additionally, existing studies suggest that NSSI is much higher in inpatient clinical samples as rates have ranged from 40% (Darche, 1990) to 61% (DiClemente, Ponton, & Hartley, 1991) for adolescents and 4% to 21% for adults (Briere & Gil, 1998). The findings support that it may be clinically beneficial to use the Self- Compassion Scale- Short Form (SCS-SF) (or a similar measure) over the course of treatment with these populations to track if one's level of self-compassion is increasing or decreasing. Due to the recent criticism in the research literature, it may be most useful to focus and assess strictly the positive components of the SCS-SF as many believe this is the best way of capturing the protective qualities of the construct (Muris, 2016).

Finally, the findings from this study provide a view for the general population for why individuals may engage in self-injury. According to Kholodkov (2011), individuals engaging in NSSI may feel that their behavior, thoughts, or feelings are being stigmatized by the general population. Additionally, Law, Rostill-Brookes, & Goodman (2009) state, “the public may often hold negative views of self-injury leading to avoidance of individuals who engage in such behaviors.” This secrecy and stigma from the general population causes difficulties in understanding and treating these behaviors as those who engage in NSSI are less likely to reveal their behavior and seek help. However, Raymond (2012) found that individuals exposed to and educated on NSSI in a classroom held less stigmatizing attitudes. Therefore, the findings from this study may provide a level of understanding regarding NSSI that may reduce the stigma, blaming, and judging regarding these individuals and their behavior. Reducing stigma, blaming, and judging among the general population may increase the likelihood that these individuals seek treatment. Additionally, stigmatization, blaming, and judging may feed into one’s low level of self-compassion; thus, increasing the public’s understanding regarding NSSI may actually increase levels of self-compassion and provide a barrier to engaging in NSSI.

Limitations

It should be noted that there are several limitations to this study. First, this study collected data that examined participant’s level of self-compassion in current form from the Self-Compassion Scale-SF (SCS-SF); however, data gathered from the Client Information/Demographic Questionnaire (SDS-CCMH) regarding NSSI was for both recent and/or past history. Thus, one is comparing two variables, each relating to potentially different “time periods”. Therefore, it cannot be stated that a relationship

exists between self-compassion and NSSI in their current tense. Rather, it can only be said that if an individual has injured in the past then they will likely have lower self-compassion at present/at time of intake.

Second, preliminary analyses found that the data set may not have been normally distributed. Data sets not normally distributed indicate there is less variation and range among scores; thus, mean scores may be significantly impacted. This bias in the range of scores makes it difficult to assess/detect differences between groups. However, one may not expect scores of self-compassion and self-injury to be normal within a clinical population; therefore, the nonnormality of the data may not have been the fault of the author.

Third, this study examined the relationship between self-compassion and occurrences of self-injury in a clinical population. The use of a clinical sample impairs generalizability of the results to a nonclinical population. Although the relationship between self-compassion and occurrences of self-injury may apply to both clinical and nonclinical populations, the replication of the present study in a nonclinical sample may discover more robust findings.

Fourth, the data set consisted of predominantly Caucasian individuals (e.g. 72.5% of data set) who were between the ages of 18-23. Accordingly, it would be important to examine the generalizability of the present findings in more diverse ethnic/cultural groups as well as more diverse age ranges. For example, Neff, Pisitsunkagarn, and Hsieh (2008) found significant differences in self-compassion levels among college students from Thailand, the United States, and Taiwan. Their study found that students from

Thailand reported the lowest levels of self-compassion compared to those from the other two countries.

