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Non-Suicidal Self-Injury Disorder in a Community Sample of Adults

Margaret S. Andover

Department of Psychology, Fordham University, Bronx, NY, USA

Abstract

Non-suicidal self-injury (NSSI) Disorder has been included in DSM-5 for the first time as a disorder requiring further research. The present study investigated DSM-5 criteria for NSSI Disorder in a community sample of adults and provided an initial investigation of differences between those with and without a diagnosis of NSSI Disorder and NSSI history. Participants over the age of 18 ($N = 548$) completed an online survey using Amazon's MTurk. A lifetime history of NSSI was reported by 23% of the sample. Nearly 3% of the total sample and 11.2% of those with an NSSI history met criteria for NSSI Disorder. Those with NSSI Disorder were similar to participants with an NSSI history who did not meet criteria for the disorder on NSSI frequency and methods, and age of NSSI onset, use of coping strategies, and borderline symptoms, but they differed on automatic reinforcement of the behavior and reported interference with functioning. Endorsement of specific NSSI Disorder criteria, potential implications for the diagnosis, and avenues for future research are discussed.

Keywords

DSM-5; NSSI

1. Introduction

Non-suicidal self-injury (NSSI) involves deliberate injury to body tissue that occurs without suicidal intent and for purposes that are not socially sanctioned; common methods of NSSI include cutting, carving, burning, and skin picking (International Society for the Study of Self-Injury, n.d.). The behavior is a significant public health problem, as NSSI is alarmingly prevalent in both clinical and non-clinical samples of adults and youth (e. g., Klonsky, 2011; Rodham and Hawton, 2009). Historically, NSSI has been included in the *Diagnostic and Statistical Manual* (DSM) only as a criterion of borderline personality disorder (BPD; American Psychiatric Association, 2000). However, NSSI does not occur exclusively in the

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Corresponding Author: Margaret S. Andover, Ph.D., Fordham University, Department of Psychology, 441 East Fordham Road, Bronx, NY 10458. Tel.: 718 817 0188; andover@fordham.edu.

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context of BPD (Andover et al., 2005; Muehlenkamp et al., 2011), and the behavior has been reported across psychiatric disorders (e.g., Glenn and Klonsky, 2013; Nock et al., 2006). Despite this, the sole placement of NSSI in the DSM as a symptom of BPD is problematic because it is inconsistent with research findings on the association between NSSI and BPD (e.g., Andover et al., 2005; Muehlenkamp et al., 2011; Nock et al., 2006), it may limit treatment development and identification of NSSI in individuals without BPD, and it may contribute to a bias toward diagnosing BPD among individuals who engage in NSSI (Ghaziuddin et al., 1992).

In order to appropriately represent NSSI as distinct from BPD and to facilitate communication among clinicians and patients, as well as the identification, and treatment of those who engage in the behavior, researchers have suggested that NSSI be included in the DSM as a specific diagnostic category (e.g., Favazza and Rosenthal, 1990; Muehlenkamp, 2005; Pattison and Kahan, 1983). In 2009, NSSI Disorder was proposed for inclusion in DSM-5 (Shaffer and Jacobson, 2009). The Child and Adolescent Workgroup for DSM-5 argued that NSSI Disorder merited inclusion in the DSM because of the concerning prevalence of the behavior, associated clinical and functional impairment, and distinction from suicidal behaviors, BPD, and other psychiatric diagnoses (Shaffer and Jacobson, 2009). Although criteria for the disorder were modified several times since the original proposal, the final proposed criteria for DSM-5 included the following:

- A.** Intentional self-inflicted injury performed with the expectation of physical harm, but without suicidal intent, on five or more days in the past year.
- B.** The behavior is performed for at least one of the following reasons:
 - 1.** To relieve negative thoughts or feelings
 - 2.** To resolve an interpersonal problem
 - 3.** To cause a positive feeling or emotion
- C.** The behavior is associated with at least one of the following:
 - 1.** Negative thoughts or feelings or interpersonal problems that occur immediately prior to engaging in NSSI
 - 2.** Preoccupation with NSSI that is difficult to resist
 - 3.** Frequent urge to engage in NSSI
- D.** The behavior is not socially sanctioned and is more significant than nail biting or picking at a scab
- E.** The behavior causes clinically significant distress or impairment
- F.** The behavior does not occur exclusively in the context of another disorder and cannot be accounted for by another mental or medical disorder (American Psychiatric Association, 2013).

