Section: Psychiatry

Original Research Article

ADVERSE CHILDHOOD EXPERIENCES, RECENT NEGATIVE LIFE EVENTS IN YOUNG ADULTS WITH NON-SUICIDAL SELF INJURY

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ABSTRACT

Background: Non-suicidal self-injury (NSSI) is a significant mental health concern among young adults, often rooted in complex psychosocial and developmental factors. Adverse Childhood Experiences (ACEs) and Recent Negative Life Events (RNLEs) are established risk factors that may independently or interactively contribute to the development of NSSI. This study investigates the influence of ACEs and RNLEs on the manifestation of NSSI among young adults. **Aim and Objective:** To assess the prevalence of ACEs and RNLEs in young adults with NSSI and to evaluate the correlation between these stressors and self-injurious behavior. **Materials and Methods:** A cross-sectional observational study was conducted at the Department of Psychiatry, Vydehi Institute of Medical Sciences, Bangalore, over 18 months. A total of 75 participants aged 18-26 years, meeting DSM-5 criteria for NSSI, were included. Data were collected using a sociodemographic proforma, ACE questionnaire, and RNLE scale. Statistical analysis was performed using IBM SPSS version 28, applying Mann-Whitney U and Kruskal-Wallis tests for group comparisons. **Results:** The median ACE and RNLE scores were both 2. Emotional neglect, parental conflict, and relationship breakups were commonly reported stressors. Substance use was significantly associated with higher ACE scores (p=0.001), while no significant variations were found across gender, socioeconomic status, or family structure. **Conclusion:** The study highlights a strong association between ACEs and NSSI, with substance use emerging as a significant co-morbidity. These findings underscore the need for trauma-informed care and early interventions targeting childhood adversity to prevent self-harming behaviors.

INTRODUCTION

Non-suicidal self-injury (NSSI) refers to the deliberate infliction of physical harm without suicidal intent and is commonly used as a maladaptive strategy to regulate overwhelming emotions or psychological distress.[1] Individuals engaging in NSSI typically seek temporary emotional relief rather than death. Common behaviors include cutting, burning, scratching, hitting, biting, severe skin-picking, and interfering with wound healing; related behaviors such as trichotillomania may overlap depending on motivation and emotional context.[2] NSSI is highly prevalent among adolescents and young adults, with approximately 15–20% reporting lifetime engagement. While methods may differ by gender, the underlying psychological functions of emotional regulation, self-punishment, communication of distress, and restoration of control are consistent across groups.[3,4]

NSSI frequently co-occurs with psychiatric conditions such as depression, anxiety disorders, eating disorders, borderline personality disorder, post-traumatic stress disorder, and substance use disorders. Although distinct from suicidal behavior, repeated NSSI increases the risk of future suicidal ideation and attempts and is associated with significant physical complications, stigma, social isolation, and interpersonal difficulties.[5] Effective management requires integrated, evidence-based interventions. Dialectical behavior therapy (DBT) and cognitive-behavioral therapy (CBT) are particularly effective in improving emotional regulation and replacing self-injury with adaptive coping strategies. Family-based, group, and supportive interventions further enhance outcomes, while pharmacological treatment is limited to managing comorbid conditions. Prevention efforts

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emphasize early identification, psychoeducation, and nonjudgmental support within families, schools, and healthcare settings.[6]

Understanding risk factors for NSSI is essential for prevention and targeted intervention. Emotional dysregulation, adverse childhood experiences, trauma exposure, interpersonal conflict, bullying, and comorbid mental health disorders significantly increase vulnerability. Early recognition enables timely intervention, reduces chronicity, and helps prevent progression toward suicidal behaviour.[7] Identifying individual risk profiles allows clinicians to tailor interventions such as DBT, CBT, and trauma-informed care to address underlying causes rather than surface behaviors, improving recovery and reducing relapse.[8] At the community level, recognition of vulnerable populations supports targeted prevention programs, resilience-building initiatives, and family- and school-based interventions, while also reducing stigma and promoting help-seeking behaviors.[9,10]

Adverse childhood experiences (ACEs), including physical, emotional, and sexual abuse, neglect, and dysfunctional family environments, play a critical role in the development of NSSI. These experiences disrupt emotional regulation, attachment security, and stress tolerance, leading individuals to adopt self-injury as a means of emotional relief, grounding during dissociation, or self-punishment rooted in shame and self-blame.[11-13] Subsequent life stressors-such as interpersonal conflict, academic or occupational pressure, discrimination, and economic hardship-often exacerbate these vulnerabilities, triggering self-injurious behaviors.[12] Effective intervention requires trauma-informed, attachment-focused approaches that address both early adversity and current stressors. Therapies such as DBT and trauma-focused CBT enhance emotional regulation, challenge maladaptive beliefs, and promote healthier coping strategies.[14-17]

The present study aims to examine risk factors for NSSI among young adults by assessing the role of adverse childhood experiences and recent negative life events, and by evaluating their combined influence on the occurrence of NSSI, to inform targeted, preventive, and therapeutic interventions.

