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Gender Based Comparison of Suicide Attempters on Suicidal Intent, Method of Attempt, Psychiatric Diagnosis, Psychosocial Stress and Personality Profile: A Cross Sectional Study

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ABSTRACT

Background: Suicide rates in developing countries have been progressing steadily despite increasing availability of psychosocial interventions. The need of the hour is developing specific need-based services. This study attempts to identify the gender based differences among suicide attempters regarding parameters like Suicidal Intent, Method of Attempt, Psychosocial stress, Psychiatric diagnosis and Personality profile which may help in developing gender specific intervention strategies. **Methods:** First consecutive 250 suicide attempters who availed the Psychiatry services in a general hospital setting in central Kerala from May 2018 to December 2018 were included. Each subject was assessed using a detailed clinical interview and administered scales to determine the suicidal intent (Beck's Suicide Intent Scale), recent stress (Presumptive Stressful Life Events). The personality was assessed using Eysenck's Personality Questionnaire and diagnosis made based on DCR-10 Criteria. **Results:** Males outnumber females among suicide attempters, make the attempts at an older age and are less educated compared to females. Males have a higher suicidal intent and they used more lethal methods. Most attempts are made at home, maximum being between 6PM to Midnight. The most common Psychiatric diagnosis in both genders is Adjustment disorder, followed by Affective disorders. Males are found to have a greater genetic and biologic predisposition for attempted suicide. Alcohol use has been found to be an important predisposing factor in males. Males had greater mean stress scores compared to females and showed a higher tolerance for stress. Male and female attempters showed different response patterns to stressful events, based on their personality. **Conclusion:** Male and female suicide attempters differ considerably regarding various psycho-socio-demographic parameters. Hence, it is essential to devise gender-specific intervention strategies based on these differences, if effectiveness of these strategies is to be expected.

Keywords: Gender based, Intent, Method, Stress, Personality, Psychiatric diagnosis.

INTRODUCTION

Suicide is a grave problem facing mankind since time immemorial. While humanity has triumphed over several diseases that cause suffering and loss of lives, suicidal behaviour still continues to lead to loss of precious lives. Suicide is among the top 10 causes of death in India, where about 100,000 individuals commit suicide every year, contributing to about 10% of the suicides in the world.[1]

The risk factors for attempted suicide are ubiquitous but there may be wide variations in their presentation across the world, among nations, states and even between different parts of the state. The potential risk factors are related to the gender, age, educational status, history of previous suicidal attempts, interpersonal issues, economic difficulties, psychiatric co morbidity, alcohol and other substance abuse, various losses etc.[2]

The common reasons cited for attempted suicide are poverty, indebtedness, marital discord, family conflicts, failure to realise an ambition or to pass an examination, etc. The method used by attempters also depends on various factors like suicidal intent, ease of availability, cultural and professional background, etc. The commonly used methods in our geographical area include poisoning, hanging, drowning, self- immolation and so on. The attempters may have varying suicidal intent, which is defined as the seriousness or intensity of the patient's wish to terminate his or her life.[3] The present study was conducted to compare the suicidal intent, method of attempt and psychiatric diagnosis between male and female suicide attempters.

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MATERIALS AND METHODS

The study sample is constituted by first consecutive 250 patients with attempted suicide attending the Psychiatry Outpatient and Inpatient Services at the tertiary care teaching hospital in central Kerala. Duration of the study was May 2018 to December 2018 (8 months). Inclusion Criteria were subjects aged between 18 and 65 years of age, subjects who are medically stable to undergo psychiatric evaluation and subjects who are capable of giving informed consent.

The study was cleared by the Institutional Ethics Committee of the Institution. Patients and relatives were explained about the study and written informed consent was obtained for each case. All the subjects were evaluated by a detailed history, general examination, systemic physical examination, mental status examination, relevant laboratory investigations and Psychometric evaluation wherever needed. The Mini Mental Status examination was administered to rule out cognitive impairment wherever indicated. Psycho-socio-demographic and other clinical variables were collected by completing the specially designed proforma, for each subject. The diagnosis was arrived at based on the DCR-10 criteria. Each case was cross checked and diagnosis confirmed by a consultant at the department of Psychiatry. Suicidal intent of the subjects was assessed by administering the Beck's Suicide Intent Scale. The Presumptive Stressful Life Events Scale was administered to assess the psychosocial stressors in the study subjects. The personality profile was assessed using the Eysenck's Personality Questionnaire. The data collected was tabulated. Data was analysed using the software 'Statistical Package for Social Sciences version (SPSS) 11.0' and 'EPI Info for Windows'. The statistical methods included Chi-square test, Fisher Exact t test and Mann-Whitney test.

