

# Functions, Consequences, and Frequency of Non-suicidal Self-Injury

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**Abstract** We examined the correspondence between reported reasons and consequences for a specific act of non-suicidal self-injury (NSSI), and their relationship with lifetime NSSI frequency. College students with a history of NSSI ( $n = 52$ ) indicated reasons for and consequences from their most recent NSSI episode. A match was coded when a reason and its corresponding consequence(s) were both endorsed by the participant. Reasons and consequences were significantly correlated, but their correspondence was not related to lifetime NSSI frequency. Automatic negative reasons explained lifetime NSSI frequency, but consequences and match between reasons and consequences did not. Reported reasons for NSSI may be more important in understanding maintenance of NSSI than either consequences or match.

**Keywords** Non-suicidal self-injury · Operant conditioning · Functions · Emotion regulation

## Introduction

Non-suicidal self-injury (NSSI) is the act of harming one's self without the intention of suicide. Approximately 5.9 % of the general population in the U.S. engages in NSSI in their lifetime, with median age of onset of 14 years. The rate of NSSI is higher among people younger than 30 [1]. Lifetime prevalence rates for adolescents are approximately 13–23 % [2].

There is tremendous variance in lifetime frequency for NSSI behaviors [3, 4]. For example, Laye-Gindhu and Schonert-Reichl [5] reported lifetime frequencies of NSSI behavior in a community sample ranging from one episode to hundreds of episodes.

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Unfortunately, few studies have examined NSSI frequency as an outcome variable. Those that have focused on NSSI frequency typically examine frequency on a short-term basis, such as NSSI acts within a month [6] or a year or two [7] rather than assessing over a lifetime. Others have assessed lifetime frequency by using response categories such as six or more episodes [8], thereby missing variance within the large group of repeated injurers.

Some evidence suggests that the frequency of NSSI is associated with the severity of NSSI. Chinese adolescents who endorsed six or more acts of NSSI in the past 2 years reported more depressive symptoms, behavioral impulsivity, and dissociation compared to those with fewer NSSI acts [8]. Greater lifetime frequency of NSSI was also found to be related to a history of attempted suicides, more suicide attempts, and current suicidal ideation in a sample of psychiatric inpatients [9]. These studies suggest that lifetime frequency may be associated with poorer outcomes.

Operant conditioning may be a useful framework to begin to understand the maintenance of self-injurious behavior. That is, individuals will continue to self-injure after the behavior is reinforced. Possible reinforcers include features of the environment or a person's individual affect. For example, attention could be a positive reinforcer for self-injurious behavior, leading to an increase in the frequency of NSSI. Feeling positive emotions or a sense of control over the environment following self-injury could also be considered positive reinforcers. Reduction in distress could serve as a negative reinforcer for the self-injurious behavior. Thus, either positive or negative reinforcers sought by the person can increase occurrence of the behavior [10]. Although conscious awareness of the association between the behavior and the consequence are not necessary for learning, humans with verbal capacity learn faster when given a rule describing the consequence that follows a behavior [11]. It would be useful to understand an individual's own rule for the contingencies they anticipate receiving from a behavior such as NSSI, to better implement behavior modification.

## Functions of NSSI

To date, most of the research has centered on examining the reasons individuals choose to self-injure with the hope of informing treatment for those engaging in NSSI. It should be noted however, that the term 'functions' has been used in NSSI literature to describe consciously processed reasons for NSSI rather than the actual reinforcing factors for the behavior, which may be different. For the purposes of this paper, we will be using the four function model of NSSI as described by Nock and Prinstein [12]. In this model, four separate functions are categorized along two dichotomous dimensions: positive or negative reinforcement and automatic or social context. In automatic-positive reinforcement, individuals have an increase in positive emotions. Automatic-negative reinforcement involves reduction of negative affect states. Social-positive reinforcement refers to gaining attention or access to others whereas social-negative reinforcement describes situations where NSSI allows individuals to flee from interpersonal demands. Multiple studies have found that automatic functions are more frequently endorsed than social functions [12–14].

