

Interpersonal and Intrapersonal Functions of Non Suicidal Self Injury in University Students

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Present study aimed to assess interpersonal functions (interpersonal boundaries, peer bonding, interpersonal influence, self-care, revenge, toughness, autonomy and sensation seeking) and intrapersonal functions (affect regulation, self-punishment, anti-dissociation, anti-suicide, and marking distress) of Non Suicidal Self Injury (NSSI) in university students. NSSI can be conceptualized in a better way by understanding functions of NSSI. Research design was correlational. Assessment measures used were DSM-5 Self-Rated Level 1 Cross-Cutting Symptom Measure—Adult, Alexian Brothers Assessment of Self-Injury (ABASI) and Inventory of Statement about Self Injury (ISAS). Sample comprised of hundred students of age ranged between 19 to 24 years ($M = 19.85$, $SD = 1.75$). The results indicated that interpersonal functions are more endorsed functions than intrapersonal functions of NSSI. Moreover, it was found that self-care and toughness are more endorsed functions from interpersonal functions. Furthermore, the results revealed that self-punishment and affect regulation were more endorsed functions from intrapersonal functions. Moreover, it was found that from intrapersonal function ‘toughness’ is positively related with NSSI while from interpersonal functions ‘affect regulation and self-punishment’ are significantly negatively related with NSSI. Additionally, the findings indicated that interpersonal functions are significant positive predictor of NSSI while intrapersonal functions are significant negative predictor NSSI. Furthermore, it was found that intrapersonal functions significantly mediate the relationship between interpersonal function and NSSI. It could be concluded that interpersonal functions and intrapersonal functions of NSSI play important role in initiation and maintenance of NSSI respectively and should be targeted in interventions accordingly.

Keywords. Self-harm, non-Suicidal self-Injury, functions of NSSI, university students

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Non-Suicidal Self-Injury (NSSI) is direct, repetitive and deliberate destruction of tissues of one's own body without intent to suicide (Nock & Favazza, 2009). NSSI serve various functions simultaneously. Functions can be defined as variables that motivate or reinforce behavior (Klonsky, 2007). According to Klonsky and Glenn (2009) functions of NSSI are conceptualized in two categories: intrapersonal functions and interpersonal functions. Intrapersonal functions are defined as functions that are self-focused. Affect regulation, self-punishment, anti-dissociation, anti-suicide and marking distress are intrapersonal functions. Interpersonal functions are other focused. Interpersonal functions comprise of interpersonal boundaries, peer bonding, interpersonal influence, self-care, revenge and toughness. Klonsky and Glenn (2009) described that intrapersonal functions and interpersonal functions are conceptually equivalent to automatic and social functions (Nock & Prinstein, 2004).

According to four factor model of NSSI, it is reinforced on two distinct dimensions: Automatically or socially as well as positively or negatively (Nock & Prinstein, 2004). Hence, it can be categorized into four categories: automatic positive (to create positive internal state), automatic negative (to decrease negative emotional states), social positive (to gain attention) and social negative (to escape from interpersonal stresses).

The literature documented various functions of NSSI in university students. The findings of systematic review showed that intrapersonal functions are more endorsed than interpersonal functions in young adults (Cipriano et al., 2017). Likewise, affect regulation, self-punishment and interpersonal influence were found more frequently reported functions of NSSI (Edmondson et al., 2016). Similarly, a meta-analysis reported that affect regulation, self-punishment and anti-dissociation are more frequently reported functions from intrapersonal functions while affect regulation is the most commonly reported function from intrapersonal functions of NSSI (Taylor et al., 2018)

Some people endorse multiple functions of NSSI (Klonsky & Glenn, 2009). Therefore, it is important to understand extent to which each function occur or overlap. Moreover, functions of NSSI have implications for suicide risk, prognosis and treatment of NSSI. Furthermore, individuals engage in NSSI for different reasons, highlighting the need for targeted interventions (Muehlenkamp et al., 2013). Personalized interventions can be developed by assessing the functions of NSSI that provide information about the underlying reasons of this behavior. Likewise, Klonsky and Olin (2008) reported that research on functions of NSSI will help in conceptualization of

NSSI and in providing tailored management plan. Therefore, it is important to assess functions of NSSI in University students.

