

Participants' Experiences of Non-suicidal Self-Injury: Supporting Existing Theory and Emerging Conceptual Pathways

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Abstracts:

Due to the increase in prevalence of non-suicidal self-injury, various models of self-injury have been proposed. Researchers have found empirical support for components of these models but have not explored the models in their entirety, nor supported them through the voices of participants. Eighty-eight participants' experiences of non-suicidal self-injury were explored in the current study, providing support for the existing models of self-injury by Nock and Chapman and colleagues, as well as support for Joiner's (2005) suggestion that self-injury can desensitize individuals to suicide. However, through content analysis and correlations, new categories emerged from participants' stories that have not been included in previous models, as well as suggested pathways within the existing models. Implications for counselors are proposed.

Keywords: Thought & thinking | Personal space | Personality; Consciousness | Human beings

Article:

Due to the increase in prevalence of non-suicidal self-injury, various models of self-injury have been proposed. Researchers have found empirical support for components of these models but have not explored the models in their entirety, nor supported them through the voices of participants. Eighty-eight participants' experiences of non-suicidal self-injury were explored in the current study, providing support for the existing models of self-injury by Nock and Chapman and colleagues, as well as support for Joiner's (2005) suggestion that self-injury can desensitize individuals to suicide. However, through content analysis and correlations, new categories emerged from participants' stories that have not been included in previous models, as well as suggested pathways within the existing models. Implications for counselors are proposed.

Non-suicidal self-injury (NSSI; defined as intentionally causing immediate tissue damage to oneself; Ross & Heath, 2002), has increased in prevalence. Rates among young adults in a college population were found to increase from 18% in the early 2000s to 25% by 2011 (Simeon & Favazza, 2001; Wester, Ivers, Villalba, & Trepal, in press). More importantly, from 2008 to

2011, rates of NSSI were found to quadruple from 2.6% to 11.0% among students who reported engaging in NSSI within the past 90 days (Wester, 2014). General population rates were also found to increase from 18% to 46.5% over the past 30 years (Favazza, 1989; Lloyd-Richardson, Perrine, Dierker, & Kelley, 2007).

Conceptual frameworks have been created to better understand NSSI behaviors. Chapman, Gratz, and Brown (2006) described the Experiential Avoidance Model (EAM), specifically stating that NSSI results from the experience of intense negative affect combined with the inability to tolerate distress or regulate emotion. Nock (2009) absorbed Chapman et al.'s EAM into his Integrated Theoretical Model (ITM) of development and maintenance of NSSI. More specifically, the EAM seems to link into Nock's intrapersonal factors, which include high aversive emotions and cognitions with poor distress tolerance. Nock indicated that it is the combination of these intrapersonal factors combined with interpersonal factors (i.e. poor communication skills, poor problem solving skills) and distal risk factors (i.e., child abuse/maltreatment, family hostility, criticism) that results in NSSI behaviors. In the ITM, Nock specifically noted that NSSI is selected above and beyond any other coping strategy due to his proposed NSSI-specific vulnerability factors or processes. He indicated that these include social learning of NSSI, self-punishment, social signaling, pragmatic (or ease of the behavior), pain analgesia, and implicit identification. Each of these hypotheses had preliminary empirical support when they were proposed in the ITM (Nock), but have not been extensively explored.

Since inception of the EAM and ITM models, empirical support for components of both models has been provided. For example, distal risk factors, such as childhood abuse and dating violence, are related to NSSI behaviors (Abrams & Gordon, 2003; Murray, Wester, & Paladino, 2008). Emotion dysregulation and experiences of distress are the most commonly reported reasons for self-injury (Klonsky & Muehlenkamp, 2011), with higher levels of anxiety and depression relating to greater likelihood of engagement in and number of NSSI methods used (Wester & Trepal, 2015). Additionally, researchers found interpersonal factors from Nock's (2009) model to exist among those who self-injure. Individuals who engage in NSSI have reported having poorer communication skills (Abrams & Gordon, 2003) and less likelihood of reaching out for help (Berger, Hasking, & Martin, 2013), with the majority of those who engage in NSSI not seeking mental health treatment (Wester & Trepal, 2010). Regarding coping behaviors, individuals who self-injure were more likely to engage in maladaptive coping skills than those who did not self-injure, while being less likely to engage in adaptive coping strategies (Wester & Trepal, 2010). Furthermore, a lower sense of belonging to and affirmation by one's ethnic group was also a risk factor for engaging in self-injury (Wester & Trepal, 2015). While empirical support has been found for various components of the conceptual models of NSSI, rarely has the model been explored in its entirety, and less commonly have the voices of individuals who self-injure been heard in relation to these models. These voices are needed to further validate conceptual NSSI models and to explore if there are additional pathways or factors that should be added to the existing frameworks of NSSI.