## Consequences of NSSI

Although research on functions of NSSI has increased in recent years, there is little research focused on the reported consequences of the behavior or on the association

between the reported reasons for NSSI and the reported consequences that follow an NSSI episode. One method to study this relationship as described by Nock and Prinstein [15] is by conducting a functional analysis using the antecedents and consequences of NSSI to understand its development and maintenance. As previously stated, individuals' self-reported reasons may differ from the factors that actually determine the behavior. For example, if an individual wishes to engage in NSSI to feel better, it may also be allowing him/her to avoid social places such as school or work settings, even though they weren't consciously engaging in the behavior for these effects. These unintended consequences may then increase the probability that this individual will repeat the behavior.

Research on the consequences of NSSI has shown that the majority of individuals reported experiencing relief, calmness, and sadness immediately after an NSSI episode [13]. Similarly, Klonsky [16] found that the most common emotions after an NSSI episode were relief, anger, and calmness. In his review, Klonsky also found that the majority of participants stated that NSSI episodes were preceded by negative emotions such as tension, depression, irritability, and anxiety and that 94 % of self-injurers reported a decrease in these feelings following NSSI behaviors [16]. Similarly, another study found that 90 % of participants felt less angry, less anxious, and more peaceful following engagement in an NSSI episode [17]. The majority of research therefore finds that negative emotions precede NSSI episodes and for most individuals, positive feelings of relief and escape from negative emotions follow an NSSI episode. In sum, it appears that commonly identified reasons (i.e. affect regulation) for engaging in NSSI do result in corresponding consequences (i.e. achieving more desirable emotional states). However, to date, few studies have focused on the congruence between self-reported reasons and the consequences experienced after the NSSI episode.

## Current Study

The present study tested whether the reported reasons for NSSI associated with a specific function predict corresponding reported consequences of NSSI for a particular episode to explore whether individuals' expectations of the behavior are met. We also sought to determine whether this relationship explains the lifetime frequency of NSSI behaviors. Thus, we hypothesized that self-reported reasons for NSSI will be correlated with the corresponding self-reported consequences of the NSSI behavior. Further, we hypothesized that a match between each reason and the corresponding consequence(s) will be associated with higher lifetime frequency of NSSI.

## Materials and Methods

### Sample

The sample consisted of a total of 52 college students at the University of Wyoming with 44 females and 8 males. Participants were chosen from the psychology department participant pool after each participant endorsed at least one episode of NSSI behavior on the screening form and provided informed consent to participate. The participants' age ranged from 18 to 26 ( $M = 19.81$ ,  $SD = 1.92$ ). The sample was predominately White/Caucasian (90.4 %). Other ethnicities included were 3.8 % Latino/Hispanic, 3.8 % Biracial, and

1.9 % Asian/Pacific Islander. Data for the current study were collected as part of a larger study [18]. Participants were given research credits for their participation.

## Measures

The screening measure used for this study was the first section of the Inventory of Statements about Self-Injury (ISAS) [3], which asks about an individual's lifetime history of NSSI behavior. Participants who affirmed at least one NSSI episode were invited to participate in the study.

ISAS has two sections assessing the lifetime frequency and functions associated with NSSI behavior. The first section assesses the number of times individuals have performed 12 possible NSSI behaviors. Data from this first section were used in the present study to calculate lifetime frequency by summing frequency across the 12 NSSI behaviors. The reported psychometric properties of this section are good, with internal consistency of 0.84 [3] and one year test–retest reliabilities ranging between 0.54 and 0.83 in a sample of college students [19]. Similarly, one-to-four week test–retest reliability of the lifetime frequency ranged between 0.54 and 0.94 ( $Mdn = 0.74$ ) [3]. The NSSI total score calculated from this section was found to correlate more highly with the item pertaining to suicide/self-harm ( $r = 0.45$ ) of the McLean Screening Instrument for Borderline Personality (MSI-BPD) [20] than other items [3].

