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CONNECTIONS TO SELF, OTHERS AND HIGHER POWER
IN RELATION TO SELF-INJURY

A DISSERTATION APPROVED FOR THE
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Abstract

Despite the growing attention to self-injury in non-clinical populations, college-age individuals have been underrepresented in the research. This study examined the role of connections to self, connections to others, and connections to higher power on propensity toward self-injury in a college population, from relational cultural and psychodynamic perspectives. Connection to self was measured by looking at alexithymia and attitude toward dreams; connection to others was measured by degree of interpersonal problems; and connection to higher power was measured by looking at spiritual transcendence. Alexithymia, interpersonal problems and positive attitude toward dreams were found to predict greater propensity toward self-injury, whereas spiritual connection was not. Students with alexithymia were found to have difficulties in interpersonal relationships and have more negative attitudes toward dreams.

CHAPTER I: Introduction

As a growing number of young people seek counseling services for psychological distress, the number of individuals admitting self-injury has also increased. While a major goal of counseling has been the assessment and treatment of individuals suffering from psychological distress leading to self-injury and other maladaptive coping mechanisms, the numbers are still on the rise. As traditional-aged students enter the college environment, they are faced with many adjustments. Those who experience such factors as disconnection from self, supportive others and higher power may have greater difficulty adjusting; as a result, the ability to focus on academic matters may decrease, leading to lower grades and attrition, and subsequently lead to maladaptive attempts to cope. There are certainly other factors which may exacerbate a student's adjustment difficulty; however, the author's personal experience within multiple college counseling centers has led to the hypothesis that the common theme among students who engage in self-injury may be disconnectedness. One goal of the current study is to extrapolate a connection to oneself from an awareness of dreams. Current literature looks at connection to self through inconsistent means (i.e., self awareness, self esteem, self reflection), and dream research appears to focus largely on the content of dreams. Given the belief that dreams are a subconscious element of psychological functioning, it follows that an awareness of one's dreaming mind would be related to a connection to self. If there is a disconnection with one's emotional world and emotional self, as in alexithymic individuals, it would follow that the dream world would be impoverished as would the

connection to self. Additionally, those who are cut off from the emotional experience of self would likely indicate greater amounts of psychological distress.

Statement of the Problem

The purpose of this study is threefold. First, by further exploring the concepts of alexithymia and self-injury, this study will add to relatively small bases of scientific literature in these areas. Second, the examination of self-injury as a symptom that may co-occur with decreased ability to self-express is relevant to clinical practice. Third, by gaining a deeper understanding of complex connections across areas of functioning, we gain information about the importance of connection in everyday life, not just as indicators of psychological distress.

Specifically, this study attempts to examine personal, interpersonal and extra-personal antecedents of self-injurious thoughts and behaviors. The elements of this proposition include alexithymia, negative attitude toward dreams, disconnection with others and broken or nonexistent relationships with higher power as antecedents to self-injury. The primary problem addressed is to describe the relationships among the aforementioned variables. Secondary will be the determination of the extent to which alexithymia, attitude toward dreams, disconnection from others and disconnected spiritual life impact the propensity toward self-injurious thoughts and behaviors. A tertiary purpose is to examine what participant characteristics may contribute to the effective use of dreams and issues of spirituality for therapeutic purposes. Specific research questions to be addressed are:

1) Will participants who report a higher number of interpersonal problems also report high propensity toward self-injury?

2) Will participants who report impoverished ability to express emotions also report high propensity toward self-injury?

3) Will participants who report more negative attitudes toward dreams also report high propensity toward self-injury?

4) Will participants who report low connection with a higher power also report higher propensity to self injure?

5) What similarities and differences might exist between those with a high propensity toward self-injury and those with a low propensity toward self-injury?

CHAPTER II: Literature Review

Self-Injury

Though many individuals pass through the early adulthood years with a minor amount of difficulty in dealing with the psychological adjustments, there are some who experience more disruptive psychological symptoms. Depression and other internalizing problems, such as self-injurious behavior (SIB), appear to be becoming more commonplace, and are thought to be the result of a combination of environmental conditions and individual predispositions (Steinberg, 2005; Gratz, 2006).

It is perhaps stating the obvious to say that self-injury is dangerous, and as such, deserves greater attention. Though the intent may not be that of ending one's life, inflicting wounds upon oneself is physically harmful and can lead to accidental death. Self-injury (SI) has become a pervasive public health problem and occurs in both adult and adolescent populations (Klonsky, 2007). Young adults are at significantly increased risk and recent statistics indicate that as many as 14%–39% in community samples and 40%–61% in adolescent psychiatric inpatient samples (Olfson, Gameroff, Marcus, Greenberg & Shaffer, 2005) are injuring themselves on purpose. Despite the prevalence of SI among youth, the phenomenon has gone largely undiscussed in school and hospital settings, and is just beginning to receive more attention in the realm of mental health care.

Among the existing literature regarding self-injury, there is a range of terminology to describe the behavior. There are several labels, each with slightly different nuances, which purport to differentiate self-injury from other, similar terms, yet

contain a high amount of overlap. For example, “deliberate self-harm” is defined by Hjelmeland and Grøholt (2005):

> …an act with nonfatal outcome in which an individual deliberately initiates a non-habitual behavior that, without intervention from others, will cause self-harm, or deliberately ingests a substance in excess of the prescribed or generally recognized therapeutic dosage, and which is aimed at realizing changes which the subject desired via the actual or expected physical consequences (p. 64).

The term “self-harm” was coined by Rosen and Heard (1995) to replace “self-mutilation”, which refers to “the direct and deliberate destruction of one’s own body tissue without suicidal intent” (Grøholt, Ekeberg, & Haldørsen, 2000). Favazza (1989a; 1998) further states that self-mutilation is commonly seen in such culturally sanctioned practices as tattooing, body piercing, and spiritual rituals such as head moulding, male circumcision, and self-flagellation, and serve unique functions of healing, religious membership, and social amity.

In earlier work, Favazza and Rosenthal (1990) discuss “repetitive self-mutilation”, which they describe as an impulse disorder manifesting as maladaptive, established responses to disturbing psychological symptoms or environmental events. Additional research (Favazza & Rosenthal, 1993) yields three separate, distinct categorizations of self-mutilation: *major* (e.g., limb amputation, castration), *stereotypic* (fixed and rhythmic; e.g., head-banging), and *superficial/ moderate* (sporadic and repetitive; e.g., cutting, burning; most prevalent). Yet another term, “self-inflicted violence”, has been used to discuss a broader range of harmful behaviors (head-banging,

self-biting, etc.), and is used more frequently in research regarding developmental disabilities such as autism and mental retardation (Carr, 1977). "Para-suicide" has been used to indicate the act of harming oneself with the intent of causing a reaction from others, and is usually discussed in terms of superficial wounds that elicit reactions from others but do not serve a greater purpose for the inflictor (Muehlenkamp & Gutierrez, 2004). Conversely, these terms should be differentiated from "suicidal ideation", which denotes harming oneself with the explicit intention of causing death (Favazza, 1989a).

For purposes of uniformity and clarity, I will use the term "self-injury" (SI) throughout this paper. This is consistent with Favazza and Rosenthal's (1993) definition, which states that the key feature of SI is a preoccupation with physically hurting oneself that is devoid of conscious suicidal intent, often resulting in damage to body tissue, and involves the inability to resist or delay the impulse once the decision to self-injure has been made. The term "self-injury" has also been used as a shortened version of the now-prevalent term "non-suicidal self-injury." There are likely as many ways to commit these acts as there are people who commit them, but themes of cutting, scratching and burning appear most frequently in the literature (Favazza & Rosenthal, 1990; Favazza, DeRosear & Conterio, 1989; Rosen & Heard, 1995; Aizenman & Jensen, 2007). Other means of SI include hair-pulling, skin picking, punching self or objects, inserting objects in bodily openings and bruising or breaking bones. Self-injury is deliberate, repetitive and impulsive, and is intended to be non-lethal harm to oneself (Favazza, 1989b).

Researchers have looked at SI from a variety of angles, including isolating the phenomena within specific populations. Individuals who self-injure have been studied within the inpatient psychiatric context, with findings that indicate major deviant

mutilative behaviors such as castration and amputation are usually reflective of psychotic psychopathology (Favazza, 1989b). Researchers have also looked at special populations of individuals housed in detention/ correctional facilities, as well as those with low intellectual functioning or developmental disabilities. Results have consistently found that individuals comprising these populations have purposes for injuring themselves that differ substantially from those outside of institutions (Durand & Crimmins, 1988; Ireland, 2000; Oliver, 2005). Thus, for purposes of this discussion, the focus shall be on individuals for whom this disturbance is an aberration of normal development and functioning, but who are not hospitalized, in prison or have a diagnosis of developmental disorder.

Further examination of individuals who self-injure reveals variability in terms of demographics and statistics. Specifically, a review of age, gender, ethnicity and prevalence rates will give the reader an idea of who has historically engaged in the behavior. The behavior typically begins during adolescence, around the age of 13 or 14 years (Favazza, 1998; Favazza & Rosenthal, 1993; Walsh, 2006), and tends to persist for an average of 10 to 15 years, although it may continue for decades. While many individuals in their twenties and thirties also report self-injury, they typically report that they first began the SI in adolescence. In their review of recent SI research, Klonsky and Muehlenkamp (2007) summarize that adolescents and young adults are at greatest risk for self-injuring. White, Trepal-Wollenzier and Nolan (2002) reiterate that traditional college aged students (i.e., 18-22 years) fall in the range of highest risk for SI. In a study which examined psychological characteristics of self-injurers, Polk and Liss (2007) reported, “Twenty percent of college students sampled stated they had self-injured at

least once in their lifetime" (p.572). Slightly higher rates among college populations (14-44%) have also been reported (Favazza, DeRosear, & Conterio, 1989; Gratz, 2001; Gratz, Conrad & Roemer, 2002). A review of the self-injury literature reveals that adolescence is the most commonly studied population; however, as individuals report ongoing self-injury throughout young adulthood, and more and more research on college-aged populations finds SI is common (White, et al., 2002; Gratz & Chapman, 2007; Polk & Liss, 2007), it appears necessary to examine the phenomena in greater detail beyond the adolescent range. SI is reportedly more common among Caucasians than non-Caucasians (Gratz, 2006; Guertin, Lloyd-Richardson, Spirito, Donaldson & Boergers, 2001; Maden, Chamberlain, & Gunn, 2000); however, Whitlock, Eckenrode and Silverman (2006) were unable to replicate this finding. The ethnic trend has also been associated with socio-economic status (Austin & Kortum, 2004; Conterio & Lader, 2006), with more SI found among those from middle to upper class backgrounds. Injuring oneself has been found to be much more prevalent among females than males (Hjelmeland & Grøholt, 2005; Muehlenkamp, 2005), across race and ethnicity; however, more research has been conducted on female-only populations than with males, which has yielded more information about females than males who self-injure. Other research has shown similar overall rates in men and women (Dellinger-Ness & Handler, 2007; Gratz, Conrad & Roemer, 2002; Whitlock et al., 2006). Gratz and Chapman (2007) studied a male-only group of undergraduates and found 44% of the men reported a history of self-injury; 84% reported having self-injured more than once. Though the increased prevalence rates may be partially attributable to increased media attention and decreased stigma associated with seeking mental healthcare, the SI phenomenon is certainly receiving more research

attention in recent years. Walsh (2006) reported estimates of 150,000 to 360,000 adolescents in the U.S. self-injure, which he notes is a large increase from just ten years ago. Other research (Hawton, Fagg, Simkin, Bale & Bond, 2000; O'Loughlin & Sherwood, 2005) concurs that incidence is increasing among adolescents and young adults. Adler and Adler (2007) found that in addition to individuals who seek clinical treatment for SI, people who are structurally disadvantaged (poor, weak and/or powerless), people who have begun connecting with other self-injurers, and people who are mildly disturbed (e.g., depression, anxiety, angst) also show high prevalence rates of SI.

Several risk factors have been identified as characteristic among individuals who engage in self-injury, though it should be noted that these factors are not exclusive. Commonalities placing one in an "at risk" category include family dynamics, deficient childhood experiences, emotional aspects, physiological factors and cognitive functioning (Klonsky & Muehlenkamp, 2007). Gratz, Conrad, and Roemer (2002) found differences between males and females in terms of family dynamics. The most significant predictor of SI among women was dissociation, followed by insecure paternal attachment, childhood sexual abuse, maternal emotional neglect, and paternal emotional neglect. For males, childhood separation and dissociation were significant predictors of SI, with physical separation from fathers emerging as the strongest indicator.

These findings fit with other research that has shown a relationship between lack of familial support and familial instability as predictive of SI. Ayton, Rasool and Cottrell (2003) found that among young people who self-injured, familial deprivation was related to high prevalence of psychiatric illness in parents. They also stated an association

between male unemployment and child abuse or neglect, which in turn is associated with SI. Another conclusion they drew was that socioeconomic adversity negatively impacted parenting ability, which led to increased risk for SI in young adults.

Experiences in childhood were cited throughout the literature as contributing factors for self-injurious behavior. In his work on the contribution of insecure attachment to SI, Noshpitz (1994) proposed that the ego structures one operates under in adolescence are residual from the earliest experiences of interaction with caregivers; when these attachments are underdeveloped in childhood—the time of greatest need and vulnerability—they result in poor ego boundaries. This, in turn, leads to low self-esteem and feelings of alienation from others. Experience of sexual abuse is another factor that places one at greater risk for developing SI (Gratz, et al., 2002; Froeschle & Moyer, 2004; Walsh, 2006). Those who self-injure have also been found to endure a higher degree of emotional neglect than others. These youth may have been discouraged from expressing emotions, particularly, anger and sadness (Conterio & Lader, 2006). In some families of self-injurers, there may also be unhealthy communication, financial stress, domestic violence and parental neglect or prolonged absences (Ferentz, 2002).

Young people who have identified as self-injurers also tend to exhibit characteristic emotional risk factors. Low self-esteem and depression (Hawton, 1999; Kumar, Pepe & Steer, 2004; Hjelmeland & Grøholt, 2005) have been found to be common themes in the lives of those who self-injure. In their work on emotional dysregulation, Crowell, Beauchaine, McCauley, Smith, Stevens, and Sylvers (2005) used physiological measures of emotion regulation (heart rate, breathing rate) to determine that those who self-injured had more difficulty regulating their emotions than did age-

matched controls. Several studies have highlighted the presence of impulsivity among adolescents who self-injure (Grøholt, Ekeberg, & Haldørsen, 2000; Hawton, 1999; Herpertz, Sass & Favazza, 1997; Hjelmeland & Grøholt, 2005). Nixon, Cloutier, and Aggarwal (2002) studied internalized anger in adolescents and found that those with clinically elevated levels of unexpressed, internalized anger appear at risk for SI, but more specifically, are at higher risk for the more addictive features of the injurious behavior.