RESULTS

Table 1: Distribution as per Gender

Gender	Number	%
Male	128	51.2
Female	122	48.8
Total	250	100

Table 2: Distribution as per Age

Age (years)	Male		Female	
	Number	%	Number	%
< 25	30	23.4	56	45.9
25-35	39	30.5	29	23.8
35-45	31	24.2	19	15.6
>45	28	21.9	18	14.8
Total	128	100	122	100

[Table 1] shows that the study sample consists of 128 males and 122 females accounting for 51.2% and 48.8% respectively.

[Table 2] shows that maximum males were in age group 25-35 years (39) and females in <25 years (56).

Table 3: Assessment of parameters

Parameters	Variables	Male	Female	P value
Educational status	Lower Primary	14	14	0.02
	Upper Primary	25	10	
	High School	51	45	
	Higher Secondary	27	31	
	Graduate	11	22	
Religion	Hindu	92	86	0.01
	Christian	31	35	
	Muslim	5	1	
Marital status	Unmarried	47	46	0.04
	Married living together	67	63	
	Married living separate	10	6	
	Widow/Widower	4	7	
Family type	Nuclear	82	81	0.05
	Joint	44	31	
	Extended	2	10	
Place of attempt	Inside house	115	120	0.02
	Outside house	13	2	
Premorbid Personality	Extraversion	34	18	0.01
	Neuroticism	58	55	
	Psychoticism	36	49	
Suicidal Intent	Low	50	54	0.12
	High	78	68	
Suicide Intent Scores	Suicide intent scale (Total score)	21.7	21.2	0.05
	Circumstances related to suicide attempt score	11.2	10.9	
	Self report score	10.4	10.3	
Impulsive attempt	Yes	40	21	0.02
	No	88	101	

[Table 3] shows that maximum males (51) and females (45) had primary school education, males (92) and females (86) were hindu, unmarried males were 47 and females were 46, married living together were 67 males and 63 females. 82 males and 81 females had nuclear family. Place of attempt was inside house in 115 males and 120 females and outside house in 13 males and 2 females, premorbid personality was extraversion in 34 males and 18 females, neuroticism in 58 males and 55 females and psychoticism in 36 males and 49 females, suicidal Intent was low in 50 and 54 and high in 78 and 68 males and females respectively, suicide intent scale (Total score) was 21.7 and 21.2, circumstances related to suicide attempt score was 11.2 and 10.9 and self- report score was 10.4 and 10.3 in males and females respectively, impulsive attempt was seen in 40 males and 21 females.

[Table 4] shows that there is difference in the suicide intent for male and female suicide attempters. Among the subjects with high scores on the Extraversion scale, 76.5% of male and 72.2% of female attempters made the suicide attempt with a high intent. While among the subjects with high

scores on the Psychoticism scale, only 44.4% of males and 46.9% of the females have high suicide intent scores. Among the subjects with high scores on the Neuroticism scale, 62.1% of males and 58.2% of females, made the attempt with high suicide intent. Overall, more males have high suicide intent than females in the Extraversion and Neuroticism personality groups unlike the Psychoticism group, where there are more females than males with high suicide intent, being 46.9% and 44.4% respectively.

Table 4: Distribution of Gender as per Intent of suicide attempt versus Premorbid Personality

Suicide Intent	Extraversion				Neuroticism				Psychoticism			
	Male		Female		Male		Female		Male		Female	
	No	%	No	%	No	%	No	%	No	%	No	%
Low	8	23.5	5	27.8	22	37.9	23	41.8	20	55.6	26	53.1
High	26	76.5	13	72.2	36	62.1	32	58.2	16	44.4	23	46.9
Total	34	100	18	100	58	100	55	100	36	100	49	100

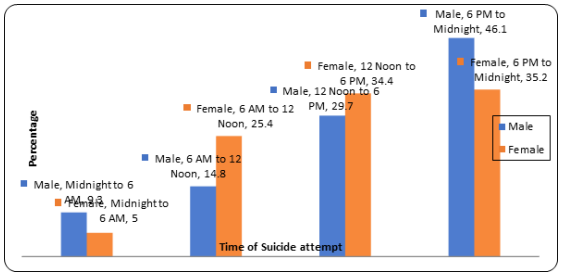

Figure 1: Distribution as per Time of Suicide attempt

[Figure 1] shows that majority of male and female attempters make the attempt between 6PM to Midnight, with males dominating the females (46.1% and 35.2%, respectively). In the time period from Midnight to 6 AM, males are represented more than females (9.3% and 5% respectively). Female attempters are represented more in the attempts made between 6AM to 12 Noon when compared to males (25.4% and 14.8%, respectively). From 12 Noon to 6 PM, females outnumber males (34.4% and 29.7%, respectively). The difference between the groups is only an observed one.