Suicide Attempt Self-Injury Interview (SASII) [21] is a structured interview created to provide detailed information about NSSI behavior. This measure was used to collect information about the most recent episode of NSSI. Inter-rater reliabilities for the SASII have been reported separately for lethality of method ( $r = 0.85$ ) and physical condition following the episode ( $r = 0.93$ ) [21]. Validity was reported in terms of rates of agreement between therapist notes and SASII for the number of episodes (76 %), and presence/absence of NSSI across assessment intervals at 4, 8, and 12 months during treatment (83 %) [21]. For the present study, data about self-reported reasons and consequences were used from this measure. Specifically, question #11 asks, “Would you say that you injured yourself/attempted suicide for any of the reasons on this list and, if so, which ones?” and lists 29 different possible motivations for NSSI behavior. Question #42 asks, “Did any of the events or experiences on this list happen immediately following your self-harming/suicidal incident? If so, please give a rating for each question on the 1–5 scale: 1 = ‘Not true at all/did not happen at all,’ to 5 = ‘very true/happened a lot’” and lists 30 different consequences following an NSSI behavior.

## Coding a Match Between Reasons and Consequences

A match variable was computed for analysis of the second hypothesis. For this purpose, only the most frequently endorsed reasons for the NSSI episode were considered. Reasons that had been endorsed by at least 15 of 52 participants were included, resulting in a list of seven reasons. Next, we started by first determining all possible consequences that could result from each of the seven most endorsed reasons. A match was coded as being present (=1) if a subject endorsed both the reason, and at least one of its corresponding consequences. For instance, if a participant endorsed the reason “to stop bad feelings”, she would score a match if any of the following consequences were endorsed: “bad feelings stopped”, “you got away or escaped”, “you stopped feeling numb or dead”, “feelings of anger, frustration or rage stopped”, and “feelings of anxiety or terror stopped”. Two raters (a clinical psychology PhD graduate student and an undergraduate McNair scholar)

independently listed each reason and all possible consequences for them. Before discussion between raters, inter-rater reliability was moderate ( $r = 0.56$ ). They then compared the lists, discussed and resolved discrepancies and came to an agreement about the consequences for each of the seven frequently endorsed reasons (see Table 1).

## Procedure

Undergraduate students in psychology classes were administered a screening form as part of mass testing that asked them to indicate how often they performed different types of NSSI behaviors (ISAS section I). Eligible participants were then sent an invitation for further participation and those who consented to the study were screened once more using the same measure as before. Each participant filled out multiple measures of which the current study used the demographic data form and select questions of the ISAS and SASII. As each participant arrived for the study, they signed the consent form and completed the demographics form and the ISAS. Next, participants were interviewed using the SASII. Each participant was then debriefed and thanked for their time and participation. Detailed procedures are described elsewhere [18]. All procedures were approved by the Human Subjects Review Board.

## Results

Lifetime frequency of NSSI scores ranged from 1 to 1,210 ( $M = 82.02$ ,  $SD = 211.84$ ,  $Mdn = 12$ ), demonstrating a markedly skewed distribution that was not corrected with use of winsorizing. Therefore, the variable was transformed using a natural logarithm, resulting in a normal distribution ( $M = 2.84$ ,  $SD = 1.64$ ). This transformed variable was used as the outcome variable for all analyses of NSSI lifetime frequency.

On an average, participants reported engaging in their last NSSI over two years ago ( $M = 29.65$  months,  $SD = 27.4$ ,  $Mdn = 23$ ) with 34.62 % ( $n = 18$ ) reporting at least one episode of NSSI in the past year. The mean age of onset was in adolescence ( $M = 13.94$  years,  $SD = 3.1$ ,  $Mdn = 14.5$ ). Finally, participants most commonly reported using one (42.3 %,  $n = 22$ ), two (28.8 %,  $n = 15$ ), or three (13.5 %,  $n = 7$ ) NSSI methods.

The first hypothesis predicted that the number of self-reported reasons associated with a particular function for engaging in NSSI behavior would be related to the number of consequences within the same function category. To test this hypothesis, each reason from the participant's most recent NSSI episode was first categorized into the three reinforcement categories—automatic negative, automatic positive and social (positive and negative). The automatic positive category had six items, the automatic negative category had 11 items and the social category had nine items. The number of reported reasons was related to the number of reported consequences in the automatic negative category, ( $r = 0.506$ ,  $p < 0.001$ ). The number of reasons and number of consequences were also correlated in the automatic positive category, ( $r = 0.516$ ,  $p < 0.001$ ), and the social category, ( $r = 0.334$ ,  $p = 0.016$ ). Our hypothesis was supported for all three function categories. The number of automatic negative reasons was related to number of automatic positive consequences ( $r = 0.32$ ,  $p = 0.02$ ), but no other correlations between reasons and consequences were significant.

