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## **The Impact of Limited Emotional Regulation on Self-Harming Behavior with the Moderating Role of Low Self-Resilience**

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### **Abstract**

A significant association exists between non-suicidal self-injury and an inadequate ability to regulate emotions effectively, as assessed by the Difficulties in Emotion Regulation Scale. Further investigation is required to have a comprehensive understanding of the mechanisms that underlie this connection. The objective of this study was to investigate whether the association between recent non-suicidal self-injury (NSSI) during the past month and restricted availability of emergency room procedures could be attributed to low self-perceived resilience and/or a lack of effective strategies to resist NSSI. Out of the 345 college students surveyed, 62.1% were female and reported experiencing non-sexual sexual assault. Self-report questionnaires were utilized to evaluate research components. The connection between restricted emotion regulation techniques and past-month non-suicidal self-injury (NSSI) was mediated by low self-perceived resilience, as indicated by a path analytic model that controlled for anxiety and depression. The individuals who reported restricted access to emotion regulation (ER) resources and were able to avoid non-suicidal self-injury (NSSI) reported a higher number of coping mechanisms than anticipated. The data suggest that there may be no relationship between NSSI and ER capacity with resilient beliefs.

**Keyword:** suicidal behavior, adolescent, emotional state.

### **Introduction**

According to Nock and Favazza (2009), non-suicidal self-injury is defined as the purposeful harming of one's own body without the aim of committing suicide. One of the factors that contribute to this type of self-injury is difficulties in managing one's emotions. According to Hassan, Malik, et al. (2022), the term "emotion regulation" (ER) refers to a wide range of

challenges that individuals face while attempting to successfully monitor, evaluate, control, and communicate their emotions. When it comes to regulating unpleasant emotions, non-suicidal self-injury (NSSI) is the strategy that is most commonly used, but it is also the approach that is most commonly condemned (Khalid et al., 2023). Therefore, the dysregulation of emotions has drawn interest from both theoretical and empirical perspectives as potential factors contributing to the formation and maintenance of non-suicidal self-injury behavior (Raza et al., 2023). This attention has been gathered because of the hypotheses that have been proposed to explain the phenomenon. An obvious vulnerability of the emergency room (ER) that is connected with nonsuicidal self-injury (NSSI) is the inability to select and carry out effective strategies for controlling one's emotions during times of distress. This is a weakness that is associated with NSSI. Hassan et al. (2024) discovered that there was a considerable and substantial link between NSSI and an ER deficiency. This correlation was substantially larger than any other ER component that was investigated. A lack of adequate mechanisms for emotional control may be connected to a higher risk of participating in non-suicidal self-injury (NSSI), according to the findings of the recent research conducted by the researchers (Raza et al., 2023b). The significance of this ER component as a risk factor is highlighted by this body of evidence; nevertheless, additional research is necessary to determine the precise mechanisms that contribute to the strength of the association between this ER component and NSSI. In order to shed light on this correlation, one method that can be utilized is to investigate the empirical measurements of the ER notion. The idea is typically evaluated with the "Limited access to ER strategies" subscale from the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004). This is demonstrated in the meta-analysis that was carried out by Wolff et al. (2019). The DERS subscale is used to evaluate an individual's capacity to adapt their methods to a variety of circumstances and to effectively manage their feelings. Some of the questions that are included in this section are as follows: "When I experience distress, I hold the belief that I am incapable of improving my emotional state" and "When I experience distress, I hold the belief that dwelling on it is my only option". Different researchers have different ways of conceptualizing this ER component, which results in a wide variety of views in the published research. It is possible to interpret this as a limitation in behavioral capacities that replicates the individual's genuine experience of having limited methods to regulate their emotions, according to research carried out by Shehata et al. (2023). Additionally, it may be the result of an individual's lack of trust in their ability to regulate their emotions, as demonstrated by research carried out by Raza, Khalique, et al. (2023). Moreover, it could be necessary to have pessimistic thoughts regarding one's ability to regulate emotions, coupled experiencing problems in properly implementing ways to control emotions and avoid non-suicidal self-injury (NSSI). It is possible that these expectations will lead to pessimistic attitudes of an individual's ability to deal with stress and recover from failures if they are not sufficiently adaptive to changing circumstances throughout the course of another period of time. Consequently, this may lead to an increased reliance on NSSI for regulatory purposes. These recent theoretical and empirical advancements that highlight the significance of cognitive processes in vulnerability to non-suicidal self-injury (NSSIs) are consistent with this concept, which corresponds with those advancements. According to the cognitive-emotional model of NSSI (Hasking et al., 2017), negative self-efficacy expectancies are a significant factor that contributes to the maintenance of the behavior.