MATERIALS AND METHODS

This cross-sectional, hospital-based study was conducted at the Department of Psychiatry, Vydehi Institute of Medical Sciences and Research Centre, Bangalore, from August 2023 to February 2025. A purposive sample of 75 young adults aged 18–26 years with non-suicidal self-injury (NSSI) diagnosed using DSM-5 criteria was recruited after informed consent, exceeding the minimum required sample size of 68.

The minimum sample size was calculated using the formula:

$n = Z^2 \times p \times q / d^2$

Where:

- Z = 1.96 (95% confidence level)
- p = 0.20 (expected prevalence of NSSI in young adults)
- q = 1 – p = 0.80
- d = 0.10 (allowable error)

$n = (1.96)^2 \times 0.20 \times 0.80 / (0.10)^2$

$n \approx 61.4 \approx 62$

After accounting for non-response and feasibility, a minimum sample size of 68 was considered adequate. The final sample included 75 participants.

Participants were assessed using a sociodemographic proforma, Adverse Childhood Experiences (ACE) questionnaire, and Recent Negative Life Events (RNLE) scale, along with a structured clinical interview. Data was analyzed using IBM SPSS version 28 with descriptive statistics and non-parametric tests, and significance was set at $p \leq 0.05$. The normality of continuous variables (ACE and RNLE scores) was assessed using the Shapiro–Wilk test. As the data were not normally distributed ($p < 0.05$), non-parametric tests were applied. The Mann–Whitney U test was used for comparisons between two groups, and the Kruskal–Wallis test was used for comparisons across more than two groups. Ethical approval was obtained, confidentiality was maintained, and key limitations included the cross-sectional design, recall bias, and limited generalizability due to the single-center setting.

RESULTS

Table 1 presents the sociodemographic and clinical characteristics of the study population (N = 75). The mean age of participants was 23.82 ± 4.91 years, with an age range of 18–26 years. The mean age at onset of non-suicidal self-injury (NSSI) was 21.97 ± 4.98 years. Females constituted a slightly higher proportion of the sample (54.7%) compared to males (45.3%).

The majority of participants belonged to the lower-middle socioeconomic class (50.7%) and were from nuclear families (69.3%). Most participants were Hindu (81.3%) and resided in urban areas (74.7%). Parental education levels indicated that a substantial proportion had secondary-level education, while a smaller proportion had graduate-level education.

Substance use was reported in 20.5% of participants. A diagnosed psychiatric illness was present in 37.3% of cases, and 32.0% had a history of psychotropic medication use. Notably, a large majority of participants (93.2%) had visited the emergency room, reflecting the clinical severity and healthcare utilization associated with NSSI in this population.

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Table 1: Sociodemographic and Clinical Characteristics (N = 75)

Variable	Category	Frequency (N)	Percentage (%)
Age (years)	Mean ± SD	23.82 ± 4.91	—
	Range	18 – 26	—
Age at onset (years)	Mean ± SD	21.97 ± 4.98	—
	Range	15 – 26	—
Gender	Male	34	45.3
	Female	41	54.7
Socioeconomic Status (Modified Kuppuswamy)	Upper	3	4.0
	Upper middle	12	16.0
	Lower middle	38	50.7
	Upper lower	17	22.7
	Lower	5	6.6
Family Structure	Nuclear	52	69.3
	Joint	23	30.7
Religion	Hindu	61	81.3
	Muslim	9	12.0
	Christian	4	5.3
	Others	1	1.4
Domicile	Urban	56	74.7
	Rural	19	25.3
Education of Father	Primary / Illiterate	21	28.0
	Secondary	33	44.0
	Graduate & above	21	28.0
Education of Mother	Primary / Illiterate	26	34.7
	Secondary	31	41.3
	Graduate & above	18	24.0
Substance Use	Yes	15	20.5
	No	58	79.5
Psychiatric Illness	Present	28	37.3
	Absent	47	62.7
Past Psychiatric Medication	Yes	24	32.0
	No	51	68.0
Emergency Room Visit	Yes	68	93.2
	No	5	6.8

Table 2: Comparison of ACE and RNLE Scores Across Variables (with p-values)

