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Relation of hopelessness and Depression severity on suicidal ideation

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ABSTRACT

Background: Hopelessness and Suicidal ideation are common in depression, but hopelessness and depression severity significantly correlated to suicidal ideation.

Aim & objective: To find out the statistical correlation between hopelessness and depression severity on suicidal ideation.

Methodology: 100 consecutive patients diagnosed with depression were taken for study. We divided these patients into two groups, basis on gender. Patients with any other psychiatric comorbidity were excluded from the study. After inclusion and exclusion criteria and giving consent for participation in the study, each patient recruited for socio-demographic Performa, the Beck Depression Inventory (BDI), Hopelessness Scale (BHS), and the Scale for Suicide Ideation (SSI).

Results: Out of 100 patients which 64 were males, and 36 were females. The mean age for males was 35 year, and for females, it was 33 year. Most of the patients in both groups were educated up to secondary school, not working, married, Hindu, and from rural backgrounds, and statistically found no significant difference. (p-value <0.05). Male were more depressed (34.03, 33.27), hopeless (13.00, 12.66), and suicidal (8.28, 7.16) as compared to female; however, statistically, it was not significant (p-value <0.05). We found a positive correlation between depression severity and hopelessness with suicidal ideation (p-value >0.05). We found that hopelessness was the more important predictor for suicidal ideation than depression severity after applying logistic regression.

Conclusion: Hopelessness appears to be an important clinical marker of suicidal ideation. Early identification of hopelessness essential to take action to help and protect patients.

Keywords: Depression, Hopelessness, Suicidal ideation, Unemployment.

INTRODUCTION

Suicidal behaviour has become a significant public health problem throughout the world.[1] Suicidal behaviour is a leading cause of death and disability worldwide—Fortunately, recent suicide theory and research developments promise to advance knowledge and prevention meaningfully.[2, 3] Suicidal behaviour can be direct as suicidal ideation, suicide attempt or completed suicide, or indirect – such as substance abuse, risky driving, high-risk activity, heavy alcohol drinking, or neglecting physical illness management.[4-6] Suicidal thought and activity are defined as thoughts and feelings

characterized by helplessness, lack of direction and significance in life, and hopelessness.[7] Various studies on suicide and suicidal behaviour have found that suicide is a multifactorial act.[8] Most people who commit suicide have a diagnosable mental disorder, and suicidal behaviour is more frequent in psychiatric patients.[9] In completed suicide, depression is the most common mental disorder and one of the most important risk factors for all suicidal behaviour.[10] When a person felt that they could not cope with an overwhelming situation, they become suicidal. The condition may be the death of a loved one, financial problems, debilitating illness or chronic health condition, the end of a relationship. Sexual abuse, grief, remorse, rejection, and unemployment are the other common condition or life events that might cause suicidal ideation.[11] The association between suicidal behaviour and depression is well known.[12] Most of the studies have usually focused on suicidal behaviour and depression severity. Hopelessness significantly correlated with the prediction of suicidal ideation rather than depression severity.[13] Health care providers attending to depressive and suicidal patients also found that hopelessness appears to be an important clinical marker of suicide for early intervention for preventing suicide. During the depression, hopelessness escalates and then subsides throughout the illness.[14] Hopelessness gives us more important information concerning the prevention of suicides.[15] According to Beck, hopelessness plays a critical role in suicide, illustrated in the sequence of events that leads a depressed individual to commit suicide.[16] Hopelessness and Suicidal ideation are common in depression, but these are moderately related to the severity of depression.[17]

That's why we planned this study to see a statistical relation between hopelessness and depression severity with suicidal ideation.

MATERIAL AND METHOD

It was a cross-sectional study conducted in the Department of Psychiatry. We included 100 patients coming to the Department of Psychiatry's outdoor clinic and diagnosed with depression as per the International classification of disorder (ICD, F -33). For data collection, we used purposive sampling based on inclusion and exclusion criteria to take the desired sample of 100 patients. We included patients who first time diagnosed with depression and on no previous antipsychotic medication. Patients with a dual diagnosis or comorbid psychiatry illness excluded from the study. Any patients with any history of past psychiatric disorder, mental retardation, history of substance abuse, and head injury history were excluded from the study.