Cognitive and physiological issues may also contribute to placing young adults at higher risk for self-injury. At a time when cognitive, affective and biological/physical changes are happening all at once, these adolescents are also presented with situations that may require more mature decisions. These situations may demand making choices for which they are cognitively unprepared (Walsh, 2006). In a study which compared adolescents to adults who self-injure, Hjelmeland and Grøholt (2005) found that the younger individuals had greater difficulty evaluating the consequences of SI; possibly due to lack of recognition of their actions as potentially lethal, they were found to inflict themselves with greater damage. They added that teens begin to become more introspective in middle adolescence, and recognize positive and negative attributes at the same time, which may lead to a period of inaccuracy and instability in cognitive processing, and this instability increases during stress.

The effects of these stressors may be felt more keenly as young people begin to experience a loss of control over situations where they previously felt control. Teenagers and young adults also have a heightened sense of their problems being unique to themselves (Steinberg, 2005), and may feel as though no one else is able to understand

what they are going through. This mindset may contribute to feelings of isolation and a desire to find an individual, accessible coping method, which may manifest itself in the form of self-injury.

The many adjustments young adults face as they begin college also contribute to their increased risk for self-injury. Traditional college aged (18-22 year olds) students fall in the range of highest risk for self-injury (Klonsky & Muehlenkamp, 2007). According to the authors, these students may experience a shift in personal freedom, have less familiarity with their environment, have the perception of decreased peer support and have less parental involvement. Additionally, those with perfectionistic tendencies or higher needs for control, but who have previously found adaptive coping mechanisms, may abandon those skills in favor of getting a "fresh start" in their new environment. The drastic changes individuals undergo during this time of transition may lead to difficulty coping, prompting young people to resort to other methods, which may include self-injury. In a more recent study, Dellinger-Ness and Handler (2007) found that among college-aged students, self-injury might be a coping mechanism enacted to mollify feelings of loneliness and abandonment. Further, they state that students who self injure may be more likely to defend against acknowledging feelings of loneliness, and may be hyper-vigilant about having adequate interpersonal contact with others so as not to appear lonely or isolated.

While numerous, the risk factors mentioned in the literature still do not account for all the individuals who engage in self-injurious behavior. The co-occurrence of SI with other disorders may help to further explain the high incidences of the phenomenon. Individuals who have been found to self-injure are often dealing with symptoms of

additional mental disorders. Most common among these is Borderline Personality Disorder (Olfson et al., 2005; Muehlenkamp, 2005; Kleindienst et al., 2008). Crowell et al. (2005) investigated the idea that SI could be a developmental precursor of borderline personality disorder due to their high rates of co-morbidity. It is also quite common for those who self-injure to be dealing with eating disorders (Favazza, DeRosear, & Conterio, 1989; Favazza & Rosenthal, 1993; Favazza, 1998; Gratz et al., 2002; Ross, Heath, & Toste, 2009), which have in common with SI the notion of attempting to regain control over one's body. Parent-child relational problems are another issue with which adolescents who self-injure tend to present for treatment, which again attests to the notion of teens needing a stable and secure family environment with healthy parental relationships.

Research has shown an increase in both direct and indirect self-injurious behaviors in recent years. Favazza and Rosenthal (1993) specify that direct self-injury includes behaviors such as cutting, burning, hair pulling, and head banging—those which produce a direct and immediate injury, and that indirect self-injury includes such behaviors as sexual promiscuity, drug and alcohol usage—behaviors which are injurious, but produce delayed effects. In a study which examined college students who self-injured and had a history of trauma, Alexander (1999) found that in students who experienced relatively low levels of posttraumatic symptomatology but had more severe trauma history, variety and frequency of indirect self-injury were higher; for students who experienced higher levels of posttraumatic symptomatology, there were no systematic relations between variety and frequency of indirect self-injury and trauma

history. For overt self-injury, more severe trauma history and posttraumatic symptomatology positively predicted variety and frequency of self-injury.

Self-injury has also been compared with culturally sanctioned injury of self. Self-injurious behaviors were compared with tattooing and piercing in a college population (Aizenman & Jensen, 2007), and revealed that students who self-injured were motivated by a desire to alleviate emotional pain, whereas students who tattooed and/or pierced their bodies were motivated by self-expression. Those who self-injured scored higher than those who tattooed and/or pierced on measures of depression, but lower on measures of self-esteem and sense of control.

Those who self-injure do so for a variety of reasons. Seminal work by Favazza (1989b) indicates that self-injuring (then referred to as "habitual self-mutilation") may be thought of as a purposeful, though morbid, act of self-help. Among the literature, there exists support for SI serving the purpose of eliciting a response from others, initiating a feeling of release, increasing personal control, serving as a social reinforcer and regulating affect/ alleviating emotional pain. Klonsky (2007) notes that "multiple functions for self-injury may exist concurrently within individuals, functions of self-injury may evolve over time within individuals, and different functional needs may overlap conceptually and describe different aspects of the same phenomena (p. 235)."

Those who self-injure have described the act as an attempt to get a response from others when they feel they are not being heard in other ways. Sometimes this means they feel important others (parents, partners, friends, etc.) are not available or that they do not care; it can also be the case that the self-injurer does not feel they have a relationship that will support discussion of self-injury. Further, they may feel as if they are not able to "be

themselves" in their relationships with important others. The self-injurer is in great pain, and previous efforts to communicate this pain have had to be kept secret, possibly due to embarrassment or an unspoken familial code of silence (Froeschle & Moyer, 2004). Machaian (2001) conducted qualitative research to examine themes across cases of women who engaged in cutting behavior, and found that cutting served to communicate in ways that their speaking voices could not. He emphasized the importance of young people having important others who will listen. In another study conducted by Austin and Kortum (2004), a young adolescent expressed, "The blood dripping down was my shout of anger; I had no voice, so I created my own." Nock (2008) proposes that self-injury serves as a social signal when other communication strategies, such as speaking, yelling or crying, fail. He adds that in the attempt to elicit a care-giving response from others, self-injury can serve to strengthen affiliation with others. The act of SI may bring about the attention to oneself that individuals desire; in an attempt to cry out for help, acting in a drastic way makes other people notice. If SI is seen as the only way to accomplish recognition, it may become a repetitive pattern.

Self-injury is also purported to bring about a feeling of release (Machaian, 2001; Nixon et al., 2002). When unable to express oneself or communicate feelings, emotions and thoughts build up; self-injuring helps to release this tension (Strong, 1998). One participant described seeing her blood flow as, "everything bad goes out of my body" (Machaian, 2001, p. 25). The feeling of release may also contribute to the addictive quality of SI. After cutting, self-injurers often feel a sense of calm, having found a way to let go of the internal emotions.

Gaining or maintaining control has also been linked to SI. When painful events from the past are recalled, it is common for feelings of rejection, anger, shame, and low self-worth to arise. Self-injury becomes a desperate ploy to obtain empowerment, control, and self-healing; by utilizing a means of coping that is independent and self-regulated, for the purpose of alleviating negative feelings, a sense of self control is developed (Solomon & Farrand, 1996; Austin & Kortum, 2004). Research has also found that individuals who have a high tendency to suppress unwanted thoughts report engaging in SI for the purpose of reducing aversive emotions (Najmi, Wegner & Nock, 2007). Weierich and Nock (2008) examined childhood abuse and PTSD symptoms as related to self-injury, and found that re-experiencing and avoiding symptoms of PTSD served as a mediator between individuals' experience of childhood sexual abuse and their propensity toward self-injury. Thus, when individuals attempted to control their reactions to traumatic experiences, they were more likely to self-injure.

There is also an element of SIB that has been related to gaining social reinforcement and acceptance from others (Machaian, 2001; Nock & Prinstein, 2005). A large number of adolescents reported that their friends had also engaged in SIB, which may validate self-injury as a viable means for coping with emotional situations. Nock and Prinstein (2005) indicated that the number of SI incidents among friends was significantly associated with a social positive reinforcement function, suggesting that some individuals may believe that their friends' behavior was successful in eliciting specific social behaviors from others. In studying lesbian and bisexual women, Alexander and Clare (2004) found that social and contextual factors contributed to the development of self-injury. Specifically, they state that self-injury is a coping response

that arises within a social context characterized by abuse, invalidation, and the experience of being viewed as different or unacceptable. Interpersonal distress, as measured by peer victimization, has also been found to be associated with self-injuring for social reinforcement, with quality of peer communication as a moderator (Hilt, Cha, & Nolen-Hoeksema, 2008). Studying adolescents in an inpatient facility, Rosen and Walsh (1989) found that "self-injury contagion" happened more frequently within specific dyads, and that there were a few individuals who were identified as being at the center of most self-injury activity who others imitated. Adler and Adler (2007) propose that widespread social learning of SI has been transmitted not only through peer group interaction, but also health education and media sources.

Though the previously mentioned functions of self-injury each have grounding in the literature, the idea of self-injuring to regulate affect (Favazza, 1992; Gratz, 2003; Haines, Williams, Brain & Wilson, 1995; Kumar et al., 2004; Machaian, 2001; Nixon et al., 2002; Nock & Prinstein, 2004) is most consistent with this proposed study. This suggests that SI functions to alleviate acute negative affect or affective arousal. Pain becomes hard to communicate and SI is used as a way to express overwhelming emotions. Several individuals in the studies reviewed expressed that they would like to be able to cry, but since they cannot, their blood serves as their tears, thereby helping to express the emotions they are feeling. Studies regarding the alleviation of emotional pain (Austin & Kortum, 2004; Greenspan & Samuel, 1989; Machaian, 2001; Solomon & Farrand, 1996; Strong, 1998) report that those engaging in SI are attempting to cope with severe depression, perfectionism, disordered eating, body image, sexual assault or other major disorders, and are unable to express their emotions outwardly, so turn them inward

instead. Linehan (1993) theorizes that early invalidating environments may teach poor strategies for coping with emotional distress. Individuals from these environments and/or with biological dispositions for emotional instability are less able to manage their affect and are therefore prone to use self-injury as a maladaptive affect-regulation strategy. Armey and Crowther (2008) found that individuals experiencing deficits in emotional regulation, and who experienced dissociation, were more likely to self-injure. Consistent with the notion of need for regulating emotion, Klonsky (2007), in his meta-analysis of SI research, summarized that "(a) acute negative affect precedes self-injury; (b) decreased negative affect and relief are present after self-injury; and (c) most self-injurers identify the desire to alleviate negative affect as a reason for self-injuring (p. 235)." This also fits with the finding of Hilt et al. (2008), who reported that internal distress, as measured by depressive symptoms, was associated with self-injuring, but was moderated by rumination.

Connection to Self

The notion that self-injury is an act toward regulation of affect may be related to the connection (or lack of connection) individuals feel with themselves. This may take a conscious form, such as with the ways one is emotionally expressive. This may also be present at a subconscious level, and be evidenced by one's awareness of and attitude toward the dreaming mind.

Conscious connection through emotional expressivity. The term alexithymia, meaning "without words for emotion (*a* = without, *lex* = word and *thymos* = mood)", was coined by Sifneos (1973) to describe patients with various psychosomatic illnesses who suffer from a relative constriction in emotional functioning, diminished fantasy life, and

inability to find words to describe their emotions. He also observed that it was difficult to establish rapport with these patients, and even found them to be boring or dull. Sifneos (1973) and other psychoanalysts (de M'Uzan, 1974; McDougall, 1982; Nemiah, 1978) were unable to progress therapeutically with these patients as they found these individuals evidenced a lack of self-awareness and an inability to describe their feelings. The patients described their lives in concrete, task-oriented terms that lacked emotion and interpersonal meaning. These patients also appeared to lack empathic skills, had difficulty individuating (viewing others as separate from themselves), and were unable to form mutually satisfying relationships (de M'Uzan, 1974). Further evidence of this construct was reported by Krystal (1978, 1979, 1982), von Rad and Lolas (1982), Rickles (1986) and Lumley, Mader, Gramzow and Papineau (1996), demonstrating alexithymia to be a substantive construct.

Individuals with alexithymia evidence disturbances in affective functions, cognitive functions, and difficulty relating to themselves and others; their inability to distinguish between one emotion and another is shown as regressed affect (Krystal, 1977). Likewise, they lack the reflective or introspective self-awareness necessary to differentiate feelings and attach meaning to them; consequently, they experience reactions of frustration, discomfort or distress rather than specific emotions such as fear or anger. This lack of affective insightfulness renders these individuals incapable of using their feelings as cues to satisfy emotional needs. Thus, when these individuals experience distress arising from an incident that would cause emotional pain (McDougall, 1982; Rickles, 1986) they appear to have difficulty implementing self-care or soothing strategies, which results in frustration (Horton, 1981; Krystal, 1977; 1982). This

frustration may be the result of the rigidity of their psychological defenses, lack of internal resources and lack of self-awareness. As problems with insight are related to problems with self-care, they often neglect their own bodies, health, and are not invested in their own personal welfare (Krystal, 1977; 1979). This distress may be attenuated by the use of substances such as alcohol and drugs (Pinard, Negrete, Annable, & Audet, 1996; Ryngala, 2007; Taylor, Parker, & Bagby, 1990) or food (Babb, 2003; De Berardis, Carano, Gamib, Campanella, Giannetti, Ceci, Mancini, La Rovere, Cicconetti, Penna, Di Matteo, Scorrano, Cotellessa, Salerno, Serroni, & Ferro, 2007; Hund & Espelage, 2006; Krystal, 1977; Lawson, Emanuelli, Sines, & Waller, 2008;), and may also result in somatic complaints (Taylor, Bagby, & Parker, 1992; Waller & Scheidt, 2004).

Individuals with alexithymia also evidence cognitive difficulties, especially in the areas of creativity, fantasy, imagination, and symbolic thought. Lacking emotional insight, they often have a mundane, realistic view of the world and of themselves characterized by an over dependence on logic (Krystal, 1982; 1988a; 1988b). This ability to use logic may serve some individuals well in academic or professional environments, unless they are called upon to use imagination and creativity (Krystal, 1979; 1988b) wherein they will not function as well. Individuals with alexithymia have also been shown to have poorer coping resources and to engage in more concrete and stereotypical thinking as compared to those without alexithymia (Porcelli & Meyer, 2002). Other cognitive deficits include executive and regulatory aspects of emotional processing; because of the difficulty in identifying and expressing their own emotional state, the ability to convey empathy for others is significantly diminished (von Rad and Lolas, 1982).

