



ASSESSMENT OF SUICIDALITY IN VIEW OF PSYCHOPATHOLOGY & CLINICAL VARIABLES IN PATIENTS ATTENDING A TERTIARY CARE CENTRE

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ABSTRACT **Background:** Suicide emerging as public health problem all over the globe. Our continent contribute most as 60% of the world's suicides are happening here, which simply means every year 60 million people are affected by suicide or attempted suicide in Asia. **Materials and Methods:** Methodology- This is a tertiary care hospital based cross-sectional study, which was conducted in outpatient department of psychiatry, Medical College and mental hospital in a city of central India, after clearance obtained from institutional ethic committee. Only those patients were included who were meeting inclusion criteria. **Result-** among all 100 subjects 69 were male and 31 female, the mean age of participants was 33.87±7.97 years. Most of subject were married, 44% of participant were economically dependent 53% were belong to nuclear family and 65% were from urban area. In our study a strong association observed between substance abuse, past history of suicidal attempt, depression with suicidal attempt. **Conclusion-** Based on the findings of this study depression and substance abuse is main factors behind the suicide attempt.

KEYWORDS : Attempted suicide, substance abuse, depression, suicidality

INTRODUCTION

According to WHO, the global age-standardized suicide rate was reported as 9.0 per 100000 population during 2019. These rates were varied between countries from fewer than two deaths by suicide per 100000 to over 80 per 100000.[1]

The global age-standardized suicide rate was higher in males (12.6 per 100 000) compared to females (5.4 per 100 000), While for females, the highest rates in countries were above 10 per 100 000, for males they were above 45 per 100 000.[2]

Globally, the age-standardized suicide rate was observed 2.3 times higher in males compared to females. The Male:female (M:F) ratio of suicide greater than 1 indicated that suicide rates are higher in males compared to females. While the ratio was a little over 3 in high-income countries, it was lower in low- and middle-income countries (low-income countries: 2.9; lower-middle-income countries: 1.8; upper-middle-income countries: 2.6)[3]

Globally, most deaths are occurred by suicide in low-and-middle-income countries of about 77%, where majority of the population live as per worldwide evaluation. More than half of the global suicides of about 58% were occurred the age less than 50 years. Most adolescents who died by suicide of about 88% were from low- and middle-income countries where nearly 90% of the adolescents live as per worldwide data.[4]

The risk of suicide can be evaluated in a multistage scale, which includes suicidal ideation (ideation, intent, and plans), as a critical initial stage, attempted, and completed suicide. It has been recorded that the long-term suicide risk in persons without mental disorders is about 0.3%, whereas the risk measured among mentally ill patients ranges from 3.4% for people affected by one mental disorder to 6.2% for people reporting more than one psychiatric disorder: each additional psychiatric diagnosis seems to contribute significantly to increase risk of suicide.[5]As per earlier study, mental disorders are occupying a premier position in the matrix of relationship of suicide. Majority of studies are noted that around 90% of those who die by suicide have a mental disorder.[6]

Depression is the most prevalent mental health disorder reported in psychological autopsy studies [7,8], and non-fatal suicidal behaviors.[9] Hopelessness is an important mediating variable between depression and suicidal behavior.[10] There is also a link between suicide ideation and depression, with increasing severity of depression associated with increasing likelihood of suicide ideation.[11]

MATERIALS AND METHODS

This a cross-sectional observational study was conducted over a period

of one years in a tertiary care hospital of India. A total of 100 subjects attending the psychiatric OPD fit in to inclusion criteria i.e. Subjects with suicide attempt and/or suicidal ideation according to DSM-5, aged between 18-65 yrs, either sex and ready to give written informed consent. Beck Scale for Suicidal Ideation (BSSI), Suicide Behaviour Questionnaire – Revised (SBQ), DSM-5 used as diagnostic tool. In sociodemographic data sheet age sex and SES etc were included and for Clinical assessment duration of illness, past history and treatment history etc were taken in account, the data were analyzed using Microsoft excel and statistical test were applied wherever required.

