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Original Research Article

EVALUATION OF PREVALENCE OF DEPRESSION IN PATIENTS PRESENTING WITH SELF HARM BEHAVIOURS IN A TERTIARY CARE HOSPITAL

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ABSTRACT

Background: Self-harming behaviors are a major risk factor for completed suicide, which is why suicide is still one of the world's leading causes of death.[1] The urgent need to comprehend the psychological aspects causing self-harm is highlighted by the 164,033 suicides reported by India's National Crime Records Bureau in 2021 [2]. Although depression has long been recognized as a significant factor in self-harming behaviors, little is known about how it manifests itself in clinical populations. **Objectives:** The primary objective is evaluation of depression among patients who avail services at a tertiary care centre after self-harm behaviours, identifying common self-harm techniques, while adjusting for sociodemographic variables were the secondary objectives of this study.

Materials and Methods: In Pune, India, at a tertiary care hospital, 100 patients (over the age of 18) who were admitted for self-harm participated in a cross-sectional study. Beck's Suicidal Ideation Scale and Depression Inventory were used to evaluate the participants through structured interviews. Sociodemographic information, the self-harming technique, and clinical history and other relevant information was collected. Fisher's exact tests and ANOVA were used in the statistical analysis to look at correlations between depression and other clinical and social characteristics.

Results: The study found that the most common ways of self-harm were poisoning (58%) and tablet overdose (30%), and that 64% of participants suffered from depression. It was found that 8% of participants were female and 84% were under 40. Self-harm attempts continued even though 80% were employed and 96% reported having a support system.

Conclusion: Depression is a significant risk factor for self-harm, especially in young adults, with poisoning being the most common way. It was found that 64 % of the patients presenting with self-harm behaviours were found to have depression. The necessity for method-specific preventative methods and focused depression screening in clinical settings is indicated by the persistence of self-harm in the face of apparent social support. In order to address the rising prevalence of self-harm in India, these findings lend support to the integration of mental health services with primary care.

Keywords: Self-harm, depression, suicide, India.

INTRODUCTION

Suicide is the 10th leading cause of death globally, with approximately 1 million deaths per year according to WHO. It remains one of the leading causes of mortality among young adults.[1,2] Self-harm behaviors are occasionally employed as maladaptive coping strategies and may be a reflection of underlying psychological suffering. Those who have self-harmed in the past are far more likely to attempt suicide in the future.[3]

The terminology around self-injurious behaviour has evolved. Kreitman's term parasuicide once referred to non-fatal self-poisoning or injury without suicidal intent. It was later replaced by "deliberate self-harm," which includes any intentional self-injury or poisoning regardless of motivation.[4,5] Due to stigma and ambiguity, this term has been discouraged in favour of clearer distinctions such as non-suicidal self-injury (NSSI), now recognized as a diagnostic category in DSM-5.

Repetition of self-harm is common, especially in the initial weeks after an episode, and suicide rates in this group are nearly 100 times higher than the general population.[6] Risk factors include a prior history of self-harm, psychiatric illness (especially depression), substance use, chronic physical illness, social isolation, low education, and financial stressors.[7] Among these, depression is a particularly strong predictor of repeat self-harm attempts.[8,9]

Depression, while often conflated with sadness, is a complex disorder characterized by behavioural symptoms (e.g., agitation, suicidality, withdrawal), cognitive patterns (e.g., hopelessness, negative self-evaluation), social withdrawal, functional impairment, and biological symptoms (e.g., sleep disturbances, appetite changes, fatigue).[10]

In India, the National Crime Records Bureau (NCRB) reported 1,64,033 suicides in 2021.[11] A study from a licensed psychiatric institute in Madurai found that 22.1% of self-harm cases were associated with underlying depressive disorders.[12]

Family and friends who lose someone to suicide—termed "suicide survivors"—are at risk of developing mental health conditions such as major depression, PTSD, or complicated grief.[13] They may also face stigma, shame, and social withdrawal, which can deter help-seeking. Notably, suicide survivors themselves may be at heightened risk for suicide in the future.[14]

High-risk groups for depression include individuals with a family history of depression, such as a parent or sibling affected by the condition. Other risk factors include exposure to chronic adversity like bullying or a history of abuse, family discord (such as parental divorce or separation), and behavioural or academic difficulties. Learning problems, deliberate self-harm, or past suicide attempts also increase vulnerability. Additional risks are associated with alcohol or substance misuse, living in institutional settings (such as foster care or shelters), recent migration, and the presence of multiple physical symptoms like recurrent abdominal pain or headaches. Chronic physical health conditions, particularly neurological or rheumatological disorders, further elevate the risk of developing depression.[15]

Despite its prevalence, depression is frequently underdiagnosed, particularly when patients present with physical symptoms like headaches, fatigue, and gastrointestinal complaints. This often leads to misdiagnosis, especially at the primary care level, where mental health training is limited. The low perceived need for psychological care, especially in rural areas, further widens the treatment gap. This is especially true among older adults in India, where a significant burden of undiagnosed depression remains unaddressed.[16]

Many individuals view their distress as rooted in social or physical issues rather than psychological ones, leading them to seek somatic care instead of mental health support. To bridge this gap, community-informed interventions are essential. The capabilities approach may offer a comprehensive framework to align services with patients' biopsychosocial needs and lived realities.[17] To address these complications this study was designed to assess the prevalence of depression in those presenting with self-harm behaviours to a tertiary care hospital to determine appropriate management for future cases.