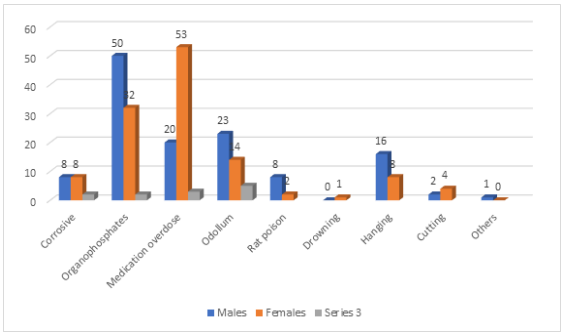

Figure 2: Distribution as per method of attempt

[Figure 2] shows that male attempters use Organophosphate intake (39%) as the most common method of attempt followed by consumption of Odollum (17.9%) and medication overdose (15.6%). The most common method used by female attempters is medication overdose (43.4%) followed by Organophosphate intake (26.2%) and consumption of Odollum (11.5%).

Table 5: Distribution as per Psychiatric diagnosis

Psychiatric diagnosis			Male		Female	
			Number	%	Number	%
Adjustment disorder			45	35.2	67	54.9
Harmful use of Alcohol			3	2.3	0	0
Alcohol dependence syndrome			8	6.3	0	0
Alcohol induced psychotic disorder			3	2.3	0	0
Delusional disorder			4	3.1	0	0
Schizophrenia			0	0	1	0.9
Psychosis NOS			1	0.8	0	0
Depressive episode		Mild	9	7.0	3	2.5
		Moderate	14	10.9	13	10.7
		Severe	7	5.5	10	8.2
Bipolar affective disorder	Depressive episode	Mild	0	0	2	1.6
		Moderate	3	2.3	3	2.5
		Severe	0	0	0	0
	Hypomania		4	3.1	2	1.6
	Mania		0	0	0	0
Others			27	21.1	21	17.2
Total			128	100	122	100

[Table 5] shows that most common psychiatric diagnosis in male and female attempters is Adjustment disorder (35.2% and 54.9% respectively). It is followed by Affective illness, diagnosed in 28.8% of males and 27.1% of females. Among the Affective illnesses, more males (23.4%) are represented in the Unipolar depression group, compared to females (21.4%), while among Bipolar depression, there are more females (4.1%) compared to males (2.3%). More males have problems related

to alcohol abuse, compared to females (10.9% and 0%, respectively). While delusional disorder is more common in males (3.1% against 0%), Schizophrenia is represented more in females (0.9% against 0%). However, 21.1% of males and 17.2% of females did not satisfy any diagnostic criteria.

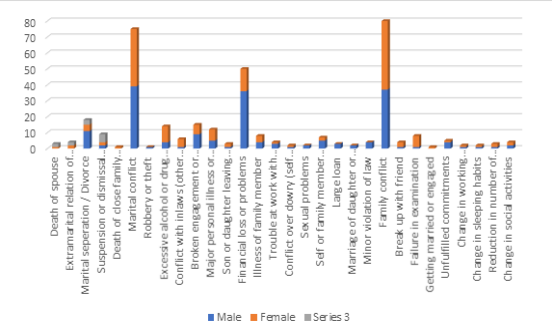

Figure 3: Distribution as per Stressful Life Events

[Figure 3] shows that the most common stressful life event reported in the past 1 month prior to the attempt among males (30.5%) is 'Marital Conflict'. While in females (35.2%) the most common event is 'Family Conflict'. The second most common stressful life event is 'Family Conflict' in males (28.9%) and 'Marital Conflict' in females (29.5%).

DISCUSSION

This study was undertaken in the background of the ever growing concern of researchers the world over, about the increasing rates of suicide in various studies. Moreover, the results of those studies analysing attempted suicide associated with various parameters have also showed considerable variations according to the region of study. The current study was conducted to assess the gender based differences regarding Suicidal Intent, Method of Attempt, Psychiatric diagnosis and the effect of Psychosocial Stress and the implications of different Personality traits on the suicidal behaviour. Also, there is a dire need for developing 'region specific' intervention strategies, if effective results are to be expected. This was the context of the study.

