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# To estimate the gender differences in clinical characteristics, personality and coping strategies among subjects who have attempted suicide attending tertiary psychiatry care hospital.

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***Abstract:*** ***Background:*** *Suicide being the most important emergency in Psychiatry and has to be understood from many perspectives. It has been studied by many researchers but there is little research comparing the gender differences in clinical characteristics, personality and coping methods among those who attempt suicide.*
***Aims and objectives****: To estimate the gender differences of clinical characteristics, personality and coping strategies among those who have attempted suicide.*
***Materials and methods****: The study was conducted in tertiary referral psychiatry department after obtaining institutional ethics committee approval. The socio-demographic characteristics were collected using intake proforma, personality using Eysenck Personality Questionnaire, Suicide intent using Beck's Suicide Intent Scale and coping strategies using Lazarus revised coping scale. The results were analysed.*
***Results:*** *Totally 155 subjects (70 Male and 85 Female) were recruited in the study. Attempt was common in those below 30 years of age; Family disputes were the main reason for attempt, tablet over dosage was the main mode, majority did not have previous attempt or family history of attempt; most of them did not communicate their ideas and also did not seek medical help for the same. There was no statistically significant difference between the two genders on demographic and clinical characteristics; also among the coping strategies. On personality males had significant high scores compared to females on Extraversion scores, but there was significant difference between them on Neuroticism and Psychoticism scores.*
***Conclusions:*** *There was no significant difference between male and female suicide attempters except on the Extraversion score of personality which was high in males compared to females.*
*Key words: Suicide, Gender difference, Personality, Coping strategies.*

## I. Background:

Suicide is one of the most important psychiatric emergencies and an important issue in the national context because more than 1 lakh people commit suicide every year in India. The number of suicides in the country during the decade (2005–2015) has recorded an increase of 17.3% (133623 in 2015 from 113914 in 2005). The increase in number of suicides was reported each year till 2011 thereafter a declining trend has been noticed till 2014 and it again increased by 1.5% in 2015 over 2014 (from 131666 suicides in 2014 to 133623 suicides in 2015).[1]

The psychiatrist may provide optimal care, yet the patient may die by suicide.Because completed suicide is relatively uncommon and also we lack satisfactory laboratory tests or clinical prediction, the psychiatrist is not expected to predict suicide with precision, but is expected to have carefully evaluated and documented the risk in his or her patient record and act accordingly.[2]

Although suicide is a deeply personal and an individual act, suicidal behaviour is determined by a number of individual and social factors. Suicide attempt is to be dealt from many perspectives like historical, epidemiological, genetic, psychological, diagnostic, philosophical, theological, economical and occupational issues. Attempted suicide is about 10 times commoner than completed suicide.[2,3]

There has been a relative paucity of research on suicide in India and only 54 articles were published from 1958 to 2009 and this paucity can be attributed to several factors but chiefly to the fact that it is an extremely difficult area to take up for research considering its sensitive nature, associated stigma and legal implications.[3]

The Indian studies on suicide have reported that the suicide was common among female gender compared to males,[4,5] young people less than 30 years of age,[4,6-9] people having low education levels and belonging to low socioeconomic status.[5]Among the various causes leading to suicide the most notable were disturbed interpersonal relationships, mood disorders, adjustment disorders, unemployment and extramarital affairs.[5,7,10-12]

There are many studies on attempted suicide regarding general aspects of suicide like age, sex, method of suicide, stressors and other socio demographic factors. But there are very few studies that compared male and female suicide attempted patients regarding personality, coping strategies and suicide intent. So this study is taken to study gender differences in these aspects.

## II. Aims And Objectives:

1. To evaluate personality differences between male and female patients attempting suicide.
2. To evaluate the gender differences in coping strategies in suicide attempted patients.
3. To evaluate the various psychiatric disorders in male and female patients attempting suicide.
4. To evaluate the gender differences in suicide intent in suicide attempted patients.

## III. Materials And Methods:

The study was carried out in a tertiary care hospital after approval from the Institutional Ethics Committee. Patients, both male and female, with history of suicide attempt recently attending psychiatry out-patient department, who are aged between 18 to 80 years and willing to give valid written consent were included in the study. Patients below 18 years, above 80 years, who are medically unstable and not willing to give valid written consent, were excluded in the study.