In the light of above literature, objectives of present study was to assess interpersonal functions (interpersonal boundaries, peer bonding, interpersonal influence, self-care, revenge, toughness, autonomy, and sensation seeking) and intrapersonal functions (affect regulation, self-punishment, anti-dissociation, anti-suicide, and marking distress) of non-suicidal self-injury in university students.

Hypotheses

1. Interpersonal functions are likely to be more endorsed functions than intrapersonal functions in university students.
2. Toughness and self-care are likely to be more endorsed functions from interpersonal functions of NSSI in university students.
3. Self-punishment and affect regulation are likely to be more endorsed functions from intrapersonal functions of NSSI in university students.
4. Interpersonal functions are likely to predict NSSI positively while intrapersonal functions are likely to predict NSSI negatively in university students.
5. Intrapersonal functions are likely to mediate the relationship between interpersonal functions and NSSI in University Students.
6. Females are likely to score high on intrapersonal and interpersonal functions of NSSI as compared to males.

Method

Sample

Data was collected by recruiting 100 university students who fulfilled DSM-5 criteria of NSSI. Age of participants ranges from 19 to 24 year ($M = 19.85$, $SD = 1.75$). Students who were enrolled in a regular program were recruited. After the screening, the students who were suffering from any other mental disorder were excluded from the study.

Instruments

DSM-5 Self-Rated Level 1 Cross-Cutting Symptom Measure—Adult

It was used for screening out various mental disorders. It consists of 23 questions. It assesses thirteen disorders including depression, anxiety, anger, mania, sleep problems, somatic symptoms, sleep problems, memory, repetitive thoughts and behaviors, personality functioning, dissociation, psychosis, substance use and suicidal ideation. It uses five point Likert scale ranging from 0 to 4 where 0 indicates *not at all* and 4 indicates *nearly every day*. Score of two or more require further inquiry (Joyce-Beaulieu & Sulkowski, 2016).

Alexian Brothers Assessment of Self-Injury (ABASI)

It is self-report measure that gives information about various characteristics of NSSI and is based on DSM-5 criteria of NSSI. It was used to identify individuals who met DSM-5 criteria of NSSI. It also indicates severity of NSSI. It uses Likert scale ranging from 0 to 4. Overall score for NSSI ranges from 0 to 24. Alpha reliability of the scale was .76 (Washburn et al., 2015).

Inventory of Statement about Self Injury (ISAS)

It was used to assess interpersonal and intrapersonal functions of NSSI. It has two sections. Section two was used to assess functions of NSSI. It assess two types of functions. One is interpersonal functions (including interpersonal boundaries, peer bonding, interpersonal influence, self-care, revenge, toughness, autonomy, and sensation seeking) and second is intrapersonal functions (affect regulation, self-punishment, anti-dissociation, anti-suicide, and marking distress). It has thirty nine items overall including three items for each function. Responses are rated on three point Likert scale ranging from 0 to 2; 0 indicates *not relevant*, 1 *somewhat relevant* and 2 indicates *very relevant*. Score for each function ranges from 0 to 6. Alpha reliability of the scale was .79 (Klonsky & Glenn, 2009).

Procedure

Participants were approached after taking permission from respective authorities. They were informed about nature and purpose

of research. They were assured of confidentiality of data. They were screened out by using screening instruments i.e., DSM-5 Self-Rated Level 1 Cross-Cutting Symptom Measure—Adult. It was used for screening of other mental disorders in university students. Alexian Brothers Assessment of Self-Injury (ABASI) was used for the assessment of NSSI and its severity. The participants who were suffering from NSSI but not any other mental disorders were included in the study. The participants who met criteria of NSSI were asked to fill second part of Inventory of Statement about Self-Injury for assessment of interpersonal and intrapersonal functions of NSSI. Feedback of participants was also taken. They were thanked for their cooperation during the study.

Results

Aim of study was to examine interpersonal and intrapersonal functions of NSSI in university students. It was hypothesized that there is likely to be more prevalence of interpersonal functions than intrapersonal functions in university students. For testing this hypothesis, descriptive analysis reflecting mean and standard deviations were run. Results are shown in [Table 1](#).

Table 1: *Mean and Standard Deviation Values for Interpersonal and Intrapersonal Functions of NSSI (N = 100)*

Functions	<i>M</i>	<i>SD</i>
Interpersonal Functions	7.61	7.81
Intrapersonal Functions	6.82	5.20

Note. M = Mean; SD = Standard Deviation.

This Table indicates that interpersonal functions are more endorsed functions than intrapersonal functions of NSSI.

