International Journal of Advanced Multidisciplinary Research and Educational Development
Volume 2, Issue 2 | March – April 2026 | www.ijamred.com
ISSN: 3107-6513

A Cross-Sectional Study on The Relationships Between Factors Contributing to Non-Suicidal Self-Harm in Persons Diagnosed With Borderline Personality Disorder in India

Ms.Keerthana[1], Mr.Raj Kumar.V[2], Mrs.Bijulakshmi[3], Dr.Vikhram Ramasubramanian[4]
[1]Associate Psychologist, Department of Psychology, Ahana Hospitals and Research Centre, Madurai, Tamil Nadu, India
[2]Associate Clinical Psychologist, Department of Psychology, Ahana Hospitals and Research Centre, Madurai, Tamil Nadu, India
[3]Consultant Psychologist, Department of Psychology, Ahana Hospitals and Research Centre, Madurai, Tamil Nadu, India.
[4]Consultant Psychiatrist, Department of Psychiatry, Ahana Hospitals and Research Centre, Madurai, Tamil Nadu, India

Abstract

Background: Borderline Personality Disorder (BPD) and Non-Suicidal Self-Injury (NSSI) are highly comorbid, yet their symptom patterns and correlates remain underexplored in the Indian population. This study examines the association between socio-demographic factors, NSSI, and BPD symptomatology.

Aim

To explore the relationship between various contributing factors of NSSI and the severity of BPD in young adults diagnosed with the disorder.

Methods

A descriptive study was conducted from July 2022 to March 2023, involving 317 young adults (aged 18-25) diagnosed with BPD, recruited through purposive sampling from psychiatric consultations. Participants were assessed using the 39-item Inventory of Statements about Self-Injury (ISAS) to measure NSSI factors and the Structured Clinical Interview for DSM-IV-R (SCID-II) to evaluate BPD symptoms. Pearson correlation analysis was employed to examine relationships between NSSI factors and BPD domains, while one-way ANOVA was used to assess demographic differences.

Results: The sample comprised 62.5% females, with the majority (88%) from urban or semi-urban backgrounds and highly educated. Gender differences indicated that females had significantly higher BPD severity scores, particularly in affect regulation, while males exhibited higher NSSI scores and behavioral dysregulation. Correlation analyses revealed that disturbed relatedness in BPD had a strong positive association with behavioral dysregulation, while affect regulation deficits negatively correlated with NSSI. Self-punishment emerged as the strongest predictor of NSSI.

Conclusion: This study emphasizing the roles of impulsivity, affective instability, and self-image disturbances. Gender, education, and marital status significantly influence symptom presentation. Findings suggest the need for targeted interventions focusing on emotional regulation, impulsivity, and interpersonal functioning to improve clinical outcomes.

Key words: Non-suicidal self-harm, Borderline personality disorder, South India

Introduction

Young adulthood is characterized by a period of regular and predictable biological and psychological maturation. This is the stage where the individual identity is formed In this period their personality shapes within them and its formation begins [1]. Personality is referred [2] as the enduring characteristics and behaviours of a person and their unique adjustment to life. An individual's personality is considered the characteristic that makes the person handle and glide through the different types of issues and conditions through the daily hustle of living.

Borderline Personality Disorder (BPD) is a complex mental health condition characterized by pervasive patterns of instability in interpersonal relationships, self-image, and emotions. Individuals with BPD often struggle with intense rapidly shifting moods, impulsive behaviors, and chronic fear of

ISSN: 3107-6513

abandonment. This disorder typically emerges in late adolescence or early adulthood and can significantly impact various aspects of a person's life, including their ability to maintain stable relationships and engage in daily activities. Large, nationwide epidemiologic studies [3] published in 2007 and 2008 estimated the prevalence of borderline personality disorder in the general population at 1.6%, with a lifetime prevalence of 5.9% and the prevalence of borderline personality disorder in the psychiatric outpatient population has been estimated at 11%, and in the psychiatric inpatient population, as high as 20%.