Interpersonally, individuals with alexithymia also experience difficulties. Their lack of empathy coupled with an inability to experience a full range of emotions creates relationships that are superficial and limited to their immediate needs. However, they are unaware of their reliance on others to fulfill these needs (Rickles, 1986) and see relationships as transient or replaceable. Spitzer, Siebel-Jürges, Barnow, Grabe and Freyberger (2005) noted the characteristics of hostility, social avoidance, and difficulty describing feelings that individuals with alexithymia experience in relationships. They appear to be detached and indifferent to others, which may lead to distress ensuing from confusion and social isolation (Keltikangas-Jarvinen, 1982; Taylor, 1984). Meins, Harris-Waller and Lloyd (2008) reported higher levels of alexithymia being linked with attachment anxiety and attachment avoidance. Further, the combination of interpersonal problems and alexithymia has been shown to be indicative of psychological distress (Schuetz, 2004).

Characteristics of alexithymia have been correlated with several personality dimensions such as introversion, neuroticism, and decreased ego strength (Bagby, Taylor & Ryan, 1986; Taylor, Parker, & Bagby, 1984; Wise, Mann & Epstein, 1991). Research has demonstrated that individuals with alexithymia may also suffer from symptoms of depression and anxiety resulting from their lack of emotional insightfulness and expressivity (Haviland, Shaw, Cummings & MacMurray, 1988; Hendryx, Haviland & Shaw, 1991). Negative emotional activation and self-defeating personality-styles have also been reported as correlates of alexithymia (Yelsma, 2007). Additionally, alexithymia has been found to be a factor in family dysfunction (Lumley, et al., 1996),

college maladjustment (Fukunishi, 1996; Parker, Austin, Hogan, Wood & Bond, 2005), and trauma survival (Krystal, 1978; 1988a).

A growing body of literature has examined the dream life and mental imagery of individuals with alexithymia. Campos, Chiva and Moreau (2000) reported finding a reduced ability to use mental imaging in people who scored "alexithymic." Dream recall frequency, reported length of dream, attitudes toward dreaming, emotional valence and bizarreness of dreams have all been reported to be lower for individuals with alexithymia (De Gennaro, Ferrara, Cristiani, Curcio, Martiradonna, & Bertini, 2003; Lumley & Bazydlo, 2000), except for those individuals who had more difficulty identifying and describing feelings. Those individuals did report more incidences of disturbing dreams, as well as dreams rated as bizarre and aggressive.

Subconscious connection through dreams. Dreams have likely been present for as long as humans have, and have been used in various ways throughout history and culture. Blum (2000) gives a brief history of the writing and interpretation of dreams. He states that the oral and written communication of dreams spans both ancient history and the history of psychoanalysis. From the earliest accounts, dreams were given special significance as messages from God, seen as prophetic omens or possessing mystical influence. Dream interpretation had social, medicinal, prophetic, and religious importance. A more recent study regarding the Mekeo people of Papua New Guinea (Stephen, 1996) revealed that among tribal customs is the belief that dreaming is viewed as indicative of illness or magical practice; those who pay close attention to dreaming are believed to have the ability to re-connect with aspects of the self usually denied in conscious awareness, thereby increasing self-knowledge. Blum (2000) concurs that

dreams were written in order to be read and understood, so that self-knowledge could increase. In many cultures, the interpretation of dreams was/is used for diagnosis, prognosis, and treatment.

A brief review of how dreams have been viewed theoretically within the field of psychology is in order. Among the most well-known psychological studiers of dreams, Freud (1961) addressed the mental correlates of memory in dreams, the material (i.e., content) of dreams, sources of dreams, and the function of dreams. He attributed not only external sensory stimuli but also internal (i.e., subjective) sensory excitations as well as internal organic somatic stimuli (i.e., disorders of internal body organs) and psychical sources of stimulation to the production of dreams. His approach to working with clients and their dreams encompassed analysis of dream-content versus dream-thought (i.e., condensation), displacement, and representation.

Jung's views of dreams differ from those of Freud in that he was a strong proponent for humans to stop looking outward and to spend more time in life looking at the inner processes. He placed great emphasis on the "realness" of inner experiences, and though he differed in thought from Freud's perspective that dreams were the "royal road to the unconscious" (Freud, 1961), he did believe that dreams are the direct, natural expression of the current condition of the dreamer's mental world (Bulkley, 1992).

The Gestalt approach to working with dreams differs from the previously described approaches in that it does not seek to interpret and analyze dreams (Corey, 1996). Instead, the dreamer becomes part of the dream by bringing the dream back to life and reliving it as if it were happening in the present. Specifically, the person seeking understanding from the dream is guided to recall and explore each detail (person, event

and mood) of the dream. The thought is that these pieces of the dream are expressions of one's own inconsistencies and contradictions. Perls (1969) believed that every dream contained an existential message of one's current struggle, and that if the parts of a dream could be assimilated the existential message would become clearer. He also purported that individuals who do not remember their dreams are using avoidance to keep themselves from experiencing the uncomfortable emotions associated with unfinished situations.

Another theory that encompasses views of dreams, the Adlerian approach, posits that dreams are projections of one's current concerns and indications of mood. Within this framework, dreams are seen as rehearsals for future possible actions, and are used to bring problems to the surface (Corey, 1996). They are seen as purposive and unique to the dreamer; therefore, one must understand the dreamer before one can understand the dream. Dreams are said to be a source of self-awareness from the Adlerian perspective (Miller, Stinson, & Soper, 1982), revealing unconscious motivations for behavior, barriers to goal achievement and disconnections within interpersonal relationships. This perspective supports drawing personal insight and psychological well-being from multiple sources, including one's dreaming mind.

Beyond theory, a good deal of research has examined the process and outcome of therapeutic work with dreams. In their study regarding dream recall and attitudes, Rochlen, Ligiero, Hill, and Heaton (1999) found that training had no effect on recall or attitudes toward dreams for those who began with below-average levels of dream recall and attitudes. They also found that clients placed a great deal of value upon having realistic expectations about working with dreams in a therapeutic context. Hill, Diemer,

and Heaton (1997) found that students who participate in dream research studies found it helpful to gain an understanding of the meaning of their dreams, to make links between dreams and conflicts in their waking lives, and to have another person's input/perspective about the dream. Hill and colleagues (Heaton, Hill, Petersen, Rochlen, & Zack, 1998; Hill, Rochlen, Zack, McCready, & Dematatis, 2003) have also found that clients preferred therapist-facilitated dream interpretation sessions, which produced greater client involvement and insightful gains, rather than self-guided dream interpretation sessions. When examining differences among participants in computer-assisted sessions, therapist-facilitated sessions, and therapist-facilitated sessions plus input, Hill et al. (2003) found that clients gained more (dream valence, perceived depth of session, perceived session quality, dream insight) from working with therapists than from working with a computer program. In a separate study which examined the difference between therapists' approaches to working with client dreams (Hill, Kelley, Davis, Crook, Maldonado, & Turkson, 2001), no differences were found between "waking life" and "parts of self" interpretations, which suggests that therapists can use either type of dream interpretation successfully. Findings also indicated that clients who had more positive attitudes toward dreams and presented pleasant dreams had better session outcome; additionally, clients who had pleasant dreams reported gaining more insight into their dreams.

Baumann and Hill (2008) assert that the type of and timing of therapist interventions may be responsible for the amount of client-reported insight gained. Crook and Hill (2003) found additional characteristics regarding therapist facilitation of dream work with clients. Clinicians who were more likely to work with clients' dreams in

therapy sessions had more training, higher estimated dream recall, more positive attitudes toward dreams, and did more personal dream work than clinicians who were not likely to work with dreams.

Wonnell and Hill (2000) reported that clients who went through the action stage of the Hill dream interpretation model (1996) scored higher on a measure of problem solving and wrote more specific plans for change than did those who did not complete the action stage. Another study (Hill, Zack, Wonnell, Hoffman, Rochlen, Goldberg, Nakayama, Heaton, Kelley, Eiche, Tomlinson, & Hess, 2000) found that participants whose sessions included focus on dreams showed increased insight regarding interpersonal relationships, learned more about their dreams in relation to waking life, gained more understanding of their dreams, improved in terms of school or work, and hid less information from their therapists than did those without a dream focus.

The notion of gaining understanding and/or insight from dreams is recurrent in the literature, and is connected to the idea of self-awareness. Recent studies have indicated that working with dreams in a therapeutic context has been helpful in developing client self-awareness, increased self-exploration and self-understanding in both the individual (Hallock-Bannigan & McConnell, 1993; King & DeCicco, 2007) and group (Coholic & LeBreton, 2007; Quackenbush, 1990; Stone & Karterud, 2006) contexts. Kane (1994) uses a Jungian framework to discuss how dreams contribute to an understanding of the mind's functions, as well as the dreamer's personality, daily concerns, therapeutic needs and personal growth and healing. The dreamer's unconscious awareness is expressed in the dream, and can be interpreted by the dreamer. Ijams (1997) examined dreams as topics of conversation and their influence upon self-awareness and perceptions of

relational intimacy, and found that dream-disclosure significantly increased intimacy after disclosure. She concluded that discussing dreams is a means to enhance self-awareness, mutual knowledge and perceptions of intimacy within interpersonal relationships. Self-awareness has also been connected with dreaming at the psychophysiological level. Holzinger, LaBerge, and Levitan (2006) reported observed changes in the brain during lucid dreaming in the left parietal lobe, an area of the brain considered to be related to semantic understanding and self-awareness. Wolf (1996) discusses how self-awareness can arise from the formation of neurons and glial cells, and states that these "self-reflective images" become ordered and emerge during the process of dreaming.

Though one purpose of the current study is to examine the subconscious connection to one's self through the act of dreaming, a review of the existent literature yielded little empirical research with that specific focus. In fact, the bulk of current studies appears to center on dreaming in relation to process and outcome variables and on individuals' attitudes toward dreams. The argument can be made, however, that a higher positive attitude toward dreams is indicative of a stronger connection to self. Schredl, Ciric, Götz, and Wittmann (2003) contend that attitudes toward dreams, rather than dream recall frequency, should be measured to get a broader sense of an individual's self. Further, research has shown that clients who profited most from dream sessions had positive attitudes toward dreams but low initial insight into the dream they were examining; as a result, the clients reported having gained self-awareness and motivation toward acting on the resultant message from the dream (Hill, Crook-Lyon, Hess, Goates-Jones, Roffman, Stahl, Sim, & Johnson, 2006). In a case-study of three individuals,

Knox, Hill, Hess, and Crook-Lyon (2008) observed the major differences in whether or not individuals gained insight and awareness through dreamwork to be positive attitudes toward dreams, motivation for change and affective presence. Conversely, Crook-Lyon and Hill (2004) found that underlying reasons for clients choosing to not engage in dreamwork in therapy sessions appeared to be related to clients' negative attitudes toward dreams.

In one of the first instruments developed to examine individuals' attitudes toward dreams, Cernovsky (1984) constructed a scale and measured its relationship to dream- and nightmare-recall frequencies in a sample of college students. He found that attitudes toward dreams were weakly related to participants' own estimates of their dream-recall frequency, and unrelated to their own estimates of nightmare-recall frequency [see Beaulieu-Pre´vost & Zadra (2005) and Schredl et al. (2003) for a discussion of assessment of Attitude Toward Dreams confounded by Dream Recall Frequency]. Consequently, Hill, Diemer, and Heaton (1997) withdrew seven of the questions from Cernovsky's scale, and added four questions to assess motivation and interest in personal dreams. They report a strong internal consistency ($\alpha = .79$) for the 11 items, and denote usage of a summary score. Their version of the Attitudes Toward Dreams (ATD) Scale has been used regularly (Rochlen et al., 1999; Zack & Hill, 1998) to examine client and therapist variables that may contribute to successful therapeutic outcome. Further research by Hill and colleagues suggested the ATD undergo changes that would ease administration and scoring, which led to the development of a revised version of the ATD, the Attitudes Toward Dreams-Revised (ATD-R; Hill et al., 2001). Items were changed from "true/false" response-type questions into Likert scaled items which each

use a five-point scale (5 = *strongly agree*, 1 = *strongly disagree*) and scoring on some items was reversed so that all items are scored in the same direction. Hill et al. (2001) conducted a factor analysis that indicated that all items loaded on one factor. The ATD-R had an internal consistency alpha of .88, was highly correlated with the original Attitudes Toward Dreams scale (.91), and had a 2-week test–retest reliability of .92.

Connection with others

The Relational-Cultural Theory (RCT; Jordan, Kaplan, Miller, Stiver, & Surrey, 1991; Miller & Stiver, 1997) is one framework through which to view psychological development. Specifically, this model posits that quality of relationships is essential to healthy psychological development and adjustment. It suggests that the development of self identity happens as a result of deep and meaningful connections with others, in which personal and interpersonal growth is cultivated; this notion is in stark contrast to the idea of self identity development resulting from a process of separating and individuating from meaningful others (Miller & Stiver, 1997). The RCT structure forms a partial basis for the current study.

Connection within RCT is a fluid, flexible element, which involves encounter and active process, with the fundamental quality of bi-directional respect. Connection provides safety from contempt and humiliation but does not promise comfort. It invites exposure, curiosity and openness to possibility, while also allowing important differences to surface within relationships (Walker, 2004). Connection is the crux of the model, the primary change-agent in relationships. Additionally, Liang, Tracy, Taylor, Williams, Jordan, and Miller (2002) identify four elements of the RCT model that are essential for growth in relationships: mutual engagement, authenticity, empowerment, and dealing

with conflict. Walker (2004) elaborates upon the seminal ideas of RCT by stating that the relationships by themselves do not necessarily serve as connections; rather, growth occurs as a result of action in relationship with others, and that seeking growthful relationships is a lifelong process.

In addition to the components previously specified, the elements of empathy, mutual empathy and power are key to viewing relationships from an RCT perspective. The concept of empathy, while incorporated into many theories, is integral in RCT as more than a standard technique; it is a way of being with one another beyond establishing rapport to ease the process of collecting information. Walker (2004) states, "empathy is the ability to join with another in his or her experience while maintaining cognitive clarity" (p. 10). Mutual empathy is a process of moving beyond neutrality and further into the relationship. This is done through gaining an understanding that one's experience matters and is impactful on another individual. In an expansion of the concept of mutual empathy, Jordan (2000) conveys that negative expectations of relationships are relinquished through the process of experiencing a sense of relational efficacy. In order for this to occur, she adds, both parties must be "emotionally present, attuned, authentic and working with the connections and disconnections in the relationship itself" (p. 1011). The recognition of power in relationships is also essential to developing connections. Walker (2004) describes power as the capacity to produce a change. She implores readers to consider both implicit and explicit sources of power in relationships, as each impacts the ability to form connection with others. The RCT model is committed to examining aspects of power actively and openly in the process of relationship development and maintenance.

The RCT model endorses connection with others as beneficial. In their work, Jordan et al. (1991) assert that meaning is derived from growth in relationships and connection with others. Jordan (2004) states, "The capacity to move beyond the isolation that can both produce and accompany stress involves a movement out of narrow self-consciousness into the awareness of being part of something larger than the separate self, a 'resonance with' another person, nature or spiritual involvement" (p. 36). Rubenfeld (1986) stated, "People should accept themselves compassionately; encourage mutual, reciprocal support and stimulation from others; honor both individuality and the needs of the larger community; and attempt to align daily life with higher ideals" (p. 123) in order to promote the maintenance of mental health.