In addition to the NSSI models, it is noteworthy that 10-37% of individuals who engage in NSSI also engage in suicidal behaviors (e.g., Andover, Primack, Gibb, & Pepper, 2010; Asarnow et al., 2011; Glenn & Klonsky, 2009; Wilcox et al., 2011). Current NSSI engagement and current number of methods used have been shown to be the strongest predictors of suicidal ideations

(Wester et al., in press), Joiner (2005) posited that acquired ability for lethal self-harm must exist; thus, NSSI behaviors can desensitize an individual to lethal means of self-harm, particularly when combined with thwarted belonging (i.e., isolation) and perceived burdensomeness on others.

While there has been support for the link between NSSI and suicide, researchers have added conflicting information about the link. Gollust, Eisenberg, and Golberstein (2008) found that although 11% of sampled individuals who self-injured reported suicidal thoughts, 43% had no suicidal thoughts or behaviors. Additionally, while NSSI has been assumed to lead to acquired capability of attempting suicide, this effect appears moderated by a feeling of burden (Van Orden, Witte, Gordon, Bender, & Joiner, 2008). Van Orden et al. reported that acquired capability for suicide, as measured by NSSI, did not predict suicidal risk when there was a low perception of burden on others, but when perceived burdensomeness was high, NSSI did positively predict suicidal risk. It seems important to begin to link the conceptual frameworks of NSSI with the frameworks of suicide, particularly that of Joiner (2005), as he has brought in the idea of NSSI linked to acquired capability for suicide.

The purpose of this study was to gather experiences of individuals who engage in NSSI in order to examine NSSI conceptual frameworks in their entirety, as well as to better understand the link of NSSI to suicidal behaviors. Exploring participants' experiences of NSSI will assist in determining if additional avenues for exploration are needed. This was done utilizing content analysis methodology. The specific research questions that guided the current study were: Do individuals who self-injure report, on their own, the components of Nock's (2009) ITM when recounting their experiences of NSSI? Do additional categories emerge from the experiential accounts of NSSI that were not in the existing ITM? Do the ITM proposed NSSI-specific vulnerability factors relate to the intra- or interpersonal factors and suicidal ideation and attempt?

Method

Participants

The final sample consisted of 88 participants recruited from social network websites and online research posts. The majority of participants were women ($n = 81, 92\%$; 8% men) and White ($n = 73, 83\%$) followed by 6.8% multi-ethnic, 3.4% Hispanic/Latino, 2.3% Asian, and 1.1% Black/African American. Three respondents did not indicate their racial/ethnic identity. Participant age ranged from 18 to 62 years ($M = 27.18, SD = 9.71$). Criteria for participating in the study included: 18 years and older, and current or previous engagement in NSSI behaviors.

Procedure

Upon IRB approval, the authors posted a request for anonymous participation on two NSSI Facebook support groups and the Self-injury Foundation blog. The two Facebook groups were membership-only sites, requiring administrators to post the survey link to members. After posting on these three sites, snowball sampling was used at the end of the survey by asking participants to forward a link to the study to anyone who met the criteria. At the completion of the survey, participants were provided with resources for suicidal and self-injurious behaviors.

Instrumentation

The following definition of NSSI was provided to participants "Self-injury has been described and defined in many different ways, including words such as self-harm, non-suicidal self-injury, deliberate self-harm, and self-mutilation. Others have used it specifically in terms of methods used to self-harm, such as cutting, burning, and scratching." This was followed by 8 open-ended questions in an online survey on Qualtrics, the adapted version of the Deliberate Self-Harm Inventory (ADSHI; Wester & Trepal, 2010; original DSHI see Gratz, 2001), questions regarding suicidal risk, and demographic items.