After getting consent from the patient, socio demographic proforma was recorded and detailed case history was taken from the patient and informant and mental status examination was done. The psychiatric diagnosis of the patient (if any) was made according to the International Classification of Diseases (ICD-10).Then rating scales were applied to the patient.

Personality scale used in this study was Eysenck Personality Questionnaire (EPQ), which is a 90 item scale with yes or no statements about Extraversion, Neuroticism and Psychoticism and Lie scale.[13]Lazarus revised coping scale (1984 revised) consisting of 72 items, with 5 options, was used to know the type of coping strategies patient used during the most stressful events during the past week. [14]Beck suicide intent scale was applied to the patient to know the suicidal intention of the patient. [15]After getting all the data, rating scales were analyzed using statistics.

## IV. Results:

**Table 1** describes the sociodemographic distribution of the study subjects.

| | Variable | Male N (%) | Female N (%) | Total N (%) |
|---|---|---|---|---|
| Gender | | 70 (45.16) | 85 (54.85) | 155 (100) |
| Age | Below 30 years | 38 (24.52) | 58 (14.84) | 96 (61.94) |
| | 31 – 50 years | 28 (18.06) | 23 (14.84) | 51 (32.90) |
| | Above 50 years | 04 (02.58) | 04 (02.58) | 08 (05.16) |
| Religion | Hindu | 67 (43.23) | 82 (52.91) | 149 (96.14) |
| | Muslim | 03 (01.93) | 03 (01.93) | 006 (03.86) |
| Domicile | Rural | 66 (42.58) | 81 (52.26) | 147 (94.84) |
| | Urban | 04 (02.58) | 04 (02.58) | 008 (05.16) |
| Education level | Illiterate | 15 (09.68) | 31 (20.00) | 46 (29.68) |
| | Upto $10^{th}$ class | 45 (29.03) | 45 (29.03) | 90 (58.06) |
| | Graduate & above | 10 (06.45) | 09 (05.81) | 19 (12.26) |
| Occupation | Unskilled | 48 (30.97) | 61 (39.35) | 109 (70.32) |
| | Skilled | 18 (11.61) | 19 (12.26) | 037 (23.87) |
| | Clerical | 04 (02.58) | 04 (02.58) | 008 (05.16) |
| | professional | 00 (00.00) | 01 (00.65) | 001 (00.65) |
| Marital status | Unmarried | 01 (00.65) | 01 (00.65) | 002 (01.30) |
| | Married | 69 (44.52) | 80 (51.61) | 149 (96.12) |
| | Married & separated | 00 (00.00) | 04 (02.58) | 004 (02.58) |
| Type of family | Joint | 12 (07.75) | 16 (10.32) | 028 (18.07) |
| | Nuclear | 58 (37.42) | 69 (44.51) | 127 (91.93) |

**Table 2** showing the reasons for suicidal attempt:

| Reason for suicide attempt | Male | Female | Total |
|---|---|---|---|
| Family disputes | 28 | 55 | 83 |
| Under alcohol influence | 01 | 00 | 01 |
| Problem with alcohol member | 02 | 10 | 12 |
| Educational issues | 00 | 02 | 02 |
| Issues of love | 04 | 01 | 05 |
| Work place issues | 01 | 00 | 01 |
| Financial issues | 15 | 06 | 21 |
| Extramarital issues | 01 | 01 | 02 |
| Medical illness | 07 | 08 | 15 |
| Threatening | 06 | 01 | 07 |
| Influence of other suicide | 05 | 01 | 06 |

**Table 3** showing the method and place of suicide attempt:

| | | Male | Female | Total |
|---|---|---|---|---|
| Method of suicide attempt | Insecticide | 15 | 13 | 28 |
| | Household poisons | 16 | 23 | 39 |
| | Poison leaves | 08 | 11 | 19 |
| | Tablets over dosage | 19 | 28 | 47 |
| | Hanging | 02 | 01 | 03 |
| | Others | 10 | 09 | 19 |
| Place of suicide attempt | Home | 54 | 81 | 135 |
| | Out of home | 16 | 04 | 020 |

