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Prevalence of Non-Suicidal Self-Injury Behaviors among Adolescents

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***Abstract*:** In Present study prevalence of Non-Suicidal Self-injury Behavior (NSSIB) was explored and also focused on the differences in non-suicidal self-injury behaviors based on participants' demographic variables. The data were collected from 725 adolescents from schools and colleges of Gujrat by using multistage stratified sampling technique. Non- suicidal self-injury behaviors of adolescents were measured by using the Scale of NSSIB for adolescents. Findings indicated moderate (46.9%) and mild (33.0%) levels of NSSIB among the participants, with significant differences based on age, socioeconomic status, and school type. The One-way ANOVA indicated that there was a statistically significant difference in the non-suicidal self- injury behaviors faced by adolescents in relation to their demographics. Lower-class adolescents exhibited the lowest NSSIB scores, while middle-class students reported the highest NSSIBI. Further, Independent T-test is used to compare non-suicidal self-injury behavior (NSSIB) among adolescents with reference to public and private schools. The findings suggest that there is a statistically significant difference in non-suicidal self-injury behavior among adolescents attending public and private schools. Specifically, public school students have higher NSSIB scores as compared to their private school counterparts.

Keywords: Non-Suicidal Self-Injury Behaviors (NSSIB), Self-harm, Suicide, Prevalence, NSSIB Questionnaire for Prevalence check

1. Introduction

Non-suicidal self-injury (NSSI) behaviors, commonly referred to as self-harm activities, are increasingly becoming a significant focus in both clinical settings and public health advocacy. NSSI involves the intentional and direct harm to one's own body tissue without the intention to cause death, motivated by reasons that are not considered socially acceptable. Normal forms of NSSI involve cutting, burning, scratching, and self-hitting, with many individuals who self-injure reporting the use of multiple methods (Cipriano et al., 2017). Although these behaviours can co-occur, be related, occur in close succession, share underlying mechanisms, or respond to similar interventions, they should be addressed with precise terminology and clear definitions (Siddaway et al., 2019).

A range of behaviours can constitute self-injury, although the following are most frequently linked to it, burning oneself; intentionally cutting or carving one's skin; scratching subcutaneous tissue; slapping oneself or punching with the intent of inflicting pain into one’s body; and inserting something into the skin. Generally speaking, piercings in body and tattoos are not seen as self-harm unless they are done with the aim to damage the body. There are many different ways that people harm themselves, but cutting is among the more prevalent and well-documented types. Actually, more than 16 types of self-harm have been reported in our research, and there may be more (Glenn et al., 2016).

Furthermore, it is evident that an individual uses anywhere from one to over ten different forms. Though it can happen on any region of the body, the hands, wrists, stomach, and thighs are the most common places for self-harm

to occur. The act's severity can range from minor cuts to ones that leave a victim permanently disfigured. There has been little research specifically examining how using NSSI to avoid suicide relates to other characteristics of NSSI and suicidality in adolescents with NSSI-D (Kraus et al., 2020). Therefore, a clearer relationship between behavioral tasks of impulsivity and self-injurious behavior might be observed if both are assessed within a similar timeframe and under controlled laboratory conditions (Closkey et al., 2012).

Specifically mentions bleeding or bruises. An important thing to remember is that less severe and highly normal behaviours like chewing one's nails, picking at sores, and lip-biting are not classified as NSSI, despite the fact that diagnostic tools occasionally include them. Additionally banned are hair pulling and skin plucking. These behaviours rarely harm the body when they are moderate. Furthermore, in cases where symptoms are severe, trichotillomania (in the later situation) or skin excoriation disease (in the former case) may be a more appropriate and specific diagnosis. It should be highlighted, nevertheless, that a person's behaviour does not always determine the extent of physical harm that results. It is theoretically possible for behaviour that would ordinarily be seen as moderate and normative like lip biting to result in severe harm. Under such circumstances, this behaviour may be accurately classified as NSSI (Hooley et al., 2020). Those who participate in NSSI most frequently report intrapersonal functions (66–81%), particularly those related to emotion regulation (63–78%). Interpersonal skills (such as communicating discomfort) were less prevalent (33–56%), (Taylor et al., 2018).