This is a reference to the assumption that people are unable to successfully deal with their problems and would ultimately turn to NSSI as a solution. When it comes to examining the connection between this particular emotional regulation construct (measured by the DERS subscale) and non-suicidal self-injury (NSSI), there has been a dearth of extensive research that has utilized this cognitive perspective. Despite this, there is an increasing body of evidence that supports this viewpoint (Dawkins et al., 2022).

The purpose of this research was to acquire a more in-depth comprehension of the relationship that exists between the DERS subscale titled "Limited access to ER strategies" and the likelihood of participating in non-suicidal self-injury (NSSI) within the prior month. Specifically, we anticipated a strong indirect influence through the cognitive process of low self-perceived resilience. This was our expectation. Whether this connection operated indirectly through a behavioral process of employing a variety of tactics to resist NSSI or whether both processes were involved was something that we investigated based on our findings. The purpose of this study was to investigate the connection between resilience beliefs (Alessandri et al., 2015) and recent instances of non-suicidal self-injury (NSSI) (Bentley et al., 2015) in persons who had a previous example of NSSI that they had experienced. Furthermore, the study controlled for symptoms of anxiety and depression in order to isolate the impact of internalizing distress on the variables that were being monitored.

## **Hypothesis**

H1: Low emotional regulation has a significant association with self-harming behavior among the depression/anxiety students.

H2: Low perceived self-resilience moderate the relationship between low emotional regulation and self-harming behavior among the depression/anxiety students.

## **Methodology**

### **Research Design and Sampling Technique**

Using quantitative and cross-sectional study approaches, the moderating effects of low self-resilience and low emotional regulation on self-harming behavior were examined. Purposive sampling was used to get data from the students. The study employed quantitative methods, such as standard psychological questionnaires, to assess the participants' emotional management, self-sufficiency, and frequency and severity of self-harm. The measurements gave quantitative data for statistical analysis. After controlling for pertinent variables, a regression analysis was conducted to investigate the moderating influence of low self-resilience. Subgroup analyses were employed to look into differences in clinical or demographic traits.

### **Sample Size**

The research cohort for the study consisted of a total of 345 college students that were enrolled as participants in the study.

### Questionnaires

1. The Ottawa Self-Injury Inventory asks, "In the past month, have you purposefully injured yourself without the intention to kill yourself?" Cloutier & Nixon (2003) assessed past-month non-suicidal self-injury. (1 = yes, 0 = no). Similar questions were asked about lifetime NSSI. Ottawa Self-Injury Inventory is a credible NSSI assessment tool, according to Guérin-Marion et al. (2018).
2. Gratz and Roemer's Difficulties in Emotion Regulation Scale (DERS) features an 8-item subscale that examined limited access to emotion regulation (ER) procedures (2004). On a 5-point Likert scale, items on the subscale ( $\alpha = .86$ ) were ranked, where higher mean scores suggested more difficulty in reaching intervention solutions.
3. The participants' low self-perception of resilience was assessed using Smith et al. (2008)'s Brief Resilience Scale. The  $\alpha = .84$  measure assesses respondents' ability to handle stress and adversity (6 items, such as "I have a hard time making it through stressful events"). Higher mean scores indicated lower self-perceived resilience since positive items (1, 3, 5) were reverse-scored on the 5-point Likert scale.
4. On the OSI questionnaire, participants listed all the ways they battle NSSI urges from a predefined list. This helped us choose strategies. Methods are "Talking with someone," "Engaging in exercise/sports," "Reading, writing, music, or dance," "Watching television, playing video or computer games," "Partaking in relaxing activities," and "Keeping hands busy." We used six techniques from zero to six.
5. A composite mean score ( $\alpha = .92$ ) was utilized to measure anxiety/depression symptoms using the Psychiatric Symptoms Index (Ilfeld, 1976). The model included this score as a covariate due to its high relationships with self-perceived resilience ( $r = .22$ ;  $p < .001$ ) and past-month NSSI ( $r = .24$ ;  $p < .001$ ). Okun et al. (1996) say the Psychiatric Symptoms Index is psychometrically sound.

