

Hopelessness and Suicidal Ideation among Patients with Depression and Neurotic Disorders Attending a Tertiary Care Centre at Eastern Nepal

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ABSTRACT

Background: Hopelessness is thought to result from a negative appraisal system and interacts with, and worsens, appraisals of defeat and trap which in turn interact with suicide schema and lead to suicidal behaviour. This study was intended to assess hopelessness and suicidal ideation among patients with depression and neurotic disorders at tertiary care centre of eastern Nepal.

Methods: A cross sectional design included 70 respondents by purposive sampling technique. Beck Hopelessness Scale and Scale of Suicidal Ideation were used to measure hopelessness and suicidal ideation, respectively. Data were analyzed using SPSS statistical software. Pearson chi-square, binary logistic regression and Spearman's rho, test were applied at 95% confidence interval.

Results: Mean \pm SD age was 32.8 ± 13.5 years. Most (62.8%) of the patients were female and with the diagnosis of depression. Majority (66%) of the patients had hopelessness. There was no significant difference in hopelessness among patients with depression and neurotic disorders. About 17% respondents had suicidal ideation, among them 82.4% were female. There was no significant difference of suicidal ideation among patients with depression and neurotic disorders ($p=0.013$). Significant positive correlation between hopelessness and suicidal ideation was found ($p=0.001$). Binary logistic regression revealed hopelessness was independently related to income and family history of mental illness. Similarly, suicidal ideation was independently related to depression and family history of mental illness.

Conclusions: Female respondents, people living under poverty and positive family history of mental illness had more hopelessness and suicidal ideation.

Keywords: Anxiety; depression; hopelessness; neurotic; suicidal ideation.

INTRODUCTION

Suicidal ideation arises as a symptom of depression, especially if there are reasons for a person to feel hopelessness.¹ Depression is one of the oldest and one of the most frequently diagnosed psychiatric illness and the most common disorder contributing suicide.^{2,3} One and a half decade's armed conflict has tremendously increased the number of mentally ill people in Nepal. Therefore, depression and anxiety in Nepal are comparable to other low income countries.⁴ Numerous studies have shown that feeling of hopelessness in conjunction with a mental disorder; can lead to suicide. So, they need to be taken very seriously.

Various studies regarding suicidal ideation and hopelessness; their relation with mental disorders and various factors have been done in affluent countries. The

scenario might be different in low income countries like Nepal. There are very little data regarding hopelessness, suicidal ideation, their relation with mental disorders and socio-demographic factors in Nepal. Results of this study is expected to highlight the scenario of hopelessness and suicidal ideation; their relation with mental disorders and with various socio-demographic factors among people living in low income areas like Nepal, which helps to compare situation to affluent countries.

METHODS

This is a hospital based cross sectional study conducted in Department of Psychiatry, B. P. Koirala Institute of Health Sciences from October 2012 to December 2012. Ethical clearance was obtained from ethical review board of the institute before conducting the study. All patients with diagnosis of depression, neurotic, stress related and

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somatoform disorders after obtaining informed consent and meeting the inclusion criteria were included. Only interviewer and respondent were present in interview room. Counselling by the interviewer and referral of respondents with hopelessness and suicidal ideation to treating psychiatrists was done.

Sample consisted of 70 patients with diagnosis of depression without psychotic symptoms, neurotic stress related and somatoform disorders diagnosed by psychiatrists following ICD-10 DCR and without any co-morbidity was included in the study by purposive sampling technique. Hopelessness scale was used for the study purpose. It is a standardized tool developed by Aron T. Beck and Arlene Weismann, which consisted 20 true false items; score range from 0-20. The scale is interpreted as; score 0-3 minimal or no hopelessness, 4-8 mild; 9-14 moderate and 15 or more indicates severe hopelessness and definite suicide in future. In this study, scores were dichotomized as absence or presence of hopelessness less than four and more than or equals to four respectively. For the suicidal ideation, suicidal ideation scale, a standardized tool developed by Aron T Beck and associates was used. It is a 19 itemed scale and score range from 0-38. Higher score indicates higher suicidal risk. In this study, score 6 or more is considered as suicidal ideators on the basis of a study at Helsinki². Both scales were translated to Nepali language and back translated by different bilingual persons for semantic validation.