Finally, as already discussed in this manuscript, the Self-Compassion Scale- SF (SCS-SF) has been recently criticized in the literature as having questionable psychometric properties, in particular the scale's validity (Lopez, et al., 2015; Muris, 2016). According to Lopez, et al. (2015) the six-factor structure (e.g. self-kindness, self-judgement, common humanity, isolation, mindfulness, over identification) proposed by Neff (2003) does not exist and cannot be summed into an overall self-compassion score. In contrast, Muris (2016) found two existing factors, formed by positive and negative items, that should be separately measured. According to many researchers, self-judgement, isolation, and over identification combine into the negative factor and are a measure of self-criticism; however, self-kindness, common humanity, and mindfulness combine into the positive factor and are a measure of self-compassion (Lopez, et al, 2015; Muris, 2016; Muris & Petrocchi, 2016). This finding in the research significantly undermines the quality of the SCS-SF as the use of a total self-compassion will likely inflate the relationship between self-compassion and psychopathology (Muris & Petrocchi, 2016); thus, the use of this scale is another limitation of this study.

However, if one decides to use the SCS-SF, researchers have suggested one should group the positive (self-compassion) and negative items (self-criticism) and weight the factors against each other (Lopez, et al., 2015; Muris & Petrocchi, 2016). It has also been suggested that one can merely discard the negative items of the SCS-SF and focus on the positive features of self-compassion, particularly when regarding self-compassion as a protective mechanism within the context of mental health problems

(Muris, Meesters, Pierik, & Kock, 2015). In this study, the author included two additional analyses following these recommendations. These analyses include: 1) analysis focusing on the positive items of the SCS-SF measuring self-compassion; and 2) analysis focusing on the negative items of the SCS-SF measuring self-criticism. The analyses continued to parallel findings in the literature as the results showed that self-compassion was lower in those who had engaged in NSSI, while self-criticism was found to be higher in those who had engaged in NSSI.

Future Directions

This study was one of the few studies to date that has explored the relationship between self-compassion and one's engagement in NSSI. This study measured one's current level of self-compassion as it relates to past occurrences of NSSI. However, future studies may utilize a concurrent measure in order to measure one's current level of self-compassion as it relates to current occurrences of NSSI. Additionally, it may be useful for future studies to examine the role of self-compassion in the initiation, recurrence, and cessation of NSSI to better understand its' role in this type of behavior.

Although the SCS-SF has come under recent criticism, future studies may consider looking into the different components of self-compassion (e.g. self-kindness, self-judgement, common humanity, isolation, mindfulness, and over identification) and how each different component relates to engagement in NSSI. Studies focusing on the different components of self-compassion may help guide treatment strategies as a study of this nature could point to the value of assessing for and targeting deficits in the positive components (e.g. self-kindness, common humanity, and mindfulness) or

excesses in the negative components (e.g. self-judgement, isolation, over identification) as a potential means for reducing self-harm risk.

Further, it may be particularly useful for future studies and research to examine the relationship between self-compassion and NSSI in different clinical populations and various groups. Understanding the role of self-compassion in NSSI across different clinical populations and subgroups may highlight the need for unique assessment and treatment approaches among these populations. In particular, it may be useful to look at the differences in the relationship between self-compassion and NSSI within male and female populations. Among this study's sample, history of NSSI was less prevalent among male (n=42) than female (n=107) participants; however, it remains unclear if there were differences in levels of self-compassion between these two groups. Future studies could examine levels of self-compassion in males and females whom have engaged in NSSI to determine if significant differences exist.

Conclusion

This was one of the few studies to empirically explore the relationship between self-compassion and non-suicidal self-injury (NSSI). More specifically, this study explored the relationship between self-reported self-compassion and past self-reported occurrences of NSSI in a clinical population. Results indicated that individuals who reported past occurrences of self-injury had significantly lower self-compassion scores than those who reported no past occurrence of self-injury. The findings from this study parallel previous research that has suggested that higher levels of self-compassion are associated with the use of healthy coping skills, the ability to tolerate negative emotions, and less engagement in NSSI. The findings from this study provide practitioners with an

additional conceptual framework to explain why some individuals may choose to engage in self-injury. Additionally, knowledge of self-compassion and how higher levels may reduce engagement in NSSI provides evidence for the use of compassion-based interventions in the treatment of those who self-injure.

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