RESULT

The mean age of subjects was 33.87±7.97 years, and most of them belong to age group of 31-40 years, there is preponderance of the male gender out of 100 participants 69 were male. Most of participants were married followed by single. 74% participants were Hindu by religion and 20 % were Muslim and 6% were Christian. 36% subjects were studied up to middle followed higher secondary (18%), primary (15%), graduate (13%) and illiterate (2%). Majority of cases about 46% were unemployed, Clerk and farmer were 15% each, 12% were professional, while Shopkeeper and semiskilled were 08% and 04% respectively. Majority of participant subjects about 44% were recorded from no income category, while 16%, 13% and 12% were recorded from income groups of INR 5381-8988, 18000-36016 and >36016 respectively. Minority of subjects were observed from income level of INR 13495-17999, 1803-5380 and 8989-13494 respectively, about 53% participants were from nuclear family while 47% subjects was observed from joint/extended family. 65% were of urban locality, while 35% cases belonged to rural area. The subjects were divided in two groups those who attempted suicide and those whom were not, total 44 subjects were attempted suicide among them 34 were male and 10 were female. Marital status, religion and family type doesn't show any statistical significance with suicidal attempt while education, occupation and income are statistically significant, suicidal attempt are more in educated people in contrast to illiterate. Participant with better job and good income were less likely go for suicidal attempt. Substance abuse is also related with the suicidality out of 100 participants 52 were addicted to some type of substance and 32 were attempted suicide, a strong statistical significance observed in substance abuse and suicidality. 98% of subject has suicidal ideation but only 42% were attempted suicide while among 2% participant who never thought about it were attempted suicide. Among 100 participant only 8 have past history of suicidal attempt, among 100 participant 44 were attempted suicide among them maximum frequency was observed Poisoning (Pesticide/drug overdose, etc.) of about 57% and minimum frequency was observed of Drowning of about 2% while other types such as Bleeding (Cutting/stabbing etc.), Vehicular Impact, Hanging and Jumping from height of about 14%, 11%, 9% and 7%, respectively were observed. Among participant of Past history of psychiatric illness such as Depression (39%), Schizophrenia (24%),

Alcohol use disorder(15%), Delusional disorder and obsessive compulsive disorder (6%) respectively, Opioid use disorder and Stress disorder (4%) and Bipolar affective disorder(2%) were observed and are statistically significant ($P = 0.002$). Various clinical diagnosis with Attempt of Suicide was observed statistically significant ($P < 0.004$). Of all the diagnosis maximum patient were suffering from depression in both the groups i.e., the one that attempted suicide as well as the one that did not attempt suicide. Another caveat was that the group having suicidal attempt no patient was suffering from obsessive compulsive disorder, opioid use disorder and unspecified psychosis, adjustment disorders.

DISCUSSION

In our study the mean age of subjects was 33.87 ± 7.97 years, which is in concordance of Park et al. mean age of people who attempted suicide were about 39.15 ± 15.55 years.[12] We found in our study most of the cases (78%) were in age group between 18-40 years which is backed by the previous studies of Park et al.[12] Among the 100 study subjects, 69% were male patients and 31% were female. Among the studied 100 subjects, 61% were married and 39% were single, similar distribution was seen by Choi et al.[13] Most of the participants was educated up to middle school similar distribution was seen in Kar N et al[14] study. Majority of cases about 46% were unemployed, similar distribution was seen in study by Aydin et al. and Choi et al.[13,15] No statistical significance could be observed between marital status and suicidality, In Radhakrishnan R et al[16] study, who found that in developing countries marriage is not a strong protective factor for suicide attempt. In Lal, N. et al [17] study, they reported suicide attempt is more common in married persons. Other studies found marriage as protective factor against suicide, in Kposowa A.J.[18] and Narang et al [19] study higher risks of suicide were found in divorced and singles than in married persons. No statistical significance could be observed between religious background and suicidality, there is an established belief that religion is a protective factor in suicide particularly in Muslims, their faith act as a deterrent for suicide attempt. However, contrary to this belief, in our study 20% participants were Muslim by religion, out of which about 33% attempted suicide. These finding was against the findings of Lester D. et al and Shah a, et al [20, 21] studies. This represents a complex interplay of bio-psychosocial phenomenon in causation of suicide attempt. In our study, we found that people educated upto middle school had higher suicidality compare to people studied at higher levels or illiterate. Education came up as the protective factor against suicidality, which is statistically significant. This finding was in concordance of Choi et al.[13] and Hawton et al.[22] studies, their study reported that low education level was linked to increased risk for suicide. Another study also reported short educational duration was significantly linked to suicide in a well-established cohort study by Agerbo et al.[23] In our study, we found that unemployed people had higher suicidality compare to people with any employment. Unemployment came up as the risk factor against suicidality. This finding is supported by Bagadia et al[24] study findings as unemployment is important factor contributing to the suicidal behavior. Our finding is also supported by Srivastava M K et al[25] study who identified unemployment as definite risk factors for attempting suicide. This finding is also in concordance of findings of Radhakrishnan R et al[16] study, who found strong association between unemployment and suicide, and this association is more significant for young adults. In our study, we found that people who belongs to low income group or low socioeconomic status had higher suicidality compare to people with high income group. Low income came up as the risk factor against suicidality this finding of our study was supported by Choi et al.[13] study and study by Naher A et al.[26] in which they found inverse correlation between income and suicide. Types of family and suicidality have no significance in our study which is supported by study done by Srivastava M K et al[25]. Locality doesn't affect Suicidal attempt, Similar finding were seen in NilamadhabKar[27] study. The correlation between Substance use with Suicidal attempt, in our study, we found that subjects with any substance use had higher suicidality compare to subjects without substance use. Substance abuse came up as the risk factor against suicidality. More than 60% of the subjects with substance abuse attempted suicide. Mainly alcohol was used by most of the subjects. Our finding was in concordance with Pompili M et al.[28] study, in their study they found that association between substance use especially alcohol use was highly associated with suicide attempt. Our study was also supported by Beck and Steer[29] and Beck et al.[30] studies they hypothesized that alcoholism was the strongest single predictor of subsequent completed suicide in a sample of attempted