Experiences of NSSI. Each participant received six open-ended questions that asked about their NSSI experience. Specifically these included: "When you hear the word 'self-injury' what comes to your mind", "What has been your experience of or with self-injury", "Thinking of times when you have self-injured, what has been your goal? What have you hoped the end result to be?", "Based on your response to the question above, does self-injury typically help you reach that goal? Why or why not?", "Have you tried strategies other than self-injury to get the same effect or result? If yes, what have you tried and how did it work (or not)? If not, how come?", and "In your opinion, how are suicidal behaviors different than self-injury?"

NSSI. The ADSHI was used to gain information about previous and current NSSI behaviors. The ADSHI examines 12 NSSI methods (e.g., cut, burn; yes/no response format) for past or current use (past 90 days). If participants indicate yes to using a current NSSI method, they are asked how frequently. The ADSHI provides NSSI engagement (yes/no), current engagement (yes/ no), number of methods used in lifetime (0-12) and currently (0-12), and frequency of current engagement. Reliability and validity information have reported the DSHI and ADSHI to be an adequate measure of NSSI behavior (Gratz, 2001; Wester et al, in press; Wester & Trepal, 2010, 2015).

Suicidal behaviors. Suicidal behaviors were assessed by asking participants if they had ever had suicidal ideation or attempted suicide (yes/no response format). If participants answered yes to either of these items, they were asked two open-ended questions: "At times when you have attempted or thought about suicide, what has led up to that moment?" and "In moments where you have attempted or thought about suicide, did self-injury come into play at all prior to or after those experiences? How so?"

Demographics. Participants were asked to report their biological sex, race/ethnicity, sexual orientation, current age, and age of NSSI onset.

Data Analysis

Content analysis was used in the current study as this methodology provides a systematic, objective method for analyzing text (i.e., narratives provided by individuals who self-injure) utilizing a priori codes or categories from existing theoretical frameworks. Content analysis also allows categories to emerge from the data, thus utilizing deductive and inductive analyses (Krippendorff, 2013). Because content analysis lends itself to both qualitative and quantitative methodologies for analysis, researchers can examine both existing and emergent categories, as

well as relationships between the categories (Krippendorff, 2013; Neuendorf, 2002). This flexibility allowed the researchers to explore the relationships between NSSI factors and suicidal behaviors.

In the current study, a deductive approach was used to code categories from participants' text-based responses based on an a priori conceptual framework, specifically Nock's (2009) ITM NSSI framework and Joiner's (2005) Interpersonal Theory of Suicide (see Table 1 for a priori categories). Additionally, an inductive, emergent approach was employed to allow categories to emerge from the data without an a priori theory to explore possible expansion of the NSSI frameworks. Both authors served as coders.

The current researchers followed Krippendorff's (2013) four components of content analysis. First, researchers need to unitize, which is determining the unit that will be subjected to analysis (Smith, 2000). In the current study, the unit was the individual. The second component is sampling, which is determining the method of sampling: the units, as well as the number of units needed. Utilizing G*Power, it was determined that a minimum sample size of 64 was required to conduct point-biserial correlations assuming a medium effect size, $\alpha = .05$, and power of .80. Krippendorff's third component, recording/coding, refers to how the data is recorded so that it can be transferable and readable by more than one coder. In this case, the data were written text provided by participants in an online survey. The fourth component is reducing, which is how the created data or categories are represented. All categories, both a priori and emergent, were coded dichotomously. That is, categories were coded 0 to indicate the category was absent in an individual's narrative or 1 to indicate the category was present at least one time in an individual's narrative. For the a priori categories, the coders created a codebook and scoring sheet to guide the process. In the codebook, the coders operationally defined each variable consistent with the ITM and EAM. The scoring sheet allowed for coding of all a priori factors and contained a space to note any new emergent categories for each participant.

During this fourth component, the coders independently analyzed each participant's responses. Coders read each response twice: once to gain an overall picture of the participant and a second time to code. The coders met regularly to compare codes and to come to consensus on any discrepancies between codes. Consistent with the quantitative aspect of content analysis, the coders noted all discrepancies and computed an inter-rater reliability index. The coders were able to reach consensus on all discrepancies throughout the process. Notably, the first author has considerable experience in NSSI research and practice, while the second has less experience. Thus, consistent with the qualitative paradigm of content analysis, the two coders were able to balance one another's interpretation of themes and to bracket one another's assumptions. Frequency counts of each a priori category were computed, and participant quotes that represent each category are provided in the results below. Additional data analysis included basic demographics of participants and correlations between categories.