Variable	Category	Median RNLE	Median ACE	p-value (RNLE)	p-value (ACE)
Gender	Male	2.0	2.0	0.682	0.731
	Female	2.0	2.0		
Socioeconomic Status	Upper middle	2.0	2.0	0.624	0.150
	Lower middle	2.0	1.0		
	Upper lower	2.5	1.5		
	Upper	2.0	2.0		
	Lower	2.0	3.5		
Family Structure	Nuclear	2.0	2.0	0.738	0.942
	Joint	1.5	2.0		
Psychiatric Illness	No	2.0	2.0	0.446	0.550
	Yes	2.0	2.0		
Substance Use	No	2.0	2.0	0.214	0.001
	Yes	2.5	3.0		
Family Medication History	No	2.0	2.0	0.521	0.603
	Yes	2.0	2.0		

Table 2 shows the comparison of median ACE and RNLE scores across various sociodemographic and clinical variables using non-parametric tests. There was no statistically significant difference in ACE or RNLE scores with respect to gender ($p > 0.05$), socioeconomic status (RNLE: $p = 0.624$; ACE: $p = 0.150$), or family structure (RNLE: $p = 0.738$; ACE: $p = 0.942$). Similarly, no significant association was observed between ACE or RNLE scores and the presence of diagnosed psychiatric illness (RNLE: $p = 0.446$; ACE: $p = 0.550$).

However, substance use demonstrated a statistically significant association with higher ACE scores ($p = 0.001$), indicating that individuals with a history of substance use had greater exposure to adverse childhood experiences. In contrast, RNLE scores did not differ significantly with substance use ($p > 0.05$). These findings suggest that early life adversity, rather than recent stressors, may play a more prominent role in substance use among individuals with non-suicidal self-injury.

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Table 3: Descriptive statistics and distribution of RNLE scores in the study

RNLE score	N	%
0	3	4.1
1	28	38.4
2	20	27.4
3	9	12.3
4	3	4.1
5	2	2.7
6	5	6.8
8	1	1.4
10	2	2.7
MEDIAN	2	
IQR	1-3	

Table 3 shows that RNLE scores ranged from 0–10, with most participants having scores of 1 (38.4%) and 2 (27.4%). The median RNLE score was 2 (IQR: 1–3), indicating predominantly low to moderate recent negative life events.

Table 4: Descriptive statistics and distribution of ACE scores in the study

ACE score	N	%
0	9	12.3
1	25	34.2
2	17	23.3
3	10	13.7
4	5	6.8
5	4	5.5
6	2	2.7
7	1	1.4
MEDIAN	2	
IQR	1-3	

Table 4 presents the descriptive statistics and distribution of ACE scores, outlining the range, mean/median values, and variability of scores within the study population. ACE scores ranged from 0–7, with most participants having scores of 1 (34.2%) and 2 (23.3%). The median ACE score was 2 (IQR: 1–3), indicating moderate exposure to adverse childhood experiences in the study population.

Table 5: Distribution of patients based on the method of NSSI

Method of NSSI	N	%
Cutting	11	15.1
Drug	37	50.7
Etc	22	30.1
Hitting	2	2.7
Scratching	1	1.4

Table 5 presents the distribution of patients according to the method of non-suicidal self-injury (NSSI), showing the frequencies or percentages of different NSSI behaviors employed by the participants in the study. The distribution of methods of non-suicidal self-injury (NSSI) showed a predominance of drug ingestion (50.7%), followed by other methods (30.1%) and cutting (15.1%). However, the variation in methods was not statistically significant ($p > 0.05$), indicating no meaningful difference in the frequency of NSSI methods across the study population.

Table 6: Distribution of patients based on duration of self-harm ideation

Duration of self-harm ideation	N	%
A few minutes	15	20.5
Between 1 and 24 hours	30	41.1
Between 1 and 7 days	4	5.5
Greater than a week	7	9.6
Less than 60 minutes	7	9.6
None	10	13.7

Table 6 shows that the majority of participants experienced self-harm ideation for 1–24 hours (41.1%), followed by a few minutes (20.5%). A smaller proportion reported prolonged ideation lasting more than a week (9.6%) or 1–7 days (5.5%), while 13.7% reported no ideation. This indicates that self-harm thoughts were predominantly acute and short-lasting in most participants. The distribution of duration of self-harm ideation across categories did not show a statistically significant difference ($p > 0.05$), indicating that no particular duration category was disproportionately associated within the study population

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Table 7 presents the distribution of patients according to their visits to the emergency room (ER), showing how many participants sought emergency care, likely in relation to self-harm episodes or psychiatric crises.

Table 7: Distribution of patients based on visit to emergency room

Visit to emergency room	N	%
No	5	6.8
Yes	68	93.2

The distribution of emergency room visits (Table 7) showed that a significantly higher proportion of participants had visited the ER (93.2%) compared to those who had not (6.8%). This difference was statistically significant ($p < 0.001$), indicating a markedly higher utilization of emergency services among individuals with non-suicidal self-injury.

Table 8 shows the distribution of patients according to substance use, indicating the number or percentage of participants who reported using substances such as alcohol, tobacco, or other drugs.