Neff, Brabeck, and Kearney (2006) examined self-focused autonomy, other-focused connection and mutuality relationship styles. They found that mutuality was associated with the best mental-health outcomes regardless of gender or ethnicity. Youngblade and Curry (2006) found that young people who reported warm, trusting interpersonal connections with their parents were more likely to engage in health-promoting behavior than sustained risky behaviors. Additionally, they indicate that positive peer connections, connections in the academic environment and sense of connection with the larger community were associated with sustained health-promoting behavior. Similar findings (Mancini & Huebner, 2004) indicate that having multiple interpersonal connections, versus one or two close friends only, serves as a protective factor against risky behavior. Frey, Beesley, and Miller (2006) posit that authentic and empowering relational connections with peers and the broader community may serve a protective function for college-aged students by helping them cope with attachment

insecurity and decreased emotional support from parents, even though insecure parental attachment was found to be predictive of psychological distress. Relationship perception has also been examined (Pierce, Sarason & Sarason, 1991), with findings indicating that perceptions of available support from defined, specific relationships have a greater impact on personal adjustment than more generically perceived supports.

On the flip side of the positive impact of connection with others lies the negative effects of disconnection. Miller and Stiver (1997) define disconnection as "the psychological experience of rupture that occurs whenever one is prevented from participating in a mutually empathic and mutually empowering interaction" (p. 65). Major disconnections occur when a person is abused or attacked, and when others are repeatedly unresponsive to the expression of the experience. When unable to change one's available relationships, individuals attempt to change the self, altering the internal image of connections between self and others. Consequently, unrealistic views of relationships develop, leading to constriction of feelings and expressions. When "unacceptable" feelings are still felt, confusion is generated, which in turn increases the distress level. When the possibility of closeness is felt again, the reaction becomes one of distancing self from potentially close others, resulting in disconnection. Those who have experienced significant disconnections often "create meanings that assign blame to themselves" (Miller & Stiver, 1997, p. 77); when others are not present to engage in processing the disconnections, the blaming thoughts intensify. Miller and Stiver (1997) describe the process of disconnection as "painful and frightening" (p. 78), making it hard to experience fully and completely, which leads to movement away from the experience, which prevents more complete, accurate meaning-making about the experience; lack of

being able to process this with others leads to an experience of confusion. Finally, Miller and Stiver (1997) state, "the path away from mutual connection and away from the truth of one's own experience is the path to psychological problems" (p. 81).

It is within this context of absence of mutual engagement, authenticity, empowerment and the ability to deal with conflict in relationships that lack of interpersonal connection and a sense of isolation develops (Jordan, 2004). Walker (2004) states, "chronic disconnection is the primary source of human suffering, resulting in paralyzing psychological isolation and impaired relational functioning" (p. 6). The concept of the relational paradox within RCT comes about as a common response to the chronic absence of safety and respect in relationships. Individuals resort to "strategies of disconnection", defined by Miller and Stiver (1997) as "methods people develop to stay out of relationships…use(d) in hope of warding off further wounding or violation" (p. 105), as a means of self-protection in attempt to withdraw from unsafe, disrespectful relationships. Often, an appearance of connection is retained, but the relationship is lacking in substance. The strategies of disconnection serve to mask the longing for and the fear of connection.

In looking at differences among those who define self in relation to others and those who define self more individualistically, Cross, Bacon, and Morris (2000) found that individuals who define the self in terms of relationships suffer more when close relationships are threatened or strained than those whose self-concept is not based on relationships. Budd (2007) examined women's experiences with disordered eating in relation to connections with others. She found that when women lacked connected and close relationships with others, they were more likely to choose disordered eating

behaviors as a method of control than when meaningful relationships were present in their lives. Deiter, Nicholls, and Pearlman (2000) found that when the capacity to maintain an inner sense of connection with others is impaired, self-injury serves as a connection. They speculate that self-injury may be an effort to obtain some form of interpersonal connection with others. The relational paradox is inherent. A connection with others is sought while demonstrating behavior that serves as a disconnection. The authors add that self-injury may be a way to manage conflict internally, since interpersonal conflict (and the threat of losing a connection) could feel too overwhelming. The study revealed that individuals with a history of self-injury showed significantly more impairment in the ability to maintain a sense of connection to others than those who did not report self-injury.

While the RCT model fits well with the construct of "connectedness" on which the present study focuses, it may also lead to a generalization that this author hopes to move beyond. Definitely the gender/power relations are ingrained deeply in our society, with sociocultural norms reflecting a pattern of privilege and oppression, and a psychological explanation is required; however, by viewing the problem only through the lenses of RCT, we run the risk of misattributing cause of psychological disturbances, including self-injury, along gender lines or focusing too broadly on elements of societal privilege. Consequently, the present study uses psychoanalytic/psychodynamic theory to supplement RCT.

From a vantage point of psychoanalytic theory, the experience and processing of internal pain is crucial. As events, perceptions, memories, needs and motivations accrue from the time of early relationships, they produce fodder for the unconscious mind. The

unconscious mental factors, when left unprocessed, have potential to manifest as lack of trust, fear of intimate relationships, diminished self-esteem, and inability to express feelings (Corey, 1996). When one does not possess the necessary insight and skills to resolve painful emotional experiences, maladaptive coping skills, such as self-injury, are developed. The present study aims to present a conceptualization of self-injury as resultant from subconscious deficits combined with disconnections. Adding the psychoanalytic notion of the unconscious allows us to tap into something deeper than the explanation of socialization to the workings of the personal psyche.

Connection to Spirituality

Spirituality is a broad construct, spanning hundreds of years and perhaps as many meanings. Researchers studying spirituality have agreed upon no clear definition of the term (Marcoen, 1994; Piedmont, 2001; Reker, 2003), a factor that has hampered forward empirical movement.

From a perspective of spiritual wellness, Moberg and Brusek (1978) identified dimensions such as faith and belief in a divinity, meaning in life, peace of mind, faith in other people, and harmony with oneself. In a discussion of health and spirituality, Banks (1980) identified meaning, principles, a higher power, a sense of mystery, service to others, and faith. Moberg (1984) reported dimensions of spiritual well-being that included Christian faith, self-satisfaction, personal piety, subjective spiritual well-being, optimism, religious cynicism, and elitism.

Ingersoll (1994) distilled philosophical, theological, and social science literature, finding seven dimensions of spirituality: meaning, conception of divinity, relationship, mystery, play, experience, and a dimension that represented the integrated qualities of the

other six dimensions. Similarly, Westgate (1996) has reviewed proposed dimensions from several sources and categorized them under the headings meaning-purpose, intrinsic values, transcendent beliefs-experiences, and community-relationship. Ellison (1983) worked with two spiritual well-being dimensions, existential well-being (described as well-being in one's earthly life and interactions with others), and religious well-being (described as one's well-being regarding the numinous).

Kellehear (2000) links human spirituality to transcendence, and indicates that there are three types of connection within spirituality. He identifies these components of spiritual meaning as "the situational, the moral and biographical, and the religious" (p. 150). The religious aspect includes components such as divinity, reconciliation, and forgiveness. He proposes the moral and biographical piece to include peace and reconciliation, reunion with others, and closure. The situational aspect includes such elements as purpose, hope, meaning and affirmation, and connectedness.

Also from a perspective of transcendence, Hamel, Leclerc, & Lefrançois (2003) report four characteristics they have found related to spirituality. Their notion of "in-depth perception…denotes the ability to discern and explore the different aspects of one's life beyond superficial appearances (p. 12)." Holistic perception, they assert, encompasses the ability to perceive life from a viewpoint independent of attachments. Another component of spirituality, presence of being, is more related to the notion of creative will, and incorporates the idea of harmonious personality and self. The fourth constituent of spirituality they term "beyond ego-orientation" (p. 13), which encapsulates spiritual values such as love, goodness, mutual support and a sense of belonging to a greater whole than oneself.

In his examination of aging adults, Polivka (2000) reports a concern for the loss of the search for meaning, moral centeredness and spiritual relationships as societies become increasingly dependent upon the search for youth. He further contends that aging adults are experiencing a loss of existential/spiritual connectedness in our postmodern society, which results in insecurity and anxiety about core identities. This loss of value and meaning, he asserts, can be recaptured by furthered awareness of one's spirituality and spiritual identity. Johnson (2003) echoes this assessment of reconnection and asserts the importance of recognizing and incorporating spirituality into counseling, to include themes of hopefulness, relationship with a higher power, and overall life purpose. Similarly, perception of oneself as a participant in the purpose of some life force and derived meaning from that participation are seen as the overarching themes of spiritual meaning (Mascaro, Rosen and Morey, 2004). In refining a measure of spiritual wellness, Ingersoll (1994) discusses the specific construct of spiritual connectedness, which he describes as a nexus of "relationship" and "community."

Reker (2003) expanded the notion of spirituality and connectedness with his look at spiritual transcendence. He maintains that there are three aspects to spirituality: inner-connectedness, human compassion and connectedness with nature. The dimension of inner-connectedness refers to a desire to seek and maintain meaningful integration within oneself; human compassion refers to the desire to seek and maintain meaningful relationships with other persons and the world; connectedness with nature refers to the desire to seek and maintain a connection with a sacred force outside oneself. In their model of spiritual wellness, Purdy and Dupey (2005) contend that connectedness provides transcendence both physically and emotionally and increases one's appreciation

of the reality outside oneself. They include belief in a universal force, making meaning of life, making meaning of death, connectedness, faith, and movement toward compassion as necessary components of spiritual health. Further, they state that individuals have potential to experience each, with the flow among and between those elements facilitating transcendence; spirituality is the central force that determines an individual's health and satisfaction within each dimension. Bellingham, Cohen, Jones and Spaniol (1989) present ideas on how to foster connectedness to self, others, and a larger meaning or purpose with the goal of helping individuals achieve lasting spiritual health. They cite potential consequences of disconnectedness as self-alienation, loneliness, and lack of meaning or purpose. Kirkpatrick (1998) asserts that religious belief, and God specifically, serves to compensate for an attachment figure in individuals who have insecure attachments to parents and unsatisfying interpersonal relationships with others.

The concept of spirituality as it intersects with connectedness is of great importance if mental health professionals are to reach their clients on multi-faceted levels of functioning. Particularly, the multidimensional construct of spirituality that encompasses motivational and emotional areas appears to be a foundation upon which other realms of life perspective, including physical health (Zullig, Ward & Horn, 2006) and emotional health (Ellison & Fan, 2008; Westgate, 1996) are based. Therefore, greater inquiry into how spiritual connectedness affects change on the variable of self-injury, which spans both physical and emotional realms of health, seems warranted.

Literature Gap

While the existing literature on self-injury looks at risk factors, common reasons for engaging in the behavior, co-morbidity with other diagnoses, barriers to treatment and modes of prevention, there does not appear to be a commonality among the theoretical approaches to the topic. Though none of the existing studies have overtly expressed a relationship between self-injury and connections, a majority of them allude to this construct in some form. The proposed study aims to examine the phenomena from a relational-cultural theoretical perspective combined with a psychoanalytic viewpoint.

Self-injurious behavior has primarily been approached within the psychiatric and nursing literature; however, studies examining this phenomenon with non-clinical populations are just beginning to appear in the literature. The bulk of the literature examines adolescent populations, despite continued reports of incidences in the college-age group. Current research on self-injury also has a primary focus on women, with a few studies expanding to men. Further, no published studies to date have focused upon the intersection of connections with self-injury. Another purpose of the current study is to examine the subconscious connection to one's self through attitudes toward dreaming, though a review of the literature yielded little empirical research within the realm of attitudes toward dreaming linked to self-connection. Specifically, the effects of self-connectedness, other-connectedness and spiritual-connectedness on self-injurious behavior within a coed, college student population have not been addressed in the current body of scientific literature. The concepts of connection to self, connection to others and connection to a higher power have a common thread of relationship; however, current

literature does not provide a link between the constructs. With this study, the researcher aims to address the gap in the literature between these elements of connection.

These particular variables emerged from observation of client-report in direct clinical experience with individuals who reported self-injurious behavior. Western psychology for the most part, has not viewed spirituality as an important aspect of the living experience of human beings. This author's experience, as well as research over the past few decades, suggests otherwise. When elements of human experience beyond self become repressed, the resultant stress and pathology lead to disconnection. If the spiritual dimension is not dealt with, we are failing to deal with the person as a whole self. The present research also attempts to integrate the unconscious, via dream exploration, to address the conspicuous, irrational elements related to self-injury. As far as alexithymia, few would argue with the notion that human beings are symbol-making creatures and have a natural drive toward self-expression. One inference is that if one is not expressing self in the "normal" ways, the drive to express self in other ways will emerge, even if those modes of expression are maladaptive. Lastly, when difficulty with expression exists, reactions are elicited, even if unconsciously or not conspicuously recognized. The assumption can be made that humans have a natural drive to relate with others; causing deliberate harm to oneself elicits a reaction or response from another human being. This act may contribute to keeping others from relating or connecting. When pain experienced inwardly becomes displaced, unconscious connections become affected and the result is an outward expression.

CHAPTER III: Method

Design Overview

This study is descriptive and correlational in nature. According to Mertens (2005), "Relationship studies usually explore the relationships between measures of different variables obtained from the same individuals at approximately the same time to gain a better understanding of factors that contribute to a more complex characteristic" (p. 154). This type of approach was used for this study as the objective was to examine the relationships between intrapersonal connectedness, interpersonal connectedness and spiritual connectedness to the propensity to engage in self-injuring thoughts and behaviors.

Hypotheses

This study hypothesized the following outcomes:

Hypothesis 1: A statistically significant inverse relationship exists between the propensity to self-injure and

a) attitude toward dreams (connection to oneself)
b) spiritual connection (connection to spirituality)

Hypothesis 2: A statistically significant relationship exists between the propensity to self-injure and

a) alexithymia (second measure of connection to oneself)
b) interpersonal problems (connection to others)

Hypothesis 3: Alexithymia will be significantly, inversely related to attitude toward dreams.

Hypothesis 4: The effects of alexithymia, attitude toward dreams, interpersonal

problems, and lack of spiritual connection will individually and collectively significantly predict self-injury.

Population and Sample

The participants in this study consisted of students attending a public university in a Midwestern state. A total of 217 students completed the questionnaires, 74 (34.1%) men and 143 (65.9%) women. Per the rule of thumb supplied by Mertens (2005) for correlational studies, 15 participants per variable are necessary; however, Mertens (2005) also indicates that for increased power, a larger sample size should be utilized. Thus, a sample size of 217 was used in order to decrease the probability of committing a Type I error, and to account for increased statistical power. As this study included four independent variables (alexithymia; attitude toward dreams; interpersonal problems; and lack of spiritual connection), the sample size exceeded the necessary sampling criteria.