Results

Though all participants in the current study had engaged in NSSI at some point in their lives, 70 participants (79.5%) reported currently engaging in NSSI within the past 90 days. The average number of lifetime methods used was 6.35 ($SD = 2.00$; range 1 to 11). This was greater than the

current number of methods used ($M = 3.11$, $SD = 1.77$). Participants who currently engaged in NSSI reported engaging an average of 65.58 times in the past 90 days ($SD = 98.54$; range 1 to 542, median = 33; 1 outlier of 10,006 times was removed from this analysis). All participants indicated they had used cutting to self-injure (100%), with scratching self and using a body part to hit, punch, or bang into wall/object to specifically hurt/bruise self were used equally (80.7% each). Four percent of individuals reported breaking their own bones to self-injure at some point in their lifetime. Of those who currently self-injured, all 12 methods on the ADSHI were reported by at least one person. Most participants indicated experiencing suicidal ideation at some point in their life (92%, $n = 81$), and 5.7% of participants indicated they had never experienced suicidal ideation (2 participants did not answer this question). Almost half of the participants (56.6%) reported previously attempting suicide; 51.1% indicated they had not attempted suicide and 2.3% ($n = 2$) did not respond to this item.

Through content analysis coding, it was determined that participants' experiences supported the ITM intrapersonal factors because at least one participant (but typically more than one) self-reported each of the a priori categories/factors (See Table 1). For example, abuse history was self-reported in the open-ended questions by 13.6% of participants. Some participants reported sexual and physical abuse in childhood, neglect, and sexual abuse later in life (e.g., rape). For example, one White woman, 29 years old, indicated, "I grew up in an abusive environment and I could not express my feelings any other way." Although 86.4% of participants did not mention abuse histories, it does not mean that abuse did not occur, but that these individuals did not specifically mention abuse as a part of their NSSI experience.

The most frequently mentioned stimulus for engaging in NSSI was aversive emotions (87.5% of participants). Participants frequently mentioned high levels of overwhelming emotions, including anxiety and anger. As one 26-year-old female participant stated, "I sometimes get overwhelming feelings of anxiety and I need something to keep my mind occupied so I can ignore it." Sometimes, participants indicated that emotions were overwhelming, but they were unable to label or identify the actual feeling. One 33-year-old woman stated, "I just did it because I was in so much emotional pain and I needed something to calm me down... try and have pain on the outside to equal the pain [on the inside]..." Others mentioned underwhelming emotions, a 26-year-old woman reported, "Seeing blood proves that I'm alive. When I start to cut I feel empty, dead, like a ghost and the only way back is through proving that I haven't died."

TABLE 1 IS OMITTED FROM THIS FORMATTED DOCUMENT

In addition to emotions, participants reported overwhelming aversive cognitions (22.7%), though this was reported less frequently than emotions. Participants typically reported experiences such as, "my head was just filling up with thoughts and screams...That overwhelming pressure that was built up in my head was seeping out" (20-year-old woman). Some participants (13.7%) indicated that the stimulus to engage in NSSI behaviors was relational in nature, typically a fight or a conflict. One 18-year-old participant indicated, "[I] started cutting when I was in eighth grade as a result of bullying and low self-esteem." Likewise, a 50-year-old female participant indicated, "The worst knife cut [was] when my students gave me negative feedback and I thought I'd die, felt utterly rejected..."

Similar to aversive emotion being the most frequent stimuli, 83% of participants indicated that they engaged in NSSI to regulate emotions and to alleviate distress. Most participants indicated this was an end goal of NSSI behaviors. A 39-year-old female participant stated, "When I cut it was to release something - usually anger... Self-injury was my rescuer, my release, my friend." Interestingly, the 17% who did not mention emotion regulation as a goal or purpose of their NSSI behaviors typically reported that they were uncertain of their end goal.

When asked if they engaged in other activities to cope, 90.6% of participants indicated that they at some point tried at least one strategy other than NSSI, and 9.4% reported that they had never tried anything other than NSSI to cope. Specifically, 70.5% reported they engaged in avoidant or more maladaptive coping behaviors, including eating disorders, holding ice on skin, throwing self into work, and taking a shower. Alternatively, 55.7% of participants indicated they had attempted or engaged in active or more adaptive forms of coping behaviors, including reaching out or talking to someone (e.g., a friend or a parent). Some participants (39%) indicated that active or adaptive forms of coping were helpful, and 10.9% reported that these strategies had not helped at all (50% of participants did not indicate the helpfulness of active coping strategies). Alternatively, 32.8% of participants indicated that avoidant forms of coping were not helpful, and 18.8% indicated these strategies helped them cope (48.4% did not indicate helpfulness).