Non-suicidal self-injury (NSSI) is a common phenomenon among young adults and refers to deliberate, non-suicidal, and repetitive self-harm behaviors that cause tissue damage or injury to one's body [4]. NSSI can take many forms, including cutting, burning, and scratching, and is associated with a variety of mental health disorders, including borderline personality disorder (BPD). While the act itself may serve as a coping mechanism for individuals with BPD, it also reflects the profound emotional distress and inner turmoil they experience. The relationship between NSSI and BPD has been the subject of extensive research, and it is widely accepted that NSSI is a common symptom of BPD. However, the exact nature of this relationship remains unclear. Some researchers have suggested that NSSI is a form of self-harm that is used by individuals with BPD as a coping mechanism for emotional distress or to regulate intense negative emotions. Others have proposed that NSSI and BPD share common underlying risk factors, such as childhood trauma or emotional dysregulation. Studies have reported a strong association between NSSI and BPD among young adults [5]. A meta-analysis conducted by [6]found that the prevalence of NSSI among individuals with BPD was significantly higher than among individuals with other mental health disorders, such as depression or anxiety. Several studies have also attempted to identify the factors contributing to the co-occurrence of NSSI and BPD. One of the most commonly cited factors is emotional dysregulation, which refers to the inability to regulate or manage intense negative emotions, such as anger or anxiety [7]. Several studies have reported that individuals with BPD and NSSI have higher levels of emotional dysregulation compared to those without NSSI[8]. Other factors that have been implicated in the co-occurrence of NSSI and BPD include childhood trauma, impulsivity, and cognitive distortions.

Understanding the connection between BPD and NSSI is crucial for effective diagnosis and treatment. NSSI often occurs as a way for individuals with BPD to regulate overwhelming emotions, gain a sense of control, or express emotional pain that is challenging to verbalize. Recognizing these patterns is essential for mental health professionals, as it can guide therapeutic interventions aimed at addressing the underlying emotional dysregulation and fostering healthier coping mechanisms for individuals grappling with both BPD and NSSI.

As discussed above there are few studies that study the pattern of NSSI in BPD but there are no studies in India that study the prevalence of NSSI in BPD and there are no studies that analyze the factors that contribute to NSSI. This study aims to find the relationship between the factors that contribute to NSSI in those diagnosed with BPD.

Methodology:

Study Design

This descriptive study was conducted from July 2022 to March 2023 among people who have been diagnosed with borderline personality disorder. The institutional ethics committee approved this study. Purposive sampling was used. The participants were chosen from people who visited the outpatient department of a single neuropsychiatric hospital for consultation. Psychiatrists referred the participants who fulfilled the criteria for BPD according to ICD 10. The psychologists approached these participants to evaluate if they met the inclusion and exclusion criteria. These participants were selected for the study and informed consent was obtained from the participants

Inclusion criteria:

Young adult in the age group of 18-25 years, who were diagnosed with borderline personality disorder according to ICD – 10 and who had previous history of self-harming behaviour and willing to give informed consent were included in the study.

ISSN: **3107-6513**

Individuals with co-morbid depression and anxiety were also included in the study. Individuals who were undergoing regular therapy and treatment were included in the study.

Exclusion criteria:

Persons diagnosed with psychotic disorder, OCD, and other personality disorders or who were intellectually challenged were excluded from the study

Assessments

All the participants filled out a set of questions consisting of the following questionnaires.

- The semi-structured questionnaire for obtaining the participant's Gender, Age, Socioeconomic status, educational qualification, Marital status, Occupational status, place of living, substance use, and medicine compliance.
- The 39-item Inventory of Statements about Self-injury (ISAS) uses a 3-point likert scale ranging from 0 to 2 to measure self-injury and has a scale reliability of 0.93 [9]. It measures the 13 factors that contribute to NSSI [10].
- BPD symptoms were analyzed using the structured clinical interview for DSM – IV – R (SCID-II) [11]. It is validated instrument for evaluating the symptoms of BPD [12]. It evaluates the presence of 9 BPD symptoms that can be broadly categorized into a three-factor model of BPD namely the disturbed relatedness factor, affect regulation and behavioral dysregulation.

Procedure

The sample consisted of 354 participants. The data was collected for the fulfillment of the inclusion and exclusion criteria. Researchers administered the study questionnaire, which included an inventory of statements about Self-injury. Of the 354 responses, 37 had to be discarded because the forms were incomplete, and a total of 317 responses were taken for analysis.

Statistical analysis

Data were statistically analyzed using the Statistical Package for Social Sciences (SPSS) software, Version 19.0. The Pearson correlation was calculated for the variables. A one-way ANOVA was employed to find out the significant mean difference between the demographic variables. Simple percentage analysis was used with a 95% confidence level, and P 0.05 was considered statistically significant.