However, NSSI Disorder performed poorly in the initial DSM-5 field trials; inter-rater reliability of the diagnosis was unacceptably low (Regier et al., 2013). Ultimately, NSSI was accepted to Section 3 of the DSM-5, Disorders Requiring Further Research (APA, 2013).

Since the diagnosis was proposed, several studies have investigated NSSI Disorder, most within adolescent samples. Because the proposed criteria were not finalized when many of the studies were conducted, the published DSM-5 criteria were not used. In addition, most researchers determined if criteria were met using available self-report measures, rather than directly assessing for each criterion. Despite these limitations, these studies provide important evidence regarding the prevalence and validity of NSSI disorder. Using questions from the Functional Assessment of Self-Mutilation (FASM; Lloyd et al., 1997) and the Self-Injurious Thoughts and Behaviors Interview (SITBI-Short; Nock et al., 2007) to determine Criteria A and B, Zetterqvist and colleagues (2013) found that although 41.6% of their sample of community adolescents reported a history of NSSI, 6.7% met criteria for a diagnosis. Barrocas and colleagues (2012) reported that 8.0% of a community sample of youth aged 7 to 16 reported an NSSI history, and 1.5% fulfilled Criterion A of NSSI Disorder. Each participant who reported engaging in NSSI at least five times in the past year also reported engaging in NSSI with a purpose, which had been a proposed component of Criterion B at the time of the study. In addition, youth who met Criterion A reported significantly higher levels of depression than other participants, suggesting functional impairment (Barrocas et al., 2012) and therefore serving as a proxy for Criterion E. Among adolescent psychiatric inpatients, 78% of those with a history of NSSI and half of the total sample met criteria for NSSI Disorder using the Inventory of Statements about Self-Injury (ISAS; Klonsky and Glenn, 2009) to assess proposed NSSI criteria (Glenn and Klonsky, 2013). The authors found that the co-occurrence between NSSI Disorder and BPD was similar to the comorbidity between BPD and other Axis I disorders, and NSSI Disorder statistically predicted suicidal ideation and attempts within the past month, emotion dysregulation, and loneliness while controlling for BPD diagnosis (Glenn and Klonsky, 2013). These findings provide support for distinguishing NSSI from BPD among adolescent psychiatric patients. In addition, patients with NSSI disorder were more likely to be diagnosed with a mood disorder, anxiety disorder, bulimia nervosa, and BPD, as well as report more suicidal ideation and attempts in the past month, emotion dysregulation, and loneliness, than other psychiatric patients (Glenn and Klonsky, 2013), suggesting that NSSI Disorder is in fact a valid diagnosis, and not simply a behavior that occurs within the context of another psychiatric disorder.

Only one study has investigated NSSI Disorder among adults. Selby and colleagues (2012) conducted a chart review of adult outpatients. Those who 1) reported problems with NSSI in the past year, 2) did not meet criteria for BPD, and 3) whose NSSI was not better accounted for by mental retardation or an autism spectrum disorder were included in the NSSI Disorder group; frequency, function, and associated factors (Criteria A, B, and C) were not assessed. Using these criteria, 11% of the sample met criteria for NSSI disorder. When compared with outpatients diagnosed with BPD, participants with NSSI Disorder reported similar diagnoses, psychopathology, and impairment. Those with BPD, however, were more likely to be female and to report a history of abuse than those with NSSI Disorder. Compared to outpatients with psychiatric diagnoses other than BPD, those with NSSI Disorder reported more depressive symptoms, anxious symptoms, and suicidality (Selby et al., 2012). Similar to Glenn and Klonsky (2013), comparisons between NSSI Disorder and other diagnoses support the inclusion of a separate NSSI diagnosis. Similar findings between the NSSI

Disorder and BPD groups are more difficult to interpret, however, as over half of those in the BPD group reported problems with NSSI (Selby et al., 2012).