Moreover, it was hypothesized that there is likely to be more self-care and toughness functions from interpersonal functions of NSSI. For this purpose descriptive analysis was run. Results are shown in [Table 2](#).

Table 2: Mean and Standard Deviation Values for Interpersonal Functions of NSSI (N = 100)

Functions	M	SD
Self-Care	1.46	1.34
Toughness	1.39	1.54
Interpersonal Boundaries	1.13	1.48
Autonomy	1.10	1.49
Interpersonal Influence	1.00	1.39
Revenge	1.06	2.44
Sensation Seeking	.94	1.36
Peer-Bonding	.86	1.40

Note. M = Mean; SD = Standard Deviation.

Table 2 shows that self-care and toughness are more endorsed functions from interpersonal functions while interpersonal boundaries, autonomy, interpersonal influence, revenge, sensation seeking and peer-bonding were less endorsed functions from interpersonal functions of NSSI.

Furthermore, it was hypothesized that there is likely to be more self-punishment and affect regulation function from intrapersonal functions in university students. For this purpose descriptive analysis was run. Results are shown in Table 3.

Table 3: Mean and Standard Deviation Values for Intrapersonal Functions of NSSI (N = 100)

Functions	M	SD
Self-Punishment	2.12	1.63
Affect Regulation	1.82	1.59
Anti-Suicide	1.45	1.56
Marking Distress	1.23	1.42
Anti-Dissociation	1.20	1.47

Note. M = Mean; SD = Standard Deviation.

Table 3 shows that self-punishment and affect regulation were more endorsed functions of NSSI from intrapersonal functions while anti suicide, marking distress and anti-dissociation were less endorsed functions.

Likewise, it was assumed that there is likely to be positive relationship of interpersonal functions (interpersonal boundaries, peer bonding, interpersonal influence, self-care, revenge toughness, autonomy and sensation seeking) with NSSI while negative relationship of intrapersonal functions (affect regulation, self-punishment, anti-dissociation, anti-suicide, marking distress) with NSSI. Pearson product moment correlation was applied for testing this hypothesis. Results are shown in Table 4.

Table 4: Correlation Between Intrapersonal and Interpersonal Functions of NSSI in University Students (N = 100)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.A.R	-															
2. S.P	.53*	-														
3.A.D	.38*	.51*	-													
4.S.S	.36*	.55*	.65*	-												
5. M.D	.49*	.62*	.51*	.67*	-											
6. Int. B	.60*	.52*	.51*	.44*	.53*	-										
7.S.C	.40*	.39*	.26*	.27*	.34*	.45*	-									
8. S.S	.43*	.40*	.61*	.51*	.43*	.47*	.35*	-								
9.P.B	.43*	.53*	.66*	.51*	.46*	.55*	.31*	.79*	-							
10.Int I	.44*	.45*	.48*	.55*	.53*	.49*	.37*	.70*	.74*	-						
11.Tough	.40*	.39*	.66*	.58*	.43*	.43*	.28*	.61*	.60*	.59*	-					
12.Revenge	.19*	.27*	.51*	.23*	.17*	.34*	.26*	.36*	.37*	.32*	.34*	-				
13.Atmny	.50*	.43*	.55*	.35*	.44*	.55*	.48*	.65*	.67*	.55*	.61*	.38*	-			
14.Intrap.F	.72*	.83*	.79*	.81*	.75*	.67*	.42*	.62*	.68*	.62*	.63*	.37*	.58*	-		
15.Interp.F	.53*	.56*	.71*	.61*	.56*	.73*	.59*	.78*	.81*	.78*	.72*	.65*	.73*	.78*	-	
16.NSSI	-.19*	-.16*	-.01	-.08	-.13	-.14	-.07	.11	-.03	.03	.01	.19*	.00	-.14*	-.02	-

Note. A. R. = Affect regulation; S.P. = Self Punishment; A.D = Anti Dissociation; A.S = Anti Suicide; D = Marking Distress; Int. B = Interpersonal Boundaries; S.C. = Self Care; S.S = Sensation Seeking; P.B = Peer Bonding; Int. I = Interpersonal influence; Tough = Toughness; Atmny = Autonomy; Intrap. F = Intrapersonal Function; Interp. F = Interpersonal Function; NSSI = Non-Suicidal Self-Injury
* $p < .05$.