Fewer participants mentioned NSSI-specific vulnerability factors. The most common factor mentioned by participants was the pragmatic nature of NSSI behaviors in helping them cope; this was mentioned by 50% of participants. Participants frequently mentioned that nothing else worked as well or as quickly for them as NSSI. One 21-year-old man reported "...the feeling of release I gained from [self-harm] caused me to turn to it more and more as a way to cope with any problem I was having." Approximately one-quarter of participants (27.3%) reported engaging in NSSI to punish themselves. For example, a 21-year-old female participant indicated, "The goal is usually self-punishment, it took a while for me to realize that the benefit I was getting was a calming effect..." Similarly, an 18-year-old female participant said, "Other times I do it to punish myself because I have so much self-loathing."

Interestingly, 19.3% reported that when they engaged in NSSI behaviors, they felt pain, but 79.5% reported that they did not feel pain (1.1% did not indicate anything about pain). When reporting painful experiences, one participant indicated, "Even though I'm injuring myself, my thoughts are focused on the pain in my body rather than the overwhelming or racing thoughts I'm having." Those who reported experiencing no pain typically indicated similar things. For example, a participant who denied feeling pain said, "The goal is to see blood. There is no pain involved, so blood is the desired result."

Fewer participants (12.5%) indicated they engaged in NSSI to communicate or socially signal their distress to others. Individuals who reported this vulnerability factor were similar to this 38-year-old female participant: "Expressing rage and hurt. I didn't have a voice and wasn't taught or encouraged to express emotions - I was taught to hide them. I had no idea how to begin communicating how much I was hurting." Most indicated that they did not utilize self-injury to socially signal others and made comments similar to this 32-year-old woman: "I was very secretive and smart about my cutting. Thighs. Breasts. Torso. Places no one had to see..."

Even fewer participants indicated implicit identification with NSSI (8%) or that they socially learned NSSI behaviors (3.4%). Regarding social learning, a 41-year-old woman stated, "I came from a physically abusive household, and so I learned very early that there was a connection between pain and mental escape." Another participant noted of identification with NSSI, "I lost my ability to picture myself without [self-injury] by my side" (18-year-old woman).

One of the goals of the current study was to determine if any categories emerged inductively from participants' narratives. Seven categories emerged: NSSI as a protective factor, addiction, tolerance/progression, guilt/shame, temporary relief, relapse, and perceived judgment (Table 1). The most frequent emergent category was NSSI as a protective factor against suicide (n = 34, 38.6%). Specifically, participants reported that they used NSSI to avoid attempting suicide when they were having suicidal ideations. For example, a 25-year-old female participant noted, "I guess I [self-injure] hoping that the pain will remind me that I don't actually want to die," and a 22-year-old female participant said, "Cutting is a short term release when I feel too overwhelmed. If anything, it makes it so I never feel too overwhelmed that I want to commit suicide."

Twenty-eight participants (31.8%) indicated that although they felt immediate emotional relief or control once they self-injured, it was immediately followed by experiences of guilt or shame, thus experiencing a cycle of emotions. Some of these participants reported, "...usually I feel stupid afterwards as I now have marks to hide/deal with" (18-year-old female) and "Cutting and burning creates shame for me..." (33-year-old female).

The categories of addiction and tolerance/progression of NSSI emerged among 20 participants (22.7%). In the addiction category, participants self-reported NSSI as an addiction or used addictive language to describe NSSI. Some comments included, "At one time [it helped me reach my goals]. Now it has taken my life over" (54-year-old female) and "I relied on it to the point I was almost an addiction" (21-year-old male). One 24-year-old woman utilized language similar to that of addiction by stating, "I try to ignore the itching under my skin, but sometimes it becomes too great to ignore and I cave." The tolerance/progression category was defined as individuals who reported a gained tolerance in NSSI, or indicated that across time they engaged in more severe methods to achieve similar results or gain the same effect. As one 30-year-old woman stated, "It worked, I did find relief, it worked well but gradually I needed to cut more or deeper to get the same effect." Another 25-year-old woman stated, "I started off biting myself and I progressed into cutting, burning, stabbing, and beating myself with blunt objects."

