



Original Research Article

## Psychiatric Morbidity and the Socio-Demographic Determinants of Patients Attempting Suicide in Kashmir Valley: A Cross-Sectional Study

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### ABSTRACT

**Background:** Human suicidal behaviour has always been a source of dread and wonder to mankind. As in many countries, suicide in India is hidden and silent epidemic. Suicide has many determinants, studying various determinants has always been the topic of interest for many researchers.

**Objectives:** To study the socio-demographic and the clinical profiles of the subjects who had attempted suicide in Kashmir valley.

**Design:** Retrospective study

**Setting:** Tertiary referral Hospital, SMHS Srinagar.

**Materials and Methods:** We conducted a cross-sectional study for a period of 2 years in SMHS Government medical college associated Hospital. We monitored every alternate patients admitted to the hospital after attempting suicide during our on-going study period (n =201).The data was recorded in a specially designed Proforma, which included the socio-demographic variables, psychiatric illnesses, psycho-social stress factors, past and family history and the details of the suicide attempt. Chi-square and t tests were used to note the statistically significant associations.

**Results:** Majority of cases belong to Muslim group (95.02%). Younger people of 15-25 years of age (52.7%) predominated in the study. Females (54.7%) outnumbered the males (45.27%). Majority of the patients were married and housewives and were from rural and low socio-economic backgrounds. Many of the patients had no family history of self-harm and they used poison as the most preferred method of suicide. Majority of the patients examined were suffering from psychiatric illness, which was predominated by depression (21.90%). Besides this, family conflicts (31.8%) and failure in exams (10.44%) were found to be the most common precipitating factors for suicide.

**Conclusion:** The results of the present study suggest that suicide attempts must be carefully evaluated in subjects with previous psychiatric disorders, previous suicide attempts and a family history of psychiatric disorders. Steps like awareness programs, preventive measures and proper psychiatric referral systems should be built to control the increasing incidence of suicide in the

violence hit conflict zones are like Kashmir valley. Where, insurgency, badly affected education and employment sector, which are directly proportional to youths.

**Keywords:** suicide, socio-demographic variables, drug-addiction, insurgency.

## INTRODUCTION

Suicide is a fatal, self-inflicted destructive act with explicit or inferred intent to die. <sup>[1]</sup> Psychiatric illnesses are the primary distal risks processes that underlie the vast majority of suicide mortality and morbidity are considered to be necessary conditions under which suicidal behaviour may occur. <sup>[2]</sup> Kashmir is a conflict zone and has been constantly in state low intensity war since last 20 years and this has led to increased mental health disorders. Apparently, employment and education sector main craving areas of youths are worst affected by insurgency. <sup>[3]</sup> Apart from increase in mental disorders there has been increase in suicide and suicidal attempters. <sup>[4]</sup> Number of suicidal attempts has increased more than 250% over the last 18 years compared with the pre turmoil period. <sup>[4]</sup> Suicidal attempts account for 23% for all psychiatric visits to an emergency room. <sup>[5]</sup> Acute Suicidality tops most admission criteria and is a justification of many admissions. <sup>[6]</sup>

Persons who attempt suicide may have various intentions, of which manipulative or threatening and suicidal intentions are the most important ones. <sup>[7]</sup> Majority of the persons who committed suicide attempt don't want to commit suicide. <sup>[8]</sup> They do so due to depression or they may have anger, jealousy or the desire for attention. <sup>[9]</sup> Suicide ranks as the eleventh leading cause of death in the United States. <sup>[10]</sup> Globally, an estimated 700,000 people will take their own lives annually. <sup>[11]</sup> The WHO estimates that one suicide occurs approximately every minute and an attempt at the suicide is made every 3<sup>rd</sup> second, thus a number of people killed by suicide is more than the armed conflict.