The mean age of the sample was 22.12 (*SD* = 6.78) with a range of 18 to 56. The majority of participants (n = 178; 82.0%) were Caucasian, although some were from other racial backgrounds including African-American/Black (n = 15; 6.9%), American Indian (n = 11; 5.1%), Biracial/Multi-racial (n = 6; 2.8%), Asian-American (n = 2; .9%), and Hispanic (n = 1; .5%). Four participants (1.8%) identified themselves as "other" in terms of racial classification.

The participants included 43 (19.8%) freshmen, 71 (32.7%) sophomores, 34 (15.7%) juniors, 48 (22.1%) seniors and 21 (9.6%) graduate students. In terms of relationship status, 180 (82.9%) have never been married, 17 (7.8%) were in a first-time marriage, eight (3.7%) indicated they were single after having previously been married, seven participants (3.2%) indicated they were in a life partnership with a significant

other, four (1.8%) were currently married after having previously divorced, and one participant (.5%) indicated current relationship status as "separated." Participant religious affiliation was primarily Christian (n = 159; 73.3%), and also included Agnostic (n = 13; 6%), Personal Spirituality (n = 9; 4.1%) and Atheist (n = 9; 4.1%). Several participants (n = 13; 6%) indicated religious/spiritual affiliation as "other."

Measures

Demographic information was obtained from a questionnaire developed by the researcher. Questions on this form pertained to age, gender, ethnicity, religious/spiritual affiliation, and current relationship status. Four survey-type instruments were used to solicit information on the predictor variables. The Toronto Alexithymia Scale-20 (TAS-20; Taylor, et al., 1992) was used to assess participants' conscious connection to self; the Attitudes Toward Dreams–Revised (ATD-R; Hill et al., 2001) was used to measure participants' subconscious connection to self; the Inventory of Interpersonal Problems—Short Circumplex Form (IIP-SC; Soldz, Budman, Demby, & Merry, 1995) assessed participants' experience of interpersonal problems to get at participants' connection to others; and the Spiritual Transcendence Scale (STS; Reker, 2003) was used to measure participants' sense of spiritual connectedness. Additionally, the Self-Injurious Thoughts and Behaviors Interview (SITBI; Nock, Holmberg, Photos, & Michel, 2007) was used to assess the criterion variable of self-injury.

Toronto Alexithymia Scale-20. The Toronto Alexithymia Scale-20 (TAS- 20; Bagby, Parker & Taylor, 1994) is a 20-item self-report instrument that measures three factors of the alexithymia construct. The first factor is "difficulty identifying feelings" (e.g., "I am often confused about what emotion I am feeling."). The second factor is

"difficulty describing feelings" (e.g., "It is difficult for me to find the right words for my feelings."). The third factor involves items which elicit externally-oriented thinking (e.g., "I prefer to just let things happen rather than to understand why they turned out that way"; Parker, Bagby, Taylor, Endler & Schmitz, 1993; Taylor, et al., 1992). Responses to the TAS-20 are scored on a 5-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. Alexithymia is determined by the sum of the items (items 4, 5, 10, 18 and 19 reverse-scored) with scores 61 or greater indicating a presence of alexithymia and scores 60 and less indicating the absence of alexithymia. Confirmatory factor analysis of the TAS-20 indicated that the three-factor structure is stable and replicable across clinical and non-clinical populations. Factor analysis yielded three inter-correlated factors that are congruent with the theoretical construct of alexithymia. Coefficient alphas ranging from .74 to .77 were obtained for the full TAS-20 across samples, indicating excellent internal consistency (Bagby, Taylor & Parker, 1994). Homogeneity was also confirmed by the values of the mean inter-item correlation coefficients. The TAS-20 also demonstrates good test-retest reliability (Bagby, et al., 1994).

Attitudes Toward Dreams–Revised. The Attitudes Toward Dreams–Revised (ATD-R; Hill et al., 2001) is a 9-item self-report measure of a person's attitudes about dreams. Participants respond to all items on a 5-point Likert scale (5 = strongly agree 1 = strongly disagree). The original ATD (Hill et al., 1997) was positively correlated with measures of openness, estimated dream recall, and diary dream recall; however, Hill et al. (2001) conducted a factor analysis that indicated that all items loaded onto one factor. The ATD-R had an internal consistency alpha of .88, was highly correlated with the original Attitudes Toward Dreams scale (.91), and had a 2-week test–retest reliability of

.92. Lyon and Hill (2004) found an internal consistency alpha of .90 when studying the impact of client attitudes toward dreaming on therapy sessions, and Hill et al. (2006) found an internal consistency alpha of .87 when studying client characteristics and perspectives of the therapy process. Scores of 30 and above are indicative of positive attitude toward dreams; scores of 29 and below are indicative of less positive attitude toward dreams.

Inventory of Interpersonal Problems—Short Circumplex Form. The Inventory of Interpersonal Problems—Short Circumplex Form (IIP-SC; Soldz, Budman, Demby, & Merry, 1995) is a 32-item subset of the 64-item IIP-C "Circumplex Form" developed by Alden, Wiggins, and Pincus (1990) from the original 127-item Inventory of Interpersonal Problems (Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988). The IIP-SC contains 18 items preceded by the phrase "It is hard for me to" (e.g., "tell a person to stop bothering me", "show affection to people") and 14 items describing interpersonal behaviors a person may do too much (e.g., " I try to control other people too much", " I am too suspicious of other people"). The 32-items are arranged in eight, four-item "octant scales" that factor analysis suggest provide a close representation of the two-dimensional interpersonal circumplex, with its underlying orthogonal Affiliation and Dominance scales. [See Locke (2006) for a discussion of interpersonal circumplex measures.] However, for the current study, the full scale score was used. In three samples of clients, the authors report that internal consistency (coefficients) ranged from .69 to .84 for all scales. Test-retest reliabilities for a group of clients in treatment (n = 55, interval = 8 weeks) ranged from .61 to .79 for the eight subscales. Correlations of the 32-item IIP-SC

subscales with the corresponding subscales of the 64-item IIP-Circumplex scale ranged from .91 to .98.

The IIP-SC was chosen for use in this study due to its focus on identifying barriers to interpersonal connection. As the current study seeks to examine the quality of connections with others as indicative of self-injury, particularly hypothesizing low connection with others to be indicative of greater propensity toward self-injury, the author sought to find a measure that would get at difficulties with interpersonal connections. Thus, the Inventory of Interpersonal Problems was researched. The IIP measures distress arising from interpersonal sources, both as a function of describing the types of interpersonal problems experienced and rating the level of distress associated with them. The researcher gave consideration to other measurements (RISC; Cross et al., 2000; RHI; Liang et al. 2002; MICQ; Pollina & Snell, 1999; RAS; Snell, 1998) which had an alternative focus of positive aspects of relationships, but after review, none seemed as appropriate a fit as the IIP-SC.

Spiritual Transcendence Scale. The Spiritual Transcendence Scale (STS; Reker, 2003) is a 24-item scale constructed to assess three components of an individual's spirituality. Derived from a larger scale of spirituality with additional, less independent constructs (Piedmont, 1999), the STS was pared down to measure inner-connectedness (e.g., self-identity, harmony, peace, comfort, fulfillment, spiritual coping), human compassion (e.g., sense of connection with others, love for mankind, community involvement), and connectedness with nature (e.g., peacefulness derived from experiencing the aesthetics, sounds, and/or smells of outdoor places; Reker, 2003). Individuals indicate to what extent they agree or disagree with each statement on a seven-

point Likert-type scale with options ranging from one (strongly disagree) to seven (strongly agree). Scores range from 24 to 168, with higher scores indicating greater levels of spiritual meaning in one's life. Reker (2003) indicated that the STS was normed on college students of varying racial and ethnic categories, including Caucasians, African Americans and Latino/as. Internal consistency tests revealed high alpha coefficients (α=.90), as well as good convergent and discriminate validity. Advantages to using this instrument include its ability to assess multiple dimensions of spirituality, as well as its ease of administration and scoring.

Self-Injurious Thoughts and Behaviors Interview. The Self-Injurious Thoughts and Behaviors Interview (SITBI; Nock et al., 2007) was initially developed as a structured interview consisting of 169 questions designed to assess past suicidal ideation, suicidal plan, suicidal gesture, suicidal attempt, thoughts of non-suicidal self injury, and non-suicidal self injury behaviors, as well as self-rated propensity to engage in future self-injuring thoughts and behaviors. After examining other instruments attempting to measure self-injury (Gratz, 2001; Linehan, Comtois, Brown, Heard, & Wagner, 2006; Sansone, Wiederman, & Sansone, 1998; Santa Mina, Gallop, Links, Heslegrave, Pringle, Wekerle, & Grewal, 2006), it was decided the SITBI offered a better fit with the goals of the current research than did other measures. Linehan et al. (2006) developed an interview that uses behavioral analysis to examine method, frequency, severity and intention of past self-injury. Gratz's (2001) instrument measures the age of onset, frequency, date of last occurrence, duration, and severity of 17 types of self-harm behavior. Santa Mina et al. (2006) produced a research instrument for self-injury intentions with a clinical, self-harm population. Sansone et al. (1998) developed an

instrument with the intention of predicting a diagnosis of Borderline Personality Disorder. The SITBI appears a better fit for the purposes of the current study because it has been used with non-clinical and clinical populations, it does not attempt to diagnose, it looks at thoughts ("Have you ever thought about doing something to purposely hurt yourself without intending to die?") as well as behavior ("Have you ever done something to purposely hurt yourself without intending to die?"), it examines propensity for future thoughts and behavior and is not limited to a set number of methods of self-injury. However, the SITBI has been used previously only as a structured interview.

It becomes important, then, to address the need to convert the SITBI (a structured interview) into a "pen and paper" instrument. A review of the items reveals the task to be relatively easy, as many of the questions already exist in a likert-type format (0=low/little, 4=very much/severe). Other questions ask for specific numbers ("How many times in your life have you engaged in self-injury?"), or offer a response range ("On average, how long have you thought about NSSI before engaging in it?" Less than one day, one to two days, etc.); these were transformed into continuous variables for the current study.

For the interview form of the SITBI, the authors report inter-rater reliability, test-retest reliability, and construct validity. They describe their psychometrics using the *Kappa* (K) statistic, and report that *Kappa* is a chance corrected statistic varying from -1 to +1, with zero representing chance agreement between raters. Values greater than .75 represent excellent agreement beyond chance; values from .40 to .75 represent fair to good agreement; and values below .40 represent poor agreement beyond chance (Fleiss, Levin, & Paik, 2003). For all items assessed quantitatively, the authors indicate perfect

inter-rater reliability (K=1.0, *r*=1.0). Test-retest reliability is also reportedly strong (K=1.0 for self-injury items at six-month follow-up; intraclass correlation of .71, $p < .001$ for self-injury). Reported construct validity varies somewhat, but is still strong (K=.74 for presence versus absence of self-injury; K=1.0 for presence of self-injury; *r*=.99 for lifetime frequency of self-injury; behavioral functions of self-injury ranged from *r*=.64 to *r*=.73). The authors also note that factor analyses and internal consistency reliability analyses were not conducted, as they would not be theoretically or empirically meaningful for the SITBI, given that it was "designed to efficiently examine a fairly broad range of constructs using a minimal number of items" (Nock et al., 2007, p. 312). Correspondence with the SITBI lead author, M. Nock, (personal communication, September 11, 2008) revealed that, when used as a survey instrument, the SITBI is assumed to have similar psychometric properties as when used in interview form.

Though information gleaned from administration of the full instrument (169 items) would no doubt be valuable, an in-depth look at suicidal thoughts, plans, gestures and attempts is beyond the scope of this project, and is inconsistent with this researcher's view of the relationship between suicidality and self-injury; therefore, only questions pertaining to self-injury (54 items) were administered. The questions assess presence, history, frequency, intensity, contributing factors and reasons for thoughts and behaviors of self-injuring; additionally, the type of behavior is specified and participants' self-assessment of propensity toward future thoughts and behaviors of self-injuring is assessed.

Data Collection

Participants were recruited through contact with the Introductory Psychology Course Coordinator at the University of Central Missouri. The researcher communicated with the Course Coordinator to arrange times for the researcher to present a brief synopsis of the research to psychology classes, as well as data collection dates and times. The researcher spent the first portion of class time collecting data from interested participants, which did not exceed thirty minutes.

As the study was carried out on a campus other than the one in which the researcher is completing her degree, it was necessary to obtain Institutional Review Board (IRB) approval to conduct the study from both institutions. Additionally, informed consent to participate in a research study was completed, reviewed and approved by both IRB's.

All voluntary participants completed a packet of questionnaires, including a demographic questionnaire, the TAS-20, the ADT-R, the IIP-SC, the STS and the SITBI. When the packets were returned, each packet was assigned an identification number for data coding purposes, to ensure that individual responses remained anonymous. As each packet was received, the informed consent for participation form was removed and stored in a separate location from the study data. All participants were invited to contact the researcher for debriefing. A pilot time study (N = 5) demonstrated the average time to complete the measures to be 16 minutes.

Each packet (see Appendix A) consisted of a demographic form and the following instruments: the Toronto Alexithymia Scale-20 (TAS-20; Taylor et al., 1992), the Attitudes Toward Dreams–Revised (ATD-R; Hill et al., 2001), the Inventory of

Interpersonal Problems—Short Circumplex Form (IIP-SC; Soldz, Budman, Demby, & Merry, 1995), the Spiritual Transcendence Scale (STS; Reker, 2003), and the Self-Injurious Thoughts and Behaviors Interview (SITBI; Nock et al., 2007). The order of these instruments within packets was counterbalanced. The total number of items is 139.

Data Analysis

Demographic data for participants was analyzed using measures of central tendency (i.e., mean, standard deviation). Specifically, this data was reported for participant age, gender, frequency of spiritual activity, and amount of sleep per night. Multiple regression analyses were conducted on the criterion variables, with the specific variables of attitude toward dreams, alexithymia, interpersonal problems, and spiritual transcendence entered as predictor variables, to determine how linked these are to the propensity to self injure. The level of statistical significance used in all procedures was p=.05 or lower, as this is the level generally accepted in social sciences research. In order to display the results of this study more descriptively, data are presented as tables and graphs when appropriate.

CHAPTER IV: Results

This chapter presents the results of the statistical analyses conducted for each of the hypotheses. First, descriptive statistics of all of the variables used are described. An examination of the hypotheses of this study follows. Descriptions of the correlations among variables, as well as the results of the hierarchical regression analysis, are presented.