Table 8: Distribution of patients based on substance use

Substance use	N	%
No	58	79.5
Yes	15	20.5

The distribution of substance use showed that the majority of participants did not report substance use (79.5%), while 20.5% reported substance use. This difference was statistically significant ($p < 0.001$), indicating that non-substance users constituted a significantly larger proportion of the study population.

Table 9 presents the responses of participants to the RNLE (Recent Negative Life Events) questionnaire, summarizing the frequency, mean scores, or percentages for each item or domain, reflecting the extent and types of recent stressful life events experienced by the study population.

Table 9: Responses to RNLE questionnaire

During the past year	N	%
My family moved to a new home or apartment	9	12.3
Somebody in my family had a serious illness	7	9.6
My parents got separated or divorced	3	4.1
I got disciplined or suspended from school	4.1	4.1
My parents argued a lot	20	27.4
Somebody in my family had a serious accident	4	5.5
I had a lot of arguments with my parents	27	37.0
My father/mother lost his/her job	8	11.0
I had a serious illness	4	5.5
I got a new stepfather/stepmother	2	2.7
I broke up with my boy/girl friend	32	43.8
I got bad grades in school	3	4.1
I got into trouble with the police	0	0
My parents had problems with money	20	27.4
I had a serious accident	3	4.1
I didn't get into a group or team that I wanted to be in	8	11.0
I had trouble with my weight or physical appearance	10	13.7
Someone in my family was arrested	2	2.7
A new person joined our household (a child, a grandparent, stepbrother or sister, or other).	1	1.4
Some people that I use to be friends with don’t pay attention to me anymore	12	16.4

Table 10: Responses to ACE questionnaire

ACE questions	N	%
Did a parent or other adult in the household often or very often swear at you, insult you, put you down, or humiliate you? or Act in a way that made you afraid that you might be physically hurt	27	37
Did a parent or other adult in the household often or very often push, grab, slap, or throw something at you? or Ever hit you so hard that you had marks or were injured	21	28.8
Did an adult or person at least 5 years older than you ever touch or fondle you or have you touch their body in a sexual way? or attempt or actually have oral, anal, or vaginal intercourse with you?	9	12.3
Did you often or very often feel that no one in your family loved you or thought you were important or special? or Your family didn't look out for each other, feel close to each other, or support each other?	30	41.1
Did you often or very often feel that. You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you? or Your parents were too drunk or high to take care of you or take you to the doctor if you needed	10	13.7
Were your parents ever separated or divorced	9	12.3
Was your mother or stepmother: Often or very often pushed, grabbed, slapped, or had something thrown at her? Sometimes, often, or very often kicked, bitten, hit with a fist, or hit with something hard? Ever repeatedly hit at least a few minutes or threatened with a gun or knife?	17	23.3

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Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?	12	16.4
Was a household member depressed or mentally ill, or did a household member attempt suicide	8	11
Did a household member go to prison	5	6.8

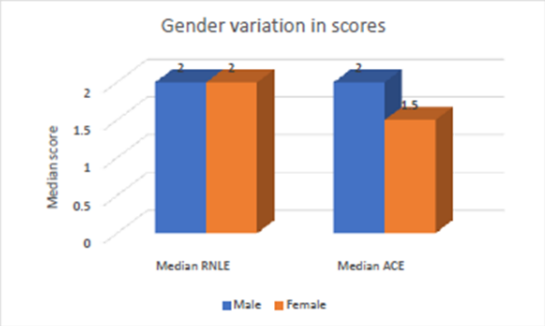

Figure 1: Comparison of ACE and RNLE scores against gender

Figure 1 illustrates the comparison of ACE (Adverse Childhood Experiences) and RNLE (Recent Negative Life Events) scores across genders, showing potential differences in exposure to childhood adversity and recent stressors between male and female participants.

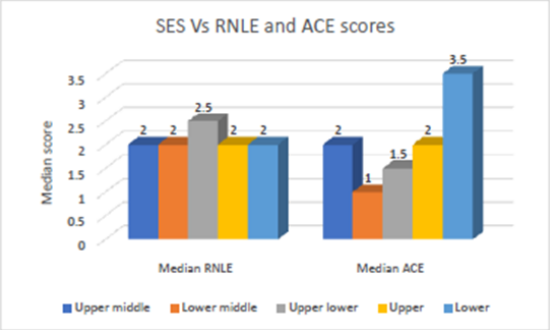

Figure 2: Comparison of ACE and RNLE scores against socioeconomic status

Figure 2 depicts the comparison of ACE (Adverse Childhood Experiences) and RNLE (Recent Negative Life Events) scores across different socioeconomic status groups, highlighting how childhood adversity and recent stress exposure may vary with socioeconomic background.