<sup>[12]</sup> A review of the literature shows that the attempted suicide rates vary from 100 to 300 per 100,000 with a preponderance of those attempting suicides being females. <sup>[13]</sup> In India, about 100,000 persons commit suicide every year, contributing to about 10% of the suicides in the world [10]. Suicide is among the top 10 causes of death in India and among the top 3 causes of death in those who are between 16 and 25 years of age. <sup>[14]</sup> The national suicide rate for 2001 was 10.6 per 100,000 populations, a 14.5% increase from the statistics of 1991. <sup>[15]</sup> It is estimated that the incidence of non-fatal deliberate self-harm is 250 per 100,000 persons per year. <sup>[16]</sup> Indian research on suicidal attempt has shown that various socio-cultural and environmental factors are associated with suicidal behaviour. <sup>[17]</sup>

In case of conflict zone there has been increase in cases of psychological disorders along with suicide and suicide attempters and Suicide is viewed with indifference due to focus on the physical part of trauma. The purpose of this study was to find the psychiatric morbidity and the socio demographic determinants of patients attempting suicide in Kashmir valley.

## MATERIALS AND METHODS

This study was carried out at SMHS Government medical college associated hospital, Srinagar, using a cross sectional analysis of the subject, the cases were those who got admitted through accidental and emergency services, during the period from Jan 2010 to Jan 2012. Every alternate patients who were admitted in hospital was included in the study. After stabilization the patients were subjected to a detailed psychiatric evaluation to understand the basic precipitating cause besides treatment

or counselling. The socio medical history was obtained from the patients, and their attendants. This was also done at the first follow ups Interviews were conducted of the patients as well as their legal guardians. Patients with accidental or homicidal poisoning were not included. The number of cases studied was 201, among which 91 were male and 110 were female. A specially designed Proforma was used for identification, socio-demographic data and case history. Socioeconomic status was assessed by using kupaswamy socioeconomic scale, which included income occupation and Current psychiatric status was assessed with the MINI (Mini International Neuropsychiatric Instrument). The diagnosis of psychiatric disorder was made by the ICD-10 criteria. The general characteristic of study population is given in table-1 and table 2.

**Statistical Analysis:**

Data were extracted and analysed by using GraphPad Prism statistical software version 5.0. Chi-square and Fisher exact tests were used to note the statistically significant associations wherever they were appropriate. A p-value of <0.05 was considered to be significant.

**RESULTS**

Out of 201 patients, 91 were males and 110 were females. A majority of the cases observed were of the 15-25 years of age group (52.7%), married (46.26%) and rural residence (59.92%) and mainly belong to low socio-economic background (38.8%).

Most of them were illiterate ((54.72%) and females doing household works (36.31%) as shown in table-2. The most commonly used method of suicide was poisoning (82.08%). Among the 201 patients, 97 female (88.18%) and 68 males (74.72%) tried poisoning as the most preferred method to self-harm themselves. The 2nd most common method was hanging or jumping (14.92%), followed by burning (2.98%). Most of the patients (93.3%) didn't have any past history of DSH. Only 14 patients (6.97%), among whom 8 (7.27%) were females and 6 were males (6.59%), tried to harm themselves in the past. 21 patients (10.44 %; 8.79% male and 11.81% females) had a family history of suicide.

According to the ICD-10 criteria, 48.75% patients were diagnosed to have psychiatric illness, among which a majority of cases suffer with depression (21.90%) followed by adjustment disorder (9.95%). Among other psychiatric disorders anxiety disorders (6.46%), schizophrenia (1.49%), substance abuse disorders (3.98) etc., were also observed in the study sample as given in table-3.

Family conflict was the most common precipitating factor in both males and females for suicide. About 31.80% of patients had family quarrels, which included 19 (20.87%) males and 45(40.90%) females. Marital disharmony (6.96 %), failure in exams (10.4%), failure in love (9.45%) and financial crises (7.46%) were a few other precipitating factors, which were also observed in our study.

**Table-1: General characteristics of study population.**

Religion	Male (n = 91) n = %	Female (n = 110) n = %	Total (n = 201) n = %
Muslim	86 (94.50)	105 (95.45)	191 (95.02)
Hindu	2 (2.19)	4 (3.63)	6 (2.98)
Sikh	2 (2.19)	1 (0.90)	3 (1.49)
Others	1 (1.09)	1 (0.0)	1 (0.49)