Result

The study consisted of 62.5% of females with more than 80% of the participants being graduates or postgraduates and only 12% of the participants were from rural background. Table 1 gives the details of the study population. 73.5% of the participants reported taking some form of substance while 83.9% of the participants reported that they were taking treatment or therapy for their condition.

Table 1: Sociodemographic details

	Frequency N(%)
Gender	
Female	198 (62.5%)
Male	119 (37.5%)
Education	
Graduate	172 (54.3%)
Postgraduate	107 (33.8%)
High school	38 (12%)
Occupation	
Student	101 (31.9%)

ISSN: **3107-6513**

Home makers	58 (18.3%)
Employed	75 (23.7%)
Business	26 (8.2%)
Unemployed	57 (18%)
Marital Status	
Married	58 (18.3%)
Unmarried	234 (73.8%)
Separated	25 (7.9%)
Socio economic status	
Low	44 (13.9%)
Upper	120 (37.9%)
Middle	153 (48.3%)
Place of Residing	
Rural	38 (12%)
Semi-urban	132 (41.7%)
Urban	147 (46.4%)
Are you taking any substance regularly at present	
No	84 (26.5%)
Yes	233 (73.5%)
Are you taking any Medication/ therapy regularly at present	
Yes	266 (83.9%)
No	51 (16.1%)

The relationship between the socio-demographic variables and the scores were analyzed using analysis of variance and when comparing the scores across the male and female participants it is seen that there is a significant relationship between the scores as shown in Table 2. While there was no significant difference in the scores in disturbed relatedness factor in terms of gender, the scores indicate that females scored significantly lesser in the interpersonal and intrapersonal domains and the total score of NSSI. Female participants had significantly higher scores in BPD, and a significantly higher score in affect regulation factor, but male participants had significantly higher scores in behavior dysregulation factor

Table 2: Analysis of variance across gender and the variables

		Mean (SD)	F (1,315)	P
Disturbed relatedness factor	Male	28.26 (±2.07)	.334	.564
	Female	28.39 (±1.41)		
Affect regulation factor	Male	22.04 (±2.57)	175.021	.000**
	Female	25.62 (±1.89)		
Behavioural dysregulation factor	Male	13.32 (±1.96)	4.510	.034**
	Female	12.79 (±2.42)		
Intrapersonal factors	Male	23.84 (±4.95)	89.477	.000**

ISSN: **3107-6513**

	Female	17.85 (±6.22)		
Interpersonal factors	Male	40.62 (±7.4)	57.312	.000**
	Female	33.41 (±9.4)		
Total of NSSI	Male	64.46 (±12.14)	73.511	.000**
	Female	51.26 (±14.97)		
Severity score of BPD	Male	63.62 (±4.3)	52.383	.000**
	Female	66.8 (±2.74)		

**P is significant at P<.05

The results show that females have higher scores in BPD and lower scores in NSSI. The factors contributing to the total scores in BPD and NSSI indicate that while females have higher scores in affect regulation factor, males have higher scores in behavioural dysregulation factor of BPD and higher scores in both inter and intrapersonal factors in NSSI.

The analysis of the difference in the scores across participants with different educational qualifications shows that there is significant difference across the variables as shown in Table 3.

Table 3: Analysis of variance across educational qualification and the variables

		Mean (SD)	F (2,314)	P
Disturbed relatedness factor	Graduate	27.87 (±1.35)	127.772	.000**
	Postgraduate	29.83 (±1.63)		
	High school	26		
Affect regulation factor	Graduate	23.5 (±2.38)	81.705	.000**
	Postgraduate	21.75 (±2.646)		
	High school	27.45 (±1.18)		
Behavioural dysregulation factor	Graduate	13.40 (±1.35)	291.018	.000**
	Postgraduate	14.30 (±1.19)		
	High school	8.55 (±1.18)		
Intrapersonal factors	Graduate	20.26 (±7.75)	11.985	.000**
	Postgraduate	23.85 (±2.53)		
	High school	21.29 (±2.75)		
Interpersonal factors	Graduate	36.26 (±9.56)	58.150	.000**
	Postgraduate	43.63 (±2.74)		
	High school	29.32 (±7.07)		
Total of NSSI	Graduate	56.51 (±17.26)	31.216	.000**
	Postgraduate	67.48 (±4.95)		
	High school	50.61 (±9.82)		
Severity score of BPD	Graduate	64.77 (±3.46)	13.660	.000**
	Postgraduate	65.88 (±5.15)		
	High school	62		

**P is significant at P<.05

The post hoc analysis was done using the Bonferroni method to compare differences in scores across different educational qualifications (Graduate, Postgraduate, and High School) for various factors in BPD and NSSI.

