

Comparison of Various Factors with Different Methods of Self-Harm In Patients Admitted to a Tertiary Care Hospital in Pakistan

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ABSTRACT

Objective: To compare different factors in patients harming themselves with serious methods with or without suicidal intent in patients admitted to a tertiary care hospital in Pakistan.

Study Design: Comparative cross-sectional study.

Place and Duration of Study: Fauji Foundation Hospital Rawalpindi Pakistan, from Sep 2018 to Aug 2020.

Methodology: All patients who were admitted to medical, surgical or psychiatry wards of the hospital after an episode of self-harm were included in the study. Detailed history and mental state examination were carried out on all the patients by a consultant psychiatrist or post-graduate trainee in psychiatry. Methods of self-harm were assessed in all the patients, and relevant socio-demographic factors were studied.

Results: Out of 350 patients who were admitted with self-harm in the hospital during the study period and consented to be included in the study. Patients were divided into two groups for comparison: 189(54%) did not use any serious methods, while 161(46%) used serious methods and expressed an intent to end their lives. Cutting (80 patients, 22.8%) was the most common method of self-harm among patients included in the study, followed by overdose of prescribed medication (59 patients, 16.8%). The presence of major mental illness and substance use were found statistically significantly more in patients who used serious methods of self-harm and intent to end their lives (p -value<0.05).

Conclusion: Cutting an overdose of prescribed medication emerged as the most common method of self-harm in our data set. A considerable number of patients harmed themselves with the intent to die and also used serious methods.

Keywords: Depression, Anxiety, Mental health; self-harm.

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INTRODUCTION

Mental health problems are among some of the most commonly encountered non-communicable diseases (60-90%) across the globe.¹ There has been a rapid rise in psychiatric illnesses and subsequent emergency presentations of these problems within the last few decades.² Mortality and morbidity related to these conditions are quite high and depend on many complex factors, which makes it a considerable challenge for the treating team and for the healthcare system to help them get better.^{3,4}

Different kinds of risks have been associated with patients suffering from mental health problems. The risk of harm to self and others is the most discussed and most feared risk among these patients.^{5,6} Self-harm and suicide have been studied extensively in the Western population in various populations and settings, and recent studies highlight various methods that might be effective in reducing these risks among

patients suffering from these conditions.⁷ Deliberate self-harm with or without an intent to die may present in several ways and may warrant urgent medical or psychiatric intervention.⁸

Various kinds of presentations could be encountered by clinicians depending upon the methods employed for self-harm. The overall situation regarding self-harm is not very different in this part of the world. Mental illnesses have been steadily on the rise for the past decade, and emergency departments across the county receive patients with self-harm regularly.⁹ A recent study published in Pakistan on suicidal ideation among people who identify as transgender shows that the prevalence of suicidal ideation is significantly high in this population in Pakistan.¹⁰ Limited local data is available regarding different methods of self-harm used by patients presenting to emergency, medical and psychiatric departments due to various policies and laws in place in the country. We, therefore, planned this study with the rationale to look for different methods of self-harm in recent years, as well as to look at factors related to

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serious methods in patients admitted to a tertiary care hospital in Pakistan.

METHODOLOGY

The comparative cross-sectional study was conducted at Fauji Foundation Hospital, Rawalpindi Pakistan, from September 2018 to August 2020 after approval was obtained from the Hospital Ethical Committee (letter no.567/RC/FFH/RWP). The sample size was estimated by using the expected percentage of self-harm in both groups, i.e. serious self-harm as 10.8% and non-serious self-harm at 69.8%.¹¹ Non-probability consecutive sampling was used to gather the sample.

Inclusion Criteria: Patients of either gender aged 18 to 60 years who were admitted to various wards, including the Intensive Care Unit (ICU), Medical Wards, Surgical Wards or the Psychiatry Ward after an episode of harming themselves, were included.

Exclusion Criteria: Patients with intellectual disability or epilepsy, autoimmune illnesses, or organic mental illness, patients who did not want to participate in the study after a detailed description were excluded.

Patients who signed written informed consent for participation in the study were interviewed using a structured questionnaire.

Self-harm was defined as the intentional destruction of one’s body tissue with or without suicidal intent and for purposes not socially sanctioned.¹² Self-harm was classified into serious (with expressed suicide intent) and non-serious (without suicidal intent).¹³ This was established on a clinical interview by a psychiatrist. A psychiatrist confirmed the presence of major mental illness based on ICD-10 criteria.¹⁴

Statistical analysis was done using the Statistical Package for Social Sciences (SPSS) version 25.0. Frequency and percentage were calculated for the qualitative variables, whereas mean and standard deviation were calculated for the quantitative variables. The Chi-square test was used to look for the relationship between age, gender, use of illicit substances, and presence of major mental illness with the use of severe methods with suicidal intent. The *p*-value less than or equal to 0.05 was considered significant.

RESULTS

Out of 350 patients who were admitted with self-harm in our hospital during the study period and consented to be included, 160(45.7%) were male, while

190(54.3%) were female. The mean age of the study participants was 29.48±7.52 years. 189(54%) did not use serious methods, while 161(46%) used serious methods and expressed intent to end their lives. Table-I summarizes the general characteristics of the study participants. Cutting (80 patients, 22.8%) was the most common method of self-harm in the study participants, followed by overdose with prescribed medication (59 patients, 16.8%).