**Table 4** showing Previous and Family history of suicide attempt:

| | | Male | Female | Total | p-value |
|---|---|---|---|---|---|
| Previous history of suicide attempt | Absent | 65 | 77 | 142 | |
| | Present | 05 | 08 | 013 | 1.00 |
| Family history of suicide | Absent | 62 | 81 | 143 | |
| | Present | 08 | 04 | 012 | 0.18 |

**Table 5** showing the communication of suicidal ideas and seeking medical help before attempt:

| | | Male | Female | Total |
|---|---|---|---|---|
| Communication of suicidal ideas | Shared | 06 | 07 | 013 |
| | Not shared | 64 | 78 | 142 |
| Seeking medical help before attempt | Sought | 04 | 04 | 008 |
| | Not sought | 66 | 81 | 147 |

**Table 6** showing presence or absence of psychiatric disorder:

| | Psychiatric disorder | | p-value |
|---|---|---|---|
| | Present | Absent | |
| Male | 010 | 060 | |
| Female | 028 | 057 | 0.012 |
| Total | 038 | 117 | |

**Table 7** showing the Severity of Suicide Intent:

| Severity of suicide intent | Male | Female | Total |
|---|---|---|---|
| Low | 30 | 29 | 59 |
| Moderate | 12 | 19 | 31 |
| High | 28 | 37 | 65 |

**Table 8** showing the Personality dimensions between male and female attempters:

| Personality dimension | Male Mean (±SD) | Female Mean (±SD) | p-value |
|---|---|---|---|
| Extraversion | 13.61 (3.96) | 11.46 (4.87) | 0.003 |
| Neuroticism | 09.67 (4.92) | 10.47 (5.18) | 0.330 |
| Psychoticism | 07.11 (4.13) | 06.99 (4.59) | 0.859 |

Table 8 shows that the mean Extraversion and Psychoticism score was higher for males where as mean Neuroticism score was higher for females. But when compared between male and female groups, only extraversion score had statistical significance (p value=0.003).

**Table 9.**Coping strategies between male and female attempters:

| Coping strategy | Male Mean (±SD) | Female Mean (±SD) | p-value |
|---|---|---|---|
| Problem Focused Engagement (PFE) | 31.17 (11.63) | 31.40 (11.54) | 0.90 |
| Emotion Focused Engagement (EFE) | 29.14 (11.35) | 30.66 (12.04) | 0.42 |
| Problem Focused Disengagement (PFD) | 26.81 (09.47) | 27.94 (10.77) | 0.49 |
| Emotion Focused Disengagement (EFD) | 28.16 (12.75) | 27.47 (09.51) | 0.70 |

Table 9 shows the mean PFE, EFE, PFD scores were higher in females where as EFD score was higher in males, but none of the scores has statistical significant difference between them (p value more than 0.005).

## V. Discussion:

Among 155 samples, 70 were males and 85 were females (Table 1). Females outnumbered males in this study. This result was in coherence with studies like Banerjee G et al[16]Ponnudurai and Jeyakar[8], Nandi et al[17] and Shukla et al.[18]But higher male to female ratio was observed in Venkoba Rao, [6]Hedge, [19]Stengel [20]and Laxmi Vijay Kumar[3]. The difference in higher rate of female suicide than male may be explained from situational, psychological and socio cultural perspectives.

Majority (62%) of the subjects were below 30 years are 62 % (Table 1). The similar finding was also found in previous studies byGanapathi and Venkoba Rao,[21]Nandi et al., [17]Hedge, [19]Gupta and Singh[22]Ponnudurai et al., [8]and Narang et al.[5]Age group above 40 years occupied less percentage (14.87%) in this study ,which was similar to less percentage of 6.5 % in Srivastava MK et al., study. [11]This may be better explained by better coping strategies used by old age group than in young age group in stressful life situations.

Regarding marital status, majority of study subjects were married in both males and females (Table 1)which was similar to studies of Sathyavathi and Murthi Rao [23]and Ponnudurai and Jeyakar. [8]This may be due to cultural factors regarding marriage in India. Of these married, majority of sample were living together with spouse (96.13%) than living separately (1.29%) and divorced (1.29%). This may infer that day to day inter personal conflicts in married life may be the responsible factors for higher suicide attempt rate in married and living together people than separated and divorced.