Research on the distinction between NSSI Disorder and other psychiatric diagnoses supports NSSI Disorder as a valid DSM diagnosis (Glenn and Klonsky, 2013; Selby et al., 2012). In addition, research suggests that the rates of NSSI Disorder may differ based on the sample; between 1.5% and 6.7% of community youth may meet criteria for NSSI Disorder (Barrocas et al., 2012; Zetterqvist et al., 2013), 50% of adolescent psychiatric inpatients (Glenn and Klonsky, 2013), and 11% of outpatient adults (Selby et al., 2012). However, the existing research on NSSI Disorder has been limited by a number of factors. First, each study used an earlier version of the DSM-5 criteria for the disorder, limiting the generalizability of the findings to the diagnosis currently presented in Section 3. Second, the studies assessed only some of the criteria for NSSI Disorder. Finally, none of the studies directly assessed the diagnostic criteria, instead using a separate NSSI assessment tool to investigate each criterion. Although this methodology may have yielded similar results as an interview or measure designed to directly assess the criteria, clinical and research assessment of the diagnosis will likely be based on questions specific to the diagnostic criteria. Given these limitations and the limited research on NSSI Disorder, the purpose of this study was to directly assess the criteria of NSSI Disorder in DSM-5 in a community sample of United States adults and to provide an initial investigation of differences between those with and without a diagnosis of NSSI and NSSI history.

2. Methods

2.1 Participants and procedure

Participants for the current study were recruited using Amazon's Mechanical Turk (MTurk; www.MTurk.com). MTurk is an online marketplace where jobs are posted and workers select and complete jobs for pay. MTurk has been used in a number of psychological research paradigms, and poses a number of benefits over other research designs, such as access to diverse participants and faster data collection (e. g., Buhrmester et al., 2011; Mason and Suri, 2012). MTurk results in high-quality data (Buhrmester et al., 2011; Mason and Suri, 2012); Buhrmester and colleagues (2011) found that the psychometric properties of data collected using MTurk either was either equal to or better than published psychometric standards for the measures.

Recruitment for MTurk is passive; workers find the survey using search items for tasks posted by requestors. For the current study, the search terms "psychology, psychiatry, coping, life events, stress, self-injury, self-harm, NSSI, and self-mutilation" were used. Workers who meet the study's qualifications can access a brief description of any study they are interested in, and they can contact the requestor for additional information. The qualifications for this study were restricted to workers in the United States who were at least 18 years of age and had a 95% completion rate for other surveys on MTurk. If the worker wished to participate after viewing the description of the study, they were directed to a page with the study's informed consent form; only those who indicated that they gave consent completed the online survey. Workers read an online debriefing form following their participation, and they were compensated for their time.

In total, 564 MTurk workers participated in the study. Sixteen workers failed one or more validity checks included in the survey as part of recommendations to ensure high-quality data (Mason and Suri, 2012) and were not included in the study; the final sample consisted of 548 participants. Participants ranged in age from 18 to 73 years ($M = 35.70$, $SD = 12.23$). Nearly 50% of the sample was female (46.5%, $n = 255$). Eighty percent (79.7%, $n = 437$) reported their race as white, and 6.8% ($n = 37$) reported their ethnicity as Latino/a. Eighteen percent (17.7%, $n = 92$) reported being in college.

2.2 Measures

NSSI Disorder—Participants were asked to indicate if they had ever purposefully hurt themselves without intent to die. Those who reported a history of NSSI were asked to respond to questions assessing Criteria A (i.e., NSSI on five or more days in the past year), B (i.e., NSSI performed to relieve negative thoughts or feelings, resolve an interpersonal problem, or generate positive affect), C (i.e., interpersonal problems or negative cognitions or affect immediately preceding NSSI, preoccupation with NSSI, or frequent urge to engage in NSSI), and E (i.e., clinically significant distress or impairment due to NSSI) of NSSI Disorder. For Criterion A, participants were asked to indicate the number of days in the past year during which they engaged in NSSI. For Criteria B and C, participants were asked to respond “yes”, “no”, or “I don’t know” to questions assessing reasons for NSSI and associated factors as listed in DSM-5. For Criterion E, participants were asked to respond “yes”, “no”, or “I don’t know” to two questions: one assessing whether NSSI interfered with the participant’s functioning, and one asking if the participant wanted to stop engaging in NSSI. Internal consistency for diagnostic criteria was moderate, $\alpha = 0.56$.

Functional Assessment of Self-Mutilation (FASM; Lloyd et al., 1997)—The FASM is a self-report measure that assesses specific characteristics of NSSI, such as methods used, frequency of the behavior, and age of onset. In addition, the FASM consists of 23 statements assessing four functions of NSSI: automatic negative, automatic positive, social negative, and social positive reinforcement. The FASM has been used in several studies of NSSI and has demonstrated adequate reliability and validity (Guertin et al., 2001; Lloyd et al., 1997; Nock et al., 2006). Internal consistency of the FASM in the present study was excellent, $\alpha = 0.92$.