In Disturbed Relatedness Factor, postgraduates had significantly higher scores than Graduates (Mean Diff = 1.960, p <.01). High school participants had significantly higher scores than Graduates (Mean Diff = 1.872, p <.01). Postgraduates had significantly higher scores than High school participants (Mean Diff = 3.832, p <.01). The scores in Affect Regulation Factor indicate that graduates had significantly higher scores than Postgraduates (Mean Diff = 1.752, p p <.01) but significantly lower scores than high school participants (Mean Diff = -3.947, p <.01). Postgraduates had significantly lower scores than High school participants (Mean Diff = -5.700, p = .000). High school participants showed the highest difficulty in affect regulation. The scores in

ISSN: 3107-6513

Behavioral Dysregulation Factor indicate that postgraduates scored lower than graduates (Mean Diff = -.904, p <.01), indicating slightly better behavioral regulation. Participants with qualification upto high school scored significantly higher than graduates (Mean Diff = 4.843, p <.01) and Postgraduates (Mean Diff = 5.746, p <.01), indicating the highest level of behavioral dysregulation. The Severity Score of Borderline Personality Disorder (BPD) indicates that there is no significant difference between graduates and postgraduates (Mean Diff = -1.111, p <.01). High school participants had significantly higher BPD severity scores than graduates (Mean Diff = 2.767, p <.01) and postgraduates (Mean Diff = 3.879, p <.01). This suggests that lower educational levels are associated with higher severity of BPD symptoms.

The scores in Intrapersonal Factors indicate that graduates had significantly lower scores than postgraduates (Mean Diff = -3.595, p <.01). Differences between high school participants and the other two groups were not statistically significant at p < .05. The scores in Interpersonal Factors indicate that graduates had significantly lower scores than postgraduates (Mean Diff = -7.370, p <.01) and significantly higher scores than high school participants (Mean Diff = 6.940, p <.01). Postgraduates had significantly higher scores than high school participants (Mean Diff = 14.310, p = .000). The total Non-Suicidal Self-Injury (NSSI) score indicates that postgraduates scored significantly higher than Graduates (Mean Diff = 10.965, p <.01). High school participants scored significantly higher than Graduates (Mean Diff = 5.906, p <.01) and Postgraduates (Mean Diff = 16.871, p <.01). This suggests that NSSI tendencies increase as educational attainment decreases.

Table 4 shows the analysis of variance across the variables based on the marital status of the participants. The scores indicate that there is a significant difference between the scores of NSSI and BPD and its factors

Table 4: Analysis of variance across marital status and the variables

		Mean (SD)	F	P
Disturbed relatedness factor	Married	28.55 (±.50)	24.381	.000**
	Unmarried	28.50 (±1.98)		
	Separated	26		
Affect regulation factor	Married	26.10 (±1)	144.327	.000**
	Unmarried	22.21 (±2.39)		
	Separated	28		
Behavioural dysregulation factor	Married	14	153.133	.000**
	Unmarried	13.45 (±1.79)		
	Separated	8		
Intrapersonal factors	Married	15.17 (±8.03)	56.147	.000**
	Unmarried	23.35 (±4.73)		
	Separated	20		
Interpersonal factors	Married	31.86 (±11.04)	66.643	.000**
	Unmarried	40.68 (±6.76)		
	Separated	26		
Total of NSSI	Married	47.03 (±19.06)	57.684	.000**
	Unmarried	64.04 (11.22)		
	Separated	46		
Severity score of BPD	Married	68.66 (±1.51)	43.945	.000**
	Unmarried	64.16 (±4.14)		
	Separated	62		