Descriptive Statistics

The means, standard deviations, skewness and kurtosis for all variables are presented in Table 1. The means obtained from this sample on these measures were generally similar to those obtained by the authors of the respective scales for college students (TAS-20; Bagby, et al., 1994, IIP-32; Soldz et al., 1995; STS; Reker, 2003; ATD-R; Hill et al., 2001; SITBI; Nock et al., 2007). Skewness and kurtosis for all measures except the Self-Injurious Thoughts and Behaviors Interview (SI) indicate a relatively normal sample distribution. The means for both the STS and the ATD were found to be slightly negatively skewed, though at levels (see Table 1) for inclusion without transformation. While the SI did not meet the assumptions of normality, the decision was made to analyze the data without transformation. The rationale for this decision included the difficulty of interpretation of transformed variables and the reduced importance of the normality assumption for the dependent variable in a multiple regression analysis (Allison, 1999).

Seventy-seven percent ($\underline{n}$ = 168) of this college student sample endorsed some thought or action toward self-injury; a percentage much higher than what previous research has reported for similar populations (White et al., 2002; Polk & Liss, 2007;

Favazza, DeRosear, & Conterio, 1989; Gratz, 2001; Gratz, Conrad & Roemer, 2002). Additionally, an independent-samples *t* test was conducted to ascertain whether or not the means between men and women on the variable of self-injury were significantly different, given the higher number of female participants. Due to a violation of the homogeneity of variance assumption (sample sizes were markedly unequal), the standard t value is not reported; rather, the t value that does not assume equal variances was used. The test was not significant, $t(184.89) = -1.93$, $p = .06$, indicating that for the current sample, there was no significant difference in mean scores on self-injury between men and women (see Table 2).

Scale intercorrelations are provided in Table 3. The Pearson correlation coefficients were examined to (a) determine which predictor variables were significantly correlated with the criterion measure and (b) assess for multicollinearity. The Toronto Alexithymia Scale and the Inventory of Interpersonal Problems full scales were significantly correlated with each other ($r = .45$, $p < .000$). Additionally, the Attitude Toward Dreams Scale and the Spiritual Transcendence Scale were significantly correlated with one another ($r = .16$, $p < .01$). Also of note, the Spiritual Transcendence Scale's negative correlation with the Toronto Alexithymia Scale was found to be approaching significance ($r = -.10$, $p < .069$). As none of these correlations is considered "high" (Allison, 1999, pp. 64), all were retained in the regression analysis with minimal concern of multicollinearity.

Internal Consistency Estimation

Internal consistencies of each measure were similar to those found for college students by the authors (TAS-20; Bagby et al., 1994; IIP-32; Soldz et al., 1995; ATD-R;

Hill et al., 2001; STS; Reker, 2003); as the SITBI (Nock et al., 2007) had not been used as a quantitative instrument prior to the current study, no comparative data exist for that measure. Cronbach alphas for all measures were very strong including $\alpha = .79$ for alexithymia (TAS-20); $\alpha = .88$ for interpersonal problems (IIP); $\alpha = .89$ for attitude toward dreams (ATD-R); $\alpha = .96$ for self-injurious thoughts and behaviors (SITBI); and $\alpha = .97$ for spirituality (STS).

Hypotheses

To examine the first three hypotheses, bivariate correlations were performed. The results of these analyses are presented in Table 3.

Hypothesis 1: A statistically significant inverse relationship exists between the propensity to self-injure and

a) attitude toward dreams (connection to oneself)
b) spiritual connection (connection to spirituality)

Pearson Product Moment Correlation Coefficients were used to determine the relationships between these variables. The first component of hypothesis 1 was found to be partially supported, and was significant at the $\underline{p} < .01$ significance level. However, attitude toward dreams was not found to have an inverse relationship to the propensity to self-injure as hypothesized; they were instead positively correlated ($\underline{r} = .20$, $\underline{p} = .002$). Analysis revealed that the second component of hypothesis 1 was not supported. No significant relationship exists between propensity to self-injure and spiritual connection ($\underline{r} = .05$, $\underline{p} = .244$). As a result, the null hypothesis for this component of hypothesis 1 must

be maintained. These findings suggest that students' propensity to self-injure was significantly associated with attitude toward dreams, but not with spiritual connection.

Hypothesis 2: A statistically significant relationship exists between the propensity to self-injure and

a) alexithymia (second measure of connection to oneself)
b) interpersonal problems (connection to others)

Pearson Product Moment Correlation Coefficients were again used to determine the relationships between these variables. Both correlations were significant at the $\underline{p} < .05$ significance level or less. As a result, the null hypothesis for each component for hypothesis 2 can be rejected. A statistically significant relationship exists between alexithymia and self-injury ($r = .14$, $\underline{p} = .02$), as well as between interpersonal problems and self-injury ($\underline{r} = .25$, $\underline{p} = .000$). These correlations suggest that students' propensity to self-injure was significantly associated with alexithymia and interpersonal problems.

Hypothesis 3: Alexithymia will be significantly, inversely related to attitude toward dreams.

A Pearson product moment correlation coefficient demonstrated that the relationship between alexithymia and attitude toward dreams ($r = -.145$, $\underline{p} = .016$) was significant at the $p < .05$ level as hypothesized. Therefore, the null hypothesis for hypothesis three is rejected; there is a statistically significant inverse relationship between alexithymia and attitude toward dreams. Students who have difficulties expressing or experiencing emotions also appear to report negative attitude toward dreams.

To examine the remaining hypothesis, regression analysis and hierarchical regression analysis were used. The results of these analyses are in Tables 4 - 8.

Hypothesis 4: The effects of attitude toward dreams, interpersonal problems, alexithymia, and spiritual connection will individually and collectively be significantly predictive of self-injury.

To test the individual effects of each component on self-injury, linear regression analysis was used. When attitude toward dreams was entered as the predictor variable and self-injury as the criterion variable, attitude toward dreams was found to be statistically significantly predictive of self-injury [$F (1, 215) = 8.65$, $p < .004$, $R^2 = .039$, $\Delta R^2 = .034$] (see Table 4). Attitude toward dreams is a statistically significant predictor of self-injury, though the analysis indicated that attitude toward dreams is a relatively weak predictor of self-injury, accounting for 4% of the variance. When interpersonal problems was entered as the predictor variable and self-injury as the criterion variable, interpersonal problems was found to be statistically significantly predictive of self-injury [$F (1, 215) = 14.01$, $p < .000$, $R^2 = .061$, $\Delta R^2 = .057$] (see Table 5). Interpersonal problems is a statistically significant predictor of self-injury, accounting for 6% of the variance. When alexithymia was entered as the predictor variable and self-injury as the criterion variable, alexithymia was found to be statistically significantly predictive of self-injury [$F (1, 215) = 4.32$, $p < .039$, $R^2 = .02$, $\Delta R^2 = .015$] (see Table 6). Alexithymia is a statistically significant predictor of self-injury, albeit a relatively weak predictor, accounting for 2% of the variance. When spirituality was entered as the predictor variable and self-injury as the criterion variable, spirituality was not found to be statistically significantly predictive of self-injury [$F (1, 215) = .48$, $p = .489$, $R^2 = .002$, $\Delta R^2 = -.002$] (see Table 7).

When interpersonal problems was added as a predictor variable along with attitude toward dreams, and self-injury used as the criterion variable in a hierarchical regression analysis, attitude toward dreams and interpersonal problems were significantly predictive of self-injury [$F (2, 214) = 13.131$, $p < .000$, $R^2 = .109$, $\Delta R^2 = .101$] (see Table 8). The effects of attitude toward dreams combined with interpersonal problems are significantly predictive of propensity to self-injure. While attitude toward dreams alone accounted for 4% of the variance in self-injury, the addition of interpersonal problems increased the amount of variance accounted for by 7% to account for a total of 11% of the variance.

This hypothesis was further tested using attitude toward dreams, interpersonal problems and alexithymia as the predictor variables and self-injury as the criterion variable in a hierarchical regression analysis. Results indicated that the three predictor variables were significantly predictive of self-injury [$F (3, 213) = 9.016$, $p < .000$, $R^2 = .113$, $\Delta R^2 = .10$](see Table 8). The independent variables attitude toward dreams, interpersonal problems and alexithymia are significantly predictive of the dependent variable, self-injury. The addition of the variables interpersonal problems and alexithymia to attitude toward dreams accounted for 11% of the variance in self-injury, representing an increase of less than 1%.

The final component of this hypothesis was tested using attitude toward dreams, interpersonal problems, alexithymia and spirituality as the predictor variables and self-injury as the criterion variable in a hierarchical regression analysis. Results indicated that the combination of the four predictor variables were significantly predictive of self-injury [$F (4, 212) = 6.761$, $p < .000$, $R^2 = .113$, $\Delta R^2 = .113$] (see Table 8). The independent

variables attitude toward dreams, interpersonal problems, alexithymia and spirituality when combined continue to be significantly predictive of the dependent variable, self-injury. However, the addition of the spirituality variable revealed no significance, and was not found to be significantly predictive either of self-injury directly or within the overall model. Thus, hypothesis 4 is partially supported, and the null must be maintained.

CHAPTER V: Discussion

This chapter summarizes the findings of this research on intrapersonal, interpersonal, and spiritual connections as related to propensity toward self-injury. The results are then discussed in terms of how they have contributed to the extant body of literature in these areas. Implications for research and practice are explored, as are limitations of this study.

The results partially supported two of the proposed hypotheses; the null hypotheses for the remaining two were rejected. As anticipated, the presence of alexithymia and interpersonal problems predicted greater propensity toward self-injury; contrary to a priori thought, positive attitude toward dreams also predicted greater propensity toward self-injury. However, the addition of spiritual connection did not significantly contribute either positively or negatively to self-injury. Additionally, students with alexithymia were more likely to have difficulties in interpersonal relationships and have more negative attitudes toward dreams.

Relationship Between Self-Connectedness, Connection with Others and Self-Injury

Relational Cultural Theory posits that as a result of becoming more authentically connected with others, one finds more connection with personal experience, and is then able to embrace empathy and understanding of self (Miller & Stiver, 1997). This view of self-development happening in relation with others nudges movement beyond "'separate-self' analyses to an awareness of the relational dynamics of (shameful and humiliating) experiences" (Hartling, Rosen, Walker, & Jordan, 2004, p. 105). Connection to self was examined in this study by using two constructs: attitude toward dreams (discussed separately) and alexithymia. Individuals with alexithymia lack the ability to experience

and express shameful and humiliating experiences, and have deficits in emotional regulation. The lack of ability to introspect and attach meaning to feelings leads to a disconnection from self. Further, the inability to develop adequate coping resources can manifest in difficulties with self-care and lack of investment in personal welfare (Krystal, 1977; 1979), which the current study asserts can manifest in self-injuring behavior. Concurrent with lack of connection to self is a difficulty relating with and developing connections with others.

"As psychological health is viewed (by RCT) as a function of participation in relationship, in which mutually empowering connections occur" (Jordan, Surrey, & Kaplan, 1991, as cited by Walker, 2004, p. 6), individuals with alexithymia are more likely to also evidence interpersonal problems. Consistent with previous research (Horton, 1981; Krystal, 1977; Linehan, 1993; Armey & Crowther, 2008), students in this study with an inability to experience a full range of emotions have problems relating with others and show greater propensity toward self-injury. This finding was expected, considering the importance of emotional awareness and affect regulation deficits in individuals who self-injure (Gratz & Chapman, 2007; Gratz & Roemer, 2004) as well as the previous support for self-injury increasing as connections with others are impaired (Deiter et al., 2000).

Attitude Toward Dreams

Consistent with the hypotheses of this study, attitude toward dreams was significantly, negatively correlated with alexithymia. Thus, students who had difficulty expressing themselves emotionally also had negative attitudes toward dreams. This result is conceptually consistent in that individuals who do not have access to their emotions

and who lack affective presence also have lowered interest in the effects of dreams upon their waking lives. Given the dearth of literature associating alexithymia and emotional regulation with dreaming, the current findings may serve as an initial link between these constructs, both of which purport to indicate forms of connectedness with oneself. Attitude toward dreams, however, was also unexpectedly found to be positively and significantly correlated with self-injury. This leads the researcher to believe that the construct may be measuring something other than "connection with self", such as insight, self-awareness or problem solving ability. For instance, the correlation may be an indication that increased self-awareness is related to self-injurers' ability to cope, albeit in a maladaptive way, by self-injuring; positive attitude toward dreams would be an indication of awareness of problems with self. The correlation may also be explained by the propensity for those who self-injure to have an increased focus on self, in general, even if the focus is maladaptive and the ability to express that focus is impaired.

Implications

This study contributed to the empirical literature in the areas of self-injury, alexithymia, interpersonal problems, attitude toward dreams and spirituality. It examined the presence of self-injury in a non-clinical, college student population while the majority of self-injury research has examined this condition in outpatient populations, and with younger adolescents. As supported by Gratz and Chapman (2007), Whitlock et al. (2006), and Gratz (2006), self-injury was present in a significant proportion (77%) of this college student sample. This study also contributed uniquely to the body of literature by introducing the notion that connection to spirituality may be related to self-injury and

alexithymia, though analyses from this study revealed no significant findings in these areas (see limitations section for further discussion).

This research has several implications for clinical practice, particularly for those practitioners working with college students. First, therapists can create an environment of safety, consistency and respect, elements that comprise "the primary treatment goal" (White et al., 2002, p. 108) in work with students who self-injure. The well-developed therapeutic relationship can be facilitative of exploration into historical disconnections with caregivers, partners and other significant individuals in a client's life, and can provide first-hand experience of a trusting, secure environment. Further, the therapeutic working alliance, and therapist's willingness and ability to use interpersonal interventions, can be a catalyst for addressing client difficulties with interacting empathically with others.

Second, beyond the development of a solid working alliance, therapists can help their clients to develop the ability to identify and express feelings verbally. Previous research (Favazza, 1992; Gratz, 2003; Haines et al., 1995; Kumar et al., 2004; Machaian, 2001; Nixon et al., 2002; Nock & Prinstein, 2004; Linehan, 1993; Armey & Crowther, 2008) has highlighted the difficulty in emotional regulation for individuals who self-injure, with similar circumstances for those with alexithymia (McDougall, 1982; Rickles, 1986; Horton, 1981; Krystal, 1977; 1982). Therapists working with these individuals can model adaptive expression of emotion, validate the importance of emotion, and provide in-the-moment interactions which counteract prior client beliefs that experience of emotions is unimportant or damaging. As a result of increased emotional expressivity in

the therapeutic environment, the therapist can prepare the client to be emotionally expressive outside of the therapy room.

Third, therapist assessments of client self-injuring should be thorough and ongoing, in order to ascertain the presence, longevity, severity and extensiveness of any self-injuring behavior. Therapists may also be aware of signs of alexithymia and/or interpersonal problems, in order to ascertain the role of these elements in clients who may be prone toward self-injury. By recognizing symptoms, and combined symptoms, in clientele, therapists may be able to facilitate use of behavioral alternatives to self-injury, as well as identify necessity of referral to other entities, such as the student health center.

