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RESEARCH ARTICLE
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NON-SUICIDAL SELF-INJURY AMONG PATIENTS ATTENDING MENTAL HEALTH FACILITY – A CROSS-SECTIONAL STUDY

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ABSTRACT

Background: Non-suicidal self-injury (NSSI) is a significant public health concern characterized by intentional self-harm without suicidal intent. Limited research exists on NSSI in Indian psychiatric settings, particularly regarding its association with emotional dysregulation and suicide risk.

Aim: To assess the prevalence of NSSI among young psychiatric outpatients and examine its association with sociodemographic factors, emotional regulation difficulties, and suicide risk.

Methods: A cross-sectional observational study was conducted at the Department of Psychiatry, Government General Hospital, Siddhartha Medical College, Vijayawada. One hundred patients aged 18-30 years attending the psychiatry outpatient unit were recruited through convenient sampling. Data were collected using sociodemographic questionnaire, Self-harm Inventory, Difficulties in Emotional Regulation Scale (DERS), and Columbia Suicide Severity Rating Scale (CSSRS).

Results: The prevalence of NSSI was 30% (n=30). Males comprised 61% of the sample. No significant association was found between NSSI and sociodemographic variables ($p>0.05$). Among participants with NSSI, 93% (n=28) had significant emotional regulation difficulties, with goal-directed behavior impairment being most prominent. Sixty percent of NSSI participants had active suicidal ideation or history of suicide attempts. Common self-harm methods included hitting, cutting, and head banging.

Conclusion: NSSI shows high prevalence among young psychiatric patients with strong associations to emotional dysregulation and suicide risk. Comprehensive assessment and targeted interventions are essential for this vulnerable population.

Keywords: Non-suicidal self-injury, emotional regulation, suicide risk, psychiatric outpatients, young adults

INTRODUCTION:

Non-suicidal self-injury (NSSI), defined as the intentional, direct destruction of body tissue without suicidal intent, represents a significant mental health concern globally.[1] Also referred to as self-

harm, deliberate self-harm, or self-injurious behavior, NSSI encompasses various methods including cutting, burning, scratching, hitting, or biting oneself.[2] The behavior serves primarily as a mechanism for emotional regulation or communication of psychological distress rather than an attempt to end life. The epidemiological burden of NSSI is substantial, with prevalence rates of approximately 250 per 100,000 persons annually.[3] While traditionally viewed as predominantly affecting adolescent females, recent population studies demonstrate relatively equal prevalence across genders. [4,5] The typical onset occurs during early to mid-adolescence, around 13-14 years of age, though presentation in clinical settings may vary considerably.

NSSI is frequently misunderstood as attention-seeking behavior, overlooking its complex underlying motivations and functions. Research indicates that individuals engaging in NSSI often experience temporary relief from emotional distress, suggesting its role as a maladaptive coping mechanism for overwhelming psychological pain.[6] The behavior may serve multiple functions including emotional regulation, self-punishment, communication of distress, or seeking interpersonal influence.

The relationship between NSSI and emotional dysregulation is well-established in Western literature, with difficulties in emotion identification, acceptance, and management being key risk factors.[7,8] Additionally, NSSI shows strong associations with increased suicide risk, though the mechanisms underlying this relationship remain complex and multifaceted.[9]

Despite its clinical significance, limited research exists on NSSI within Indian psychiatric populations. Understanding the sociodemographic profile, prevalence, and associated factors in hospital-based settings is crucial for developing culturally appropriate assessment and intervention strategies. This study aims to address this gap by examining NSSI among young psychiatric outpatients in a tertiary care setting.

AIMS AND OBJECTIVES

Primary Objectives

1. To assess the prevalence of non-suicidal self-injury among psychiatric outpatients aged 18-30 years
2. To evaluate emotional regulation difficulties in participants with NSSI
3. To assess suicide risk among participants with NSSI

Secondary Objectives

1. To analyze sociodemographic characteristics of the study population
2. To examine associations between sociodemographic variables and NSSI
3. To identify common methods and patterns of self-harm behavior

METHODOLOGY

Study Design and Setting

This cross-sectional observational study was conducted at the Department of Psychiatry, Government General Hospital, Siddhartha Medical College, Vijayawada, Andhra Pradesh, India.