**Table-2: Association of the socio-demographic variables with the patients of suicide.**

Study characteristic	Male (n = 91) n = %	Female (n = 110) n = %	Total (n = 201) n = %
<b>Age in years</b>			
15-25	40 (43.95)	66 (60.0)	106 (52.7)
26-40	32 (35.16)	28 (25.45)	60 (29.8)
>40	19 (20.87)	16 (14.54)	35 (17.4)
<b>Marital status</b>			
Married	44 (48.35)	49 (44.54)	93 (46.26)
Unmarried	38 (41.75)	53 (48.18)	91 (45.2)
<b>Residence</b>			
Urban	37 (40.65)	45 (40.90)	82 (40.79)
Rural	54 (59.34)	65 (59.1)	119 (59.92)
<b>Family type</b>			
Joint	46 (50.54)	40 (36.36)	86 (42.78)
Nuclear	36 (39.56)	37 (33.63)	73 (36.30)
Ex nuclear	09 (9.89)	33 (30.0)	42 (20.89)
<b>Education</b>			
Illiterates	42 (46.15)	68 (61.81)	110 (54.72)
Literate	49 (53.84)	42 (38.18)	91 (45.27)
Primary	13 (14.28)	29 (26.36)	42 (20.89)
Middle	23 (25.27)	26 (23.63)	49 (24.73)
Higher	13 (14.28)	06 (5.45)	19 (9.45)
<b>Occupation</b>			
Household work	0 (0.0)	73 (66.36)	73 (36.31)
Student	42 (46.15)	21 (19.09)	63 (31.34)
Unemployed	10 (10.98)	06 (5.45)	16 (7.96)
Employed	31 (34.06)	09 (8.18)	40 (19.90)
Business	08 (8.79)	01 (0.90)	09 (4.47)
<b>Socio-economic status</b>			
Lower class	37 (40.65)	41 (37.27)	78 (38.80)
Middle class	30 (32.96)	35 (31.81)	65 (32.33)
Upper class	24 (26.37)	34 (30.90)	58 (28.85)

**Table-3: Characteristics and psychiatric morbidity in the patient's suicide**

Study characteristic	Male (n = 91) n = %	Female (n = 110) n = %	Total (n = 201) n = %	P value
<b>Mode of suicides</b>				
Poisoning	68 (74.72)	97 (88.18)	165 (82.08)	0.04
Burning	04 (4.39)	02 (1.81)	06 (2.98)	
Others (Hanging, Jumping etc.)	19 (20.87)	11 (10.0)	30 (14.92)	
<b>Past history of suicide</b>				
Yes	06 (6.59)	08 (7.27)	14 (6.97)	0.85
NO	85 (93.40)	102 (92.72)	187 (93.03)	
<b>Family history</b>				
Yes	08 (8.79)	13 (11.81)	21 (10.44)	0.48
No	83 (41.29)	97 (88.18)	180 (89.55)	
<b>Psychiatric illness</b>				
Depression	24 (18.38)	34 (25.81)	38 (21.90)	0.25
Adjustment disorder	11 (12.08)	09 (8.18)	20 (9.95)	
Anxiety disorders	09 (9.89)	04 (3.63)	13 (6.46)	
Psychotic illness	02 (2.19)	01 (0.90)	03 (1.49)	
Post traumatic disorders	02 (2.19)	01 (0.90)	03 (1.49)	
Substance abusers	06 (6.59)	02 (1.81)	08 (3.98)	
Others	08 (8.79)	05 (4.54)	13 (6.46)	
<b>Precipitating factor</b>				
Familial conflicts	19 (20.87)	45 (40.90)	64 (31.80)	0.056
Marital disharmony	06 (6.59)	08 (7.27)	14 (6.96)	
Death of closed relatives	05 (5.49)	07 (6.36)	12 (5.97)	
Failure in exams	13 (14.28)	08 (7.27)	21 (10.44)	
Financial crises	09 (9.89)	06 (5.45)	15 (7.46)	
Failures in love	08 (8.79)	11 (10.0)	19 (9.45)	
Loss of job	04 (4.39)	01 (0.90)	05 (2.48)	
<b>Physical illness</b>				
Psychiatric illness	12 (13.18)	06 (5.45)	18 (8.95)	0.0018
Others	0 (0.0)	11 (10.0)	11 (5.47)	