Although not many participants reported the following three emergent categories, they are important to note as more than one person mentioned them. Nine individuals (10.2%) reported that although NSSI worked for them, it only provided temporary relief. Specifically, some participants stated, "it works for shorter and shorter periods of time" and "It soothes the mind for a little while...you start to come back to reality and the emotions all start to come back..." Six participants (6.8%) indicated they had gone into remission from NSSI, but they relapsed. One 27-year-old female participant provided her experience, "I can recall banging my arm or head against a wall when I was young in order to calm down. I cut through my teens and a bit in my twenties, then stopped for several years in school, but in the past year I have started again, and have started burning myself." Finally, two participants (2.2%) mentioned that they felt judged by

others due to NSSI. One mentioned that they felt judged by their counselor, "...what one therapist said to me 'it's horribly maladaptive behavior'" and the other suggested that others generally hold judgment, "I find that disclosing feelings of self-injury makes others uncomfortable and they don't always know how to act."

Finally, a purpose of the study was to explore the relationships between interpersonal factors, intrapersonal factors, abuse history, suicidal ideation and attempts, and NSSI specific vulnerability factors. Most relationships among factors represented a small ($r = .10$) to medium effect size ($r = .30$). Engaging in NSSI due to emotional stimuli related positively to using NSSI to emotionally regulate ($r = .23, p < .05$) and negatively to the number of current methods used ($r = -.26, p < .05$). Engaging in NSSI due to cognitive stimuli, such as ruminating thoughts, was negatively related to the guilt/shame cycle ($r = -.32, p < .01$), indicating that those who were more likely to engage in NSSI due to cognitions were less likely to experience guilt/shame after they self-injured. Relational stimuli were not related to any other categories or NSSI behaviors.

Men who self-injured were less likely to indicate they engaged in NSSI for emotion regulation purposes compared to women ($r = .33, p < .01$), and women reported using higher numbers of methods in their lifetime than men ($r = .24, p < .05$). Feeling a sense of isolation or alienation from others was positively related to both engaging in NSSI to socially signal and for self-punishment (r 's = $.22$ and $.23, p$'s $< .05$, respectively). Individuals who used NSSI to socially signal were more likely to report a history of abuse ($r = .25, p < .05$). Additionally, participants with a history of abuse also were more likely to perceive judgment from others regarding NSSI ($r = .27, p < .05$), were less likely to attempt suicide ($r = -.29, p < .05$), and were less likely to currently engage in NSSI behaviors ($r = -.29, p < .05$).

Participants who reported socially learning NSSI were more likely to indicate they felt pain ($r = .23, p < .05$) and to report higher levels of suicidal ideation ($r = .22, p < .05$). On the other hand, individuals who reported NSSI as pragmatic reported less suicidal ideation ($r = -.25, p < .05$). Individuals who reported that NSSI served as a protective factor against suicide were more likely to describe NSSI as an addiction ($r = .32, p < .01$). Addiction was positively related to tolerance ($r = .22, p < .05$), indicating that those who described NSSI with addictive language also indicated the need to engage in more severe methods to achieve the same result. Reporting tolerance/progression in NSSI behaviors was positively related to engaging in avoidant coping methods and implicit identification with NSSI (r 's = $.24$ and $.23, p$'s $< .05$, respectively). Additionally, individuals who reported tolerance reported a greater number of lifetime methods used ($r = .23, p < .05$). Men were more likely to engage in active forms of coping ($r = -.26, p < .05$). The number of current methods used to self-injure was positively related to identification with NSSI ($r = .27, p < .05$) and to engagement in avoidant coping ($r = .30, p < .05$).

Discussion

Although a criterion for participating in this study was that individuals needed to self-injure at some point in their life, it is notable that 80% responded self-injuring within the past 90 days, with the average frequency of NSSI being 65 times, which equates approximately to self-injuring five days per week. Even more notable was the prevalence of suicidal ideation and attempts in the current sample. The majority of participants (92%) indicated having suicidal ideations, with