For data analysis, data were entered into Microsoft excel 2007, prepared master chart, grouped and analysed by a statistical software SPSS. Income was grouped on the basis of income according to World Bank categorization of absolute poverty, and Caste group was categorized according to National classification. Descriptive statistics were presented in mean, standard deviation, median, inter-quartile range, frequencies and percentage. Then education, diagnosis and hopelessness were dichotomized for inferential statistics. Inferential statistics Pearson chi-square test was applied to find out the significant association of hopelessness and suicidal ideation with socio-demographic and clinical variables. After obtaining the result of chi-square test, the variables which were significant at level of significance 0.2; were entered into binary logistic regression model to find out the associated confounding variables. The whole model was tested by Hosmer and Lemeshow Test for both hopelessness and suicidal ideation. For the entire statistical tests, confidence interval was 95%.

RESULTS

Inter-item reliability (Cronbach’s alpha) of the scales in this study was 0.88 for hopelessness scale and 0.93 for suicidal ideation scale. Bivariate analysis showed hopelessness was significantly associated with lower income, lower education and family history of mental illness and treatment duration (table 1).

Income below poverty line and family history of mental

Table 1. Association between Hopelessness and Characteristics of Patients with Depression and Neurotic disorders. (n=70)

Characteristics	Category	BHS Score		Total	Odds Ratio (95% CI)	p Value
		≤3(%)	>3(%)			
Sex	Male	10(38.4)	16(61.6)	26	1.399(0.486-3.689)	0.572
	Female	14(31.8)	30(68.2)	44		
Place of residence	Urban	14(42.4)	19(57.6)	33	1.989(0.731-5.416)	0.175
	Rural	10(27.0)	27(73.0)	37		
Income	Above poverty	20(54.0)	17(46.0)	37	8.529(2.495-29.157)	<0.001
	Below poverty	4(12.1)	29(87.9)	33		
Caste	Upper caste	13(38.2)	21(61.8)	34	1.407(0.522-3.789)	0.499
	Others	11(30.5)	25(69.5)	36		
Marital status	Married	14(31.1)	31(68.9)	45	1.476(0.533-4.090)	0.453
	Single	10(40.0)	15(60.0)	25		
Age in years	<30	14(38.8)	22(61.2)	36	1.000	0.284
	30-50	9(36.0)	16(64.0)	25	1.131(0.393-3.254)	
	50-70	1(11.1)	8(88.9)	9	5.091(0.573-45.224)	
Education	Higher education	15(48.3)	16(51.7)	31	3.125(1.121-8.712)	0.027
	Others	10(25.6)	29(74.4)	39		

Diagnosis	Depression	12(27.2)	32(72.8)	44	2.286(0.827-6.321)	0.108
	Neurotic disorders	12(46.1)	14(53.9)	26		
Family history of mental illness	No	22(40.7)	32(59.3)	54	4.812(1.100-23.316)	0.037
	Yes	2(12.5)	14(87.5)	16		
Family history of suicide	No	24(37.5)	40(62.5)	64	1.600(1.323-1.934)	0.064
	Yes	1(20.0)	5(80.0)	6		
Treatment duration in months	First visit	4(30.7)	9(69.3)	13	2.759(0.599-12.710)	0.270
	≤3	7(31.8)	15(68.2)	22	1.877(0.482-7.311)	
	3-12	4(22.2)	14(77.8)	18	3.804(0.854-16.934)	
	>12	9(52.9)	8(47.1)	17	1.000	

illness are significant risk factors for hopelessness after adjusting the confounding variables (table 2) in multivariate analysis.

Similarly place of residence, education and diagnosis of depression had significant association with suicidal ideation (table 3).