Coping Strategy Indicator (CSI; Amirkhan, 1990)—The CSI is a 33-item self-report inventory used to assess the degree to which participants used three specific coping strategies, problem solving, social support seeking, and avoidance, during a recent stressful event. The CSI has demonstrated good reliability and validity among non-clinical samples (Amirkhan, 1990). Internal consistency of the CSI in the current study was very good, $\alpha = 0.87$.

McLean Screening Instrument for Borderline Personality Disorder (MSI-BPD; Zanarini et al., 2003)—The MSI-BPD consists of ten true or false statements that reflect the nine criteria of the DSM-5 BPD diagnosis. The measure has demonstrated good sensitivity and specificity in research studies (Zanarini et al., 2003). To reduce overlap in the NSSI construct, ratings for the self-injury question were not included in the calculation of

MSI-BPD total scores. The internal consistency for the MSI-BPD in the current study was good, $\alpha = 0.83$.

3. Results

3.1 NSSI disorder

Nearly a quarter of participants (23.0%; $n = 126$) reported engaging in NSSI at least once in their lifetime. The following analyses only included only those participants reporting a history of NSSI. Over 30% (36.8%, $n = 46$) indicated that they did not engage in NSSI during the past year. Number of days on which the participant engaged in NSSI during the past year ranged from 0 to 365 ($M = 15.37$, $SD = 60.70$). Twenty percent (20.8%, $n = 46$) of those with an NSSI history reported engaging in NSSI on five or more days in the past year (Criterion A).

Two-thirds of the sample of self-injurers (66.4%, $n = 83$) fulfilled Criterion B by endorsing at least one of three reasons for NSSI; 33.6% ($n = 42$) did not endorse Criterion B. Specific patterns of endorsement are shown on Table 1. Over 10% of the sample responded “I don’t know” to the functions of NSSI assessed by Criterion B (Relieve negative thoughts or feelings: 16.8%; Resolve an interpersonal problem: 11.2%; Generate a positive feeling or emotion: 12.8%). Over 80% of the sample (82.4%, $n = 103$) fulfilled Criterion C by endorsing at least one of three associated features of NSSI; 17.6% ($n = 22$) did not endorse Criterion C. Specific patterns of endorsement are shown on Table 1. A smaller percentage of the sample responded “I don’t know” to Criterion C than to Criterion B (Immediately preceded by negative affect or interpersonal problems: 3.2%; Difficulty stopping NSSI thoughts: 14.4%; Frequent urges to engage in NSSI: 2.4%).

Nearly 20% of those with an NSSI history (17.6%, $n = 22$) fulfilled Criteria A, B, and C. As shown in Table 1, clinically significant distress or impairment in functioning (Criterion E) was indicated by an affirmative response to at least one of two questions: “Does NSSI interfere with your functioning?” and “Do you want to stop engaging in NSSI?”; 1.1% and 24.0% of participants endorsed “I don’t know” for each item respectively. Nearly 65% of those with an NSSI history (64.8%, $n = 81$) reported clinically significant distress or impairment in functioning. Excluding Criterion D (not socially sanctioned and not restricted to scab picking or nail biting), and Criterion F (not better accounted for by another condition) 2.6% of the total sample and 11.2% of those with an NSSI history met criteria for NSSI Disorder.

3.2 Differences in demographic and clinical variables

We next investigated differences in demographic and clinical variables among participants with no NSSI history ($n = 400$), those with an NSSI history who did not meet criteria for NSSI Disorder ($n = 112$), and those with NSSI Disorder ($n = 14$). As seen in Table 2, there were no differences among the groups in gender, ethnicity, or the percent currently enrolled in college. However, there was a significant difference in age, $F(2, 519) = 8.19$, $p < 0.001$, $r_{es} = 0.16$, although post-hoc analyses did not reveal the pattern of significant differences. In addition, those with an NSSI history, regardless of diagnosis, were significantly more likely

to be white, $X^2(2, N = 524) = 8.06, p = 0.02$, *Cramer's V* = 0.12. Compared with participants with an NSSI history regardless of diagnosis, those without an NSSI history endorsed significantly fewer BPD criteria, $F(2, 495) = 83.66, p < 0.001, r_{es} = 0.49$, and avoidance behaviors, $F(2, 496) = 19.52, p < 0.001, r_{es} = 0.27$. Those without an NSSI history reported using more problem solving strategies than those with NSSI Disorder, $F(2, 495) = 7.18, p = 0.001, r_{es} = 0.17$, but there was no difference in use of social support seeking strategies.

