BIPOLAR AFFECTIVE DISORDER IN SUICIDE ATTEMPTERS ADMITTED IN TERTIARY CARE HOSPITAL SOCIODEMOGRAPHIC PROFILE AND RELATIONSHIP CHARACTERISTICS A STUDY FROM KASHMIR, INDIA

Ab. Majid Gania¹, Bilal Ahmad Hakak², Ajaz Ahmad Suhaf³, A.W.Khan⁴
Department Of Psychiatry. Skims Medical College, Bemina Srinagar

ABSTRACT

Bipolar Affective Disorder is one of the commonest psychiatric disorders, with life time prevalence between 1% to 5%, has high risk of suicide in particular. Around 10% of Bipolar Affective Disorder patients die by committing suicide and as many as 40% attempt suicide. Statistics from civil war zones / conflict zones has suggested increase in suicide rates in Bipolar patients due to continued exposure to environmental stressors.

Aim: The present study was aimed at studying the prevalence of Bipolar Affective Disorder in suicide attempters. Assessment of Sociodemographic characteristics and risk factors in particular reference to present turmoil was done.

Material and Methods: The study was conducted on 300 suicide attempters admitted in the Multispecialty Tertiary Care Hospital of the valley over the period of two years between 2010 and 2012. The patients were diagnosed by M.I.N.I plus.

Results: Total of 58% (n=174) had psychiatric comorbidity and out of them 32.18% (n=56) had Bipolar Affective Disorder as comorbid diagnosis. Majority of patients belonged to 18-38 year age group, lower and middle class, unmarried and divorced, unemployed and significantly more than 17% attributed their suicidal attempt directly to persistent environmental stress due to turmoil.

Conclusions: Significant number of suicide attempters had Bipolar Affective Disorder as diagnosis at the time of their suicide attempt. Keeping in view significant number had attributed their suicidal attempts to be precipitated by present turmoil, proper evaluation and management of patients with Bipolar Affective Disorder in civil war zone is needed to prevent suicidal behaviours.

Keywords: Suicide, Bipolar Affective disorder, Comorbidity

INTRODUCTION

In spite of the great decline in suicide mortality in most countries with traditionally high baseline suicide rates during the last two decades,¹ completed and attempted suicides still remain a major public health problem. Suicidal behaviour is neither a 'normal' response to the levels of stress experienced by most people nor a linear consequence of major mental disorders. Suicide is a very complex, multicausal human behaviour with many 'causes' and several biological as well as psychosocial and cultural components. Current research findings clearly

suggest that suicidal behaviour in patients with mood disorder is a 'state-dependent' phenomenon.

(ie, patients with major mood disorder commit or attempt suicide, they do it mostly during their MDE (78–89%) and less frequently in dysphoric mania (11–20%) but very rarely during euphoric mania and euthymia (0–7%), indicating that suicidal behaviour in patients with mood disorder is a 'state-dependent' phenomenon.²⁻⁵ Recently, there is, however, a growing body of evidence that besides the well accepted clinically explorable suicide risk factors in mood disorders (e.g., severe depression, prior suicide attempt, comorbid anxiety, substance use, personality disorders and so on), ongoing armed conflict or war like situation could also be an important precursor of suicidal behaviour.

*Corresponding author:

Email: maajid72@gmail.com

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Although it is now firmly established that armed conflict has a detrimental effect on the mental health of those living in active conflict zones,⁶⁻⁸ it remains the case that we still know remarkably little about how different characteristics of conflict lead to specific forms of psychopathology and psychological impairment in civilians. This is likely due to the fact that great majority of the research on the psychological effects of armed conflict has been conducted on war veterans despite the fact that war leads to a greater burden on the civilian population than on soldiers.⁹

Kashmir "a conflict zone" is Himalayan region in the far north of Indian subcontinent. It is large area that includes Indian administered territories of Jammu and Kashmir which consists of Jammu, the Kashmir valley, and Ladakh, and Pakistan administered territories of Pak, Gilgit and Baltistan. Indian administered Kashmir is mainly Muslim majority state. After 1990 Indian administered Kashmir is going through conflict phase in form of armed struggle initially, now a mass unarmed uprising. During this period the population suffered from severe social, economical and political impasse. Consequently Kashmir has observed alarming increase in psychiatric disorders for last two and half decades mainly due to manmade disasters (armed Conflict) and natural Disasters (earth Quake & Snow Tsunami).¹⁰ Since two thirds of suicide attempters have an underlying psychopathology, there has been significant increase in number of suicidal cases as well. This has been quite contrasting to the suicide statistics before 1990 particularly in an area which has Muslim majority population where suicide is strictly prohibited^{11,12}

Bipolar affective disorders are one of the commonest and serious psychiatric conditions, which confer increased risk of suicide attempt or completion. According to one study, bipolar mood disorder (BD) carries an 18.9% risk of suicide attempt with numerous factors proposed as contributors¹³. As per one of the studies conducted in India, psychiatric morbidity in suicide

attempters was found to be around 79% and among them 34% had mood disorder as diagnosis¹⁴.