Study Population and Sampling

The study population comprised patients attending the psychiatry outpatient unit. A convenient sampling method was employed to recruit 100 participants.

Selection Criteria

Inclusion Criteria:

- Patients providing informed consent for study participation
- Age less than 30 years

All genders included

Exclusion Criteria:
- Refusal to provide informed consent
- Age above 30 years
- Patients below 18 years not accompanied by legal guardian
- Severe and active psychiatric conditions precluding participation
- Severe medical comorbidities interfering with assessment

Data Collection Procedure
Eligible patients were approached during their outpatient visits and provided with detailed information about the study. After obtaining informed consent, sociodemographic data were collected using a structured questionnaire.

Subsequently, standardized assessment tools were administered by trained personnel. All assessments were conducted in a private, comfortable environment to ensure confidentiality and accurate responses.

Assessment Instruments
1. **Sociodemographic Questionnaire:** Structured form to collect demographic, educational, occupational, and socioeconomic information
2. **Modified B.G. Prasad Scale:** For socioeconomic status assessment based on per capita monthly income, updated according to current consumer price index
3. **Self-harm Inventory (SHI):** A validated self-report measure assessing various forms of self-injurious behaviors with scoring ranges indicating severity levels
4. **Difficulties in Emotional Regulation Scale (DERS):** A 36-item self-report measure assessing six dimensions of emotional dysregulation:
   - Nonacceptance of emotional responses
   - Difficulty engaging in goal-directed behavior
   - Impulse control difficulties
   - Lack of emotional awareness
   - Limited access to emotion regulation strategies
   - Lack of emotional clarity
5. **Columbia Suicide Severity Rating Scale (CSSRS):** A comprehensive assessment tool evaluating suicide ideation severity, suicide behavior, and actual attempts with detailed classification
6. **Clinical Assessment:** Psychiatric diagnoses were established using ICD-10 and DSM-5 criteria through clinical interview

Ethical Considerations
The study protocol received approval from the Institutional Ethics Committee of Siddhartha Medical College. All participants provided written informed consent after receiving detailed information about the study objectives, procedures, and confidentiality measures. For participants below 18 years, parental consent was mandatory. Participant confidentiality was strictly maintained throughout the study process.

Statistical Analysis
Data were analyzed using appropriate statistical software. Descriptive statistics were calculated for all variables. Chi-square tests were employed to examine associations between categorical variables. Continuous variables were analyzed using appropriate parametric or non-parametric tests based on data distribution. Statistical significance was set at $p<0.05$.

RESULTS

Sociodemographic and NSSI data distribution

	TOTAL (N=100)	NSSI		p value
		PRESENT N=30)	ABSENT (N=70)	
AGE (in years)				**0.300**
15 or less	21	7	14	
16-20	22	9	13	
21-25	29	5	24	
26-30	28	9	19	
GENDER				**0.893**
Male	61	18	43	
Female	39	12	27	
EDUCATION				**0.329**
Illiterates	15	6	9	
Primary	7	3	4	
Secondary	58	18	40	
Graduation	20	3	17	
OCCUPATION				**0.752**
Employed	22	6	16	
Unemployed	78	24	54	
MARITAL STATUS				**0.974**
Single	83	25	58	
Married	13	4	9	
Separated	4	1	3	
RESIDENCE				**0.341**
Rural	19	8	11	
Semi urban	11	4	7	
Urban	70	18	52	
SOCIO ECONOMIC STATUS				**0.726**
Upper	10	4	6	
Upper middle	20	7	13	
Middle	41	10	31	
Lower middle	13	3	10	
Lower	16	6	10	

Sociodemographic Characteristics

A total of 100 participants were enrolled in the study. The sample comprised 61 males (61%) and 39 females (39%). Age distribution showed 21 participants (21%) aged ≤15 years, 22 (22%) aged 16-20 years, 29 (29%) aged 21-25 years, and 28 (28%) aged 26-30 years.