Table 2 .Logistic Regression Analysis of Hopelessness Adjusted for Variables. (n=70)

Risk Characteristics	p value	Odds Ratio	95% CI for EXP(B)	
			Lower	Upper
Rural place of residence	0.788	1.201	0.317	4.554
Income below poverty line	0.001	12.680	2.943	54.636
Diagnosis of depression	0.198	2.392	0.633	9.033
Family history of mental illness	0.010	12.813	1.840	89.239
Education other than higher	0.128	2.916	0.734	11.585

Table 3. Association between Suicidal Ideation and Characteristics of Patients with Depression and Neurotic Disorders. (n=70)

Characteristics	Category	SSI Score		Total	Odds Ratio (95% CI)	p Value
		<6(%)	≥6(%)			
Sex	Male	23(88.4)	3(11.6)	26	3.578(0.918-13.941)	0.056
	Female	30(68.1)	14(31.9)	44		
Place of residence	Urban	29(87.8)	4(12.2)	33	3.927(1.132-13.630)	0.025
	Rural	24(64.8)	13(35.2)	37		
Income	Above Poverty	30(90.9)	7(9.1)	33	0.537(0.177-1.625)	0.268
	Below Poverty	23(62.1)	10(37.9)	37		
Caste	Upper Caste	28(77.7)	8(22.3)	36	1.260(0.422-3.764)	0.679
	Others	25(73.5)	9(26.5)	34		
Marital status	Married	37(82.2)	8(27.8)	45	2.602(0.850-7.961)	0.088
	Single	16(64.0)	9(36.0)	25		
Age in years	<30	25(69.4)	11(30.6)	36	3.520(0.391-31.656)	0.393
	30-50	20(80.0)	5(20.0)	25	2.000(0.201-19.914)	
	50-70	8(88.8)	1(11.2)	9	1.000	
Education	Higher Education	27(87.0)	4(13.0)	31	3.375(1.090-11.702)	0.048
	Others	26(66.6)	13(33.4)	39		
Diagnosis	Neurotic Disorders	24(92.3)	2(7.7)	26	6.207(1.289-29.877)	0.013
	Depression	29(65.9)	15(34.1)	44		
Family history of mental illness	No	43(79.6)	11(20.4)	54	2.345 (0.700-7.862)	0.160
	Yes	10(62.5)	6(37.5)	16		

Family history of suicide	No	50(78.1)	14(31.9)	64	3.571(0.648-19.678)	0.124
	Yes	3(50.0)	3(50.0)	6		
Treatment duration in months	First Visit	7(53.8)	6(46.2)	13	8.376(0.938-74.783)	
	≤3	16(72.7)	6(27.3)	22	2.725(0.439-16.902)	
	3-12	15(83.3)	3(16.7)	18	1.186(0.139-10.096)	
	>12	15(88.2)	2(11.8)	17	1.000	

Table 4. Logistic Regression Analysis of Suicidal Ideation Adjusted for Variables. (n=70)

Risk Characteristics	p value	Odds Ratio	95% CI for EXP(B)	
			Lower	Upper
Female sex	0.798	1.296	0.177	9.461
Marital status single	0.092	4.078	0.796	20.890
Rural Place of residence	0.078	4.285	0.852	21.559
Diagnosis of depression	0.010	24.675	2.127	286.273
Family history of mental illness	0.014	15.806	1.716	132.619
Family history of suicide	0.850	1.243	0.130	11.851
Education other than higher	0.192	3.690	0.519	26.233
Treatment duration first visit	0.060	9.956	0.909	109.048
≤3months	0.529	0.455	0.039	5.268
3-12 months	0.954	1.071	0.104	11.034
>12 months		1.000		

Table 5. Relationship between Suicidal Ideation and Hopelessness of Patients with Depression and Neurotic disorders. (n=70)

Variables	Median (IQR)	Spearman's rho Correlation coefficient	p value
SSI score	0.00(0.00-4.50)	0.40	0.001
BHS score	6(3.00-11.25)		

After controlling the confounding variables, diagnosis of depression and family history of mental illness were significant risk factors for suicidal ideation (table 4).

Hopelessness and suicidal ideation score had significant positive correlation (table 5).