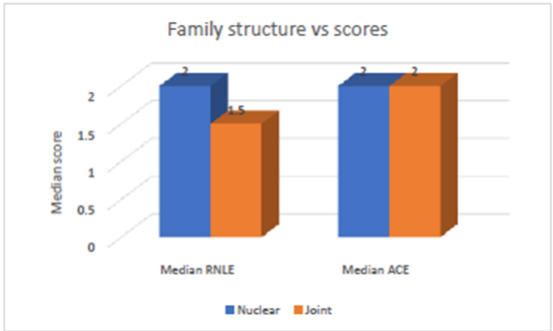

Figure 3: Comparison of ACE and RNLE scores against family structure

Figure 3 illustrates the comparison of ACE (Adverse Childhood Experiences) and RNLE (Recent Negative Life Events) scores according to family structure, showing how different family arrangements may influence the level of childhood adversity and recent stress experienced by participants.

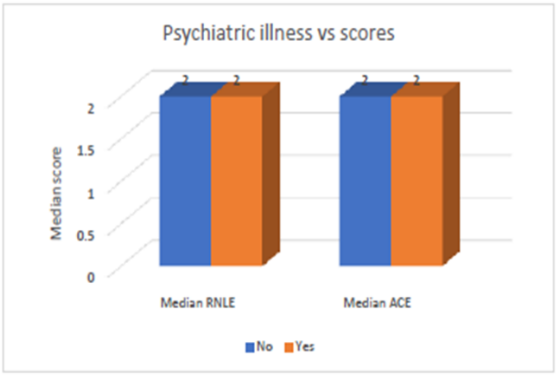

Figure 4: Comparison of ACE and RNLE scores against diagnosed psychiatric illness

Figure 4 presents a comparison of ACE (Adverse Childhood Experiences) and RNLE (Recent Negative Life Events) scores based on diagnosed psychiatric illness, highlighting the relationship between the type or presence of psychiatric disorders and the extent of past childhood adversity and recent stressful life events experienced by the patients.

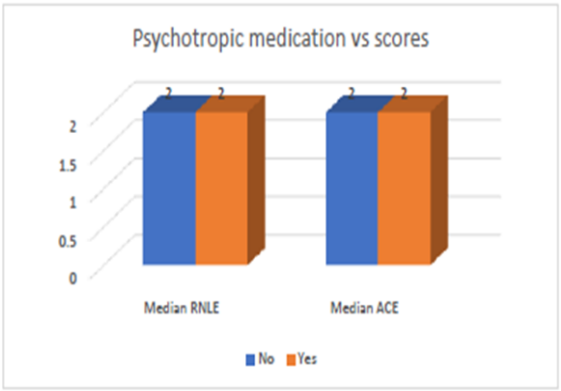

Figure 5: Comparison of ACE and RNLE scores against past history of psychotropic medication

Figure 5 shows a comparison of ACE (Adverse Childhood Experiences) and RNLE (Recent Negative Life Events) scores based on patients' past history of psychotropic medication use, illustrating how previous exposure to psychiatric medications relates to the burden of childhood adversity and recent stressful life events.

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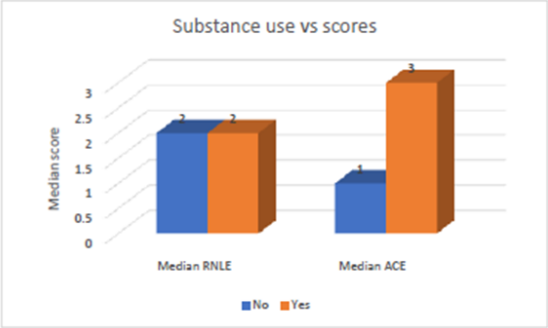

Figure 6: Comparison of ACE and RNLE scores against substance use

Figure 6 illustrates the comparison of ACE (Adverse Childhood Experiences) and RNLE (Recent Negative Life Events) scores based on patients' substance use, showing how substance-using patients differ in childhood adversity and recent life stressors compared to non-users.

DISCUSSION

Non-suicidal self-injury (NSSI) is the deliberate infliction of physical harm without suicidal intent and functions primarily as a maladaptive strategy for regulating intense emotions or psychological distress.[19] Individuals engaging in NSSI often seek relief from anxiety, sadness, anger, guilt, or emotional numbness. Common methods include cutting, burning, scratching, skin-picking, hitting, and interfering with wound healing, with behaviors such as trichotillomania overlapping depending on motivation.[20] NSSI is most prevalent during adolescence and young adulthood, affecting approximately 15–20% of adolescents. Although females more frequently report cutting and males report hitting or burning, the underlying psychological functions-emotional regulation, self-punishment, and communication of distress-are largely consistent across genders.[21]