This Table shows that from interpersonal functions toughness is significantly positively related with NSSI while from intrapersonal functions affect regulation and self-punishment are significantly negatively related with NSSI.

Additionally, it was assumed that interpersonal functions are likely to be positive predictor of NSSI while intrapersonal functions are likely to be negative predictor of NSSI in university students. For testing this hypothesis regression analysis was carried out. Results are shown in [Table 5](#).

Table 5: *Regression Analysis Indicating Functions as Predictors of Non-Suicidal Self-Injury (N = 100)*

Variables	Non Suicidal Self Injury				
	<i>B</i>	<i>S.E</i>	β	95% CI	
				<i>LL</i>	<i>UL</i>
Constant	17.6***	.18		17.29	18.02
Interpersonal Functions	.04*	.02	.31*	.01	.09
Intrapersonal Functions	-.09**	.03	-.43**	-.16	-.02
ΔR^2	.07*				
<i>F</i>	3.65*				

Note. *B* = Unstandardized Coefficients, *SE* = Standard Error, β = Standardized coefficients, *CI* = Confidence Interval, *LL* = Lower Limit, *UL* = Upper limit, $\Delta R^2 = R^2$ Change, * $p < .05$, ** $p < .01$, *** $p < .001$.

[Table 5](#) shows that overall model explains 7% variance in non-suicidal self-injury of students, $F(2, 98) = 3.65, p = .03$. According to this model interpersonal functions are significant positive predictor of non-suicidal self-injury while intrapersonal functions are significant negative predictor of non-suicidal self-injury.

Besides, it was supposed that intrapersonal functions will mediate the relationship between interpersonal functions and NSSI in University Students. Mediation analysis was carried out via PROCESS for checking out intrapersonal function as a mediator between interpersonal function and NSSI. Results are shown in [Table 6](#).

[Table 6](#) shows that direct and total effects are not significant but indirect effect is significant. It indicates that intrapersonal functions significantly mediate the relationship between interpersonal functions and NSSI in University Students.

Table 6: *Intrapersonal Functions as a Mediator between Interpersonal Functions and NSSI in University Students (N =100)*

	Estimates	SE	95 CI		t	p
			LL	UL		
Indirect Effect	.045	.016	-.077	-.012		
Interp. F → Intrap. F	.495	.045	.406	.585	10.9	.000
Intrap. F → NSSI	-.091	.033	-.157	-.023	-2.69	.008
Direct Effect	.043	.021	-.002	.087	.971	.050
Total Effect	-.001	.014	-.030	.027	-.102	.918

Note. Inter P. F = Interpersonal Function; Intrap. F = Intrapersonal Function; NSSI = Non Suicidal Self Injury.

Additionally, it was assumed that there is likely to be significant gender differences on functions of NSSI in university students. Independent sample *t*-test was applied for testing this hypothesis. Results are shown in Table 7.

Table 7: *Gender Differences on Intrapersonal and Interpersonal Functions of NSSI in University Students (N = 100)*

Variables	Males (n = 44)	Females (n = 56)	t(98)	p	95% CI		Cohen's d
	M	M			LL	UL	
	(SD)	(SD)					
Intrapersonal functions	7.31 (5.34)	6.42 (5.10)	.83(95)	.41	-1.22	3.00	.17
Interpersonal functions	8.80 (9.06)	6.63 (6.55)	1.28(72)	.19	-1.16	5.50	.27

This Table shows non-significant gender differences on intrapersonal and interpersonal functions of NSSI.

Discussion

The study aimed to investigate prevalence of various functions of NSSI in university students. It was hypothesized that there is likely to be more interpersonal functions than intrapersonal functions of NSSI in university students. The findings indicated that interpersonal functions are more endorsed functions than intrapersonal functions of NSSI. These findings are in line with research by Muehlenkamp and Gutierrez (2004) in which it was reported that more commonly endorsed functions for initiation of NSSI are interpersonal functions and onset of NSSI is reported in late adolescence and young adulthood. Nock and Prinstein (2005) also found that interpersonal

functions of NSSI are widely endorsed functions of NSSI. He also stated that interpersonal functions are more common for onset of NSSI. Similar results were reported by [Whitlock et al. \(2013\)](#).