suicides. Similar findings was supported by VijaykumarV et al.[31] and Kar N et al.[27] studies they found that co-morbid substance use and psychiatric illness confers a heightened risk of suicide through impulsivity, hostility and violence.the correlation between Suicidal ideation and Suicidal attempt, among 100 subjects, 98% of subjects had suicidal ideation, out of which 42% of subjects had attempted suicide,. Similar distribution was seen by Lövestad S et al[32].evaluates the Association between Past history of Suicide attempt with current Suicidal attempt, among 100 subjects, 8% had past history of suicide attempt. All subjects who had past history of suicidal attempt, re-attempted suicide.In our study, we found that subjects with past history of suicide had higher suicidality compare to subjects without past history of suicide. Past history of suicide came up as the risk factor against suicidality with P-value of 0.001 which was observed statistically significant.Our finding was supported by Kar N et al.[27]study, in their study they revealed that repeaters have more frequency compared to non repeaters. Our finding was also supported also supported by Dhyani, et al.[57] according to them history of suicide attempt in the past is considered to be highly predictor of future suicide attempt. In our study most common mean of suicide was through poisoning, our finding strongly supported by Kar n et al., and Radhakrishnan R et al.[27,16] studies, in their studies they found that poisoning is the commonest means of suicide and attempted suicide in India, like agricultural pesticides, plant poisons, organophosphorus poisoning etc.

In our study, we found that subjects with past history of psychiatric illness had higher suicidality in contrast with subjects without past history of psychiatric illness. Past history of psychiatric illness came up as the risk factor against suicidality. This finding of our study is also strongly supported by Kar n et al.[27] in their study they found strong correlation between psychiatric illnesses and suicidal ideation or attempt, especially depression and substance use disorders. Our finding was also supported by Radhakrishnan R et al.[74] Clinical diagnosis with Attempt of Suicide was observed statistically significant ($P < 0.004$). Of all the diagnosis maximum patient were suffering from depression in both the groups.This finding of our study was strongly supported by Choi et al.[13], Ventriglio A et al.[33], Langhinrichsen-Rohling et al.[34], Kar n et al.[27], Radhakrishnan R et al.[16], Das, et al.[35].

CONCLUSION

The findings of current study reflect the complex underlying bio-psycho-social association of suicidality. Suicidal ideation and attempt were observed over all age groups irrespective of age, gender, religion and marital status. The significant risk factor observed were substance abuse, past history of psychiatric illness especially Depression and past history of suicide attempt. However education and occupation were significant protective factors observed. This information can be utilized for effective delivery of prevention and treatment program in context of suicidality.

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