Emotional dysregulation is a core psychological driver of NSSI, with physical pain temporarily reducing overwhelming effect. Self-injury may also reflect internalized shame, guilt, or self-criticism, or serve as a nonverbal expression of distress when verbal communication feels unsafe. NSSI commonly co-occurs with depression, anxiety disorders, PTSD, eating disorders, borderline personality disorders, and substance use disorders. While distinct from suicidal behavior, NSSI significantly increases future suicide risk and is associated with medical complications, social stigma, and interpersonal impairment.[18] Evidence-based interventions emphasize addressing emotional dysregulation and underlying vulnerabilities, with dialectical behavior therapy (DBT) and cognitive-behavioral therapy (CBT) demonstrating efficacy. Family and group interventions strengthen support systems, while pharmacological treatment targets comorbid conditions rather than NSSI itself.[22]

The present study examined risk factors associated with NSSI among young adults, focusing on adverse childhood experiences (ACEs) and recent negative life events (RNLEs). Participants' mean age was 23.82 ± 4.91 years, and mean age at onset of NSSI was 21.97 ± 4.98 years, indicating that NSSI typically begins in late adolescence. These findings align with previous reports of early onset and heightened vulnerability among younger individuals.[23,24]

RNLE scores were generally low to moderate (median = 2), though variability was observed, supporting evidence that recent stressors contribute to NSSI through emotional dysregulation and internalizing symptoms.[25,26]

Moderate exposure to ACEs was observed, with emotional neglect, emotional abuse, and physical abuse being most prevalent. These findings reinforce the established association between early trauma and NSSI vulnerability, as ACEs disrupt emotional regulation and stress tolerance, increasing reliance on maladaptive coping behaviors.[19,27]

Although females comprised a larger proportion of the sample, no significant gender differences were found in ACE or RNLE scores, suggesting similar exposure levels but potentially different behavioral responses to adversity, consistent with prior literature.[28,44]

Sociodemographic findings indicated contextual vulnerability, with most participants originating from nuclear families, lower-middle socioeconomic backgrounds, and households with low parental education. These factors have been linked to increased NSSI risk through reduced psychosocial resources and adverse parenting environments.[29,30]

Urban residence predominated, consistent with studies reporting higher NSSI prevalence in urban settings, possibly due to increased stress exposure or help-seeking behaviour.[31] Notably, the majority of participants had no formally diagnosed psychiatric disorder and no history of psychiatric medication use, emphasizing that NSSI frequently occurs outside recognized psychiatric illness and warrants independent clinical attention.[32-35]

Behaviorally, most participants reported episodic or early-phase NSSI, while a smaller subgroup exhibited repetitive self-injury, indicating heterogeneity in NSSI trajectories.[34,36] Drug ingestion was the most common method, contrasting with studies identifying cutting as predominant, highlighting contextual and demographic variation in method selection.[34,37] Many participants reported sustained ideation and high emergency room utilization, underscoring the clinical severity of NSSI and its burden on healthcare services.[38-41]

Interpersonal stressors-including romantic breakups, parental conflict, and financial difficulties-emerged as prominent triggers, supporting evidence that NSSI arises from the interaction of intrapersonal vulnerability and interpersonal stress.[42,43] Overall, the findings highlight the multifactorial nature of NSSI, shaped by early adversity, recent stressors,

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emotional dysregulation, and socioeconomic context. Trauma-informed, developmentally sensitive, and early interventions targeting these interconnected factors are essential to reduce NSSI severity, prevent chronicity, and mitigate progression toward suicidal behavior.

CONCLUSION

This study highlights the pivotal role of adverse childhood experiences in the development and persistence of non-suicidal self-injury among young adults. While recent negative life events were commonly reported, childhood adversities-particularly emotional neglect, abuse, and family dysfunction-showed a stronger association with substance use and chronic self-injurious behavior. These findings suggest that early trauma exerts a lasting psychological impact that outweighs the influence of recent stressors, underscoring the need for trauma-informed assessment, early intervention, and integrated mental health and addiction services for young adults presenting with self-harm.