3.3 Differences in NSSI characteristics

Next, we investigated whether those with NSSI Disorder differed from those with an NSSI history, but not NSSI Disorder, in NSSI characteristics and functions. As seen in Table 3, those with NSSI Disorder reported engaging in NSSI on significantly more days in the past year, $t(123) = 5.11, p < 0.001, r_{es} = 0.42$, than those who did not meet criteria for the disorder. The groups did not differ in lifetime frequency of NSSI or age of onset of the behavior. Those with NSSI Disorder were significantly more likely than those with an NSSI history only to report that the behavior interfered with functioning, $X^2(2, N = 125) = 8.17, p = 0.02$, *Cramer's V* = 0.26, although the groups were equally likely to report that they wanted to stop engaging in NSSI, $X^2(2, N = 125) = 4.15, p = 0.13$, *Cramer's V* = 0.18. The groups did not differ on number of NSSI methods used or in use of specific NSSI methods, although a trend for greater likelihood of biting among those with the disorder was noted, $X^2(1, N = 119) = 3.45, p = 0.06, \Phi = 0.17$. Regarding function of the behavior, those with NSSI Disorder reported engaging in the behavior for significantly more autonomic functions than those without the disorder (Negative: $t(122) = 3.73, p < 0.001, r_{es} = 0.32$; Positive: $t(121) = 3.72, p < 0.001, r_{es} = 0.32$). There were no differences in reported in social functions of the behavior.

4. Discussion

The purpose of this study was to investigate NSSI Disorder, a disorder requiring further research included in DSM-5 (APA, 2013), in an adult community sample. Overall, 23% of study participants reported a lifetime history of NSSI. Nearly 3% of the total sample met Criteria A, B, C, and E for NSSI Disorder; of those with an NSSI history, 11.2% met these diagnostic criteria. The prevalence of NSSI Disorder among those with an NSSI history was consistent with research on NSSI Disorder in an outpatient adult sample (Selby et al., 2012), as well as among community adolescents (Zetterqvist et al., 2013). The prevalence of NSSI Disorder was lower than that found among a sample of adolescent psychiatric inpatients (Glenn and Klonsky, 2013), although this is likely due to the non-clinical nature of the current sample.

The rates of endorsement of specific NSSI Disorder criteria were evaluated in the present study. Over 40% of participants with an NSSI history reported engaging in NSSI on fewer than five days in the past year, therefore excluding them from a diagnosis. However, those reporting NSSI on five or more days in the past year did not differ significantly from those reporting the behavior on fewer than five days in endorsement of Criteria B, C, or E. Future research should confirm that the current criterion of five days is a clinically meaningful cut

point for the diagnosis. In the current study, the majority of participants met Criteria B and C by endorsing a single component of the criterion (engaging in NSSI to relieve negative affect and cognition, and following negative affect/cognition or interpersonal difficulties, respectively). Future research should investigate whether the additional criteria components are necessary in identifying individuals with clinically severe NSSI. Researchers may also wish to reevaluate the utility of infrequently endorsed options, such as engaging in NSSI to resolve an interpersonal problem, which was endorsed by only 9% of participants with an NSSI history. Further, Criterion E, clinically significant impairment or distress from NSSI, was assessed in the current study with two questions, yielding notable results. Although 65% of participants with an NSSI history met Criterion E, only 9% reported that the behavior interfered with functioning; this suggests that clinical significance for NSSI Disorder may be based more on distress than impairment. However, this finding may be an artifact of the assessment measure, as distress was assessed with the question “Do you want to stop engaging in NSSI?”, which may not reflect clinically significant levels of distress.

Of note, a significant minority of the sample (ranging from 2.4% to 16.8%) responded “I don’t know” when asked about specific components of Criteria B and C. Although the format of the survey was self-report, this finding suggests that some clients may have difficulty understanding or accurately responding to certain criteria. Clinicians should be provided with explanations or examples of the criteria in order to ensure a valid diagnostic assessment. In addition, this suggests that the wording for these criteria may need to be clarified when diagnostic criteria are revised.

