

Psychiatric Co-Morbidities of Suicide Attempters: A Cross Sectional Observation in a Tertiary Care Hospital of North India

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ABSTRACT

Background: Psychiatric disorders are at increased risk for suicide. Attempted suicide is a common clinical problem in a general hospital. It has a serious clinical and socio-economical impact too.

Aims: This study was carried out to assess the prevalence of psychiatric co-morbidities of suicide attempters attending the emergency.

Material and methods: This study was a cross sectional, observational study which was conducted at the Community General Hospital Unit, Institute of Mental Health and Neurosciences-Kashmir an associated hospital of Government Medical College Srinagar among the suicide patients attending the outpatient service and inpatient services of the hospital fulfilling inclusion and exclusion criteria over a period of one and a half year, from November 2017 to May 2019. Written informed consent was obtained in a simple and easily understandable unambiguous language. For the diagnosis of psychiatric comorbidity, we used MINI International Neuropsychiatric Interview Schedule Plus (MINI PLUS). A p-value of <0.05 was taken as statistically significant.

Results: A total of 221 cases who had been admitted following unsuccessful suicide attempts to the emergency and psychiatry

department were taken up for the study. They were evaluated in detail with regards to past attempt of suicide, family history of psychiatric illness or suicide and the presence of psychiatric co-morbidity and the results have been presented below in tabulated and graphical forms. 77.4% of the attempters had no history of psychiatric illness in their family while 22.6% of patients did have family history of a psychiatric illness. 98.2% of attempters had no family history of suicide while 1.8% of the patients gave a family history of suicide. 21.26% males and 54.75% females had associated psychiatric co-morbidities and 23.9% had no associated psychiatric co-morbidities.

Conclusion: The most common psychiatric morbidity associated with suicide was found to be major depressive disorder. Most importantly, the suicide attempters should be looked with sympathy rather than with a grimace on face. Such people should not be stigmatized and we should not let their shoulders drop.

Key Words: Depression, Bipolar Disorder, Morbidity, Suicide

INTRODUCTION

Suicide is an important and serious public health problem. The word suicide derived from Latin word for “self-murder”, is a fatal act that represents the person’s

wish to die.¹ The word suicide was first used by the English author, Sir Thomas Browne in 1642 in his treatise “Religio Medici”. Suicide attempts represent a major risk factor for future suicide attempts and eventual completed suicide.²⁻⁴ In a community sample, a prior suicide attempt increased the chance of a future attempt 18 fold.⁵ Lecomte and Fornes⁶ found that one-third of youth who died by suicide had previously attempted suicide at least once. Adolescents with a history of more than one attempt may have increased risk for subsequent suicidality relative to adolescents with a single prior attempt, who in turn are at increased risk relative to adolescents with prior ideation but no attempt. Despite the apparent differences in risk, little work has been done to describe these distinct groups in terms of diagnostic differences, particularly among adolescents.^{7,8}

Considering the recent upward trend of suicides in Kashmir, this study aimed at looking at the different co-morbidities of this group of population and to demonstrate a temporal relationship between the act of suicide and a recent increase in the number of events that require a socially adaptive response on the part of individual. This study will go a long way in deciphering such precipitating factors and also in making future strategies for their management.

Aims: This study was conducted to assess the prevalence of psychiatric co-morbidities of suicide attempters attending the emergency.

MATERIAL AND METHODS

The study was a cross sectional, observational study conducted at the Community General Hospital Unit, Institute of Mental Health and Neurosciences-Kashmir an associated hospital of Government Medical College Srinagar over a period of one and a half year from November 2017 to May 2019. This hospital is a specialized tertiary care psychiatric facility available in the valley – catering to

the whole of Kashmir along with Ladakh and some parts of Jammu. Each patient was informed about the purpose of interview; his/her consent was obtained and strict confidentiality was ensured to the patient. Written informed consent was obtained.

The following inclusion and exclusion criteria were adapted.