The study sample consisted of 250 suicide attempters comprising 128 males and 122 females. It is found that majority of the attempters made the attempt with a high suicidal intent. Differentiating on the basis of gender, it is observed that more males (60.9%) made the attempt with a high intent than females (55.7%). Females formed the major group among low intent attempters. This finding is in concordance with the Indian study with 203 suicide attempters, conducted in more or less similar geographic and clinical settings by Sudhir Kumar et al,[4] (2006) which reported a higher male representation than females in high intent attempts.

In this study, comparison of the suicide intent scores shows that males have a higher mean suicide intent score compared to females. Nilamadhab Kar,[5] have reported that there are differences in the level of suicidal intent, based on the presence or absence of psychiatric morbidity.[18]

The comparison of most commonly used methods for attempting suicide by both genders reveals that males have a preference for more lethal methods like Organophosphate intake compared to females who preferred less lethal methods like Medicine overdose. Similar results were reported in studies conducted in South India by Sudhir Kumar et al.[4]

The current study reports that males outnumber the females in the case of impulsive attempts and the finding is statistically significant. This is also associated with a higher incidence of alcohol use at the time of attempting suicide, being 64.8% in males and 0.8% in females. Hence, it may be concluded that alcohol use may contribute to the impulsiveness in males. Noting the same, regulating the sale of alcohol can be an effective strategy to reduce suicidal behaviour, especially in those who abuse alcohol. Regarding the place of attempt, it is observed that most of the attempts are made at home. This finding is supported by Patel V et al,[6] (2012) who reported nearly 3/5th of the suicide attempts occurring at home.

Depending on the time of suicide attempt, the gender difference observed in this study is that most of the attempts are made during the time period from 6PM to Midnight which is usually the time spent by the individual with the family. This is similar to the observations reported by Ponnudurai.[7] Regarding the choice of this period for attempted suicide, it is found that males are in a majority than females (46.1% and 35.2%, respectively). However, female attempters found 6 AM to 12 Noon and 12 Noon to 6 PM time periods as their favourable intervals. This is in accordance with the findings reported by Geeta et al.[8] This may be due to alcohol use by males during the evening time and females spending their daytime at home in isolation, especially in a nuclear family where confiding relationships are scarce.

The study reveals that the most common psychiatric diagnosis among the suicide attempters is Adjustment disorder. This disorder is diagnosed in 35.2% of males and 54.9% of females, which shows a greater female preponderance. The second most common diagnosis in both the sexes is Affective disorders, with males slightly in the forefront. These findings are supported by the studies by Nilamadhab Kar which reported a higher incidence of suicide attempts in people with mood disorders, most commonly Depression.[5]

In the study, it is observed that male attempters (38.3%) have a 2-fold higher prevalence of past history of mental illness and suicide attempts compared to female attempters (17.2%). This difference is statistically significant. Suresh Kumar et al (2004),[9] observed that males had a greater incidence of psychiatric illness in the past, compared

to females which was in concordance with the current study results. In the current study, it is observed that 29.7 % of the male attempters have a family history of psychiatric relevance, while such a history is only present in 18% of female attempters.

It is found that majority of male and female attempters have studied only up to high school level. This is in concordance with other Indian studies by Gouda et al (2008),[10] Latha KS et al,[11] report attempted suicide to be most common in individuals with education below or up to matriculation,[29] The majority of both male and female attempters belong to the Hindu community. This finding is in accordance with the other studies from Kerala by Baby et al.[12]

Most female attempters hail from Nuclear families while most male attempters hail from Joint families. This finding is in concordance with the results reported by Singh et al (2012) who found the same difference based on gender. The study findings reveal that both male and female attempters who were married and living together with their spouses formed the majority group, with no significant difference between the two sexes. Similar results were observed by Gouda et al (2008) and Singh et al (2012).

As per the findings with Eysenck's Personality Questionnaire, it is observed that majority of male and female attempters have high scores on the Neuroticism scale (representing traits like inferiority, unhappiness, anxiety, dependence, hypochondria, guilt and obsessiveness). Females had higher representation in Psychoticism scale than males (representing traits like risk-taking, impulsivity, irresponsibility, manipulativeness, sensation-seeking, tough-mindedness and practicality).[13-15]

CONCLUSION

Male and female suicide attempters differ considerably regarding various psycho-socio-demographic parameters. Hence, it is essential to devise gender-specific intervention strategies based on these differences, if effectiveness of these strategies is to be expected.

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