Participants with NSSI Disorder were then compared to those with an NSSI history who did not meet criteria for the disorder, as well as participants without an NSSI history, to provide a preliminary investigation of group differences in functioning. Findings suggest that although those with an NSSI history report elevated borderline symptoms and poorer coping strategies than participants without an NSSI history, those with NSSI Disorder may not be more severe than those who engage in NSSI alone. Although this may challenge the utility of identifying those meeting the current diagnostic criteria as distinct from other self-injurers, it may also indicate increased clinical severity among individuals with subthreshold NSSI Disorder. Similar to research on other subthreshold disorders (e.g., Shankman et al., 2009), individuals with subthreshold NSSI Disorder may experience significant impairment, and the subthreshold disorder may be a precursor for developing the full syndrome or another disorder. Results, however, should be interpreted with caution pending further study. The sample identified as having NSSI Disorder in the current study was very small, and the clinical variables investigated were limited to borderline symptoms and coping strategies. Further research using a larger NSSI Disorder sample and assessing other relevant clinical variables is necessary to determine differences between groups.

Among those with an NSSI history, those with and without an NSSI Disorder diagnosis did not differ on many characteristics of NSSI. Specifically, groups did not differ in age of onset, lifetime frequency of NSSI, number of NSSI methods used, or likelihood of using specific NSSI methods. Consistent with the endorsement of Criteria B and C necessary for a diagnosis, those with NSSI Disorder reported significantly more automatic positive and negative social reinforcement from NSSI, but the groups did not differ in engaging in NSSI

for social reinforcement. This is also consistent with Zetterqvist and colleagues' (2013) finding of greater endorsement of automatic functions than social functions among adolescents. Interestingly, although those with NSSI Disorder were more likely to report that the behavior interfered with their daily functioning, those with and without the disorder were equally likely to report that they wanted to stop engaging in NSSI. This suggests that individuals who do not meet diagnostic criteria for NSSI Disorder may be as likely to seek treatment for the behavior as those who do meet criteria for the diagnosis. Differences in functions of the behavior between those with and without an NSSI Disorder diagnosis may impact treatment effectiveness for patients seeking treatment. It is possible that interventions focused on the automatic functions of the behavior, such as emotion regulation, may not be as effective among those without NSSI Disorder who seek treatment for the behavior as they endorse fewer automatic functions of the behavior. Research on treatment effectiveness for decreasing NSSI among those with and without an NSSI Disorder diagnosis is necessary.

This study is among the first to investigate NSSI disorder in community adults, and additional research is necessary to address the limitations of this study. Specifically, the present study did not assess Criteria D (the behavior is not socially sanctioned or restricted to insignificant behaviors) or F (the behavior does not occur exclusively in the context of another disorder or cannot be better accounted for by another disorder). In addition, this study's methodology consisted of a self-report survey rather than a structured or semi-structured clinical interview that will most likely be used in clinical practice. Internal consistency of items assessing NSSI Disorder was low, which may reflect the questions developed to assess criteria in the current study or the criteria themselves. In addition, the current study investigated group differences on a limited number of clinical and demographic variables; future research should also investigate the differences between self-injurers with and without an NSSI Disorder diagnosis on various indices of psychopathology, including suicidal thoughts and behaviors, comorbid psychiatric diagnoses, levels of depression and anxiety, and associated features such as emotion dysregulation and impulsivity, in order to determine whether participants with NSSI Disorder represent a more clinically severe sample than those with an NSSI history who do not meet criteria for the disorder.

NSSI Disorder has been included in the DSM-5 for the first time as a disorder requiring further research (APA, 2013). As expected given the recency of its inclusion, little research has been published on NSSI Disorder, and most of the existing research does not utilize the final version of the criteria included in DSM-5. In addition, previous research on NSSI Disorder did not assess diagnostic criteria directly; instead, criteria were assessed indirectly using established NSSI measures developed and validated for different purposes, such as self-report measures assessing functions of the behavior. The present study adds to the literature by providing an initial assessment of NSSI Disorder in a non-clinical adult sample, as well as preliminary data for the overlap and distinction between self-injurers with and without an NSSI Disorder diagnosis.