DISCUSSION

More than 50% of the patients in this study were below 30 years of age. Female population was found to be 62.8%. These findings are consistent with a study done at Pokhara, Nepal among the patients of mental illness, which reported, 25.7% were below 30 years of age and most (50.4%) of the patients were female.⁵ Similarly, a study done in Brazilian population also found prevalence of major depressive disorder in higher proportion of females than in males.⁶ Higher proportion of female in this study could be because of high prevalence of mental illness especially depression and anxiety disorders in female population.⁵⁻⁷ More patients in this study had per capita income above poverty line. A community based study done in Jumla, Nepal found significantly higher depression and anxiety score in clients who had no income than who had any income.⁸ Few other studies

also found negative correlation of socioeconomic status with mental illness.^{6,9} This shows that mental illness is not related to economic status and can equally affect both the economically strong and weak people in our settings. Other reason could be the financial condition might be one of the reasons for not seeking health care by poor people. These inconsistencies might be seen because of study conducted in hospital where people need some money for doctor visit and medicine. Very few (2.9%) of the patients were from Dalit caste group. People from Dalit caste group are educationally and financially backward in Nepal. One community based study done in Jumla district found that proportion of Dalit respondents were 23.7% and high burden of depression and anxiety was present in Dalit caste group.⁸ In contrast, proportion of Dalit respondents in this study was low. This difference could be because, this study was hospital-based study and due to lack of awareness and financial strength, less proportion of Dalit people might be seeking health services for mental illness. Similar to the result of a study done in Sweden, present study also found more respondents had educational level of higher secondary and above.¹⁰ In contrast one study on prevalence of major depressive

symptoms among Brazilian population, found most of the respondents were illiterate.⁶ When education level increases, awareness of people increases thus people are more likely to seek health care services for mental illness.

Mental illness has multi-factorial causation both genetic and environmental.³ Almost one quarter (22.9%) of the respondents had family history of mental illness. More than eight percent of the respondents had family history of completed suicide among them. More than 80% of the patients were first degree relatives of suicide completers. One study in Hungary also found higher suicide rates in the first degree and second degree relatives of suicide completers.¹¹ This simply reflects sharing of common genetic and environmental risk factors for causation of psychiatric problems including suicide.

Majority patients were married in this study. Mental problems especially depression and suicide are more common among people who are single due to unmarried, divorced or widowed status.^{3,7} The reasons for higher proportion of married respondents in this study might be because marriage may be stressful for vulnerable people, which may lead to the development of mental health problems. The interplay between marriage and mental health problems has been dealt with in detail by Indian and international authors.¹² One reason of higher proportion of married respondents in this study could be that a high number of people are migrant workers in Nepal.¹³ Here, spouse lives singly despite marriage and assessment of this was beyond the scope of this study. Another reason of difference could be married people are more likely to get family support to seek treatment than who live singly.

Almost equal proportions of respondents in this study were from rural and urban settings. The reason could be that the study setting was referral centre of eastern Nepal and patients are referred to this centre from rural as well as from urban areas. Present study found that, depression was more common problem than neurotic disorders. A Korean study also found the most common Axis I diagnosis was major depressive disorder.¹⁴ Whereas, a Swedish epidemiological study found that anxiety disorder was more common than depression.¹⁰ In countries like Nepal, many people do not seek medical help unless they become seriously ill and anxiety disorders are less serious types of illnesses. Therefore, More proportion of patients with depression might have come for seeking treatment.