over half (56%) reporting attempting suicide at some point. Suicidal behaviors and NSSI typically are related (Asarnow et al., 2011 ; Glenn & Klonsky, 2009; Wester et al., in press), yet the frequency at which individuals reported suicidal behaviors tended to be lower in other studies than was found in this study. This high prevalence of suicidal ideations and attempts among these participants who engage in NSSI lends support for Joiner's theory that NSSI may serve as desensitization to lethal self-harm. However, more research is needed into what aspect of NSSI actually relates to or increases desensitization, especially since 38% of the current sample reported NSSI as delaying or protecting them from attempting suicide. For example, authors have revealed that not all aspects of NSSI behaviors (such as frequency of engagement) relate to suicidal behavior (e.g., Nock et al., 2006; Wester et al., in press). In the current study, NSSI engagement and methods did not relate to suicidal behaviors; however, social learning of NSSI positively predicted suicidal ideation. On the other hand, individuals who reported a history of abuse were less likely to report attempting suicide or currently engaging in NSSI. It may be that specific factors within the ITM (Nock, 2009) may lead to an increased risk in suicidal behaviors rather than other factors.

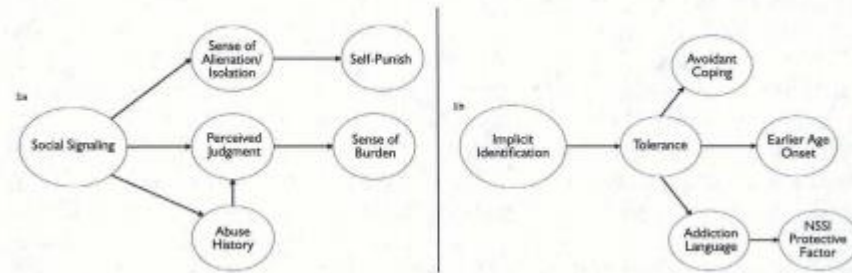
In addition to support for Nock's ITM model, it is important to note that additional themes emerged from participants' voices. These included a sense of temporary relief using NSSI, as well as experiencing guilt and shame after engaging in NSSI. The former was indicated in Chapman et al.'s (2006) EAM. They proposed that temporary relief negatively reinforces NSSI by allowing escape from aversive stimuli. However, for participants in this study, a sense of guilt and shame after self-injuring may have undone this negative reinforcement. Two other themes that emerged referred to NSSI as addiction and building tolerance to NSSI, thus needing to engage more frequently or in increasing severity of methods. While substance abuse has been related to NSSI (Stewart, Baiden, & Theall-Honey, 2014), Victor, Glenn, and Klonsky (2012) indicated that NSSI is not an addiction, but instead is reinforced through the reduction of aversive emotions. Thus, it is interesting that participants described NSSI behavior as addictive. Finally, 38.6% of participants referred to NSSI as a protective factor from attempting suicide. This reveals, through participant language, a potential positive aspect of NSSI when individuals are in moments of crisis or mortal danger.

Based on participants' voices and correlations in this study, the ITM (Nock, 2009) and the EAM (Chapman et al., 2006) were upheld. The vulnerability factors in Nock's ITM also were supported, some occurring more frequently across participants than others. However, what also seemed to emerge was that there may be different pathways within the ITM vulnerability factors that best explain individuals' engagement in NSSI. Based on the correlations found, pathways within the models seem to be appearing. Two pathways that will be highlighted here are the larger ones that were found, with the most links or correlations. These included NSSI as social signaling (Figure 1a) and implicit identification as a "self-injurer" (Figure 1b). While there are other pathways that may emerge (e.g., individuals who socially learned NSSI tended to feel more pain while self-injuring and were more likely to have suicidal ideations; individuals who reported higher suicidal ideation were less likely to refer to NSSI as pragmatic, thus easily resolving their emotions or current situation) these were the two larger pathways.

Individuals who used NSSI to socially signal seemed to be feeling a sense of isolation or alienation from others (Figure 1a), possibly resulting in the need to use NSSI for communication

purposes. Nock (2009) indicated poor communication skills as a factor that contributes to NSSI, thus it may be that these individuals do not know a more effective method to communicate to others. This may be due to alexithymia or a lack of emotive language (Cerutti, Calabrese, & Valastro, 2014). Interestingly, individuals who felt a sense of isolation were also more likely to engage in NSSI as a method of self-punishment. It is unclear yet how these two relate or are connected, but this relationship had a small to moderate effect ($r^2 = .05$). It may be that, due to self-loathing or self-blame, an individual isolates him- or herself and uses NSSI to self-punish.