This research also has implications for college and university personnel such as residence hall workers, healthcare workers and others who have ongoing, direct contact with students. Given the findings of high prevalence of self-injury on a college campus, providing information on the topic may facilitate student help-seeking. This could be done in the format of outreach programs and/or presentations targeting risk factors, warning signs, and information about how to talk with friends who may be at risk. Additionally, personnel may benefit from the current finding of interpersonal problems affecting self-injury. In specific, programs could be formatted to promulgate the development of healthy, cohesive relationships among peers in the collegiate setting, as well as skills training for developing and maintaining interpersonal connections.

Limitations

There are several limitations of this study to be addressed. The sample was largely homogeneous, primarily including young, Caucasian women from the Midwestern United States with an identified religious denomination of “Christian.” Thus, the sample

is not representative of the diversity found on many college campuses in terms of students' racial and cultural backgrounds, and may affect the generalizability of the results. Specifically, there could be limitations in terms of conclusions drawn for adults in the general population as well as college students.

A limitation of this study is the use of a student sample rather than a clinical sample; however, the choice to conduct this research with a college population was intentional. Research suggests that young adult college students may be at a higher risk for self-injury in comparison with other groups, yet there is a relative lack of previous research on this population. Despite this limitation, the findings are of relevance to mental health professionals working in a college setting. This study provides clinicians with information about the correlates and characteristics of self-injury that they may see among college students seeking psychological services.

Further difficulty with sampling involves the recruitment of participants from psychology courses, as this is a specified subset of the college student population, and students in psychology courses may differ from students from a general college sample. It is notable, though, that the majority of participants were recruited from introductory psychology courses, and were likely not psychology majors.

Another limitation of the current study is the use of full-scale scores rather than subscale scores for each instrument included. This practice may have compressed or simplified the results, which otherwise may have been more robust. Particularly of note is the measure of self-injury; the segment of the instrument which assessed propensity toward future thoughts and/or behavior was combined with the segment assessing past thoughts and/or behaviors, yielding a score that may not have been as descriptive as

possible, given the available data. Similarly, the measure of spiritual connectedness contains three subscales, but was used as a full-scale. Given the lack of significance spirituality was found to have in relation to self-injury, and the phenomena of approaching significance in correlation with alexithymia, the researcher believes use of the subscale scores may have been more indicative of these relationships.

Also pertinent to the measure of self-injury used in this study is the difficulty in determining a cut-off point for inclusion in a category of "self-injurious thought or behavior." Since the measure was based upon transformation of the Non-Suicidal Self-Injury interview to pen and paper format, criteria for use of scores does not exist. It should be noted that for purposes of this study, any full-scale score above 65 was used to designate "thought or behavior toward self-injury", which may be liberal criteria. This decision was made based upon the difficulty in determining "how much is enough"; rather, if any thoughts or behavior were indicated, the score was included.

Reliance upon self-report measures is another limitation of the current study, as it introduces retrospective bias with no way to substantiate the actual occurrence of any self-injury. Further, it is impossible to determine the extent of superfluous influence on respondent self-report, especially when answering emotionally-laden questions.

Future Research

Given the limitations of the present study for external reliability and generalizability, further research should involve changes in sampling. The intent of this study was to assess the variables in a sample of college students, as there has been little research to date examining this specific population; however, the results suggest a much higher incidence of self-injury than was expected. Further research could benefit from

increasing the likelihood that the sample will be more representative of a non-clinical population, to minimize skew, possibly by using a screening measure for inclusion in the study. It will also be of benefit for future research to be conducted with a more culturally, ethnically and religiously diverse sample.

This study found no significance for the effect of spirituality on self-injury, either with or without other factors. Prior research has indicated support for a relationship between emotional health (Ellison & Fan, 2008; Westgate, 1996) and spirituality, as well as physical health (Zullig et al., 2006) and spirituality; as self-injury affects both these aspects of health, it seems fitting that this area continue to be explored. Future research may benefit by viewing spirituality and/or spiritual connectedness as a more complex construct. For instance, the various aspects (i.e., inner-connectedness, human compassion, and connectedness with nature; Reker, 2003) of a spiritual relationship may be significantly relative to self-injury, the effects of which were not significantly revealed with compressed (full-scale) scores.

While prevalence rates for men and women who self-injure are reported in this study, there was no aimed focus on gendered differences between individuals. Future research should continue to examine self-injury in college student samples, further differentiating differences between men and women. For example, it is not enough to say that they both engage in self-injury; studies would be more informative if they explore how men and women differ. The current study, consistent with other research (Dellinger-Ness & Handler, 2007; Gratz et al., 2002; Whitlock et al., 2006), shows that both self-injure. With greater information on what differences exist, more opportunities will arise to address the needs therapeutically.

Given the finding that self-injurers also have positive attitudes toward dreams, contrary to the hypothesized outcome, it may be beneficial for future research to explore how problem solving and use of coping mechanisms are activated within the college student population, and those who self-injure in particular. Qualitative or mixed-methods design may yield richer data in this area. Similarly designed studies may also produce greater information regarding college students' formative and current connections with self, others and spiritual being.

Conclusions

Based on the results of this study, it can be concluded that difficulties in interpersonal relations, problems with affect regulation, and positive attitude toward dreams contribute to increased propensity toward self-injury. Individuals who display symptoms of alexithymia lack the ability to use internal, affective states to guide them through interpersonal interactions or help them develop adaptive coping skills. Without the ability to regulate affect, and having difficulty establishing and maintaining connections with supportive others, such individuals may therefore experience greater likelihood of self-injury.

Though this study does not explore these directly, prior research and theory suggest influences that may contribute to the development of adaptive self-connection, interpersonal connections, and spiritual connections, and the minimization of self-injurious thoughts and behaviors. Relationships across the lifespan, from early childhood experiences with caregivers, to childhood friendships, to dating relationships and adult friendships, as well as relationships with community, all coalesce with aspects of psychological, sociological and biological factors, impacting one's ability to regulate

affect, connect with others and form connections with a higher power. Individuals who self-injure, have difficulties relating with others, or who experience alexithymia may seek therapy for the relief of symptoms of distress, yet may be unaware of their own emotional processes. Therapists working with these clients should become familiar with historical relational and psychological dynamics which may have contributed to lack of connections with self and others, possibly resulting in self-injury. Thus, the counselor may actively work with the client to develop interventions which may improve interpersonal relationships, affective expressivity and a decrease in thoughts and actions toward self-injuring.

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Appendix A

Tables

Table 1.

Means, Standard Deviations, Skewness and Kurtosis Values for all Variables

Variable	M	Range	SD	Skew	Kurtosis
SI	98.71	65 - 238	43.41	1.27	.55
ATD	32.65	13 - 45	7.65	- .52	-.20
TAS	45.16	23 - 80	11.49	.41	-.15
IIP	64.19	32 - 112	15.48	.46	-.19
STS	108.16	24 - 168	35.81	-.71	-.23

Note. SI = Self-Injurious Thoughts and Behaviors Interview; ATD = Attitude Toward Dreams; TAS = Toronto Alexithymia Scale-20; IIP = Inventory of Interpersonal Problems; STS = Spiritual Transcendence Scale. N = 217.

Table 2.

Gender Differences

Gender	N	M	SD
Male	74	91.47	35.64
Female	143	102.45	46.60

Note. 95% Confidence Interval = -22.20 - .24

Table 3.

Correlations Among Variables

Variable	1	2	3	4	5
1. SI	—	.20**	.14*	.25**	.05
2. ATD	—	—	-.15*	-.09	.16*

3. TAS	—	—	—	.45**	-.10
4. IIP	—	—	—	—	-.01
5. STS	—	—	—	—	—

Note. (*p < .05; ** p < .01) SI = Self-Injurious Thoughts and Behaviors Interview; ATD = Attitude Toward Dreams; TAS = Toronto Alexithymia Scale-20; IIP = Inventory of Interpersonal Problems; STS = Spiritual Transcendence Scale. N = 217.

Table 4.

Summary of Regression Analysis Predicting Propensity Toward Self-Injury

Variable	B	*SE* B	β	t
ATD	1.12	.38	.20	2.94**

Note. R^2 = .039, ΔR^2 = .034 (**p < .01) ATD = Attitude Toward Dreams Scale-Revised. N = 217

Table 5.

Summary of Regression Analysis Predicting Propensity Toward Self-Injury

Variable	B	*SE* B	β	t
IIP	.69	.19	.25	3.74**

Note. R^2 = .061, ΔR^2 = .057 (**p < .01) IP = Inventory of Interpersonal Problems. N = 217

Table 6.

Summary of Regression Analysis Predicting Propensity Toward Self-Injury

Variable	B	*SE* B	β	t
TAS	.53	.26	.14	2.08*

Note. R^2 = .02, ΔR^2 = .02 (*p < .05) TAS = Toronto Alexithymia Scale-20. N = 217

Table 7.

Summary of Regression Analysis Predicting Propensity Toward Self-Injury

Variable	B	*SE* B	β	t
STS	.06	.08	.05	.69

Note. R^2 = .002, ΔR^2 = -.002; STS = Spiritual Transcendence Scale. N = 217

Table 8.

Summary of Multiple Regression Analysis Predicting Propensity Toward Self-Injury

Variable	B	*SE* B	β	t
Step 1				
ATD	1.12	.38	.20	2.94**
Step Two				
ATD	1.25	.37	.22	3.40**
IIP	.75	.18	.27	4.12**
Step 3				
ATD	1.29	.37	.23	3.48**
IIP	.67	.20	.24	3.28**
TAS	.25	.28	.07	.90
Step 4				
ATD	1.27	.38	.22	3.39**
IIP	.66	.20	.24	3.26**

TAS	.26	.28	.07	.92
STS	.03	.08	.02	.33

Note. $\underline{R^2}$ = .039, $\underline{\Delta R^2}$ = .034 for step 1. $\underline{R^2}$ = .109, $\underline{\Delta R^2}$ = .101 for Step 2. $\underline{R^2}$ = .113, $\underline{\Delta R^2}$ = .10 for Step 3. $\underline{R^2}$ = .113, $\underline{\Delta R^2}$ = .096 for Step 4. (*p < .05; **p < .01) ATD = Attitude Toward Dreams; IIP = Inventory of Interpersonal Problems; TAS = Toronto Alexithymia Scale-20; STS = Spiritual Transcendence Scale; SI = Self-Injurious Thoughts and Behaviors Interview; $\underline{N}$ = 217.

Appendix B

Measures

Please complete each of the following demographic questions.

1. Age in years: _____

2. Gender: _____Male _____Female _____Transgendered/Questioning

3. Highest level of education completed:
   ___ High school diploma/GED ___College Sophomore ___Bachelors degree
   ___College Freshman ___College Junior ___Master's degree

4. What is your current relationship status?
   ___Single, never married ___Married, first marriage ___In life partnership
   ___Single, previously married ___Married, not first marriage ___Separated

5. How many hours of sleep do you typically get each night?
   ___Eight or more hours ___Three to four hours
   ___Five to seven hours ___Fewer than three hours

6. Upon waking to begin your day, how rested do you typically feel?
   ___Very tired, can't seem to get up ___Mostly refreshed, takes a few minutes to wake ___Somewhat tired, but able to rise ___Completely refreshed

7. In the past 6 months, how often have you used alcohol, illegal drugs or prescription pain medication?
   ___Daily ___Four or more times per week ___Three or fewer times per week
   ___Monthly ___Fewer than monthly or only at special times ___Never

8. What is your ethnic background? (Check all that apply.)
   ___African American/Black ___European American/White ___Other
   ___Hispanic/Latino/Chicano/Mexican American ___Biracial/Multiracial
   ___Asian American ___ American Indian/Native American/Alaskan Native

9. What is your general religious/spiritual affiliation or orientation? (Check applicable.)
   ___Agnostic ___Hindu ___Other ___Buddhist
   ___Atheist ___Jewish ___Muslim ___Wiccan
   ___American Indian Spirituality ___Christian ___Personal Spirituality

10. How often do you engage in religious/spiritual activities (praying, worshipping, meditating, chanting, etc.)?
    ___Daily ___Four or more times per week ___Three or fewer times per week
    ___Monthly ___Only at special times ___Never

11. If you engage in religious/spiritual activities, how often do you participate *with others*?
    ___Daily ___Four or more times per week ___Three or fewer times per week
    ___Monthly ___Only at special times ___Never

IIP-SC

Here is a list of problems that people report in relating to other people. Please read the list below, and for each item, consider whether that item has been a problem for you with respect to any significant person in your life. Then select the number that describes how distressing that problem has been, and write that number on the line to the left of the statement.

1	2	3	4	5
not at all	a little bit	moderately	quite a bit	extremely

The following are things you find hard to do with other people.

_____ 1. It is hard for me to join in groups.

_____ 2. It is hard for me to keep things private from other people.

_____ 3. It is hard for me to tell a person to stop bothering me.

_____ 4. It is hard for me to introduce myself to new people.

_____ 5. It is hard for me to confront people with problems that come up.

_____ 6. It is hard for me to be assertive with another person.

_____ 7. It is hard for me to let other people know when I am angry.

_____ 8. It is hard for me to socialize with other people.

_____ 9. It is hard for me to show affection to people.

_____10. It is hard for me to understand another person's point of view.

_____11. It is hard for me to be firm when I need to be.

_____12. It is hard for me to experience a feeling of love for another person.

_____13. It is hard for me to be supportive of another person's goals in life.

_____14. It is hard for me to feel close to other people.

_____15. It is hard for me to feel good about another person's happiness.

_____16. It is hard for me to ask other people to get together socially with me.

_____17. It is hard for me to attend to my own welfare when somebody else is needy.

_____18. It is hard for me to be assertive without worrying about hurting the other person's feelings.

1	2	3	4	5
not at all	a little bit	moderately	quite a bit	extremely

The following are things that you tend to do too much.