The second hypothesis predicted that a match between self-reported reasons and their consequences would be related to higher lifetime frequency of NSSI. To determine the

**Table 1** Consequences matched to each of the seven most commonly endorsed reasons

Reason	Consequences matched to the reason
To stop bad feelings	Bad feelings stopped You got away or escaped You stopped feeling numb or dead Feelings of anger, frustration, or rage stopped Feelings of anxiety or terror stopped Feelings of aloneness, emptiness, or isolation stopped Feelings of self-hatred/shame stopped You experienced relief from a terrible state of mind Feelings of sadness stopped Feelings of depression stopped
To feel something, even if it was pain	You felt something, even if it was pain You felt punished or succeeded in punishing yourself You proved to yourself that things really were bad You stopped feeling empty inside, as if you were unreal, or disconnected from you feelings You felt worse about yourself or felt more self-hatred/shame
To punish yourself	You felt punished or succeeded in punishing yourself You felt worse about yourself or felt more self-hatred/shame
To get away or escape	Bad feelings stopped You got a vacation from having to try so hard You got out of doing something You got away or escaped You were distracted from other problems
To stop feeling angry or frustrated or enraged	Bad feelings stopped Feelings of anger, frustration, or rage stopped Your self-injury expressed your anger or frustration You experienced relief from a terrible state of mind
To distract yourself from other problems	You got a vacation from having to try so hard It gave you something, anything to do You were distracted from other problems You experienced relief from a terrible state of mind
To express anger or frustration	Others understood how desperate you are/were You shocked or impressed others You got back at or hurt someone Feelings of anger, frustration, or rage stopped Your self-injury expressed your anger or frustration You experienced relief from a terrible state of mind

relationship between match and lifetime frequency, an Independent Mann–Whitney *U* test was conducted for groups scoring zero and one on each match variable. There were no significant differences in lifetime frequency of NSSI between groups with and without a match between the reasons endorsed and their corresponding consequences for all seven reasons. Thus, our second hypothesis was not supported.

## Post Hoc Analyses

We tested the total number of reasons and total number of consequences as predictors of lifetime frequency using linear regression. The model was significant [ $R^2 = 0.11$ ,  $F(2, 49) = 3.10$ ,  $p = 0.05$ ], with total number of reasons emerging as a significant predictor [ $\beta = 0.20$ ,  $t(49) = 2.19$ ,  $p < 0.05$ ] and total number of consequences as being not significant [ $\beta = 0$ ,  $t(49) = 0.02$ ,  $p = 0.99$ ].

Next, we used the three categories of reasons—automatic negative, automatic positive, and social—as predictors of lifetime frequency. The model was significant [ $R^2 = 0.23$ ,  $F(3, 48) = 4.74$ ,  $p < 0.05$ ], with only number of automatic negative reasons significantly predicting lifetime frequency [ $\beta = 0.49$ ,  $t(48) = 3.73$ ,  $p = 0.001$ ].

## Discussion

Analyses were conducted to test two hypotheses about the match between self-reported reasons and consequences of NSSI and how that is associated with the frequency of NSSI behavior. Our first hypothesis that the self-reported reasons for an episode of NSSI would be related to the self-reported consequences experienced after engaging in the behavior was supported. All three categories of functions—the automatic positive category, the automatic negative category, and the social category were correlated with their corresponding consequences. That is, when an individual reported engaging in NSSI to increase a desired psychological state, decrease an unwanted psychological state, flee from interpersonal demands and/or gain access to or attention from others, they reported experiencing the corresponding desired consequences. In addition, reports of engaging in NSSI to decrease negative feelings were related to reports of generating more positive feelings after an NSSI episode. Importantly, the reasons within the automatic positive and social function categories did not predict consequences in the other categories. Overall, research has shown that changes in affective states seem to be the most common self-reported reason for NSSI behavior [12]. In addition to finding support for the original reinforcement categories proposed by Nock and Prinstein [12], our research suggests that for all subgroups of these reasons (automatic positive, automatic negative, and social), the individuals also report experiencing the corresponding consequences. This provides evidence that the expectations of individuals before engaging in NSSI are met. This serves as a first step in confirming the reinforcing properties of NSSI.