ISSN: **3107-6513**

**P is significant at P<.05

The analysis of the post hoc Bonferroni comparisons based on marital status (Married, Unmarried, Separated) shows that Disturbed Relatedness Factor has no significant difference between Married and Unmarried participants. Separated individuals scored significantly higher than both Married (Mean Diff = 2.552, p <.01) and Unmarried (Mean Diff = 2.496, p <.01). The scores in Affect Regulation Factor shows that married individuals scored significantly higher than Unmarried (Mean Diff = 3.890, p <.01), indicating better affect regulation in the unmarried group. Separated individuals scored significantly lower than both Married (Mean Diff = -1.897, p <.01) and Unmarried (Mean Diff = -5.786, p <.01). The scores in Behavioral Dysregulation Factor indicates that Married individuals had slightly higher scores than Unmarried (Mean Diff = .551, p = .045), indicating slightly better behavioral control in the unmarried group. Separated individuals had significantly higher scores than both Married (Mean Diff = 6.000, p <.01) and Unmarried (Mean Diff = 5.449, p <.01). The Severity Score of Borderline Personality Disorder (BPD) show that unmarried individuals had significantly higher BPD severity scores than Married (Mean Diff = 4.497, p <.01). Separated individuals had the highest BPD severity scores, significantly higher than both Married (Mean Diff = 6.655, p <.01) and Unmarried (Mean Diff = 2.158, p <.01).

The scores in Intrapersonal Factors show that unmarried individuals scored significantly higher than Married (Mean Diff = 8.182, p <.01), indicating poorer intrapersonal functioning. Separated individuals scored significantly higher than Married (Mean Diff = 4.828, p <.01) but significantly lower than Unmarried (Mean Diff = -3.355, p <.01). The scores in Interpersonal Factors show that unmarried individuals scored significantly higher than Married (Mean Diff = 8.822, p <.01), suggesting more interpersonal difficulties. Separated individuals had the highest scores, significantly higher than both Married (Mean Diff = 5.862, p <.01) and Unmarried (Mean Diff = 14.684, p <.01). The total scores in Non-Suicidal Self-Injury (NSSI) indicate that Unmarried individuals had significantly higher NSSI scores than Married (Mean Diff = 17.004, p <.01). Separated individuals had the highest NSSI scores, significantly higher than both Married (Mean Diff = 1.034, not significant) and Unmarried (Mean Diff = 18.038, p <.01).

The scores of NSSI in its various domains and the total scores were checked for correlation to the severity score of BPD using pearsons correlation and shown in table 5. It was noted that the disturbed relatedness factor (DRF) domain of BPD consisting of difficulty in relationships, emptiness, self-image and quasi-psychotic states has a strong significant positive correlation to the behavioural dysfunctional factor (BDF) consisting of impulsivity and suicidal/self-mutilation. There is a significant positive correlation between disturbed relatedness factor and affect regulation factor (ARF) consisting of affective instability, abandonment and intense anger.

The intrapersonal factors of NSSI is significantly correlated to all the factors in BPD, the strongest correlation being with ARF. The interpersonal factors of NSSI on the other hand is significantly negatively correlated to ARF and positively correlated with BDF. The totals score in NSSI has the strongest correlation to ARF. The total NSSI score has the strongest correlation to ARF of BPD, while there is no significant correlation to the other two factors namely DRF and BDF. The totals score in BPD is strongly correlated to all the 3 factors with DRF showing the strongest positive correlation.

Table 5: Correlations between scores of NSSI and severity of BPD

		1	2	3	4	5	6	7
1	Disturbed relatedness factor (DRF)	1						
2	Affect regulation factor (ARF)	.165**						

ISSN: **3107-6513**

3	Behavioural dysregulation factor (BDF)	.843**	.380**				
4	Intrapersonal factors	.190**	.391**	.155**			
5	Interpersonal factors	.023	.559**	.161**	.900**		
6	Total of NSSI	.066	.503**	.032	.964**	.983**	
7	Severity score of BPD	.779**	.437**	.638**	.446**	.303**	.371**

**. Correlation is significant at the 0.01 level (2-tailed).

Table 6: Correlation between the 13 factors of NSSI and the total score

	1	2	3	4	5	6	7	8	9	10	11	12	13
1.Affect regulation	1												
2.Interpersonal boundaries	.175**												
3.Self-punishment	.570**	.850**											
4.Self care	.484**	.414**	.644**										
5.Anti-disassociation	.617**	.275**	.451**	.789**									
6.Anti-suicide	.513**	.778**	.899**	.734**	.462**								
7.Sensation seeking	.286**	.931**	.907**	.366**	.181**	.721**							
8.Peer bonding	.852**	.183**	.496**	.673**	.871**	.465**	.198**						
9.Interpersonal influence	.299**	.264**	.422**	.869**	.803**	.500**	.177**	.664**					
10.Toughness	.184**	.415**	.509**	.140*	.117*	.230**	.575**	.291**	.269**				
11.Marked distress	.263**	.682**	.773**	.718**	.284**	.813**	.682**	.265**	.391**	.219**			
12.Revenge	.097	.777**	.719**	.338**	.070	.786**	.706**	.048	.272**	.256**	.542**		
13.Autnomy	.253**	.478**	.661**	.283**	.128*	.317**	.722**	.145**	.146**	.638**	.423**	.295**	
14.Total of NSSI	.577**	.799**	.961**	.799**	.642**	.896**	.812**	.637**	.650**	.504**	.766**	.661**	.583**