Those patients who were willing to participate in the study and gave consent included. After giving consent, we interviewed patients by using a structured questionnaire-based literature review. It has demographic variables, including age, education, marital status, employment, religion and locality. We also applied a structured questionnaire Performa for collecting socio-demographic variable data based on the literature review. Each patient also completed the Beck Depression Inventory (BDI), Hopelessness Scale (BHS), and the Scale for Suicide Ideation (SSI). The senior consultant psychiatrist validated the diagnosis by using ICD–10 criteria.

Instrument of study -

Beck Depression Inventory - The 21-item revised Beck Depression Inventory (BDI; Beck & Steer, 1987) was used to measure the severity of self-reported depression.[18]

The Beck Scale of Suicide Ideation (BSS) - BSS is a 19-item scale designed to measure the presence, intensity, and severity of suicidal ideation (Beck, Steer, & Ranieri, 1988). Each item had a scale of 0 to 3; summing the item ratings yielded a possible score of 0 to 38. This scale was normed on psychiatric inpatients and had very high correlations with the clinically rated Scale for Suicide Ideation (SSI). [19, 20]

Beck Hopelessness Scale - The Beck Hopelessness Scale (BHS; Beck & Steer, 1988) was employed to assess negative expectancies about the future or hopelessness. [16, 18, 21]

Ethical Consideration

We took ethical approval from the institutional ethical committee for the study. Written consent was taken from all patients who were agreed to participate in the study. In the study, all the ethical aspects were taken care of. All patients were managed according to

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the department protocol and as per standard treatment guidelines.

Statistical Analysis

Data were recorded in excel and analysed statistically by using IBM SPSS Statistics Software (V 15). Categorical variables Data were presented as frequency distributions and mean ± standard deviation of the mean for continuous variables. The significance level was 0.05. For finding significance between groups, the Pearson chi-square test was used for categorical variables, and the student's t-test was performed to examine the significance level for continuous variables. Multinominal logistic regression was applied to study the contributory effect of different variables suicidal ideation rating scale.

RESULT

A total of 100 patients were taken in this study for data analysis. (Table 1) Out of these, 32 were males, and 18 were females. The mean age of male was 35 years (SD 8.492) and 33 (SD 8.396) for females. Most of the males were educated up to primary school (34.37 %), followed by secondary school (28.12 %). Similarly, most females were educated up to primary school (38.88 %), but 33.33 females were illiterate. However, there was no significant difference in both groups in the education level (p-value 0.104).

59.37% of the males were employed in various sectors, whereas only 22.2% were employed. Most of the females (77.77 %) were not working homemakers, and a significant difference was found in both groups (p-value 0.0003). 46.87% of the males and 58.33 % of females were married, and no statistically significant difference was found (p-value 0.064). 50.00 % of males and 47.22 % of females belonged to the Hindu religion. Statistically, no significant difference was present (p-value, 0.419). In both groups, most of the males and females were belong to the middle socioeconomic class (42.18 % and 38.88 %, respectively), and statistically, no significant difference was found (p-value 0.948). 57.81 % of males in the study belonged to rural areas. 55.55 % of females belonged to rural areas. And there was no statistically significant difference was (p-value 0.791) in both groups.

Table 2 showed the Mean score of depression, hopelessness, and suicidal ideation rating scale. After applying Beck's Depression Inventory on patients, it was found that the severity of depression was more in male (Mean = 34.03, SD = 15.35) compared to female (Mean = 33.27, SD = 11.61). However, no significant difference was found in depression severity in both groups (p-value 0.796). More severe hopelessness in male (Mean = 13.00, SD = 4.08) as compared to female were found (Mean = 12.66, SD =3.14) in the beck hopelessness scale. More suicidal ideation was found in male (Mean = 8.28, SD = 4.21) as compared to female (Mean = 7.16, SD = 3.50) in Scale of Suicidal Ideation. Similarly, hopelessness and suicidal ideation were statistically not found significant (p-value >0.05).