Educational status revealed that 15 participants (15%) were illiterate, 7 (7%) had primary education, 58 (58%) had secondary education, and 20 (20%) were graduates. Regarding occupation, 78 participants (78%) were unemployed while 22 (22%) were employed. Marital status showed 83 participants (83%) were single, 13 (13%) were married, and 4 (4%) were separated.

Residential distribution indicated 70 participants (70%) from urban areas, 19 (19%) from rural areas, and 11 (11%) from semi-urban areas. According to the Modified B.G. Prasad Classification, 10 participants (10%) belonged to upper socioeconomic status, 20 (20%) to upper middle, 41 (41%) to middle, 13 (13%) to lower middle, and 16 (16%) to lower socioeconomic status.

Prevalence of NSSI

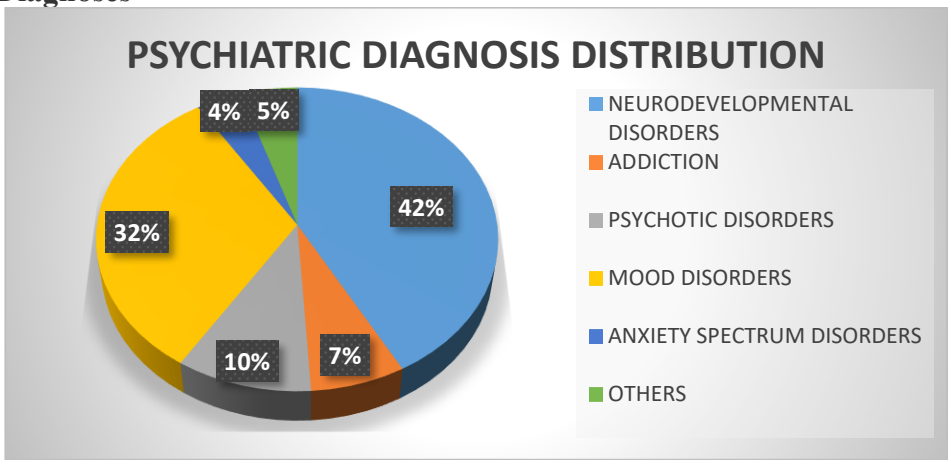
Among the 100 participants, 30 (30%) reported a history of non-suicidal self-injurious behavior. The remaining 70 participants (70%) had no history of NSSI.

Association Between Sociodemographic Variables and NSSI

Statistical analysis revealed no significant associations between NSSI and any sociodemographic variables examined:

- Age: p=0.300
- Gender: p=0.893
- Education: p=0.329
- Occupation: p=0.752
- Marital status: p=0.974
- Residence: p=0.341
- Socioeconomic status: p=0.726

Psychiatric Diagnoses



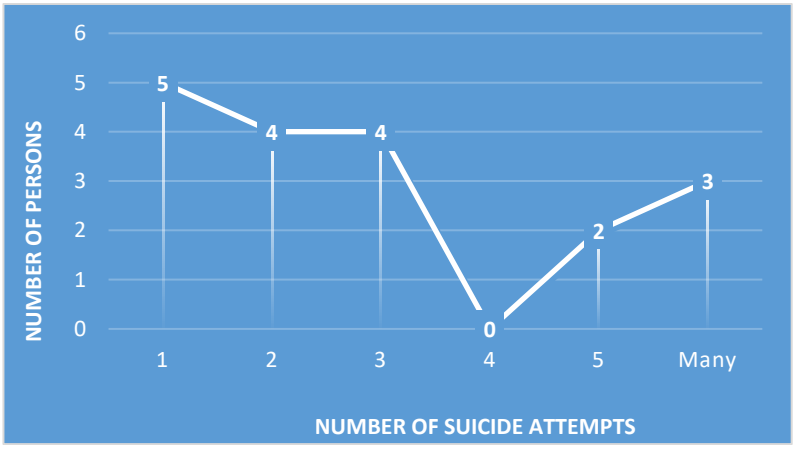
The most common psychiatric diagnoses among participants were neurodevelopmental disorders (42%), followed by mood disorders (32%). Other diagnostic categories included anxiety disorders, psychotic disorders, and personality disorders.