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Correlations between the 13 factors of NSSI and the total score show that all the factors are positively correlated to the total score as shown in table 6. Self-punishment ($r = .961$, $p < .01$) has the highest correlation, suggesting that self-punishment is the most strongly associated factor with NSSI. Anti-suicide ($r = .896$, $p < .01$) has high correlation, to the total score indicating that non-suicide behaviors are also closely linked with NSSI. Sensation seeking ($r = .812$, $p < .01$), Interpersonal boundaries ($r = .799$, $p < .01$), Revenge ($r = .661$, $p < .01$) and peer bonding ($r = .637$, $p < .01$) have strong correlation to the total score of NSSI.

The correlation between the different factors shows that Sensation seeking ($r = .931$, $p < .01$) has the strongest correlation with interpersonal boundaries, followed by self-punishment ($r = .907$, $p<.01$). There is no significant correlation between revenge and affect regulation, anti-dissociation and peer bonding. Correlation between the factors of BPD and the total scores in NSSI is shown in table 7. It shows that Impulsivity has the strongest correlation to self-image and emptiness has the strongest correlation to affective instability. Intense anger has the strongest correlation to abandonment and quasi-psychotic state has a strong correlation to suicide/self-mutilation. It

ISSN: **3107-6513**

also shows that the total score in BPD has the strongest positive correlation to quasi-psychotic states and suicide/self-mutilation followed by impulsivity, self-image, affective instability, emptiness, abandonment and intense anger.

Table 7: Correlations between factors of BPD and total scores in NSSI

	1	2	3	4	5	6	7	8	9	10
1.Impulsivity	1									
2.Affective Instability	.106									
3.Abandonment	.369**	.012								
4.Relationships	.495**	.577**	.150**							
5.Self-Image	1.000**	.106	.369**	.495**						
6.Suicide/Self-Mutilation	.719**	.025	.393**	.524**	.719**					
7.Emptiness	.106	1.000**	.012	.577**	.106	.025				
8.Intense Anger	.369**	.012	1.000**	.150**	.369**	.393**	.012			
9.Quasi-Psychotic States	.719**	.025	.393**	.524**	.719**	1.000**	.025	.393**		
10.Total of NSSI	.299**	.092	.520**	.061	.299**	.175**	.092	.520**	.175**	
11.Severity score of BPD	.529**	.502**	.222**	.638**	.529**	.640**	.502**	.222**	.640**	.371**

**. Correlation is significant at the 0.01 level (2-tailed).

The total NSSI score has significant positive correlation to impulsivity sense of abandonment, intense anger, quasi-psychotic states and self-image suggesting its positive influence in NSSI.

Discussion:

This is a detailed study on the symptom presentation of persons with BPD and offers some insights that are new to the Indian population.

The sample consists of 62.5% females and 37.5% males, which is similar to other studies that indicate that females are mostly affected by BPD[13] and also similar to a review study done in Indian population [14] indicating that about 60% of persons with BPD were females. The majority (88%) of the participants are from urban or semi-urban areas, with only 12% from rural backgrounds. Most participants (80%) have a graduate or postgraduate degree, indicating a well-educated sample. The majority (73.8%) are unmarried, and 18.3% are married, with a small percentage (7.9%) separated. Socioeconomic status is skewed toward the middle class (48.3%) and upper class (37.9%), with fewer participants from a low-income background (13.9%). A significant portion of participants (73.5%) use some form of substance, similar to other studies that indicate that people suffering from BPD use substances [15]. 83.9% are receiving medication or therapy.

While analyzing the gender differences in the scores the results indicate that males scored significantly higher in total NSSI scores, in both interpersonal, and intrapersonal factors. This is in contrast to the popular notion that the female gender is more prone to NSSI. Females had significantly higher BPD severity scores, with particularly higher scores in affect regulation, suggesting greater emotional instability. Males had significantly higher scores in behavioral dysregulation, indicating more impulsive behaviors. Females' higher scores in affect regulation and BPD severity are consistent with previous research indicating that women are more likely to experience mood dysregulation and emotional instability. Conversely, males' higher scores in behavioral dysregulation and NSSI are aligned with findings that suggest men may exhibit more externalizing

ISSN: 3107-6513

behaviors and higher rates of self-injurious actions. This is similar to other studies done in various nations, showing differences in symptom presentations in terms of gender [16] [17].