INCLUSION CRITERIA:

1. Age \geq 18 years.
2. Those who gave consent.

EXCLUSION CRITERIA:

1. Those with Accidental injuries.
2. Suffering from severe neurological disorders
3. Those with severe medical illness

INSTRUMENTS

Modified Kuppuswamy Scale⁹: Socio-economic status was determined using the modified Kuppuswamy scale. This is an important tool in hospital and community based research in India, used to measure SES in urban and peri urban communities. It was devised by Kuppuswamy in 1976 in India and has been recently revised in 2017.⁶³ It is based on composite score considering the education and occupation of the head of the family along with monthly income of family which yield a score of 3-29. This scale classifies study population into high, middle and low SES, which further classified into five social classes: i) upper, ii) upper middle, iii) lower middle, iv) upper lower, v) lower socio-economic status.

MINI PLUS¹⁰: For the diagnosis of psychiatric comorbidity, we used MINI International Neuropsychiatric Interview Schedule Plus (MINI PLUS). After the diagnoses of Psychiatric morbidity, diagnosis was discussed and confirmed by consultant psychiatrist. The MINI PLUS is DSM-IV based diagnostic interview with high reliability and validity. The Mini-International Neuropsychiatric Interview (M.I.N.I. PLUS) is a short structured diagnostic interview, developed jointly by

psychiatrists and clinicians in the United States and Europe, for DSM-IV and ICD-10 psychiatric disorders. Psychometric examination of the MINI shows acceptable test-retest and inter-rater reliability. It was designed to meet the need for a short but accurate structured psychiatric interview for multicentre clinical trials and epidemiological studies.¹¹ Interview was conducted after getting formal training in instituting MINI by trained psychiatrists of department of psychiatry GMC Srinagar.

Statistical Analysis:

The data collected was entered in a Microsoft excel spreadsheet. Continuous variables were summarized as mean and standard deviation and categorical variables were summarized as percentages. Fischer exact test was used to analyse the relationship between categorical variables. Psychiatric disorders were analysed using appropriate statistical tools. A p-value of <0.05 was taken as statistically significant.

RESULTS

A total of 221 cases who had been admitted following unsuccessful suicide attempts to the emergency and psychiatry department were taken up for the study. They were evaluated in detail with regards to socio-demographic profile and the presence of psychiatric morbidity and the results have been presented below in tabulated and graphical form (Table 1).

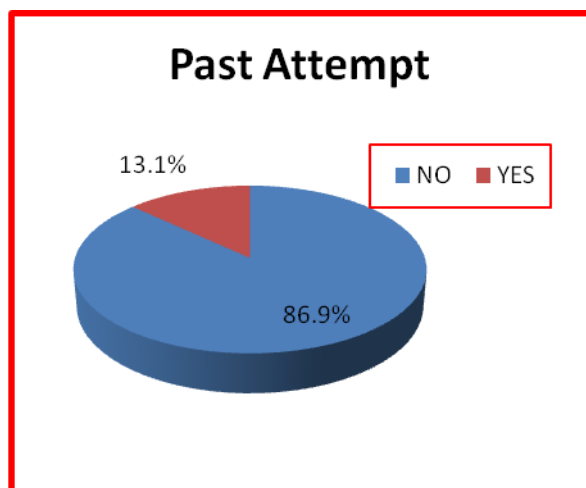


Fig 1 showing history of Past Attempt in Study Population

13.1% patients had history of past suicidal attempt as shown in fig.1.