Emotional Regulation Difficulties

Among participants with NSSI history (n=30), 28 individuals (93%) demonstrated significant difficulties in emotional regulation as measured by the DERS. Analysis of DERS subscales revealed the following hierarchy of difficulties:

1. Difficulty engaging in goal-directed behavior (Goals) - most prominent
2. Impulse control difficulties (Impulse)
3. Limited access to emotion regulation strategies (Strategies)
4. Nonacceptance of emotional responses (Nonacceptance)
5. Lack of emotional awareness (Awareness)
6. Lack of emotional clarity (Clarity) - least prominent

Suicide Risk Assessment



Among participants with NSSI history (n=30), the Columbia Suicide Severity Rating Scale revealed that 18 individuals (60%) had active suicidal ideation or history of suicide attempts at the time of assessment.

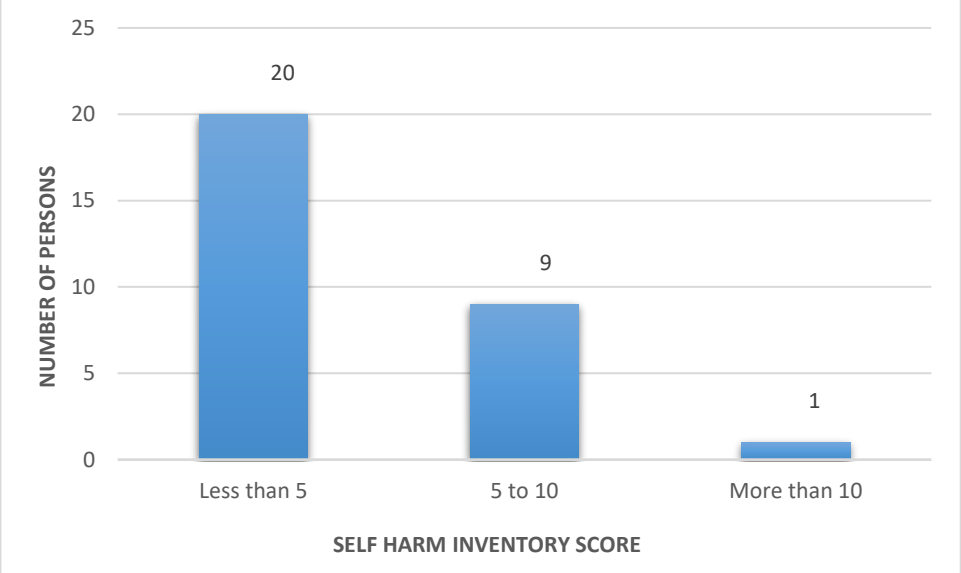
The predominant methods of suicide attempts included:

- Hanging
- Cutting
- Poisoning

Less frequently reported methods included:

- Fall from height
- Drowning

Self-Harm Methods and Patterns



Analysis of the Self-harm Inventory among NSSI participants (n=30) revealed:

- 9 participants scored 5-10, indicating need for further evaluation
- 1 participant scored >10, requiring comprehensive psychiatric evaluation

The most common self-harm methods reported were:

- Hitting oneself
- Cutting
- Head banging

Less frequent self-harm behaviors included:

- Starvation
- Engaging in torturous thoughts
- Skipping medications

DISCUSSION

This cross-sectional study provides important insights into NSSI prevalence and associated factors among young psychiatric outpatients in an Indian tertiary care setting. The 30% prevalence rate observed aligns with previous research in similar populations,[10,11] highlighting the significant burden of NSSI in clinical psychiatric samples.

Gender and Demographic Factors

Contrary to traditional beliefs about female predominance in NSSI, our study found no significant gender differences (p=0.893). This finding is consistent with recent population-based studies demonstrating equivalent prevalence rates across genders.[12,13,14,15] The absence of gender bias in our sample suggests that NSSI assessment should be equally prioritized for both male and female psychiatric patients.