We applied the Pearson correlation between hopelessness and depression severity with suicidal ideation to seeing a relation between them (Table 3). It was significantly positively correlated depression severity (.591, $p < .05$) and hopelessness (.635, $p < .05$) with the Suicidal Ideation. It indicated that the magnitudes of the relationships of the depression severity and the hopelessness with the suicidal ideation were comparable. To see the contributary effect of individual socio-demographic factors on gender, we applied linear logistic regression after adjusting age, education, employment, marital status, religion, socioeconomic status, and background. It was found that there was only employment had a significant contributing factor for suicidal ideation after controlling the effect of hopelessness and depression severity (p-value 0.016).

Table 4 showed multinominal logistic regression to see the contributing correlation between hopelessness and depression severity with suicidal ideation after controlling the effect of all socio-demographic variables. The regression analysis result reveals that hopelessness (Beta 0.458, p value 0.021) had a significant contributing effect than depression severity (Beta 0.365, p-value 0.258) with suicidal ideation. Based on the regression analysis's standardized beta weights, the hopelessness was approximately 1.25 times (0.458/ 0.365) more important than the depression for suicidal ideation after controlling for the other variables in the regression model.

DISCUSSION

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The present study examined the relationships of hopelessness and depression severity with suicidal ideation in patients diagnosed with depression. In our study, employment is the single most variable significantly different in both males and females. It was also positively correlated with suicidal ideation in our study. Based on the strength of influence, employment significantly affected hopelessness and depression for estimating suicidal ideation in regression analysis. A similar finding was also found in various studies.[22, 23] However, there in India, females were more housewives than working outward, so the result might differ in western countries where females were equally working as males. Another study found that unemployed and unmarried were more prone to suicidal ideation than female, married and employed.[24, 25] Unemployment is an incredibly significant factor in a person's life that causes hopelessness and suicidal ideation. Females are mentally stronger as compared to male in case of depression.[26] Marital status also plays an essential role in suicidal ideation.[27] Life partner and family member give support to people who play a crucial role in the depression phase.[28] Keilp et al., found that depression severity is moderately associated with suicidal ideation and accounted for primarily by core mood disturbance symptoms and self-punitive thinking.[19] Chochinov et al., study the mediational hypothesis of hopelessness to predict suicidal ideation in 196 patients with advanced terminal cancer.[29] They found that hopelessness was correlated more highly with suicidal ideation than was the level of depression. However, in our study, we could not find a significant relationship between other socio-demographic profiles like age, education level, locality, religion, socioeconomic status, and background on suicidal ideation.

Higher levels of suicidal ideation were positively associated with increasing severity of self-reported depression and increasing negative expectancies about the future.[30] The interaction between the depression severity and the hopelessness was significant and indicated that increasing levels of self-reported depression and hopelessness were positively related to suicidal ideation. Our study found that hopelessness was approximately 1.25 times more important than depression severity for suicidal ideation. Similarly, Beck et al., found that hopelessness was 1.3 times more important than depression for explaining suicidal ideation.[18]

Hopelessness was highly correlated with suicidal ideation than the level of depression. Other studies also found; hopelessness uniquely contributed to the prediction of suicidal ideation after the level of depression was controlled.[31, 32] For clinician or health care worker, when attending the morbid patients, hopelessness is a significant factor for assessing suicidal ideation in this vulnerable patient population.[33]

CONCLUSION

This study shows that employment was a more significant effect on hopelessness and depression for estimating suicidal ideation; hopelessness appears to be an important clinical marker of suicidal ideation. Those higher levels of hopelessness must have a higher level of depression and a higher level of suicidal ideation. If a person is hopeless, we must prioritize this symptom and assess the immediate risk of self-harm, suicide, or hurting another person. So, we can timely try to seek treatment as soon as possible. Many psychiatrist experiences sharing the problem with a healthcare provider, a loved one, or a support worker can often help. Providing emotional and financial support in employment also plays an essential role in patients to prevent committed suicide. But future research will be necessary for clarifying the role of hopelessness in the context of elaborated models of suicide risk.

