INTRODUCTION

Self-injurious behavior or deliberate self-harm (DSH) in adolescents and young adults is an area of growing concern. Reports from clinics and emergency rooms are pointing to the increase in incidence. However, there are very few studies from India. Many of the people presenting with acts of self-harm do not have suicidal intent, and this has prompted the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)\(^1\) to propose a category of Nonsuicidal Self-Injury (NSSI) as a “Condition for Further Study” to encourage further research in this area. DSM-5 Proposed Criteria for NSSI requires an individual to engage in intentional self-inflicted damage to the surface of his/her body, on 5 or more days in the last 1 year, with the expectation that the injury will lead to only mild or moderate physical harm. NSSI is defined as ‘intentional destruction of one’s body tissue without suicidal intent’. The individual engages in such a behavior either to get relief from negative feelings, to resolve interpersonal difficulties, or to induce a positive feeling.\(^1\) This behavior has also been referred by different other names such as moderate self-mutilation,\(^2\) deliberate self-harm,\(^3\) self-wounding,\(^4\) and parasuicide\(^5\) by different authors. It is different from the stereotypic self-injurious behaviors seen in individuals with mental retardation, and self-mutilation seen in psychotic individuals. Current research suggests that self-injury is common not only in psychiatric populations but also in nonclinical populations. It has a number of features that set it apart from suicidal behavior and other mental disorders, like a prominent symptom pattern and a relatively clear presentation of biological and associated features (e.g., age of onset, precipitants, and course). Hence, some authors have suggested it to be an independent diagnostic category.\(^6\) Non-suicidal self-injury prevalence is 17.2% among adolescents and 13.4% among young adults. The age of onset of NSSI is generally between 12 and 16, and the onset is younger in inpatient adolescents than in outpatient adolescents; NSSI is common among adolescents in clinical practice and it is associated with significant functional impairment.\(^7\).

Studies show that almost half of community samples of adolescents report some form of self-harm at some point in their lives. With the high prevalence rate of NSSI, it is likely that adolescent primary care providers and mental health clinicians will assess and treat these behaviors. Self-injurers often report that engaging in NSSI helps to regulate intense emotions. Before self-injuring, individuals may feel overwhelmed, frustrated or sad; after injuring, individuals report feeling a sense of relief from pain, calm, dissociation or numbness. For individuals engaging in NSSI, physical injury is believed to serve social (to communicate or elicit a reaction from someone) (Nock 2008), emotional (to regulate emotions) and physiological (to decrease physiological arousal in response to emotional distress) functions.\(^8\)

Theories of learning have been used to explain the maintenance of NSSI in individuals. Positive reinforcement may come in the form of emotional relief obtained from the act or the attention and importance it generates. Negative reinforcement results from reduction of unpleasant emotions or avoiding distressing thoughts.\(^1\) Social learning theories put forward an explanation as to how recent highlighting of self-injurious behaviors in the media and songs could explain the increasing trend of self-injurious behavior among youth. According to self-punishment hypothesis, individuals may choose to engage in self-injury as a means of affect regulation and as a vehicle for punishing oneself for wrong deeds. Social signaling hypothesis explains these behaviors as “means of communication” or “cries...
for help.”[9] The Interpersonal theory of Suicide is one of the most comprehensive theories proposed to explain this interaction. Joiner argues that because of the extreme and lethal nature of suicide, most people are fearful to attempt suicide. In the presence of certain enabling factors, individuals may feel more courageous to engage in suicidal acts. Joiner (2009) argues that individual acquire a ‘capability to suicide’ through the interaction of three factors: (a) perceived burdensomeness: the perception that one is a burden on loved ones (b) thwarted belongingness: a function of social alienation; and (c) learned fearlessness: reduced fear of death because of various reasons including high pain tolerance[10]. Finally, the shame and guilt associated with NSSI, may lead to an increase in perceived burdensomeness. NSSI, hence, may predispose individuals to the three factors proposed by Joiner, which, in turn, may increase the risk for suicidal ideation and suicide. According to “Altered Pain Hypothesis,” these individuals have higher threshold for pain responsiveness, which makes them engage repeatedly in such acts, which others would find “painful.”[2] Individuals engaging in NSSI have also been found to have poor tolerance to distress, higher arousal in response to stressful events, poor verbal communication, and social problem-solving skills.[2]

Apart from its association with suicide, NSSI has other public health implications. Existing research suggests strong associations between NSSI and disorders like anxiety, depression, eating disorders, and personality disorders (especially Borderline personality disorder; NSSI is also associated with developmental and personality related vulnerabilities). Hence, NSSI may serve as an indirect indicator of the aforementioned mental health disorders in community settings and may be helpful in early assessment and interventions[11].