	Number	Percentage (%)
Sex		
Male	60	27.1%
Female	161	72.9%
Age (in Years)		
18-30	188	85.1
31-45	25	11.3
46-60	8	3.6
Residence		
Rural	167	75.6
Urban	54	24.4
Religion		
Hindu	1	0.5
Muslim	220	99.5
Marital status		
Unmarried	144	65.2
Married	67	30.3
Widowed	0	0.0
Separated / divorced	10	4.5
Family		
Nuclear	122	55.2
Extended	15	6.8
Joint	84	38.0
Occupation		
Employed	19	8.6
Unemployed	123	55.7
Farmer	15	6.8
Bussinessman	16	7.2
Student	48	21.7
Education		
Illiterate	33	14.9
Primary	36	16.3
High School	64	29.0
Hr. Sec. School	48	21.7
Graduate / postgraduate	38	17.2
Professional	02	0.9
Socioeconomic status		
Upper	3	1.4
Upper middle	53	24.0
Lower middle	76	34.4
Upper lower	76	34.4
Lower	13	5.9

77.4% of the attempters had no history of psychiatric illness in their family while 22.6% of patients did have family history of a psychiatric illness (Table 2).

Family History of Psychiatry Illness	Frequency	Percent
No	171	77.4
Yes	50	22.6
Total	221	100.0

98.2% of attempters had no family history of suicide while 1.8% of the patients gave a family history of suicide (Table 3).

Family history of suicide	Frequency	Percentage %
No	217	98.2%
Yes	4	1.8%
Total	221	100.0%

Diagnosis	Frequency	Percentage %
MDD	24	10.86
BPAD	8	3.61
OCD	3	1.36
PTSD	1	0.45
Substance dependence	3	1.36
Schizophrenia	4	1.81
Borderline Personality disorder	3	1.36
Psychotic depression	1	0.45
Total	47	21.26

21.26% males and 54.75% females had associated psychiatric co-morbidities and 23.9% had no associated psychiatric co-morbidities (Table 4, 5). Comparison of

psychiatric co-morbidities between males and females is shown in fig.2.

Diagnosis	Frequency	Percentage%
MDD	74	33.48
BPAD	5	2.26
Agoraphobia	1	0.45
OCD	11	4.98
Psychotic depression	1	0.45
Brief psychotic episode	2	0.90
GAD	1	0.45
Adjustment disorder	7	3.16
Mixed anxiety depressive disorder	8	3.62
Borderline personality disorder	10	4.52
Histrionic personality disorder	1	0.45
Total	121	54.75

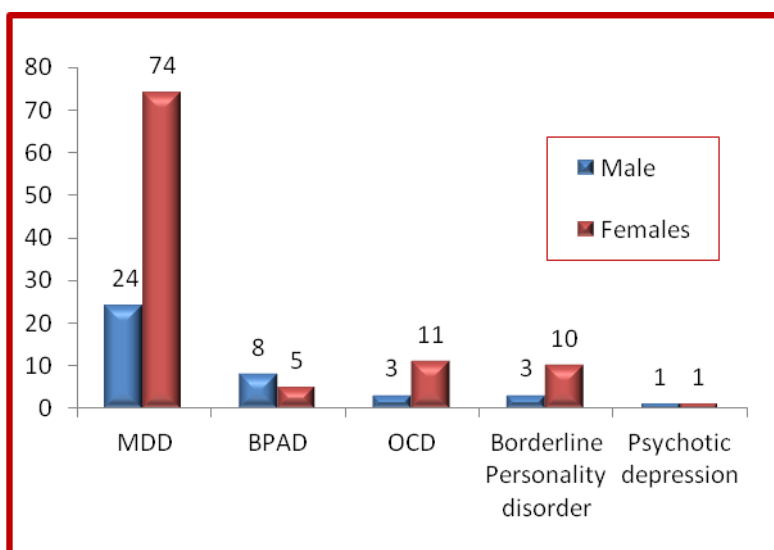


Fig 2 showing comparison of psychiatric co-morbidities between males and females

DISCUSSION

Kashmir is a conflict zone and has been constantly under stress for the past 20 years which has led to rise in mental illnesses in the valley as reported by many studies conducted by various researchers.^{12,13,14} In recent times suicide rates are rising more quickly in adolescents and young people than any other age group, both in developing and developed countries and it has been seen that emotional issues, exam failures, peer pressure, substance abuse, financial difficulties, high parental expectations, family conflicts etc, are the triggering factors.¹⁵