REFERENCES

1. Halicka J, Kiejna A. Non-suicidal self-injury (NSSI) and suicidal: Criteria differentiation. Adv Clin Exp Med. 2018;27(2):257–261. doi:10.17219/acem/66353
2. Simeon D, Favazza AR. Chapter 1. Self-Injurious Behaviors: Phenomenology and Assessment. In: Self-injurious behaviors: Assessment and treatment. 2001. 1–28.
3. Plener PL, Kaess M, Schmahl C, Pollak S, Fegert JM, Brown RC. Nonsuicidal self-injury in adolescents. Dtsch Arztebl Int. 2018;115(3):23–30. doi:10.3238/arztebl.2018.0023
4. McKenzie KC, Gross JJ. Nonsuicidal self-injury: An emotion regulation perspective. Clin Psychol Rev. 2014;47:207–219.
5. Cipriano A, Cella S, Cotrufo P. Nonsuicidal self-injury: A systematic review. Front Psychol. 2017;8:1-14. doi:10.3389/fpsyg.2017.01946
6. Westlund Schreiner M, Klimes-Dougan B, Parenteau A, Hill D, Cullen KR. A framework for identifying neurobiologically based intervention targets for NSSI. Clin Psychol Sci. 2019;6:177–187.
7. Wang YJ, Li X, Ng CH, Xu DW, Hu S, Yuan TF. Risk factors for non-suicidal self-injury (NSSI) in adolescents: a meta-analysis. Psychiatry Res. 2022;46:1-12.
8. Forrester RL, Slater H, Jomar K, Mitzman S, Taylor PJ. Self-esteem and non-suicidal self-injury in adulthood: A systematic review. Clin Psychol Rev. 2017;221:172–183.
9. Kpeno A, Sahu PK, Sahoo S. Deliberate self-harm among adolescents: risk factors, diagnosis, and preventive measures. J Adolesc Health. 2023;9(4):26–32.
10. Saha M, Debanjan B. Revisiting social stigma in non-suicidal self-injury: A narrative review. Psychiatry Res. 2022;3(3):6–18.
11. Nurius PS, Green S, Logan-Greene P, Borja S. Life course pathways of adverse childhood experiences toward adult psychological well-being: A stress process analysis. Child Abuse Negl. 2015;45:143–153. doi:10.1016/j.chiabu.2015.03.002
12. Peel-Wainwright KM, Hartley S, Boland A, Rocca E, Langer S, Taylor PJ, et al. The interpersonal processes of non-suicidal self-injury: A systematic review and meta-synthesis. Clin Psychol Rev. 2021;94:1059–1082.
13. Chandler A. Pain Incarnate: A narrative exploration of self injury and embodiment. Sociology of Health & Illness. 2013;35(5):716–730. doi:10.1111/j.1467 9566.2012.01523.x.
14. Prada P, Perroud N, Rüfenacht E, Nicastro R. Strategies to deal with suicide and nonsuicidal self injury in borderline personality disorder, the case of DBT. Front Psychol. 2018;9:1-6. doi:10.3389/fpsyg.2018.02595
15. Usmani SS, Mehendale M, Shaikh MY, Sudan S, Guntipalli P, Ouellette L, et al. Understanding the impact of adverse childhood experiences on non-suicidal self-injury in youth: a systematic review. Child Adolesc Psychiatry Ment Health. 2024;25(2):1-15.
16. Liu J, Yao Y, Deng X, Xu X, He W. How does emotional abuse affect adolescents' non-suicidal self-injury urges. A moderated chain mediation model. J Affect Disord. 2024;147:106535.
17. Beryl R, Lewis J. "When you have got like twenty thousand thoughts in your head, that one little thing can just make it all go away": Trauma and non-suicidal self-injury in forensic settings. In: Trauma-Informed Forensic Practice. Routledge; 2022:165–182.
18. Hooley JM, Franklin JC. Why do people hurt themselves? A new conceptual model of nonsuicidal self-injury. Clin Psychol Sci. 2018;6(3):428–451.
19. AghaMohammadi S, Mazaheri MA, Fata L, Mootabi F, Moghadasiyan B. The experience of hurt in the deepest part of self; a phenomenological study in young people with non-suicidal self-injury (NSSI). Qual Res J. 2024;24(3):233–244.
20. Nock MK. Self-injury. Annu Rev Clin Psychol. 2010;6:339–363. doi:10.1146/annurev.clinpsy.121208.131258
21. Daukantaitė D, Lundh LG, Wångby-Lundh M, Claréus B, Bjärehed J, Zhou Y, et al. What happens to young adults who have engaged in self-injurious behavior as adolescents? A 10-year follow-up. J Affect Disord. 2021;30:475–492.
22. Brackman EH, Andover MS. Non-suicidal self-injury. In: Handbook of Self-Harm and Suicide Prevention. 2017:328–344.
23. Chang S, Vaingankar JA, Tan B, Tan YWB, Samari E, Archana S, et al. Prevalence and correlates of nonsuicidal self-injury among youths in Singapore: Findings from the National Youth Mental Health Study. Psychiatry Res. 2025;19:1-13.
24. Muehlenkamp JJ, Xhunga N, Brausch AM. Self-injury age of onset: A risk factor for NSSI severity and suicidal behavior. J Clin Child Adolesc Psychol. 2019;551-563.
25. Zhou L, Qiao C, Huang J, Lin J, Zhang H, Xie J, et al. The impact of recent life events, internalizing symptoms, and emotion regulation on the severity of nonsuicidal self-injury in adolescents: A mediation analysis. J Affect Disord. 2024;415–428.
26. Zhang Y, Gong L, Feng Q, Hu K, Liu C, Jiang T, et al. Association between negative life events through mental health and non-suicidal self-injury with young adults: Evidence for sex moderate correlation. Psychiatry Res. 2024;24(1):1-10.
27. He Y, Jiang W, Wang W, Liu Q, Peng S, Guo L. Adverse childhood experiences and nonsuicidal self-injury and suicidality in Chinese adolescents. BMC Psychiatry. 2024;7(12):1-14.
28. Yue Y, Wang Y, Yang R, Zhu F, Yang X, Lu X, et al. Gender difference in the associations of childhood maltreatment and non-suicidal self-injury among adolescents with mood disorders. J Affect Disord. 2023;14:1-6.
29. Baetens I, Claes L, Martin G, Onghena P, Grietens H, Van Leeuwen K, et al. Is nonsuicidal self-injury associated with parenting and family factors? J Youth Adolesc. 2014;34(3):387–405.
30. Liu Y, Xiao Y, Ran H, He X, Jiang L, Wang T, et al. Association between parenting and non-suicidal self-injury among adolescents in Yunnan, China: A cross-sectional survey. PLoS One. 2020;8:1-12.
31. Boduszek D, Debowska A, Ochen EA, Fray C, Nanfuka EK, Powell-Booth K, et al. Prevalence and correlates of non-suicidal self-injury, suicidal ideation, and suicide attempt among children and adolescents: Findings from Uganda and Jamaica. Child Youth Serv Rev. 2021;283:172–178.
32. Glenn CR, Klonsky ED. Nonsuicidal self-injury disorder: An empirical investigation in adolescent psychiatric patients. J Clin Child Adolesc Psychol. 2013;42(4):496–507.