The second hypothesis stated that a match between self-reported reasons and their consequences would be related to a higher lifetime frequency. This hypothesis was not supported for any of the seven reasons examined. However, we did not measure actual reasons or consequences, but instead coded participants' reports of the after-effects of NSSI behavior. It may be that the reported reason/consequence relationship does not represent actual behavior. That is, the individual's rule about their own behavior may not adequately explain the behavior as the actual reinforcer may be out of their conscious awareness. Alternatively, individuals may be embarrassed to report some reinforcers such as social consequences. Finally, this cross-sectional measure of lifetime frequency may not be a good indicator of continued engagement of NSSI in the future. It is possible those with matches between reasons and consequences may go on to self-injure more in the future. Therefore, a prospective research design would allow us to more accurately measure consequences and determine functions of the behavior.

The post hoc analyses showed that total number of reported reasons, and automatic negative reasons specifically, were related to lifetime frequency of NSSI whereas total number of consequences was not associated with frequency. These findings suggest that the number of reasons for NSSI may be more strongly related to the frequency of the behavior than the number of consequences or the match between reason and consequence. Again, it appears that individuals' own consciously-processed reasons are related to history of engagement in NSSI. However, that does not preclude the possibility of other factors playing a role, and may be related to nature of self-reported data. For example, it is possible that individuals with a tendency to endorse multiple reasons also have a tendency to report more NSSI acts. Future research on NSSI is needed to clarify the relationship between reasons and consequences. Indirect or behavioral measures of antecedents and consequences of NSSI behavior would be particularly useful in functional analyses of behavior. That is, if individuals are unaware of the relationship between reasons and consequences, self-report data may not always identify this, so functional analytic methods of data collection may be more revealing.

Another consideration in interpreting these results is that we only analyzed data from the most recent episode that individuals reported. Therefore, it is possible that the participants' experiences differed with other episodes. Results from the most recent episode were analyzed to afford more reliable reporting of emotional states during the NSSI episode.

For practitioners, it may be beneficial to pay attention to the endorsed reasons for NSSI by clients. Those who describe engaging in NSSI to stop feeling negative emotions may be at increased risk for engaging in the behavior. Teaching alternative methods of emotion regulation, a primary component of Dialectic Behavior Therapy, may be particularly useful as a treatment to reduce NSSI [22]. Also, simply having more reasons to engage in NSSI may be an indicator of higher risk of continuation.

This study looked at the congruence between self-reported reasons for and consequences of NSSI and whether that relationship predicts lifetime frequency of NSSI. The results indicate that individuals experience a correspondence between self-reported reasons and consequences for a particular episode. Further, endorsing multiple reasons, particularly reasons related to reducing the experience of negative emotions, may also be associated with greater frequency of NSSI. This study makes a unique contribution to the literature by examining the relationship between self-reported reasons and consequences of NSSI.

**Acknowledgments** The authors wish to acknowledge Zackie Salmon and Susan Stoddard from the University of Wyoming McNair Scholars program for their assistance on this project.

**Conflict of interest** Pooja Saraff, Natasha Trujillo, and Carolyn Pepper declare they have no conflict of interest.

**Ethical Standards** All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2000 (5). Informed consent was obtained from all patients for being included in the study.

## References

1. Klonsky ED: Non-suicidal self-injury in United States adults: Prevalence, sociodemographics, topography and functions. *Psychological Medicine* 41:1981–1986, 2011.
2. Jacobson CM, Gould M: The epidemiology and phenomenology of non-suicidal self-injurious behavior among adolescents: A critical review of the literature. *Archives of Suicide Research* 11:129–147, 2007.