MATERIALS & METHOD

The study was carried out to evaluate the prevalence and sociodemographic characteristics of Bipolar Affective Disorder in Suicide Attempters (first attempt) admitted in super-specialty hospital of Kashmir valley. Patients above 18 years and willing for participation were included and those who did not give consent and who had family history of psychiatric disorder and family history of suicide were excluded from study.

This study was conducted in Sher-i-Kashmir Institute of Medical Sciences / Medical College, Srinagar, a super-specialty teaching hospital of Kashmir valley.

Total of 300 consecutive patients of suicide attempt who were admitted from year October 2010 to September 2012 were included in this study. Bipolar affective disorder was diagnosed using M.I.N.I Plus¹⁵

RESULTS AND OBSERVATION

Table.1. Distribution of patients with Suicide Attempt.

	No of patients (N)	Percentage (%age)
Total	300	100
Patients with Psychiatric comorbidity	174	58%
Patients without psychiatric comorbidity	126	42%

Out of total 300 suicide patients, psychiatric

Table.2.No of suicide patients with Bipolar Affective Disorder.

Patients with Psychiatric Disorders				
Total	Bipolar Affective Disorder		Other Psychiatric Disorders	
	No	%age	No	%age
174	56	32.2	118	67.8

Table.3. Mean age of suicide patients with psychiatric illness.

	Bipolar Disorder	N	Mean	Std. Deviation	P value	Mean Difference
Age	yes	56	27.3750	7.89836	0.056	-3.15042
	No	118	30.5254	13.59280		

Table.4. Sociodemographic characteristics of attempted suicide patients with psychiatric disorders(N=174)

<u>Age in years</u>			<u>Gender</u>			<u>Residential Status</u>		
	Pts.	% age		Pts.	%age		Pts.	%age
14-24	85	48.85						
25-34	48	27.58	Male	93	53.44	Rural	85	48.85
35-44	19	10.91						
45-55	9	05.17	Female	81	46.55	Urban	89	51.14
➤ 55	13	07.47						
<u>Marital Status</u>			<u>Socioeconomic Status</u>			<u>Occupation</u>		
	Pts.	% age		Pts.	%age		Pts.	%age
Married	57	32.75	UC	31	17.81	Employed	42	24.13
Unmarried	108	62.06	MC	85	48.85	Unemployed	97	55.74
Divorcee	9	5.17	LC	57	32.75	Students	35	20.11
<u>Education</u>			<u>Modes of Suicide</u>			<u>Precipitating factors</u>		
	Pts.	%age		Pts	%age		Pts	%age
Illiterate	62	35.63	OP Poisoning	93	53.44	Interpersonal problems	86	49.42
Matric	63	36.20	Hanging	11	6.32	Failure in exams	35	20.11
Graduates	45	25.86	Other poisons	37	21.26	Due to conflict	29	16.66
Post Graduates	4	2.22	Burns/ injuries	33	18.96	Broken relationship	24	13.79

comorbidity was present in 174 (58%) patients, with major depressive disorder and bipolar

affective disorders leading the table. Among these 174 patients, 56 (32.2%) patients had Bipolar

Table.5. Gender distribution of patients with Bipolar Affective Disorders among suicide attempters.

<u>Gender</u>		<u>Bipolar Disorder</u>			<u>Total</u>	<u>Chi-Square Tests</u>				
		Yes	No			Value	df	P value	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Gender	Female	count	22	55	77	Pearson Chi-Square	.725 ^a	1	.394	
		% within Bipolar Disorder	39.3%	46.2%	43.9%	Continuity Correction ^b	.473	1	.491	
	Male	count	34	63	97	Likelihood Ratio	.729	1	.393	
		% within Bipolar Disorder	60.7%	53.8%	56.1%	Fisher's Exact Test			.417	.246
Total		count	56	118	174	Linear-by-Linear Association	.721	1	.396	
		% within Bipolar Disorder	100.0%	100.0%	100.0%	N of Valid Cases	173			

Table.6. Marital status of patients withBipolar Affective disorders among suicide attempters.