Moreover, it was assumed that there is likely to be more self-punishment and affect regulation functions from intrapersonal functions of NSSI. The results showed that self-punishment and affect regulation were more endorsed functions while marking distress, anti-suicide, and anti-dissociation were less endorsed functions from intrapersonal functions of NSSI. These findings are consistent with literature; self-punishment and affect regulation were reported as more prevalent functions ([Edmondson & Brennan, 2016](#)). Likewise [Shen et al. \(2023\)](#) reported that affect regulation and self-punishment are more common functions of NSSI. Similar results were reported by researchers; affect regulation ([Klonsky & Glenn, 2009](#)) and self-punishment ([Klonsky, 2007](#)) were commonly reported functions of NSSI.

Furthermore, it was hypothesized that there is likely to be more self-care and toughness function from interpersonal functions of NSSI. The findings revealed that self-care and toughness are more endorsed functions from interpersonal functions while interpersonal boundaries, autonomy, interpersonal influence, revenge, sensation seeking and peer-bonding were less endorsed functions from interpersonal functions of NSSI. [Brausch and Muehlenkamp \(2018\)](#) found that self-care is more common function from interpersonal functions of NSSI. Likewise, the researchers reported that toughness is more endorsed function from interpersonal functions of NSSI ([Peng et al., 2023](#)).

As well, it was postulated that that there is likely to be positive relationship of intrapersonal functions (affect regulation, self-punishment, anti-dissociation, anti-suicide, .marking distress) with NSSI while negative relationship of interpersonal functions (interpersonal boundaries, peer bonding, interpersonal influence, self-care, revenge, toughness, autonomy and sensation seeking) with NSSI. It was found that from intrapersonal functions, toughness is positively related with NSSI while from interpersonal functions, affect regulation and self-punishment are significantly negatively related with NSSI. Similarly, the researchers reported that affect regulation and self-punishment are negatively related with NSSI ([Shen et al., 2023](#)). In another research it was found that from intrapersonal functions, toughness is significantly associated with NSSI ([Reinhardt et al., 2022](#)).

Likewise, it was assumed that interpersonal functions will predict NSSI positively while intrapersonal functions will predict NSSI negatively in University students. Results revealed that interpersonal functions are significant positive predictor of non-suicidal self-injury while intrapersonal functions are significant negative predictor of non-suicidal self-injury. These findings are in line with research by [Muehlenkamp and Gutierrez \(2004\)](#). Similarly, the researchers reported that interpersonal functions are more associated with initiation of NSSI than intrapersonal functions ([Whitlock et al., 2013](#)).

As well, it was postulated that intrapersonal functions are likely to mediate the relationship between interpersonal functions and NSSI in University Students. Findings indicated that intrapersonal functions significantly mediate the relationship between interpersonal functions and NSSI. The researchers reported that interpersonal functions play an important role as precipitating factors of NSSI while intrapersonal factors are perpetuating factors of NSSI. Accordingly, intrapersonal factors may mediate the relationship between intrapersonal factors and NSSI ([Gardner et al., 2021](#)).

Additionally, it was hypothesized that there are likely to be significant gender differences on functions of NSSI in university students. Contrarily, the results indicated non-significant gender differences on functions of NSSI in university students. [Victor et al. \(2018\)](#) reported similar results; no significant gender differences are found on functions of NSSI in university students.

Implications

Findings have implications for treatment of NSSI. Students who endorse more intrapersonal function will benefit from emotion focused interventions. Interventions focusing on interpersonal skills and problem solving will be more beneficial for students who score higher on interpersonal functions. Moreover, it will help in identifying at risk students (who scored high on interpersonal functions will be at risk as these are associated with onset of NSSI) and will help in prevention of NSSI ([Bentley et al., 2014](#)). Additionally, interpersonal factors plays an important role in triggering NSSI while intrapersonal factors are significant in maintaining NSSI. Therefore, mental health professionals should focus on identifying interpersonal factors as a precipitating factors of NSSI and on management of distress caused by these factors without engaging in NSSI ([Wycoff et al., 2021](#)).

Limitations and Suggestions

Correlational research design was used. Longitudinal research design should be used for getting more information about prognostic factors and perpetuating factors of NSSI. Moreover, findings are based on self-report of the participants. Information should be verified by some other source such as parental self-report.

Conclusion

Hence, it can be concluded that interpersonal functions are more common than intrapersonal functions of NSSI. Moreover, intrapersonal functions play mediating role in the relationship of interpersonal functions and NSSI. In summary, interpersonal functions and intrapersonal functions of NSSI play role in initiation and maintenance of NSSI respectively and should be targeted in interventions accordingly.

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