Table-I: Characteristics of study participants (n=350)

Parameters	n(%)
Age (years)	
Mean±SD	29.48±7.52 years
Range (min-max)	18 years-46 years
Gender	
Male	160 (45.7%)
Female	190 (54.3%)
Major Mental illness (other than substance use and Personality Disorder)	
Depressive disorder	106(30.2%)
Anxiety disorder	66(18.8%)
Mixed anxiety depression	44(12.5%)
Bipolar affective disorder	18(5.14%)
Schizophrenia	09(2.5%)
Others	03(0.8%)
Method Used for Self-Harm	
Hanging	08(2.2%)
Electrocution	03(0.8%)
Use of fire arm	02(0.5%)
Use of pesticide or poison	39(11.1%)
Jumping from height	26(7.4%)
Jumping into canal or river	14(4%)
Jumping in front of train	04(1.1%)
Prescribed medication Overdose	59(16.8%)
Paracetamol overdose	36(10.3%)
Cutting	80(22.8%)
Burning	29(8.2%)
Hitting	27(7.7%)
Combination of two methods	19(5.42%)
Others	04(1.1%)

Patients were divided into two groups for the sake of comparison. Group-I used a less severe method of self-harm, while Group-II used a more severe form of self-harm. Table-II shows that the presence of major mental illness (*p*-value-0.010) and substance use (*p*-value<0.001) had a statistically significant relationship with the use of serious methods of self-harm and intent to die in the study participants. At the same time, age (*p*-value-0.349) and gender (*p*-value-0.015) had no such relationship with the use of serious methods of self-harm in patients admitted to the psychiatry department of our hospital.

Table II: Comparison of Various Factors Among the Study Groups (n=350)

Factors studied	Non Serious Self-Harm Group	Serious Self Harm Group	p-value
Age			
18-30 years	163(86.2%)	13(82.6%)	0.349
>30 years	26(13.8%)	28(17.4%)	
Use of illicit substance			
No	169(89.4%)	118(73.3%)	<0.001
Yes	20(10.6%)	43(26.4%)	
Gender			
Male	93(49.2%)	67(41.6%)	0.155
Female	96(50.8%)	94(58.4%)	
Presence of major mental illness			
No	67(35.4%)	37(22.9%)	0.010
Yes	122(64.6%)	124(77.1%)	

DISCUSSION

Self-harm among people with or without the presence of major mental illness has been a widely discussed topic in the last few years. People use different methods for harming themselves, and each method used has its implications when considering the short- and long-term prognosis of the patient. The presence of suicidal intent while harming oneself is another widely discussed phenomenon. Azeem *et al.* published an interesting local study in this regard.¹⁵ Limited data has been generated regarding commonly encountered methods of self-harm in our part of the world and the factors related to the use of serious methods with suicide intent. This study was designed and conducted to look for different methods of self-harm and factors related to serious methods with suicidal intent in patients admitted to a tertiary care hospital in Pakistan. Beckman *et al.*¹⁶ came up with the findings that the use of a violent method was more commonly associated with completed suicide as compared to less serious methods like poisoning. Adolescents using violent methods had an increased probability of psychiatric inpatient care following initial treatment for self-harm, thus indicating a diagnosable psychiatric illness in these cases. The majority of our study participants were 18 to 30 years old, and we generated similar results in this younger age group, where the presence of a major mental illness was significantly associated with attempted serious self-harm with suicidal intent.

Daukantaitė *et al.*¹⁷ concluded that most of their patients suffered from depression; cutting was the most common method of self-harm in their study participants. Our results supported the findings generated by Daukantaitė *et al.*, as depression was the

most common major mental disorder found in patients included in our study, and cutting was the most common method of self-harm. Non-suicidal self-injury among Korean young adults was reported by Kim *et al.*¹⁸ in 2019, who employed the Korean version of the inventory of statements about self-injury. They revealed that banging, biting, carving, cutting, burning, pinching, pulling hair and swallowing dangerous substances were the most common methods used for self-harm in Korean patients. Our data set showed similar findings, but a considerable number of patients, especially those who were using illicit substances and had major mental illness, used serious methods with suicidal intent.

Claes *et al.*¹⁹ in 2015 investigated the prevalence of non-suicidal self-injury in trans-gendered people and the associations with intra- and interpersonal problems. They concluded that more psychological and interpersonal problems and less perceived social support were significantly associated with self-harm in study participants. Our results also revealed that the presence of major mental illness was a risk factor for the use of serious methods of self-harm with suicide intent.

LIMITATION OF THE STUDY

The main limitation of this study is that suicidal intent and substance use were established based on the accounts given by patients themselves. The presence of major mental illness was diagnosed after the event as well as during admission after the self-harm. It may not be an actual representation of the burden of major mental illness among these patients. Many patients may have left against medical advice or would have been discharged from the emergency department or referred to public sector hospitals. Future studies addressing these limitations may generate better results.

CONCLUSION

Cutting and prescribed medication overdose emerged as the most common methods of self-harm in our data set. A considerable number of patients harmed themselves with the intent to die and used serious methods. In terms of safety and follow-up of patients being discharged from the hospital, special attention should be given to patients who have been diagnosed with a major mental illness as well as substance use.

Conflict of Interest: None.

Authors Contribution

Following authors have made substantial contributions to the manuscript as under:

SR & NA: Data acquisition, data analysis, data interpretation, critical review, approval of the final version to be published.

SM & NA: Study design, data interpretation, drafting the manu-script, critical review, approval of the final version to be published.

KH & UBZ: Conception, data acquisition, drafting the manuscript, approval of the final version to be published.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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