_____19. I am too easily persuaded by other people.

_____20. I open up to people too much.

_____21. I am too aggressive toward other people.

_____22. I try to please other people too much.

_____23. I want to be noticed too much.

_____24. I try to control other people too much.

_____25. I put other people's needs before my own too much.

_____26. I am too suspicious of other people.

_____27. I tell personal things to other people too much.

_____28. I argue with other people too much.

_____29. I keep other people at a distance too much.

_____30. I let other people take advantage of me too much.

_____31. I am affected by another person's misery too much.

_____32. I want to get revenge against people too much.

Toronto Alexithymia Scale—20 (TAS – 20)

INSTRUCTIONS: Using the scale provided as a guide, indicate how much you agree or disagree with each of the following statements by circling the corresponding number. Give only one answer for each statement:
Circle 1 if you STRONGLY DISAGREE Circle 4 if you MODERATELY AGREE
Circle 2 if you MODERATELY DISAGREE Circle 5 if you STRONGLY AGREE
Circle 3 if you NEITHER DISAGREE NOR AGREE

	Strongly Disagree	Moderately Disagree	Neither Disagree nor Agree	Moderately Agree	Strongly Agree
I am often confused about what emotion I am feeling.	1	2	3	4	5
It is difficult for me to find the right words for my feelings.	1	2	3	4	5
I have physical sensations that even doctors don't understand.	1	2	3	4	5
I am able to describe my feelings easily.	1	2	3	4	5
I prefer to analyze problems rather than just describe them.	1	2	3	4	5
When I am upset, I don't know if I am sad, frightened or angry.	1	2	3	4	5
I am often puzzled by sensations in my body.	1	2	3	4	5
I prefer to just let things happen rather than to understand why they turned out that way.	1	2	3	4	5
I have feelings I can't quite identify.	1	2	3	4	5
Being in touch with emotions is essential.	1	2	3	4	5
I find it hard to describe how I feel about people.	1	2	3	4	5
People tell me to describe my feelings more.	1	2	3	4	5
I don't know what's going on inside me.	1	2	3	4	5
I often don't know why I am angry.	1	2	3	4	5
I prefer talking to people about their daily activities rather than their feelings.	1	2	3	4	5
I prefer to watch "light" entertainment shows rather than psychological dramas.	1	2	3	4	5
It is difficult for me to reveal my innermost feelings, even to close friends.	1	2	3	4	5
I can feel close to someone, even in moments of silence.	1	2	3	4	5
I find examination of my feelings useful in solving personal problems.	1	2	3	4	5
Looking for hidden meanings in movies or plays distracts from their enjoyment.	1	2	3	4	5

Attitudes Toward Dreams Scale – Revised (ATD-R)

Instructions: Mark the response that best describes you.

1. I believe that dreams are one of the most important ways to understand myself	**Agree 5**	**4**	**3**	**2**	**Disagree 1**
2. I do not pay any attention to my own dreams	**Agree 1**	**2**	**3**	**4**	**Disagree 5**
3. Dreams have meaning	**Agree 5**	**4**	**3**	**2**	**Disagree 1**
4. Dreams are too confused to have any meaning to me	**Agree 1**	**2**	**3**	**4**	**Disagree 5**
5. I dislike speculations about the meaning of dreams	**Agree 1**	**2**	**3**	**4**	**Disagree 5**
6. I value my dreams	**Agree 5**	**4**	**3**	**2**	**Disagree 1**
7. Practical everyday life is too important to me to pay attention to my dreams	**Agree 1**	**2**	**3**	**4**	**Disagree 5**
8. How often have you speculated about the possible meaning of one of your dreams?	**Never 1**	**2**	**3**	**4**	**Often 5**
9. Do you have any beliefs or theories about the meaning of dreams?	**Yes 5**	**4**	**3**	**2**	**No 1**

TOTAL

Spiritual Transcendence Scale

This questionnaire contains a number of statements related to beliefs and feelings about your spirituality in general. Read each statement carefully, then indicate the extent to which you agree or disagree by circling one of the alternative categories provided. For example, if you **STRONGLY AGREE**, circle **SA** following the statement. If you **MODERATELY DISAGREE**, circle **MD**. If you are **UNDECIDED**, circle **U**. Try to use the undecided category sparingly.

SA	**A**	**MA**	**U**	**MD**	**D**	**SD**
STRONGLY AGREE	AGREE	MODERATELY AGREE	UNDECIDED	MODERATELY DISAGREE	DISAGREE	STRONGLY DISAGREE

1. I regularly reach out to assist others on their path to living a spiritually meaningful life. **SA A MA U MD D SD**
2. I derive spiritual meaning from community with others. **SA A MA U MD D SD**
3. When I am troubled I look to my spirituality for peace of mind. **SA A MA U MD D SD**
4. I derive a great deal of emotional support from my spiritual beliefs. **SA A MA U MD D SD**
5. Nature's beauty gives me a sense of spiritual connectedness. **SA A MA U MD D SD**
6. Human compassion is the core of my spirituality. **SA A MA U MD D SD**
7. I am spiritually touched by the peacefulness of nature. **SA A MA U MD D SD**
8. My spirituality gives me a deep sense of inner peace. **SA A MA U MD D SD**
9. My sense of self is nurtured by my spirituality. **SA A MA U MD D SD**
10. My spirituality embraces a feeling of sacredness with every human being. **SA A MA U MD D SD**
11. I surround myself with spiritually fulfilling people. **SA A MA U MD D SD**

(over)

SA	A	MA	U	MD	D	SD
STRONGLY AGREE	AGREE	MODERATELY AGREE	UNDECIDED	MODERATELY DISAGREE	DISAGREE	STRONGLY DISAGREE

12. My spirituality helps me cope with uncertainty in life. **SA A MA U MD D SD**

13. My spirituality helps me cope with the stresses and strains of life. **SA A MA U MD D SD**

14. I feel spiritual when I listen to the sounds of nature. **SA A MA U MD D SD**

15. My spirituality will assist me in facing future challenges. **SA A MA U MD D SD**

16. I draw a great deal of strength from my spirituality. **SA A MA U MD D SD**

17. I feel spiritual when walking through the forest or a beautiful park. **SA A MA U MD D SD**

18. I express my love for all mankind through my spirituality. **SA A MA U MD D SD**

19. I have a spiritual awareness of the sacredness of every living thing. **SA A MA U MD D SD**

20. My spiritual awareness contributes to my sense of wholeness. **SA A MA U MD D SD**

21. My spirituality is a great source of comfort to me. **SA A MA U MD D SD**

22. Forgiveness is the hallmark of my spiritual nature. **SA A MA U MD D SD**

23. Being around people gives me a sense of spirituality. **SA A MA U MD D SD**

24. I feel “at one” with nature. **SA A MA U MD D SD**

This questionnaire contains a number of statements related to thoughts and behaviors of non-suicidal self-injury. Read each statement carefully, then mark the response that best describes you. Be sure to give only one answer for each statement.

Non-Suicidal Self-injury ***Thoughts***						
1.	I often have thoughts of purposely hurting myself without wanting to die (for example, cutting or burning myself).	Strongly Disagree	Moderately Disagree	Neither Disagree nor Agree	Moderately Agree	Strongly Agree
2.	I was this age when I **first** had thoughts about engaging in self-injury.	Not Applicable	10 or younger	11-13	14-17	18 or older
3.	I was this age when I **last** had thoughts about engaging in self-injury.	Not Applicable	10 or younger	11-13	14-17	18 or older
4.	Throughout my **life**, I have thought about engaging in self-injury this many separate times…	0	1-5	6-10	11-15	> 15
5.	During the **past year**, I have thought about engaging in self-injury this many separate times…	0	1-5	6-10	11-15	> 15
6.	During the **past month**, I have thought about engaging in self-injury this many separate times…	0	1-5	6-10	11-15	> 15
7.	During the **past week**, I have thought about engaging in self-injury this many separate times…	0	1-5	6-10	11-15	> 15
8.	At the worst point, my thoughts about engaging in self-injury were this severe…	Not Applicable	Not Severe	Kind of Severe	Moderately Severe	Very Severe
9.	On average, my thoughts about engaging in self-injury were this severe…	Not Applicable	Not Severe	Kind of Severe	Moderately Severe	Very Severe
10.	I know why I have (or have had) thoughts of engaging in self-injury.	Not Applicable	Disagree	Mostly Disagree	Mostly Agree	Agree
11.	How much did you think of engaging in self-injury as a way to get rid of bad feelings?	Not at all	Hardly ever	Not sure	Sometimes	Very much
12.	How much did you think of engaging in self-injury as a way to feel something, because you were feeling numb/ empty?	Not at all	Hardly ever	Not sure	Sometimes	Very much
13.	How much did you think of engaging in self-injury in order to communicate with someone else or to get attention?	Not at all	Hardly ever	Not sure	Sometimes	Very much
14.	How much did you think of engaging in self-injury in order to get out of doing something or to get away from others?	Not at all	Hardly ever	Not sure	Sometimes	Very much
15.	To what extent did problems with your family lead to your having thoughts of engaging in self-injury?	Not at all	Hardly ever	Not sure	Sometimes	Very much
16.	How much did problems with your friends lead to these thoughts?	Not at all	Hardly ever	Not sure	Sometimes	Very much
17.	How much did problems with your relationships lead to these thoughts?	Not at all	Hardly ever	Not sure	Sometimes	Very much

18.	How much did problems with your peers lead to these thoughts?	Not at all	Hardly ever	Not sure	Sometimes	Very much
19.	How much did problems with work or school lead to these thoughts?	Not at all	Hardly ever	Not sure	Sometimes	Very much
20.	How much did your mental state at the time lead to these thoughts?	Not at all	Hardly ever	Not sure	Sometimes	Very much
21.	During what percent of the time were you using drugs or alcohol when you had thoughts of engaging in self-injury?	0% or Not applicable	1-25%	26-50%	51-75%	76-100%
22.	When you have had these thoughts, how long have they usually lasted?	Not applicable	0 seconds	< 5 minutes	>5 mins but < one day	One day or more
23.	Before you ever thought about engaging in self-injury, how many of your friends, to your knowledge, thought about engaging in self-injury?	Not applicable	None	1-2	3-5	More than 5
24.	Since the first time you thought about engaging in self-injury, how many of your friends have thought about engaging in self-injury?	Not applicable	None	1-2	3-5	More than 5
25.	Before you ever thought about engaging in self-injury, how much did your friends thinking about engaging in self-injury influence your thinking about engaging in self-injury?	Not applicable	Hardly ever	Not sure	Sometimes	Very much
26.	Since you ever thought about engaging in self-injury, how much have your friends thinking about engaging in self-injury influenced your thinking about engaging in self-injury?	Not applicable	Hardly ever	Not sure	Sometimes	Very much
27.	What do you think the likelihood is that you will have thoughts about engaging in self-injury in the future?	Not at all likely	Somewhat likely	Not sure	Moderately likely	Very likely

Non-Suicidal Self-injury ***Behaviors***						
28.	I have actually engaged in self-injury.	Strongly Disagree	Moderately Disagree	Neither Disagree nor Agree	Moderately Agree	Strongly Agree
29.	I was this age when I **first** engaged in self-injury.	I have never done it	10 or younger	11-13	14-17	18 or older
30.	I was this age when I **last** engaged in self-injury.	I have never done it	10 or younger	11-13	14-17	18 or older
31.	Throughout my life, I have engaged in self-injury this many separate times...	0	1-5	6-10	11-15	> 15
32.	During the past year, I have engaged in self-injury this many separate times...	0	1-5	6-10	11-15	> 15
33.	During the past month, I have engaged in self-injury this many separate times...	0	1-5	6-10	11-15	> 15
34.	During the past week, I have engaged in self-injury this many separate times...	0	1-5	6-10	11-15	> 15

For questions 35a through 35l, please use the scale to the right, making one checkmark for each question under the appropriate category:		Strongly Disagree/ Never	Moderately Disagree	Neither Disagree nor Agree	Moderately Agree	Strongly Agree
35a.	I have cut or carved my skin.					
35b.	I have hit myself on purpose.					
35c.	I have pulled my hair out.					
35d.	I have given myself a tattoo.					
35e.	I have picked at a wound on my body.					
35f.	I have burned my skin with a cigarette, match or other hot object.					
35g.	I have inserted objects under my fingernails, toenails or skin.					
35h.	I have bit myself (e.g., mouth, lip, skin).					
35i.	I have picked areas of my body to the point of drawing blood.					
35j.	I have scraped my skin.					
35k.	I have "erased" my skin to the point of drawing blood.					
35l.	I have done other things to self-injure which are not listed here. [Please briefly describe.]					
36.	I have received medical treatment for harm caused by self-injury.	Strongly Disagree	Moderately Disagree	Neither Disagree nor Agree	Moderately Agree	Strongly Agree
37.	I know why I engage in, or have engaged in, self-injury.	Not Applicable	Disagree	Mostly Disagree	Mostly Agree	Agree
38.	When you have engaged in self-injury, how much did you do it as a way to get rid of bad feelings?	Not at all	Hardly ever	Not sure	Sometimes	Very much
39.	How much did you do it as a way to feel something, because you were feeling numb or empty?	Not at all	Hardly ever	Not sure	Sometimes	Very much
40.	How much did you engage in self-injury in order to communicate with someone else or to get attention?	Not at all	Hardly ever	Not sure	Sometimes	Very much
41.	How much did you engage in self-injury in order to get out of doing something or to get away from others?	Not at all	Hardly ever	Not sure	Sometimes	Very much
42.	To what extent did problems with your family lead to your engaging in self-injury?	Not at all	Hardly ever	Not sure	Sometimes	Very much
43.	How much did problems with your friends lead to your engaging in self-injury?	Not at all	Hardly ever	Not sure	Sometimes	Very much
44.	How much did problems with your relationships lead to your engaging in self-injury?	Not at all	Hardly ever	Not sure	Sometimes	Very much
45.	How much did problems with your peers lead to your engaging in self-injury?	Not at all	Hardly ever	Not sure	Sometimes	Very much
46.	How much did problems with work or school lead to your engaging in self-injury?	Not at all	Hardly ever	Not sure	Sometimes	Very much
47.	How much did your mental state at the time lead to your engaging in self-injury?	Not at all	Hardly ever	Not sure	Sometimes	Very much

48.	During what percent of the time were you using drugs or alcohol when you engaged in self-injury?	0% or Not applicable	1-25%	26-50%	51-75%	76-100%
49.	On average, how long have you thought about self-injury before engaging in it?	Not applicable	0 seconds	Fewer than 5 minutes	>5 mins but < one day	One day or longer
50.	Before you ever engaged in self-injury, how many of your friends, to your knowledge, engaged in self-injury?	Not applicable	None	1-2	3-5	More than 5
51.	Since the first time you engaged in self-injury, how many of your friends have engaged in self-injury?	Not applicable	None	1-2	3-5	More than 5
52.	Before you ever engaged in self-injury, how much did your friends engaging in self-injury influence your engaging in self-injury?	Not applicable	Hardly ever	Not sure	Sometimes	Very much
53.	Since the first time you engaged in self-injury, how much have your friends engaging in self-injury influenced your engaging in self-injury?	Not applicable	Hardly ever	Not sure	Sometimes	Very much
54.	What do you think the likelihood is that you will engage in self-injury in the future?	Not at all likely	Somewhat likely	Not sure	Moderately likely	Very likely

Based upon Nock, M. K., Holmberg, E. B., Photos, V. I., & Michel, B. D. (2007). The Self-Injurious Thoughts and Behaviors Interview: Development, reliability, and validity in an adolescent sample. *Psychological Assessment, 19*, 309-317.