Marital Status			BipolarDisor der		Total	Chi-Square Tests					
			Yes	No			Valu e	df	P value	Exact Sig. (2- sided)	Exact Sig. (1- sided)
Marital Status	Unmarried	Count	29	79	108	Pearson Chi- Square	.76 0 ^a	1	.383		
		% within Bipolar Disorde r	60. 4%	67. 5%	65.5 %	Continui ty Correcti on ^b	.47 8	1	.489	.471	.243
	Married	Count	19	38	57	Likeliho od Ratio	.75 1	1	.386		
		% within Bipolar Disorde r	39. 6%	32. 5%	34.5 %	Fisher's Exact Test					
	Total	Count	48	11 7	165	Linear- by- Linear Associat ion	.75 5	1	.385		
		% within Bipolar Disorde r	100 .0%	10 0.0 %	100. 0%	N of Valid Cases	165				

Table No-7.Socio economic status of patients with Bipolar Affective Disorder among suicide attempters.

Socio-Economic			BipolarDisorder		Total	Chi-Square Tests			
			No	yes		Value	df	P value	
Socioeconomic	LC	Count	36	21	57	Pearson Chi-Square	1.882 ^a	2	.390
		% within BipolarDisorder	30.5%	37.5%	32.8%				
	MC	Count	58	28	86	Likelihood Ratio	1.955	2	.376
		% within BipolarDisorder	49.2%	50.0%	49.4%				
	UC	Count	24	7	31	Linear-by- Linear Association	1.718	1	.190
		% within BipolarDisorder	20.3%	12.5%	17.8%	N of Valid Cases	174		
Total	Count	118	56	174					
	% within	100.0%	100.0%	100.0%					

Affective Disorder as comorbid diagnosis.Mean age of suicide patients with Bipolar Affective Disorder was 27.96 years with standard deviation ± 7.44.

Majority 60.7% of suicide patients with bipolar affective disorder as co morbid diagnosis were male. 60.4% were unmarried, 87.5% belonged to middle to lower socio-economic group.58.9% were from urban area. 64.3% patients were educated, and 57.1%were unemployed. 63 %

patients attempted suicide due to interpersonal and conflict related, though findings were not statistically significant.

DISCUSSION

Suicidalbehaviour in bipolar disorder occurs in early onset and in acute states of disease.Various life stresses include financial loss, loss of position, physical illness and trauma, death of a relative, unemployment, major financial problems as well

Table No-8. Distribution as per residence of patients with Bipolar Affective Disorder among suicide attempters.

Residence		BipolarDisorder		Total	Chi-Square Tests				
		No	yes		Value	df	P value	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Residence	Rural	Count	62	23	85	Pearson Chi-Square	2.000 ^a	1	.157
		% within BipolarDisorder	52.5%	41.1%	48.9%	Continuity Correction ^b	1.567	1	.211
		Count	56	33	89	Likelihood Ratio	2.009	1	.156
	Urban	% within BipolarDisorder	47.5%	58.9%	51.1%	Fisher's Exact Test			
		Count	118	56	174	Linear-by-Linear Association	1.988	1	.159
		% within BipolarDisorder	100.0%	100.0%	100.0%	N of Valid Cases	174		

as adverse recent life event (including recent loss of a loved person) have been shown to be a risk

Table No-9. Education wise distribution of patients with Bipolar Affective Disorder among suicidal attempters.

Education		BipolarDisorder		Total	Chi-Square Tests		
		No	yes		Value	df	P value
Education	Illiterate	Count	39	20	59	4.504 ^a	.212
		% within BipolarDisorder	33.1%	35.7%	33.9%	4.260	.235
	Matric	Count	48	17	65	.564	.453
		% within BipolarDisorder	40.7%	30.4%	37.4%	.174	
	Graduate	Count	29	15	44		
		% within BipolarDisorder	24.6%	26.8%	25.3%		
	Post Graduate	Count	2	4	6		
		% within BipolarDisorder	1.7%	7.1%	3.4%		
	Total	Count	118	56	174		
		% within BipolarDisorder	100.0%	100.0%	100.0%		

Table No-10 Occupation wise distribution of patients with Bipolar Affective Disorder among suicide attempters.