Figure 1. Emerging pathways from participant narratives and correlations



History of abuse was related to social signaling as well. Both of these categories were related to greater levels of perceived judgment, which was positively related to a sense of burden on others. Due to this study being a snapshot at one point in time, it is unclear if a sense of burden leads an individual to feel judged by others or vice versa. Thus, more research is needed to determine the actual pathways and directions of relationships. It is important to tease out the direction of these relationships because Joiner (2005) suggested that the combination of perceived burden and isolation with behavior such as NSSI provides the acquired capability to attempt suicide. While unrelated in the current sample, both isolation and perceived burden are in the same potential pathway of social signaling that seems to be emerging from participants' stories.

The second of the two larger pathways that emerged (Figure 1b) was implicit identification, which was related to experiencing tolerance and needing to progress to more severe or frequent NSSI behaviors. Tolerance was then related to avoidant coping behaviors, earlier age of onset, and referral to NSSI as addictive. Unexpectedly, individuals who referred to NSSI as addictive in nature also reported it as a protective factor that they used to avoid or delay the desire to attempt suicide. Both these models and the other correlations found in the current study need to be further explored in larger longitudinal studies to determine the overall direction of the pathways and to see if these pathways hold up in larger samples.

Implications

Taking into account the limitations of the current study ($N = 88$; correlational design), the findings have important clinical implications. Participants' stories about their experience with NSSI supported existing conceptual models of NSSI and components of Joiner's (2005) acquired capability of suicide. These all came from the words provided by participants' rather than a priori researcher perspectives and selected measures. This is also the first study to support all of Nock's NSSI vulnerability factors proposed in his ITM, with some more prevalent than others. Also, this is the first study to explore Nock's model in its entirety. This holistic exploration revealed that

there is more to NSSI than what is proposed in Nock's model (i.e., the emergent themes in this study) and there are different conceptual pathways within this model that may assist in understanding and treating clients. Thus, understanding each individual client is imperative; however, applying clients' stories to the ITM, and more specifically to the emerging pathways in this study, may help clinicians understand the potential risk for suicide or even the purpose of the self-injury for a client (e.g., self-punishment, communication). Additionally, women were more likely to self-injure for aversive emotion and to use a greater number of methods to self-harm, and men were more likely to engage in active forms of coping. This highlights the need for counselors to attend to sex and gender differences in emotion regulation and coping strategies.

While NSSI and suicidal behaviors are distinct in their purpose, it is imperative that mental health counselors assess for both separately and inquire as to how they may overlap for a client, given the high overlap of suicidal ideations and attempts among the present sample and in previous studies (Wester et al., in press). Mental health counselors should consider separating "hurt yourself" assessment questions to ensure they are asking questions that assess for the desire to hurt or cut oneself (i.e., NSSI), as well as to end one's life. This helps clients who self-injure to know the counselor sees these as distinct behaviors and may make them more willing to share.

Additionally, the findings in this study support the notion that NSSI is used primarily to regulate emotions; therefore, assisting clients in learning various adaptive and healthy coping strategies may be helpful. This may include assisting clients in better understanding and being able to label their emotions, communicating their needs and feelings to others (given the frequency of alexithymia, Cerutti et al., 2014), as well as offering alternative adaptive coping strategies. Individuals who use NSSI to cope have been found to more frequently rely on maladaptive coping strategies such as denial, self blame, and alcohol abuse (Wester & Trepal, 2010) rather than adaptive and problem-focused coping strategies. Mental health counselors can consider offering strategies, while also helping clients walk through these emotion-regulation and problem-focused coping methods in and between counseling sessions.

Finally, it is important to note that while most individuals report using NSSI to regulate emotions, the different pathways bring up alternative possibilities. Therefore, it is important for mental health counselors to consider more than just emotion regulation. To do this, the counselor may look for changes in NSSI strategies or methods or the client's language around NSSI. For example, does the client's language emphasize addictive language or does the client mention needing to increase severity and frequency of methods (i.e., tolerance)? If so, the counselor may want to consider focusing on NSSI as more of a process addiction (e.g., Buser, Pitchko, & Buser, 2014) in treatment.

Additionally, it is important for mental health counselors to pay attention to the purpose of NSSI. Does the client engage in NSSI to regulate emotions, to feel better, or to gain attention or socially signal others (e.g., engaging in NSSI as more of a communication strategy rather than emotion regulation)? These emerging pathways reveal implications both for assessment and for treatment of NSSI. Nock's ITM, Chapman et al.'s EAM, and the emerging pathways in this study provide starting points for mental health counselors to use to guide questions and assess for reasons for NSSI.

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