ISSN (O): 2687-5365; ISSN (P): 2753-6556

33. Klonsky ED, Victor SE, Saffer BY. Nonsuicidal self-injury: What we know, and what we need to know. Clin Psychol Rev. 2014;42(4):565–568.
34. Xiao Q, Song X, Huang L, Hou D, Huang X. Global prevalence and characteristics of non-suicidal self-injury between 2010 and 2021 among a non-clinical sample of adolescents: A meta-analysis. Front Psychiatry. 2022;13:1-16. doi:10.3389/fpsyt.2022.912441
35. Brown RC, Plener PL. Non-suicidal self-injury in adolescence. Curr Psychiatry Rep. 2017;19:1-8. doi:10.1007/s11920-017-0767-9
36. Wångby-Lundh M, Lundh LG, Claréus B, Bjärehed J, Daukantaitė D. Developmental pathways of repetitive non-suicidal self-injury: Predictors in adolescence and psychological outcomes in young adulthood. Psychol Med. 2023;17(1):1-19.
37. Liu RT. The epidemiology of non-suicidal self-injury: Lifetime prevalence, sociodemographic and clinical correlates, and treatment use in a nationally representative sample of adults in England. Eur Psychiatry. 2023;53(1):274–282.
38. Zheng Y, Wang J, Jiang Q, Liao M, Huang F. Non-suicidal self-injury and suicidal ideation among adolescents: The chain-mediating role of rumination and decentering. J Affect Disord. 2023;14:1-9.
39. Poudel A, Lamichhane A, Magar KR, Khanal GP. Non-suicidal self-injury and suicidal behavior among adolescents: Co-occurrence and associated risk factors. Int J Environ Res Public Health. 2022;22(1):1-12.
40. Fahimi J, Aurrecoechea A, Anderson E, Herring A, Alter H. Substance abuse and mental health visits among adolescents presenting to US emergency departments. J Adolesc Health. 2015;31(5):331–338.
41. Gardner W, Pajer K, Cloutier P, Currie L, Colman I, Zemek R, et al. Health outcomes associated with emergency department visits by adolescents for self-harm: A propensity-matched cohort study. CMAJ. 2019;191(44):1207–1216.
42. Lee JS, Kim S, Lee JH, Kim JW, Yoo JH, Han DH, et al. A latent profile analysis on adolescents' non-suicidal self-injury related to intrapersonal and interpersonal factors. Child Adolesc Psychiatry Ment Health. 2024;18(1):1-12.
43. Zhou SC, Zhou Z, Tang Q, Yu P, Zou H, Liu Q, et al. Prediction of non-suicidal self-injury in adolescents at the family level using regression methods and machine learning. Comput Intell Neurosci. 2024;352:67–75.
44. Moloney F, Amini J, Sinyor M, Schaffer A, Lanctôt KL, Mitchell RH. Sex differences in the global prevalence of nonsuicidal self-injury in adolescents: a meta-analysis. Lancet Psychiatry. 2024;7(6):1-12.

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