The lack of significant associations between NSSI and educational status (p=0.329) aligns with previous research,[16] suggesting that NSSI transcends educational boundaries. Similarly, the absence of clear socioeconomic status associations (p=0.726) reflects mixed findings in the literature, with some studies showing increased risk in lower socioeconomic groups[17] while others report higher risk in affluent populations.[18]

Psychiatric Comorbidity

The predominance of neurodevelopmental disorders (42%) among our sample is consistent with existing literature demonstrating increased NSSI risk in this population.[19] The substantial representation of mood disorders (32%) also aligns with established associations between NSSI and affective conditions.[20]

Emotional Dysregulation

The finding that 93% of NSSI participants demonstrated significant emotional regulation difficulties strongly supports the theoretical framework positioning NSSI as a maladaptive emotion regulation strategy.[21,22] The prominence of goal-directed behavior difficulties suggests that individuals with NSSI may struggle with maintaining focus and completing tasks when emotionally distressed, leading to further functional impairment.

The hierarchy of emotional dysregulation patterns observed - with impulse control difficulties and limited access to regulation strategies ranking highly - provides clinical insights for targeted interventions. These findings suggest that therapeutic approaches should emphasize developing healthy emotion regulation skills and improving distress tolerance.

Suicide Risk

The elevated suicide risk observed in 60% of NSSI participants underscores the critical importance of comprehensive suicide assessment in this population. While NSSI and suicidal behavior are distinct phenomena, their frequent co-occurrence necessitates careful evaluation and risk management.[23,24] The overlap in methods (cutting, hanging) between NSSI and suicide attempts highlights the potential for method familiarity to influence suicide risk.

Clinical Implications

These findings have several important clinical implications:

1. **Universal Screening:** Given the high prevalence and lack of clear demographic predictors, routine NSSI screening should be implemented for all young psychiatric outpatients.
2. **Emotion Regulation Training:** The strong association with emotional dysregulation suggests that interventions focusing on emotion regulation skills (such as Dialectical Behavior Therapy skills training) may be particularly beneficial.
3. **Suicide Risk Assessment:** All patients with NSSI history require comprehensive suicide risk evaluation and ongoing monitoring.
4. **Integrated Treatment Approach:** Treatment plans should address both the underlying psychiatric condition and NSSI-specific factors, including emotional dysregulation and maladaptive coping strategies.

Limitations

1. **Cross-sectional Design:** The study design precludes determination of causal relationships between variables.
2. **Convenient Sampling:** The sampling method may limit generalizability to broader populations.
3. **Self-report Measures:** Reliance on self-report instruments may introduce response bias, particularly given the sensitive nature of NSSI disclosure.
4. **Single-center Study:** Findings from one tertiary care center may not be representative of other settings or regions.

5. **Limited Follow-up:** The absence of longitudinal follow-up prevents assessment of NSSI trajectory and treatment outcomes.
6. **Cultural Factors:** The study did not extensively examine cultural or religious factors that may influence NSSI presentation in the Indian contex

CONCLUSION

This study demonstrates a substantial 30% prevalence of NSSI among young psychiatric outpatients, with strong associations to emotional dysregulation and elevated suicide risk. The absence of clear sociodemographic predictors underscores the importance of universal screening approaches rather than risk-factor-based assessment.

The predominant pattern of emotional dysregulation, particularly difficulties with goal-directed behavior and impulse control, provides valuable targets for therapeutic intervention. The high rate of concurrent suicide risk necessitates comprehensive assessment and safety planning for all individuals with NSSI history.

These findings highlight the complex nature of NSSI and emphasize the need for comprehensive, multi-faceted treatment approaches that address both the underlying psychiatric conditions and specific NSSI-related factors. Development of culturally sensitive, evidence-based interventions tailored to the Indian context represents an important area for future research and clinical development.

Healthcare providers working with young psychiatric patients should maintain high index of suspicion for NSSI, implement routine screening protocols, and ensure appropriate training in NSSI assessment and management. The integration of emotion regulation skill-building into standard psychiatric treatment may prove particularly beneficial for this vulnerable population.

CONFLICT OF INTEREST

The authors declare no conflicts of interest related to this study.

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This study received no external funding.

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