## DISCUSSION

Kashmir has been suffering from a low intensity conflict zone and there has been a rise in suicidal poisoning in the valley in the insurgency from last 20 years. Kashmir's are inhabitants living in the Kashmir valley-Indian subcontinent, witnessed trauma, violence etc. During the period of insurgency, people mind get

affected. Tension get erupted, violence and infighting get day to day routine in between families on small pennies. Education, employment sector get heavily affected, ultimately youth get prone to suicide attempts and psychiatric illness. Suicidal poisoning is a significant health problem in Kashmir and the number of suicidal attempt has increased compared with the pre turmoil

period due to defective coping strategies caused by excessive external stresses. [18] This study was carried out with an aim to examine the psychiatric aspects and to study the socio-demographic determinants of patients attempting suicide. In this study, we found that the suicidal behaviour is common among females (88.18%) and in younger age groups (52.7%) as per our study, which is consistent with the findings of other Indian studies. [15,16] The suicidal behaviour is also common among subjects who are married as compared to those who are not (93% vs. 91%), thus being married was also a risk factor as according to our study, which is consistent with the study done by Kumar, et al. [17,19] The studies have also shown that subjects belonging to rural areas (119%), low educational status (110%), low income class (78%) have also maxima incidence of suicidal attempts. [19] This was probably due to the location of the institute and the lack of the referral system from the rural hospitals in this area. Besides this, individuals coming within age group of 15-25 years were found to be more prone to psychiatric morbidity leading to self-harm (106%) which is consistent with studies done in India. [19]

There is a significant rise in attempted and completed suicides in Kashmir in recent times with poisoning being the commonest method employed. [18] We also found that the most common method of suicide was poisoning (82.08%), which was similar to the findings of most of the studies in India, [20,21] while Khurram et al. [23] found that benzodiazepines were the commonly used substances for suicide. In developing countries, Pesticide self-poisoning is now considered by the WHO to be the commonest method of fatal self-harm worldwide [24,25] but it is rarely seen in the west, [26] which may be due to easy availability of poison.

The high prevalence of psychiatric morbidity in our study can be explained by

the high levels of violence confronted by the Kashmiri population has resulted in high prevalence of mental health problems. A population survey found a lifetime prevalence of traumatic events of 59% among the inhabitants surveyed. [27] In this study, we also observed that the individuals suffering with depression are more prone to self-harm (18.90%) followed by adjustment disorder (9.95%) which is also consistent with study done by Grover, Dass et al. [19] Among the precipitating factor for suicide, familial conflict (31.8%) was seen to be the major risk factor for self-harm in our setup, this observation is different from other Indian studies due to socio-cultural difference. [28,29]

The rise of suicidal poisoning especially with organophosphorus (82%) is on rise because of its easy availability in Kashmir, the mortality encountered in poisoning is almost entirely due to this compound. Suicidal poisoning is a significant health problem in Kashmir and management of these cases is fraught with difficulties across the spectrum of health care. Tighter legislation and strict enforcement of drug dispensing procedures can help in decreasing number of cases. Prevention of violence in our society should also assist in preventing primary violence to reduce other major causes of morbidity and mortality. Improvement in psychiatric services can help in decreasing the suicidal poisoning cases. Awareness programs, preventive measures and proper psychiatric referral systems and population based studies should be promoted to find out the vulnerable groups and to identify the psychological, behavioural and the relationship-related issues among them to design effective interventional strategies and to decrease the incidence of suicide. It is necessary for the death investigators to be aware of the common scenario, risk factors,

methods and the victims as well as pitfalls that may be encountered.

## CONCLUSION

The results of the present study suggest that suicide attempts must be carefully evaluated in subjects with previous psychiatric disorders, previous suicide attempts and a family history of psychiatric disorders. Steps like awareness programs, preventive measures and proper psychiatric referral systems should be built to control the increasing incidence of suicide in the violence hit conflict zone like Kashmir valley. Where, insurgency, badly affected education and employment sector, which are directly proportional to youths.

### *Declaration of Interest*

The authors declare that there is no conflict of interest that could be perceived as prejudicing the impartiality of the research reported.

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### *Author's contribution statement*

Sheikh Shoib, M Maqbool Dar wrote and compiled the manuscript: Haamid Bashir, Gousia Qayoom, Sheikh Shoib and Tasleem Arif did statistics & revised. All approved and read the final version of the manuscript. All authors contributed equally in the article.

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