In our study, the mean age was 24.61 years. This result is in concordance with the study conducted by Ghanate et al¹⁶ in 2013 in which majority of the patients (70%) belonged to 15-30 years of age

group. Recent studies conducted by Manhas et al¹⁷, Shoib et.al¹³ (2012) and by Kodali et al¹⁸ showed similar results. Females outnumbered males as out of 221 cases, 161 were females (72.9%) and 60 (27.1%) were males. 29 (13.1%) patients out of 221 had prior history of suicide attempts in which again female outnumbered males. Gould et al (2003)¹⁹ reported that the adolescents often with past histories of suicide attempts are more vulnerable to suicide behaviour. Beghi M et al (2010)²⁰ found previous attempts are the strongest risk factors for further attempt. In our study, only 4 (1.8%) patients had positive family history of suicide attempt. A similar study conducted in Kashmir valley by shoib¹³ et al in 2012 also showed low percentage of family history of suicide among their study population. Further, only 50 patients (1.8%)

had history of psychiatric illness in their families.

76% of patients in our study had underlying psychiatric co-morbidity at the time of suicide attempt, which confirms high association of psychiatric morbidity among suicide patients reported in the literature.²¹ This result correlates with the study done in Kashmir valley by Jan, et al¹⁴ which showed 82% prevalence of psychiatric morbidity in their sample. Our finding is also in accordance with the study conducted by Qusar et al²², a study from outside the Kashmir valley, which observed that 59.1% patients attempting suicide were suffering from psychiatric disorders at the time of committing the act.

Major depressive disorder (MDD) (44%) predominated amongst the psychiatric diagnosis in our study, which is in concordance with the study conducted by Shoib,¹³ Jan¹⁴, and Das²³. The diagnosis of MDD was more common among the females (33.5%) than the males (10.8%) in our study group and this difference was statistically significant ($p=0.059$).

Following MDD, the next common diagnosis was OCD (6.33%), which was again more common in females. The figure was 2% in the study conducted by Jan et al¹⁴ in 2010.

The next diagnosis in the list was BPAD and Borderline Personality Disorder, with equal percentage (5.9%). A similar study conducted in Kashmir in 2010¹⁴ showed 15% of cases had personality disorders in their study sample. Another study conducted by Roy et al²⁴ in Bangladesh in 2018 had personality disorders in 7% of their study population which is close to the results in our study.

3.6% cases in our study had mixed anxiety-depressive disorder, again more common in females.

3.16% cases were suffering from adjustment disorder at the time of attempt, all of them were females. A study conducted by Das, et al showed 8.4% cases of adjustment disorders in their study, quite more than our study.²³ Another study

conducted by Shoib et al¹³ in 2012 showed adjustment disorder (9.95%) next to depression.

Only 4 cases i.e 1.8% cases in our study had schizophrenia, all of them were diagnosed cases and were already on treatment. Shoib, et al¹³ had shown almost similar results in their study.

Other psychiatric diagnosis in our study includes psychotic depression (0.9%), agoraphobia (0.45%), PTSD (0.45%), brief psychotic disorder (0.45%). 24% of patients in our study did not meet any criteria under MINIPLUS and/or IPDE, and their acts were considered to be out of impulsivity. This figure is quite close to the results from the study conducted in Kashmir valley by Jan in 2010¹⁴ in which 18% of the cases did not meet any formal diagnostic criteria.

CONCLUSION

Almost 3/4th of the cases had some kind of psychiatric morbidity. The most common psychiatric morbidity associated with suicide was found to be major depressive disorder. We need to have more of such studies from different centers across the state to characterize this population fully and also to look at the casual factors in a detailed way. There should be a robust system in place which takes care of future management and follow up of this group of population. There should be massive anti – suicide campaigns and anti- suicide initiatives run on large scale across the state. People should be psycho-educated in general about mitigating such incidents which precipitate suicides.

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