Occupation			BipolarDisorder		Total	Chi-Square Tests		
			No	yes		Value	df	Asymp. Sig. (2-sided)
Occupation	Employed	Count	29	13	42	.131 ^a	2	.937
		% within BipolarDisorder	24.6%	23.2%	24.1%	.131	2	.936
	Student	Count	25	11	36	174		
		% within BipolarDisorder	21.2%	19.6%	20.7%			
	Unemployed	Count	64	32	96			
		% within BipolarDisorder	54.2%	57.1%	55.2%			
Total		Count	118	56	174			
		% within BipolarDisorder	100.0%	100.0%	100.0%			

factor for attempted and completed suicide^{16,17} More than half of completed suicides in both bipolar I and unipolar affective disorders are associated with recent negative life events, but the stressors are commonly dependent on the victim's

of our developing country. Unmarried and divorced were having higher comorbidity as were the unemployed. Literates were more affected than illiterates, the reason possibly is that there has been increasing unemployment with rising literacy rate. The cases belonged more to urban

Table.11. Factors leading to suicide in Bipolar Affective Disorders (N=56) patients

Patients with Bipolar Disorders	Precipitating Factors				
	Total	Interpersonal Problems	Due To Conflict	Broken Relationship	Failures In Exam
	56	25	10	8	13

Table.12..Gender distribution of Bipolar Affective Disorder patients with suicidal attempt.

Patients with Bipolar Disorder s	Precipitating Factors				
	Total	Interpe rsonal Proble ms	Due To Confl ict	Broken Relationshi p	Failur es In Exam s.
	Male	18	6	6	4
	Female	7	4	2	9

own behaviour, particularly in the case of bipolar I disorder.¹⁸

In this study, the age of patients ranges from 19-55 years with mean age of 27.96 years SD $\pm$ 7.44. Male population dominated the study with majority of patients belonging to lower and middle class since our area belongs to low economy area

Precipiating Factors in Bipolar Patients %age wise

areas 58.92% may be explained by the fact that urban population has easier access to tertiary care settings and most of the cases of attempted suicide in rural area are not reported.

Most common mode of suicide was organo-phosphorus poisoning (55.35%). Organo-phosphorus substance being easily available, followed by burns and injuries (Firearm stabbing) Psychiatric morbidity was present in 58% of the patients among attempted suicide with Major Depressive disorder (n=75) leading the list followed by Bipolar affective disorder (n=56) and Anxiety disorders. Bipolar affective disorder in our study was present in 32.18% (n=56). Sharma et al reported that bipolar affective disorder was the commonest disorder (21.6%) in suicide attempters followed by acute stress disorder and drug dependence.¹⁹

Other studies which showed similar results are Sethi et al 56%, Gupta & Singh 62% and Chandershekhar 47.2%.²⁰⁻²³ other international studies from western world show very high psychiatric morbidity (>90%).²⁴ The difference could be because of the fact that many suicides attempts in our set up have socioeconomic reasons predominantly and cultural factors also play an important role.

Most of the patients in our study reported that their reason for suicidal attempt was interpersonal and conflict related. These findings are supported by studies carried out at various centres in India, who found similar results.^{20,25} The most significant finding in our study was present turmoil / armed conflict, which has resulted in loss of human life and property for last two decades, responsible for suicide attempt in bipolar affective disorder patients by more than 17%.

It is a fact that hypomanic or manic periods easily can result in aggressive behaviour, financial extravagance, generating interpersonal conflicts and marital breakdown.^{26,27} On the other hand loss of a family member or friend due to conflict is often followed by grief-reaction, that later can develop into complicated grief and into major depression. Lack of social support system also due to conflict is also an important risk factor for suicide.

CONCLUSION:

Three clear risk factors emerged which were interpreted as 'direct conflict related', 'personal problems not directly conflict-related' and 'general hardship'. The regression analyses indicated that conflict related violence and interpersonal problems was more highly related to suicide than other risk factors, while non-conflict problems was more related to other psychopathology.

Specific conflict characteristics could predict symptom profiles. However, some of the highest risk outcomes, like depression, suicide risk and aggression, were more related to factors directly

related to the conflict. This suggests a need to focus on the systemic affects of armed conflict and not solely on direct exposure to fighting.

Although it is well established in post-conflict populations that experience of organised violence has a negative impact on mental health. Vulnerability to suicidal behaviour increases due to acute stressful situations /life events. Keeping in view significant number had attributed their suicidal attempts to be precipitated by present turmoil, proper evaluation and early management of patients with Bipolar Affective Disorder in civil war zone is needed to prevent suicidal behaviours. In this regard, this study underlines the importance of early detection and treatment of psychiatric disorders for the prevention of suicidal behaviour particularly in areas which are hit by chronic conflicts like ours.

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