NSSI is common especially among adolescents. Lifetime prevalence rates include 13-24% of nonclinical samples and 55-68% of 12-month prevalence rates are observed in psychiatric inpatients. While there is dearth of literature on the NSSI as compared with its prevalence, reviewing the available longitudinal studies shows that NSSI persists in several individuals as a pattern once they are set in adolescence. Despite the fact that majority of those involved in NSSI perform multiple episodes, they are likely to quit after a few years; nonetheless, approximately 20% persist in engaging in NSSI for more than five years. These results are in line with current research proving that a past history of NSSIB constitutes the most potent risk factor of reoccurrence, proving that the connection between these variable and other variables in this study has a big, pooled effect size (Liu, 2017). In contrast, when individuals experience ego depletion, they may feel drained and have reduced self-control, leading to self-doubt and negative assessments of their own worth and abilities (Liu et al., 2024).

Meta-analysis of 52 global community studies revealed a lifetime prevalence of 18% among adolescents. In case of adolescents, a higher statistical figure of 34% was found in U.S. about the persons who had practiced NSSI at least once in their lifetime. Other research has revealed that 29.5% adolescents were involved in NSSI with 7.1 to 8.3% experiencing high level of suicidal ideation and about 3.3% having attempted suicide in the past year (Poudel et al., 2022). Longitudinal studies also show that NSSI is a stronger predictor of future suicide attempts than even a history of past attempts (Klonsky et al., 2014).

The most significant characteristics of non-suicidal self-injury behaviors, including gender and age disparities, oncological affiliation, and clinical and psychological motives, are discussed above. Comparing NSSB motivations according to oncological form, sex, and age group was the study's main goal. This enables this phenomenon to be seen as a distinct facet of mental disease. Similarities in the age of beginning, length, types of self-injury, and reasons for committing them across different disorders are evident. Within the framework of the idea of the psychological adaptation of the individual, the emphasis in research of this clinical phenomenon should be made on the internal patterns of the condition, including sex- and age-related differences in self-injury reasons (Khutoryanskaya et al., 2022).

The objectives of the present study were to check the prevalence of NSSIB among adolescents. Further it also measures the differences in NSSIB in relation to demographic variables of the participants.

2. Participants and Methods

The current research employed an exploratory research design. This research design has been used to measure the prevalence of NSSBI among adolescents, in Gujrat Pakistan. The target population of the present study was adolescents with age range from 13 to 19 years studying in different schools and colleges from Gujrat, Pakistan. The sample of 725 adolescents from school and colleges of Gujrat was selected through multistage stratified sampling. At stage 1, sample was divided into two strata: public and private institutions. At stage 2, public and private institutions further divided into grade levels: 7^{th}, 8^{th}, 9th, $10^{th,}$ 11^{th}and12^{th}. At last stage, the grades were further divided in sub-strata of boys and girls.The research questionnaire comprised of three parts: First part was related to consent form; second part was related to demographic variables and the third part was contained screening questions related to NSSIB. These three parts were administered to all the participants (N=725). The

students having some physical illness or previous history of psychiatric symptoms were excluded from the sample.