MATERIALS AND METHODS

This cross-sectional study was carried out at a tertiary care hospital in Pune, Maharashtra, during a two-year period. After gaining informed consent, a total of 100 patients who were at least 18 years old and exhibited self-harming behaviors were recruited. Patients who refused to consent to the study were exempt from the study. SPSS 28.0 was used to analyze the data after being entered into Microsoft Excel.

The Beck Depression Inventory (BDI) [Beck et al., 1996], the Beck Scale for Suicidal Ideation (BSSI) [Beck & Steer, 1993], and a structured proforma collecting sociodemographic and clinical characteristics was used to gather data. While the BSSI measures suicide ideas and intent (score range: 0–38), the BDI evaluates depressive symptoms over 21 questions (score range: 0–63). Higher scores indicate increased risk. The data was collected after receiving approval from the Institutional Ethics Committee.

RESULTS

100 patients of acute pancreatitis were recruited in this study. Their mean age was 35.60±6.3 years. All patients were male. Among these 50 patients were having mild acute pancreatitis based on ATLANTA and BISAP scores; their mean age was similar to entire study population. BISAP SCORE of entire

population ranged from 0 to 5 with mean score of 2.40±1.4; while that in mild cases was 1.20±0.8.

Table 1: Sociodemographic Characteristics

Category	Response	Percentage	Total Number
Age Category	≤ 40 years	84%	84
	> 40 years	16%	16
Marital Status	Married	70%	70
	Unmarried	30%	30
Employment Status	Employed	80%	80
	Unemployed	20%	20
Gender	Males	42%	42
	Females	58%	58
Substance Use	Yes	33%	33
	No	67%	67
Education Status*	Educated	98%	98
	Uneducated	2%	2
Support System	Present	96%	96
	Absent	4%	4

minimum level of education attained is primary education

Table 1: Sociodemographic Characteristics - Seventy percent of the 100 individuals who presented with self-harm were married, and eighty-four percent were under 40. The proportion of females was higher (58%) than that of males (42%). Just 2% of participants were uneducated, while the majority were working (80%) and educated (98%). Notably, 67% denied using drugs, while 33% confirmed using them. Remarkably, 96% of people said they had a support system, while only 4% said they didn't.

Table 2: Mode of Self-Harm Attempts

Mode of Self-Harm Attempt	Number of Responses
1. Hanging	8
2. Overdose on tablets	30
3. Poisoning	58
4. Self-inflicted wound	4

Table 2: Mode of Self-Harm Attempts - Poisoning was the most prevalent form of self-harm among the 100 participants, as reported by 58% of people. This was followed by hanging (8%), self-inflicted wounds (4%), and tablet overdose (30%).

Table 3: Clinical History

Previous History of Self-Harm Ideations	Yes	25
History of Previous Self-Harm Attempt	Yes	9
Comorbid Conditions	Yes	16

Table 3: Clinical History - Out of 100 participants, 25% reported a previous history of self-harm ideations, while 9% had a past history of self-harm attempts. Additionally, 16% of participants had documented comorbid medical conditions.

Table 4: Severity of Depression

Severity of Depression	Number of Responses
1. Borderline Clinical Depression	4
2. Moderate Depression	37
3. Severe Depression	23
4. Other Diagnoses	36

Table 5a:

Method of Self-Harm	Average BDI Score
Hanging	27.00
Overdose (OD)	24.23
Poisoning	21.29
Self-inflicted wounds	14.50
Overall Average	**21.33**

Table 5b:

Statistical Metric	Value
Between-Group Sum of Squares (SSb)	696.19
Total Sum of Squares (SSTotal)	13316.1
ANOVA p-value	**0.0523**

Table 5 a and b - To find out if there were any significant differences in the Beck Depression Inventory (BDI) scores for the four types of self-harm—hanging, overdosing, poisoning, and self-inflicted wounds—an ANOVA was performed. The average BDI score was 21.33 overall. This reflects that those who attempted hanging had generally higher scores on the BDI.