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Table 1**Percent of Self-Injurers Endorsing Specific NSSI Disorder Criteria**

	Percent Endorsing (N = 126)
Criterion A	
Engaged in NSSI on 5+ days in past year	20.8
Criterion B	
Relieve negative thoughts or feelings	60.8
Resolve an interpersonal problem	8.8
Generate a positive feeling or emotion	26.0
One Criterion B item endorsed	43.2
Two Criterion B items endorsed	16.8
Three Criterion B items endorsed	6.4
Criterion C	
Immediately preceded by negative affect or interpersonal problems	82.4
Difficulty stopping NSSI thoughts	37.6
Frequent urges to engage in NSSI	19.4
One Criterion C item endorsed	43.2
Two Criterion C items endorsed	23.2
Three Criterion C items endorsed	16.0
Criterion E	
Interferes with functioning	8.8
Desire to stop engaging in NSSI	60.8
One Criterion E item endorsed	60.0
Two Criterion E items endorsed	4.8

Table 2

Demographic and Clinical Variables by NSSI History and NSSI Diagnostic Status

	No NSSI (n = 400)	NSSI History, Not Disorder (n = 111)	NSSI Disorder (n = 14)	F/ χ^2	df	r_{es}/V
Demographics						
Age	36.97 (12.90)	31.84 (9.43)	32.64 (9.35)	8.19 ***	2, 519	0.16
Gender (% Female)	48.5	42.0	50.0	1.55	2	0.05
Race (% White)	77.4	89.3	85.7	8.06 *	2	0.12
Ethnicity (% Latino)	5.5	8.0	14.3	2.49	2	0.07
College Student (% in college)	16.4	23.9	7.1	3.95	2	0.09
CSI						
Problem Solving	16.21 (4.72) _a	14.38 (5.69)	13.29 (6.62) _b	7.18 ***	2, 495	0.17
Social Support Seeking	11.47 (6.32)	11.74 (6.70)	11.86 (6.55)	0.09	2, 499	0.02
Avoidance	9.20 (5.16) _a	12.25 (4.74) _b	14.00 (3.92) _b	19.52 ***	2, 496	0.27
MSI-BPD	2.33 (2.38) _a	5.40 (2.27) _b	6.07 (2.30) _b	83.66 ***	2, 495	0.49

Note. Unless otherwise specified, values in cells represent means, and values in parentheses represent standard deviations. NSSI = Non-suicidal self-injury. CSI = Coping Strategy Indicator. MSI-BPD = McLean Screening Instrument for Borderline Personality Disorder.

* $p < 0.05$,

** $p < 0.01$,

*** $p < 0.001$

Table 3

NSSI Characteristics by NSSI Diagnostic Status

	NSSI History, Not Disorder (n = 111)	NSSI Disorder (n = 14)	t/χ^2	df	$r_e/\Phi/V$
Age of NSSI onset	15.60 (5.65)	14.00 (5.63)	-1.00	121	0.09
Number of days past year	6.38 (35.89)	86.64 (134.47)	5.11 ***	123	0.42
Lifetime NSSI frequency	712.65 (5962.38)	359.50 (609.36)	-0.22	114	0.02
Interfere with functioning (% Yes)	6.3	28.6	8.17 *	2	0.26
Want to stop (% Yes)	57.7	85.7	4.15	2	0.18
FASM					
Autonomic Negative	1.81 (1.88)	3.79 (1.67)	3.73 ***	122	0.32
Autonomic Positive	2.41 (2.51)	5.00 (2.00)	3.72 ***	121	0.32
Social Negative	0.96 (1.91)	0.64 (1.01)	-0.60	123	0.05
Social Positive	4.30 (7.59)	3.15 (2.78)	-0.54	116	0.05
NSSI Methods					
Number of NSSI Methods	2.10 (1.54)	2.75 (1.42)	1.39	115	0.13
% Cut	56.0	78.6	2.61	1	0.15
% Carve	25.2	16.7	0.43	1	0.06
% Hit	43.0	50.0	0.22	1	0.04
% Interfere with wound healing	19.6	25.0	0.19	1	0.04
% Burn	15.1	33.3	2.55	1	0.15
% Insert objects under skin	3.7	0.0	0.46	1	0.06
% Bite	13.1	33.3	3.45	1	0.17
% Skin pick	14.0	16.7	0.06	1	0.02
% Scratch	18.9	25.0	0.26	1	0.05

Note. Unless otherwise specified, values in cells represent means, and values in parentheses represent standard deviations. NSSI = Non-suicidal self-injury. FASM = Functional Assessment of Self-Mutilation.

* $p < 0.05$,

** $p < 0.01$,

*** $p < 0.001$,