3. Results

NSSIB falling in the scores categories of 25-50 showing absence of NSSIB, with 51-75scores have mild level of NSSIB, while 76-100scores have moderate level of NSSIB and 101-125scores indicated severe level of NSSIB(Table-1). The prevalence of NSSIB in the adolescent's sample of 725 shows that the sample of 46.9% reported a moderate level of non-suicidal self-injurious behavior, followed by 33.0% reporting a mild level of NSSIB. A smaller proportion reported either an absence (13.0%) or severe level (7.2%) of NSSIB respectively (Table-2). Furthermore, findings showed considerable difference in total score of NSSIB across all age groups. The mean scores tend to decrease from age 13 to 16 and then slightly increase from age 17 to 19 years of adolescents. The confidence intervals for the mean indicated where the true population mean is likely to fall, with narrower intervals for larger sample sizes (Table-3). The F-statistic of 13.847 and a p-value indicated that there is a statistically significant difference in NSSIB across all socioeconomic classes. Lower class individuals have the lowest mean total NSSIB score (68.31), with the widest range of scores (27 to 124). Middle class individuals have the highest mean total NSSIB score (75.85), with scores ranging from 31 to 97. Upper class individuals have a mean total NSSIB score of 72.71, with scores ranging from 27 to 117.The confidence intervals for the mean indicated where the true population mean is likely to fall, with narrower intervals for larger sample sizes (Table-4). The independent T-test comparing non-suicidal self-injury behavior (NSSIB) among adolescents in relation to public and private schools. The findings suggest that there is a statistically significant difference in non-suicidal self-injury behavior among adolescents attending public and private schools. Specifically, public school students have higher NSSIB scores compared to their private school counterparts. Adolescents in public schools have a higher mean score of NSSIB (74.74) compared to those in private schools (71.40). This suggests that, on average, public school students reported more NSSIB than private school students (Table-5).

Table 1: Categories of NSSIB

Score Ranges	Categories
25-50	Absence of NSSIB
51-75	Mild Level of NSSIB
76-100	Moderate Level of NSSIB
101-125	Severe Level of NSSIB

Table 2: Levels of NSSIB among Adolescents (n=725)

Level of NSSIB	F	Prevalence%
Mild Level of NSSIB	239	33.0%
Moderate Level of NSSIB	340	46.9%
Severe Level of NSSIB	52	7.2%

Table 3: One-way ANOVA Test Results of NSSIB based on Age Groups of Adolescents (n=725)

Age	n	M	SD	F	P
13years	104	76.69	13.7	-	-
14years	99	75.04	14.5	-	-
15years	95	72.69	16.4	-	-
16years	108	69.66	17.2	-	-
17years	97	70.25	17.8	-	-
18years	118	71.13	17.8	-	-
19years	104	76.03	11.2	3.455	.002

Table 4: One-way ANOVA Test Results of NSSIB based on Socio-Economic Status of Adolescents (n=725)

ES	n	M	SD	F	P

Lower Class	184	68.30	18.4	-	-
Middle Class	334	75.84	13.9	-	-
Upper Class	207	72.71	15.4	13.847	.000

Table 5: Independent T-test Results of NSSIB adolescents based on School System

SS	n	M	SD	F	P
Public	355	74.74	14.5	15.703	.000
Private	370	71.40	16.9	-	-

4. Discussion

The study was aimed to explore the prevalence of NSSIB among adolescents further, it also explored the differences in NSSIB due to demographic characteristics of adolescents. According to Lavrakas 2012, an exploratory research design was used to collect data from the adolescents at a single point in time. To measure the prevalence of NSSIB in a sample of 725 adolescents from various Gujrat, Pakistan, schools and colleges, this design was ideal. A significant portion of the sample had moderate (46.9%) or mild (33.0%) levels of NSSIB, as shown by the prevalence data. A more modest level of the example detailed serious NSSIB (7.2%), while 13.0% revealed a decrease of such ways of behaving. These findings demonstrated that NSSIB is noticeable among adolescents in Gujrat. Muehlenkamp et al. 2012 found that approximately 17% of adolescents engage in NSSIB, though prevalence rates significantly differ across populations and regions. The moderately high prevalence observed in the current study highlights the dire need of counselling services and behavioural management programs in Pakistani schools and colleges.

Based on age, socioeconomic status, and type of school, NSSIB showed significant differences, according to the analysis of demographic variables. The one-way ANOVA results demonstrated critical age-related contrasts in NSSIB, with the F-statistic of 3.455 and a p-value of 0.002. From the ages of 13 to 16, the mean NSSIB scores tended to decrease, and then they slightly increased from the ages of 17 to 19. According to this pattern, younger adolescents may engage in more self-injurious behavior, which decreases in the middle of adolescence and then rises again as they get closer to the end of that period. The fluctuation in scores across age bunches features the requirement for designated mediations that address explicit age-related factors adding to NSSIB. This example is predictable with research by Whitlock et al. 2011, which revealed that the beginning of NSSIB normally happens in early puberty, with predominance topping around ages 12-15 and steadily declining from there on. The slight expansion in NSSIB scores among the most established age bunch (ages 17-19) in the current review could be credited to late youth related stressors, like scholarly tensions and future vulnerability, as proposed by Laye-Gindhu and Schonert-Reichl 2005. Concentrates, for example, those by Plener et al. 2015 have likewise reported the pinnacle of NSSIB in early puberty, lining up with the on-going discoveries.