DISCUSSION

84% of participants were under 40, indicating that younger people are more likely to injure themselves, which is in line with findings from around the world [18, 19]. Despite the fact that 70% were married, this did not seem to be a protective factor, which is consistent with research that highlights the importance of quality relationships over marital status alone [20]. Previous studies have demonstrated that women are more likely to participate in non-fatal self-harm, which is supported by a larger percentage of females (58%).[21] Self-harm was not limited to socioeconomically disadvantaged groups, as evidenced by the fact that 98% of participants had an education and 80% of participants were working [22]. Thirty-three percent of people reported using drugs, which is in line with research showing that substance use is associated with higher levels of impulsivity and self-harming behaviors.[23] Although 96% of respondents said they had a support network, models of suicide behavior point out that this may not necessarily be an indication of effective or emotionally accessible assistance.[24]

The most frequent way of self-harm in this study was poisoning (58%), which was followed by overdosing on tablets (30%), hanging (8%), and self-inflicted wounds (4%). These results are in line with earlier studies conducted in India and other low- and middle-income nations, where it is usual practice to consume chemicals or pesticides because they are easily accessible, particularly in rural and semi-urban regions.[25,26]

The second most common way was overdosing on tablets, which is consistent with worldwide patterns of purposeful overdosing on drugs, especially analgesics and psychotropics.[27] Despite being less popular, hanging was a method that was clinically noteworthy because of its high fatality and correlation with higher suicidal intent.[28]

The least number of self-inflicted wounds (4%), which were frequently linked to non-suicidal self-harm, were reported. This is nevertheless a significant indicator of psychological anguish and possible future suicide risk, even though it might indicate decreased medical lethality.[29] Regardless of the harshness of the technique, these findings highlight the necessity of thorough psychological evaluations and means limitation as a public health strategy.[30]

9% of participants in this study had previously attempted self-harm, while 25% of individuals reported having previously entertained thoughts of self-harm. This highlights the significance of early identification and ongoing monitoring of at-risk individuals and are in line with the body of literature showing that prior self-harm is one of the best indicators of future self-harm and suicide.[31]

Furthermore, comorbid physical diseases were present in 16% of participants, which is consistent with research showing that chronic illnesses, especially those involving pain or impairment, can make people more susceptible to psychological distress and suicidal thoughts and actions.[32]s This emphasizes the necessity of integrated treatment strategies that treat patients who arrive with self-harm in terms of both their physical and mental health. 64% of participants had a diagnosis of depression, with moderate (37%) and severe (23%) being the most common diagnoses. This suggests that those who present with self-harm have a significant mental health burden. These results are in line with earlier studies showing that depression, especially in moderate-to-severe forms, is the most common mental illness linked to self-harming behavior.[18]

Since just 4% of people had borderline clinical depression, it seems likely that self-harm happens after depressive symptoms become severe, highlighting the significance of early detection and management. The other 36% had various psychiatric diagnoses, indicating the need for a thorough diagnostic investigation and the diversity of psychopathology in self-harming people.[22] Since a higher risk of suicide thoughts and actions is correlated with depression severity, early intervention is essential for this population.[32]

According to the data, those who injured themselves had the lowest mean depression ratings, while those who used more deadly forms of self-harm, like hanging and overdosing, had higher mean BDI scores, suggesting more severe depressed symptoms. These results are in line with other studies that show more severe psychopathology and a higher risk of suicide are linked to more fatal self-harm techniques.[18,32]

The near-significant result merits consideration, especially considering the therapeutic implications, even if the p-value (0.0523) was somewhat higher than the standard alpha threshold of 0.05.

This may imply that self-harming behaviors can be used as a stand-in for the severity of depression, which could help with risk assessment and treatment planning in emergency situations.[22] Future research should take into account higher sample sizes and post-hoc comparisons to elucidate these trends, as the lack of statistical significance could be the result of within-group heterogeneity or sample size limits.

CONCLUSION

This study shows that depression is significantly more common in people who report with self-

harming behaviors, especially in younger adults. The most frequent causes were found to be poisoning and tablet overdose, highlighting the necessity of focused preventative measures including early psychiatric intervention and means restriction. A significant percentage continued to self-harm despite high work, educational, and support system reporting rates—indicating that outward signs of social stability might not provide enough emotional security. The significance of incorporating mental health screening into emergency and primary care settings is highlighted by the substantial correlation found between depression, comorbid illnesses, and low mood. In order to lessen the incidence of suicide and self-harm in clinical populations, these findings support a multifaceted strategy that combines early detection, method-specific interventions, and comprehensive psychosocial care. In future the following factors may be utililsed to gain more knowledge and help people through longitudinal follow-up: tracking the course of depression and self-harm recurrence throughout time, Enhanced Evaluation: including quality of life, social influences, and psychiatric comorbidities, examining biomarkers, neuroimaging, and cognitive profiles to find biological correlations, sociocultural factors: assessing contextual variance by comparing regional trends, intervention studies looking at family involvement, medication, and short-term therapy, integrating health policies: creating screening procedures and providing medical staff with training, technology: using mobile application monitoring and telepsychiatry for patients who are at risk.

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