People with higher education levels (postgraduates) showed higher scores in DRF and interpersonal difficulties, suggesting social and relational struggles, and lower BDF scores, implying better self-control. People with lower education levels (high School) showed higher NSSI and BPD severity scores, indicating a stronger association between lower education and self-harm tendencies. They also showed poor affect regulation and higher behavioral dysregulation, suggesting greater difficulty in emotional and impulse control. Separated individuals had the highest severity scores for BPD and NSSI, possibly indicating relationship instability as a significant stressor. Married individuals scored significantly lower in BPD and NSSI factors, indicating better emotional stability. Unmarried individuals had higher NSSI and BPD scores compared to married participants but were still lower than separated individuals.

Disturbed Relatedness Factor (DRF) strongly correlates with BDF, indicating that relationship difficulties contribute to behavioural disturbances. Affect Regulation Factor (ARF) positively correlates with NSSI, meaning poor emotional regulation increases self-harm tendencies. The total NSSI score has positive correlation to impulsivity and self-image domains of BPD suggesting that they are the strongest predictor of self-harming behaviours in BPD as shown in numerous studies [18] In addition the scores in the factors of NSSI show that self-punishment is the strongest predictor of NSSI, highlighting that self-harm is often used as a coping mechanism for self-directed negative emotions. Anti-suicide motives also show a high correlation, suggesting that some individuals engage in NSSI as a means to prevent suicidal ideation.

The correlation between the various factors on BPD indicates that there exists a strong relationship between self-image and impulsivity and its strong significance to the scores on NSSI. This could be because fluctuating self-image and impulsivity can influence an individual to self-harm. Interestingly quasi-psychotic state is strongly associated to suicide/self-mutilation, and both these factors have the strongest positive correlation to the total BPD score and both these factors have a significant association to NSSI. This could indicate that non-suicidal self-injury in an individual is a conscious effort to ventilate when in distress, especially with regard in fluctuations in self-image. A strong intention for suicide or self-mutilation in a quasi-psychotic state is a major risk to self in those suffering from borderline personality disorder as evidenced by the strong relationship between these two factors. This could be the reason for death due to completed suicides among those suffering from BPD. Strong relationships between impulsivity and NSSI reinforced the notion that impulsivity has a major role in NSSI, while intense anger and sense of abandonment is positively associated to NSSI suggesting it role in NSSI.

Emptiness is strongly associated to affective instability and feelings of abandonment is strongly associated with intense anger. This again reinforces the various theories that explain the development of BPD [19, 20]that suggest that fear of abandonment, affective instability, fluctuations in self-image, self-harm and impulsivity are predominant factors and that these factors also has an association to NSSI.

This study's findings may not fully represent all young adults due to demographic and contextual limitations. It focuses on specific variables related to NSSI and BPD, excluding cultural, familial, and cognitive influences, which limits the comprehensiveness of the results. The absence of longitudinal data further restricts causal interpretations. Future research should explore longitudinal designs to establish clearer relationships between NSSI and BPD factors. Comparative studies on therapeutic interventions, such as DBT, CBT, and Emotion Regulation Therapy, could provide valuable clinical insights. Additionally, investigating the influence of peer dynamics, family interactions, and social stressors may enhance understanding of NSSI maintenance. Given the gender differences in impulsivity, relationships, and self-image, gender-specific interventions could improve treatment effectiveness. Furthermore, with the growing role of

ISSN: **3107-6513**

digital interactions, studies on the impact of social media and exposure to self-harm content on NSSI frequency and severity in individuals with BPD are essential.

Conclusion:

This study sheds light on the intricate connection between NSSI and BPD, highlighting the influences of impulsivity, emotional dysregulation, and self-image in NSSI. Intrapersonal NSSI factors show a negative correlation with BPD components, while interpersonal NSSI factors are associated with impulsivity. Among all factors, self-punishment emerged as the strongest predictor of total NSSI scores.