Significant differences were also found based on socioeconomic status. Middle-class adolescents had the highest mean NSSIB scores, while those from lower socioeconomic backgrounds had the lowest. This finding proposes that monetary variables might impact the predominance of NSSIB, perhaps because of shifting degrees of stress, to emotional wellness assets, and ecological circumstances. This finding lends credence to the findings of Marshall et al. (2013), who found that socioeconomic status has an impact on the prevalence and severity of NSSIB, with lower socioeconomic status being linked to increased stress and restricted access to mental health resources. The working class, frequently encountering the tensions of up portability and scholastic achievement, could confront various stressors adding to higher NSSIB rates. The extensive variety of scores inside each financial class highlights the intricacy of variables influencing NSSIB and the requirement for exhaustive systems to address these ways of behaving across various monetary layers. As verified by Yates et al. 2008, financial status impacts feelings of anxiety, ways of dealing with stress, and admittance to emotional well-being care, which all basic elements in the commonness of NSSIB.

The independent t-test results showed significant differences in NSSIB among public and private based school understudies, with public school students reporting higher mean NSSIB scores (74.74) contrasted with private

school students (71.40). This significance p-value (0.000) recommends that the type of school may assumed to play a part in exhibition of NSSIB. For instance, Fliege et al. 2009 noticed that state funded school understudies could confront more critical stressors connected with bigger class sizes, restricted assets, and possibly higher openness to peer exploitation, all of which could add to higher NSSIB rates. On the other hand, private school students might be able to reduce some of the risk factors for NSSIB by benefiting from smaller class sizes, more resources, and a supportive environment. Factors, for example, school climate, peer impact, and academic pressure could add to these distinctions, showing the significance of school-based interventions to reduce NSSIB on the other hand samples of adults, college students, and adolescents have all shown comparable rates of NSSI across genders (Cipriano et al., 2017).

The significance of NSSI also lies in its association with various mental health conditions. Adolescents who engage in self-injurious behaviors often struggle with emotional regulation, anxiety, depression, or other mental health issues. NSSI serve as both a coping mechanism and a symptom of deeper emotional distress. Recognizing NSSI as a potential indicator of underlying mental health concerns emphasizes the importance of comprehensive mental health assessments and interventions.

Furthermore, NSSI can have a profound impact on the overall well-being of adolescents. Beyond the immediate physical harm, the emotional and social consequences can be substantial. Adolescents who engage in NSSI may experience feelings of shame, guilt, or isolation, further exacerbating their mental health challenges. Addressing the emotional aftermath of NSSI is essential for fostering resilience and promoting healthy coping mechanisms. , the prevalence of NSSI among adolescents has risen over the years, drawing attention to the urgent need for comprehensive research and understanding. Studies indicate that a substantial proportion of adolescents engage in NSSI, highlighting the widespread nature of this behaviour. Examining the factors contributing to the prevalence of NSSI can offer valuable insights into the complex interplay of psychological, social, and environmental influences. Understanding the risk factors associated with NSSI is crucial for early identification and intervention. Adolescents facing challenges such as academic stress, interpersonal conflicts, or mental health disorders may be more prone to engaging in self-injurious behaviors. Identification of such risk factors enables the planning and development of targeted prevention strategies to address the underlying issues and provide appropriate support (Swannell et al., 2014).

5. Conclusion

The study showed high prevalence rate with significant differences at age, socio-economic status and school type. It emphasizes the need for mental health services and counselling programs in schools and colleges. Following the current findings, NSSIB are becoming the vital part of adolescents' behavioural patterns which guide towards the need of administrative and parental involvement in psychological development of adolescents. So, their issues can be guided properly and managed effectively.

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