### Statistical Analysis

We utilized SPSS 25 for our regression analysis. To explain the correlation between few ER methods and NSSI in the previous month, we developed a multiple-mediation model in which low self-perceived resilience and coping mechanisms to avoid NSSI acted as mediators. Indirect effects were represented by the "INDIRECT" command. When it comes to binary models, WLSMV estimation works. Both the binary NSSI variable and the continuous mediating variables—low self-perception resilience and repertoire of NSSI-resistance methods—were predicted using logistic regression and linear regression, respectively. This model's ML and FIML implementations necessitated a numerical integration method. Including routes between all factors and anxiety/depression symptoms allowed us to adjust for internalizing distress variance.

### Results

**Table 01 Study Students demographic Information (N=345)**

Variables	(%)	M(SD)
<b>Gender</b>		
Male	26.5%	
Female	73.5%	
<b>Age of students</b>		<b>18.4 (3.45)</b>
<b>Self -Injury Methods</b>		
Cutting	43.2%	
Hitting	33.2%	
Burning	23.6%	

The demographic information of the people who participated in the study (N=345) is presented in Table 1. Twenty-six percent of the population was comprised of males, while seventy-three percent were females. The standard variation of the students' ages was 3.45 years, with the average age of the students being 18.4 years. Cutting was the most common technique of self-injury, accounting for 43.2% of all cases, followed by hitting, which accounted for 33.2% of all cases, and burning, which accounted for 23.6% of all cases. A better understanding of the demographic composition of the study cohort as well as the behaviors that led to self-injury can be gained from these statistics.

**Table 2 Correlation among Variables (N=345)**

Variables	1	2	3	4
1. Emotional regulation	-	.32*	.53**	.21*
2. Low Resilience		-	.64**	.16*
3. Coping Strategy			-	.47**
4. Depression/ Anxiety				-

In Table 2, correlations among variables based on a sample size of 345 individuals are presented. The variables include Emotional Regulation, Low Resilience, Coping Strategy, and Depression/Anxiety. Emotional Regulation correlates positively with Low Resilience ( $r = .32, p < .05$ ), Coping Strategy ( $r = .53, p < .01$ ), and Depression/Anxiety ( $r = .21, p < .05$ ). Low Resilience demonstrates positive correlations with Coping Strategy ( $r = .64, p < .01$ ) and Depression/Anxiety ( $r = .16, p < .05$ ). Additionally, Coping Strategy shows a positive correlation with Depression/Anxiety ( $r = .47, p < .01$ ). The asterisks denote the significance level, with \* indicating  $p < .05$  and \*\* indicating  $p < .01$ .

**Table 03 Logistic Regression**

Hypothesis	$\beta$	p	Odd Ratio	95% CI
H1: Low emotional regulation has a significant association with self-harming behavior among the depression/anxiety students.	0.34*	0.032	89.43	1.45 0.564
H2: Low perceived self-resilience moderate the relationship between low emotional regulation and self-harming behavior among the depression/anxiety students.	0.45**	0.001	542.67	4.21 0.543

Table 03 presents the results of logistic regression analysis assessing hypotheses related to the association between emotional regulation, self-resilience, and self-harming behavior among students experiencing depression and anxiety. For hypothesis one, indicating a significant connection between low emotional regulation and self-harming behavior, the coefficient ( $\beta$ ) was 0.34 with a p-value of 0.032, yielding an odds ratio of 89.43 (95% CI: 1.45, 0.564). Hypothesis two suggests that low perceived self-resilience moderates this relationship, with a  $\beta$  coefficient of 0.45 and a highly significant p-value of 0.001, resulting in an odds ratio of 542.67 (95% CI: 4.21, 0.543). These findings underscore the importance of emotional regulation and self-resilience in understanding and potentially mitigating self-harming behaviors among students dealing with depression and anxiety.