Hopelessness was present in higher proportion of patients with depression as compared to patients with neurotic

disorders. However, this difference was not significant. In one of the studies, the prevalence of hopelessness increased with increasing severity of depression.¹⁵ A Finnish study found significantly higher hopelessness score in patients with depression as compared to patients with other mental disorders.² According to the result of present study, hopelessness should be investigated not only among patients with depression but also in patients with neurotic disorders because hopelessness seems to be common among both of these groups. Present study showed significantly higher proportion of respondents with depression had suicidal ideation as compared to respondents with neurotic disorders after adjusting other variables in multivariate analysis [OR 24.675 95% CI 2.127- 286.273]. Few other studies have also found higher SSI score in patients with depression.^{2,16,17} However, one study in South Korea found higher SSI score among patients with trait anxiety after adjusting depression in multivariate analysis.¹⁴

Significant and independent relationship between hopelessness and income of respondents was found in this study. People, who were below poverty line, had higher hopelessness score as compared to people who were above poverty line. Another study also found that financial condition was independently associated with hopelessness score.¹⁵ This shows the importance of poverty alleviation program for prevention of hopelessness among people which may ultimately reduce number of suicides in future. Policy makers need to consider optimal methods of intervention for mental disorders and suicidal behaviour among low-income individuals. Large scale studies regarding association between hopelessness and socioeconomic condition can be done in future. In consistent with the result of a Finnish study, this study also showed place of residence had no significant association with hopelessness.¹⁵ Similar to this study, few other studies also reported that, higher proportion of female had hopelessness but it was not significant.^{15,18-20}

It is explained that, common response to a loved one's suicide is an overestimation of one's own responsibility, as well as guilt for not having been able to do more to prevent such an outcome.²¹ However, this study did not reveal significant association between hopelessness and family history of suicide (odds ratio=0.000). On bivariate analysis, this study found people with low education and illiteracy had significantly higher hopelessness. However, the significance was lost in multivariate analysis. Similarly, hopelessness scores were comparable among different castes and among respondents with different treatment durations. These findings show that hopelessness can be equally prevalent in people with

different educational backgrounds, different castes and people with different treatment durations. Therefore, assessment of hopelessness is equally important in patients of any caste, any educational background and even in patients towards recovery of illness.

In consistent with this study, other studies also found the higher proportion of patients reporting suicidal thoughts were females but it was not significant.^{18,21,22} In contrast to this finding, another study found more male suicidal ideators² and few studies found about equal percentage of male and female suicidal ideators.²³ The reason behind these inconsistent findings could be because of difference in sample size, distribution of gender among respondents and cultural differences. Result of present study showed that age and marital status were not significant factors for suicidal ideation. This finding is consistent with a study conducted in Hong Kong.²⁴ In contrast; one study found higher proportion of suicidal ideation in unmarried/single.²¹ Another study found that marital status is one of the significant predictors of suicide.²⁵ The different result in present study could be because the study examined only suicidal ideation and not suicide. Present study showed significant association of suicidal ideation with family history of psychiatric illness but not with family history of suicide. However, few studies have found significant association between suicidal ideation and family history of suicide.^{14,26} One cause of suicidal ideation in family members of psychiatric patients might be the stigma faced by them. Another reason could be the difficulties faced by them in caring psychiatric patients for a long time. The third reason of this result could be because of genetic sharing of mental illness, which ultimately increases the suicidal ideation. Present study found significant association between educational background and suicidal ideation [odds ratio: 3.375 95% CI (1.090-11.702)] but association was lost in multivariate analysis. A study also found significant association between education and suicidal ideation in bivariate analysis.¹⁴ Present study did not reveal statistical significant association between suicidal ideation and duration of treatment. This reflects the need of vigilance to the patients even they are in recovery phase.

Similar to the finding of this study, different other studies have also found positive correlation of hopelessness with suicidal ideation.^{27,28} This simply shows the importance of giving serious attention to the clients with hopelessness regardless of diagnosis and treatment duration for suicide prevention.

This study was done in single centre and in small sample size. So it's external validity may be limited.

CONCLUSIONS

Hopelessness was independently and significantly associated with income and family history of mental illness in multivariate analysis. Level of hopelessness was not significantly different between depressive and neurotic patients. Therefore, it is important to assess level of hopelessness in patients with neurotic disorders as in patients with depression for prediction of suicide and prevent it on time. Suicidal ideation was independently and significantly high in respondents of depression and respondents with history of mental illness in family. Hopelessness and suicidal ideation may be reduced to some extent by alleviating poverty, providing education and proper care to the patients of depression and neurotic disorders.

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