LIMITATION

- The small sample size and result were from a single centre. The result might be different if the study was done on large sample size and data taken from multiple centres.
- Cross-sectional study design, longitudinal follows up study required for proper assessment of effect hopelessness and depression severity on suicidal ideation.
- A history of past suicide attempts, alcohol abuse disorders and substance abuse disorders were not included.
- This study focused only on hopelessness; with suicide behaviour, no other theoretical and empirical relationships were analysed.

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- A family history of depression or suicide were not assessed. Family history of any depression and suicidal attempt increases the chances the depression and suicidal ideation in patients.

Conflict of Interest – None to be declared.

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Table 1 Sociodemographic characteristics of patients according to gender.

Variable	Male (No 64)	Female (No 36)	Chi-square & p-value
Age (years) Mean (SD)	35 (8.492)	33 (8.396)	-1.135 0.259
Level of education			
Illiterate	10 (15.62 %)	12 (33.33 %)	6.158
Up to Primary school	22 (34.37 %)	14 (38.88 %)	0.104
Up to Secondary school	18 (28.12 %)	6 (16.66 %)	
Up to graduate	14 (21.87 %)	4 (11.11 %)	
Employment			
Yes	38 (59.37 %)	8 (22.22 %)	12.803
No	26 (40.62 %)	28 (77.77 %)	0.0003**
Marital status			
Unmarried	25 (36.06)	7 (19.44 %)	5.495
Married	30 (46.87 %)	21 (58.33 %)	0.064
Widow/Separated	9 (14.06 %)	10 (27.77%)	
Religion			
Hindu	32 (50.00 %)	17 (47.22 %)	1.736
Muslim	21 (32.81 %)	9 (25.00 %)	0.419
Other	11 (17.18%)	10 (27.77%)	
Socioeconomic Status			
Poor	20 (31.25 %)	12 (33.33 %)	0.105
Middle	27 (42.18 %)	14 (38.88 %)	0.948
High	17 (26.56 %)	10 (27.77%)	
Background			
Urban	27 (42.18 %)	13 (36.11 %)	0.07
Rural	37 (57.81 %)	20 (55.55 %)	0.791

Abbreviation: No – Number, SD – Standard Deviation

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Table 2 Mean score of depression, hopelessness, and suicidal ideation rating scale.

Variable	Male (No = 64) Mean (SD)	Female (No = 36) Mean (SD)	t-test and p-value
Beck's Depression Inventory	34.03 (15.35)	33.27 (11.61)	- 0.258 0.796
Beck hopelessness scale	13.00 (4.08)	12.66 (3.14)	-0.433 0.666
Scale of Suicidal Ideation	8.28 (4.21)	7.16 (3.50)	-1.354 0.178

Abbreviation: SD – Standard Deviation

Table 3 Correlation between depression, hopelessness, and suicidal ideation

Variable	Beck hopelessness scale	Scale of Suicidal Ideation
Beck's Depression Inventory r p	 0.814 0.00	 0.591 0.00
Beck hopelessness scale r p	 1.00	 0.635 0.00
Scale of Suicidal Ideation r p	 0.635 0.00	 1.00

Abbreviation: r – correlation value, p – p-value

Table 4 Multinomial logistic regression showing effect on hopelessness and depression severity with suicidal ideation

Variable	B (Unstandardized Coefficient)	Standard Error	Beta (Standardized Coefficient)	t-test	p-value
Constant	- 0.466	1.606		- 0.290	0.773
Beck hopelessness scale	0.485	0.203	0.458	2.395	0.021
Beck's Depression Inventory	0.162	0.054	0.365	1.144	0.258

*Dependent Variable: Scale of Suicidal Ideation

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