**Indian Scenario** : Overlapping usage of various forms of self-directed violent behaviors including NSSI in Indian research is a major concern impeding this endeavor. Inconsistent definitions of self-directed violent behaviors are a major hurdle in developing clinical (e.g., assessment of risks), research (for e.g., estimation of burden), and epidemiological (for e.g., international reporting and comparison of prevalence rate) knowledge about these behaviors. So far, attempts to streamline use of definitions is lacking in India. Studies on NSSI in India can be classified under three categories: case studies, hospital-based studies, and community-based studies. Chittoria et al. (2014) reported three cases of camphor related burns on the palms as NSSI. In all the cases, the burning of blocks of camphor was a religious ritual and in all the three cases, extensive tissue damage was reported. If existing diagnostic criteria for NSSI are followed, cases reported by Chittoria and colleagues cannot be considered as NSSI because burning camphor on hands is a culturally accepted ritual in some parts of India[12]. However, on closer examination of the cases, it can be noticed that injuries resulting from camphor burning were extensive enough to require medical or surgical intervention. Although none of the reported cases were evaluated for psychiatric disorders, Chittoria and colleagues reported that at least one of the patients did report psychotic features. This observation indicates that genuine cases of pathological NSSI may remain masked due to religious sanctioning of various forms of self-mutilative rituals in India[13].

Hospital-based studies from India generally involved patients who were admitted in a tertiary care center after an episode of self-directed violence. Sarkar and colleagues differentiated between patients with high intent to die and those with low or no intent to die. They found that patients from the latter group (about 85% of their total sample) were young adults or adolescents and most of them endorsed self-injurious behaviour with low lethality (e.g., superficial cutting). The majority of the ‘Deliberate Self-Harm’ cases did not have any major diagnosable psychiatric condition. Although, Sarkar and colleagues did not use the term NSSI, it is clear that some of the participants from their sample were in fact engaging in NSSI. Based on intentionality, lethality, mode, and age, Bhattacharya and colleagues differentiated hospitalized cases
of self-harm into two categories: individuals with high intent to die (classified as ‘failed suicide’) and those with low intent to die (classified as deliberate self-harm). However, as mentioned earlier, such classification may be difficult to implement, as clinically quantifying intent to die, is not always feasible. Additionally, most DSH cases in study by Bhattacharya perpetrated self-directed violence using organo-phosphates. Hence, they cannot be classified as NSSI.\[15\]

The only Indian community-based study on NSSI by Kharsati and Bhola reported a lifetime prevalence of almost 31% in a sample of emerging adults. Around 19.8% of this sample engaged in moderate and severe forms of NSSI (e.g., erasing skin to drawblood). The average age of onset of NSSI in their sample was 15.9 years. The most common reasons reported for engaging in NSSI behavior were: to feel relaxed, to get control of the situation, to stop feeling bad, and to punish oneself.

One of the possible conclusions to be drawn from the existing limited data is that lifetime prevalence of NSSI in India may be higher than international average (lifetime prevalence of NSSI among adolescents is 17.2%, among young adults is 13.4%, and 5.5% among adults. However, this conclusion may be premature given that Indian NSSI research is in a nascent stage and future large-scale research with a special consideration of the unique cultural and other contextual factors is essential to confirm these preliminary findings.\[16\]

**CONCLUSION**

NSS is in the position I in the broader spectrum of suicidal behavior, which remains to be ascertained. Some researchers, argue its ability to regulate emotions can serve as a protective factor against completed suicide. However, in the opinion of others, NSSI could increase the risk of future suicide attempts. Research efforts in India are also required to find out whether the sociodemographic profile as well as risk and protective factors of NSSI are distinct from that of individuals who make lethal suicide attempts. Since preliminary research findings have reported higher NSSI in India and its association with increased hospitalization and suicide, it is a potential candidate for further research. Developing contextualized knowledge regarding NSSI may be important as it may have important public health implications.\[17\]

**REFERENCES**