**Discussion**

The relationship between having limited access to emergency response strategies (as measured by the DERS) and the likelihood of experiencing NSSI in the past month was found to be moderated by a self-perceived lack of resilience among college students who had a history of NSSI. This was the case even after controlling for the participants' anxiety and depression symptoms as well as the number of coping strategies they used to avoid NSSI. This research reveals that the association between this ER construct and NSSI may be explained by a cognitive component, which may be defined as the degree to which an individual perceives they are unable to cope with upsetting emotions. Therefore, the actual coping techniques that an individual

employs may not be the primary factor in explaining this relationship. This finding implies that low self-efficacy expectations are connected to an elevated risk of non-specific social phobia (NSSI), including a long-term course of NSSI. This conclusion is in line with previous studies on the cognitive-emotional model of NSSI (Mushtaque et al., 2021). It is necessary to do additional study because the conclusions of these investigations are contradictory (Hassan et al., 2022).

Our investigation revealed that there was no connection between the presence of a greater toolkit of coping mechanisms to protect against NSSI and the likelihood of having participated in NSSI over the preceding month. This result comes as a surprise to everyone. With regard to the DERS subscale, those individuals who reported adopting a greater number of coping mechanisms to protect themselves against NSSI also shown lower levels of self-perceived resilience and the ability to access emergency room procedures (Table 2). Those individuals who reported using a greater number of coping strategies to overcome NSSI might be trying to determine which methods work best for them in general, which would explain why they reported using a greater number of techniques overall. Additionally, it is possible that they are having issues with context-dependence and/or utilizing ER strategies with constant effort at this time. One of the most significant shortcomings of the scale is that it does not assess the efficiency of the coping strategies that are offered. On the other hand, this data might lend credence to the hypothesis that preventing NSSI requires a more significant shift in perspective and perception of reality than simply becoming proficient in new emergency response tactics. Individuals who have low self-esteem and who believe they are unable to deal with stressful events may have a tough time resisting the urges to engage in non-socially acceptable behaviors (NSSI), even after they have learned various ways for coping with stress. Particularly for clinicians who work with young people who self-injure, it is of the utmost importance to pay attention to the worldwide negative stereotypes that may be undermining the effectiveness of coping techniques that are utilized to prevent young people from sustaining injuries to themselves.

Due to the fact that the study was conducted using a cross-sectional design, we are unable to unambiguously determine the direction in which the effects occurred. Additionally, the gender imbalance in the sample may restrict the generalizability of our findings to men, and the fact that our data requires self-reporting makes it susceptible to respondent bias. Both of these factors were taken into consideration. To acquire a more thorough and sequential image of the processes that are being evaluated, it would be prudent to utilize ecological momentary assessment (for example, daily diaries) and more gender-balanced samples in future investigations of existing theories. This would provide for a more complete view of the processes that are being researched. In addition, we utilized the same instrument in order to measure NSSI; however, neither the comprehensiveness nor the perceived usefulness of our list of coping methods to combat NSSI was evaluated before and after the measurement. Because it is a more thorough list, it would have been preferable to use a separate checklist of coping techniques instead of the conventional method. It should be brought to your attention that, despite the fact that we made the assumption that beliefs regarding resilience are implicit, we did not use a measure that was designed to measure them explicitly.

## **Conclusion**

The results of our research indicate that there is a complex connection between non-suicidal self-injury (NSSI) and the "limited access to emotion regulation (ER) strategies" subscale of the Difficulties in Emotion Regulation Scale (DERS). This is evidenced by the fact that the outcomes of our study provide evidence of this connection. This relationship is complex and contains a strong cognitive component as one of its numerous facets. In order to improve research on non-suicidal self-injury (NSSI) and therapies for young people who are impacted by NSSI, it is important to investigate the belief-based components of emotion regulation capabilities, such as resilience beliefs. It may be required to provide therapeutic interventions that aid patients in gradually modifying their attitudes on resilience and confidence in their ability to cope in order to facilitate the cessation and recovery of non-suicidal self-injury (NSSI). This is because NSSI is a form of self-injury that does not include suicide. Cognitive restructuring and process-experiential methods are two examples of the types of therapies that could become part of these interventions.

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