3. Klonsky ED, Olino TM: Identifying clinically distinct subgroups of self injurers among young adults: A latent class analysis. *Journal of Consulting and Clinical Psychology* 76:22–27, 2008.
4. Walsh BW: *Treating self-injury: A practical guide*. 2nd ed. New York, Guilford Press, 2012.
5. Laye-Gindhu A, Schonert-Reichl KA: Nonsuicidal self-harm among community adolescents: Understanding the “whats” and “whys” of self-harm. *Journal of Youth and Adolescence* 34:447–457, 2005.
6. Claes L, Klonsky DE, Muehlenkamp J, Kuppens P, Vandereycken W: The affect-regulation function of nonsuicidal self-injury in eating-disordered patients: Which affect states are regulated? *Comprehensive Psychiatry* 51:386–392, 2010.
7. Kreitman N, Casey P: Repetition of parasuicide: An epidemiological and clinical study. *The British Journal of Psychiatry* 153:792–800, 1988.
8. You J, Leung F, Fu K, Lai CM: The prevalence of nonsuicidal self-injury and different subgroups of self-injurers in Chinese adolescents. *The Archives of Suicide Research* 15:75–86, 2011.
9. Andover MS, Gibb BE: Non-suicidal self-injury, attempted suicide, and suicidal intent among psychiatric inpatients. *Psychiatry Research* 178:101–105, 2010.
10. Schaefer HH: Self-injurious behavior: Shaping “head-banging” in monkeys. *Journal of Applied Behavior Analysis* 3:111–116, 1970.
11. Skinner BF: The operant side of behavior therapy. *Journal of Behavior Therapy and Experimental Psychiatry* 19:171–179, 1988.
12. Nock MK, Prinstein MJ: A functional approach to the assessment of self-mutilative behavior. *Journal of Consulting and Clinical Psychology* 2004. doi:[10.1037/0022-006X.72.5.885](https://doi.org/10.1037/0022-006X.72.5.885).
13. Chapman AL, Dixon-Gordon K: Emotional antecedents and consequences of deliberate self-harm and suicide attempts. *Suicide and Life-Threatening* 37:543–552, 2007.
14. Chapman AL, Gratz KL, Brown MZ: Solving the puzzle of deliberate self-harm: The experiential avoidance model. *Behaviour Research and Therapy* 2006. doi:[10.1016/j.brat.2005.03.005](https://doi.org/10.1016/j.brat.2005.03.005).
15. Nock MK, Prinstein MJ: Contextual features and behavioral functions of self-mutilation among adolescents. *Journal of Abnormal Child Psychology* 2005. doi:[10.1037/0021-843X.114.1.140](https://doi.org/10.1037/0021-843X.114.1.140).
16. Klonsky ED: The functions of deliberate self-injury: A review of the evidence. *Clinical Psychology Review* 2007. doi:[10.1016/j.cpr.2006.08.002](https://doi.org/10.1016/j.cpr.2006.08.002).
17. Klonsky ED: The functions of self-injury in young adults who cut themselves: Clarifying the evidence for affect-regulation. *Psychiatric Research* 2009. doi:[10.1016/j.psychres.2008.02.008](https://doi.org/10.1016/j.psychres.2008.02.008).
18. Saraff PD, Pepper CM: Functions, lifetime frequency, and variety of methods of non-suicidal self-injury among college students. *Psychiatry Research* 219:298–304, 2014.
19. Glenn CR, Klonsky ED: One-year test-retest reliability of the Inventory of Statements about Self-Injury (ISAS). *Assessment* 18:375–378, 2011. doi:[10.1177/1073191111411669](https://doi.org/10.1177/1073191111411669).
20. Zanarini MC, Vujanovic A, Parachini EA, Boulanger JL, Frankenburg FR, Hennen J: A screening measure for BPD: The McLean screening instrument for borderline personality disorder. *Journal of Personality Disorders* 17:568–573, 2003.
21. Linehan MM, Comtois K, Brown MZ, Heard HL, Wagner A: Suicide Attempt Self-Injury Interview (SASII): Development, reliability, and validity of a scale to assess suicide attempts and intentional self-injury. *Psychological Assessment* 2006. doi:[10.1037/1040-3590.18.3.303](https://doi.org/10.1037/1040-3590.18.3.303).
22. Pasieczny N, Connor JP: The effectiveness of dialectical behaviour therapy in routine public mental health settings: An Australian controlled trial. *Behaviour Research and Therapy* 49:4–10, 2011.

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