References

[1] Kleindienst N, Limberger MF, Ebner-Priemer UW, et al. Dissociation Predicts Poor Response to Dialectial Behavioral Therapy in Female Patients with Borderline Personality Disorder. *J Pers Disord* 2011; 25: 432–447.

[2] Personality. *American Psychological Association*, https://www.apa.org/topics/personality#:~:text=Personality%20refers%20to%20the%20enduring,%2C%20abilities%2C%20and%20emotional%20patterns. (accessed 5 February 2024).

[3] Chapman J, Jamil RT, Fleisher C. *Borderline Personality Disorder*. Starpearls publishing, https://www.ncbi.nlm.nih.gov/books/NBK430883/ (2023, accessed 20 November 2023).

[4] Cipriano A, Cella S, Cotrufo P. Nonsuicidal Self-injury: A Systematic Review. *Front Psychol*; 8. Epub ahead of print 8 November 2017. DOI: 10.3389/fpsyg.2017.01946.

[5] Claes L, Houben A, Vandereycken W, et al. Brief report: The association between non-suicidal self-injury, self-concept and acquaintance with self-injurious peers in a sample of adolescents. *J Adolesc* 2010; 33: 775–778.

[6] Swannell S V, Martin GE, Page A, et al. Prevalence of nonsuicidal self-injury in nonclinical samples: systematic review, meta-analysis and meta-regression. *Suicide Life Threat Behav* 2014; 44: 273–303.

[7] Brown MZ, Comtois KA, Linehan MM. Reasons for suicide attempts and nonsuicidal self-injury in women with borderline personality disorder. *J Abnorm Psychol* 2002; 111: 198–202.

[8] Klonsky ED. The functions of deliberate self-injury: A review of the evidence. *Clin Psychol Rev* 2007; 27: 226–239.

[9] Klonsky ED, Glenn CR. Assessing the Functions of Non-suicidal Self-injury: Psychometric Properties of the Inventory of Statements About Self-injury (ISAS). *J Psychopathol Behav Assess* 2009; 31: 215–219.

[10] Klonsky ED, Olino TM. Identifying clinically distinct subgroups of self-injurers among young adults: A latent class analysis. *J Consult Clin Psychol* 2008; 76: 22–27.

[11] First MB, Gibbon M, Spitzer RL, et al. *Structured Clinical Interview for DSM-IV Axis II Personality Disorders.* Washington D.C: American Psychiatric Press, Inc, 1997.

[12] Lyons-Ruth K, Bureau J-F, Holmes B, et al. Borderline symptoms and suicidality/self-injury in late adolescence: Prospectively observed relationship correlates in infancy and childhood. *Psychiatry Res* 2013; 206: 273–281.

[13] Sansone RA, Sansone LA. Gender patterns in borderline personality disorder. *Innov Clin Neurosci* 2011; 8: 16–20.

[14] Choudhary Shalini. Borderline Personality Disorder: A Review of Indian Studies. *Journal of Psychology & Clinical Psychiatry* 2021; 12: 58–62.

[15] Bozzatello P, Blua C, Brandellero D, et al. Gender differences in borderline personality disorder: a narrative review. *Front Psychiatry*; 15. Epub ahead of print 12 January 2024. DOI: 10.3389/fpsyt.2024.1320546.

[16] Amerio A, Natale A, Gnecco GB, et al. The Role of Gender in Patients with Borderline Personality Disorder: Differences Related to Hopelessness, Alexithymia, Coping Strategies,

ISSN: **3107-6513**

and Sensory Profile. *Medicina (B Aires)* 2023; 59: 950.

[17] Potthoff S, Kwasnicka D, Avery L, et al. Changing healthcare professionals' non-reflective processes to improve the quality of care. *Soc Sci Med* 2022; 298: 114840.

[18] Weiss NH, Tull MT, Viana AG, et al. Impulsive behaviors as an emotion regulation strategy: Examining associations between PTSD, emotion dysregulation, and impulsive behaviors among substance dependent inpatients. *J Anxiety Disord* 2012; 26: 453–458.

[19] Gunderson JG, Fruzzetti A, Unruh B, et al. Competing Theories of Borderline Personality Disorder. *J Pers Disord* 2018; 32: 148–167.

[20] Otto B, Kokkelink L, Brüne M. Borderline Personality Disorder in a "Life History Theory" Perspective: Evidence for a Fast "Pace-of-Life-Syndrome". *Front Psychol*; 12. Epub ahead of print 26 July 2021. DOI: 10.3389/fpsyg.2021.715153.