When considering the reason for suicide attempt, as per Table 2, Family disputes contributed to majority of suicide attempts in this study (54%) and the results were similar to most of the studies like Sathyavathi and Murthirao, [23] Ganapathi and Venkoba Rao, [21] Ponnudurai and Jeyakar, [8] Hedge, [19] Banerjee et al., [16] Shukla et al.[18] Family arguments in different issues, blame by family members for various reasons were main reason for suicide attempt. The results indicated that marital and family therapies may be needed to prevent suicide attempts. Financial issues contributed to more cases in males than in females (21.43% in males and 7.06% in females) and the results were similar to studies like Hintikka et al. [24] This may be explained by the differences in gender roles regarding financial issues as males manage financial issues more than females in our Indian family setup. Problems with alcoholic family member contributed to suicide attempt in 1.29% males and 11.76% females. The higher percentage of female suicide attempts due to alcohol related issues may reveal that alcoholic family member may cause more psychological problem in females than in males. Suffering with medical illness like severe pain abdomen contributed to suicide attempt in 10% of males and 9.41% of females. Few patient attempted suicide to threat others and to take situation into their control.(5 males and 1female) where as few patients attempted suicide due to stress developed after suicide attempt by close family member in the family(6 males and 1 female). Family disputes were more common reasons for suicide attempt in female than males where as financial issues were more common in males than females.

Regarding method of attempt (Table 3) majority of subjects (30%) attempted suicide with tablets over dosage (12.2% males and 18.1% females).The similar results were observed in studies like, Weismann [25] and Wexler LA et al. [26]Organo phosphorus compounds poisoning contributed to less percentage in this study (9.7% males and 8.4 % females) where as it was high (38.4%) in studies by Ponnudurai et al [8] and 67.4% in Bagadia VN et al.[10]In this present study suicide attempt with available household materials like anti mosquito liquids was seen in 39 cases(10.3% males and 14.84% females). As majority of sample attempted suicide with available poisonous substances at and near home, it may conclude that necessary actions should be taken to prevent availability of poisonous household material to those people who were having suicide ideas.

As per Table 4, majority of sample (91.61%) had no history of previous suicide attempt and only 8.39% had such history. The result was similar to studies of Bagadia et al., in which only 7% had one previous attempt and 2.4 % had more than one attempt. [10]In Sethi et al.[27] study, 14.6 % patients had previous suicide attempt. Obtaining family history of suicide (Table no 4), 91.61% of suicide attempted patients had no family history of suicide attempts and suicide deaths.

With respect to communication of suicide attempts, majority of sample (91.6%), did not express their suicidal ideas to anyone and only 8.39% patients (Table 5) shared their suicide ideas to family members and others. This result indicates that major percentage of cases are non communicators of their suicide ideas (in both males and females).In Srivastava et al., study, 73.3% patients were definite communicators where as 26.7% are partial communicators. [11] The difference may be due to decreased intimacy in family relationships in recent years. Large proportion of non communicators in this study may warn us to keep observation in people not expressing their suicide ideas at the time of stressful life situations.

Out of 155 samples only 8 patients (5.16%) had sought medical help before suicide attempt where as majority (94.84%) did not seek any medical help for their problem (Table 5). Reasons for not seeking medical help may be due to social taboos regarding expression of suicide ideas and less awareness in public that suicide is a medically manageable condition. Community level public awareness programmes on suicide may improve approach of persons with suicide ideas to psychiatrists and it may decrease suicide attempts.

Regarding Psychiatric diagnosis in suicide attempters, majority of them did not receive any psychiatric diagnosis in ICD 10 and only 24.5% received psychiatric diagnosis as per ICD 10 (10 males and 28 females). The results were similar to Bagadia et al., study in which in which 52% of cases attempted suicide as impulsive behaviour[10] and in Badrinarayanastudy 44% did not received any psychiatric diagnosis. [7]The correlation between males and females had statistical significance with respect to psychiatric disorder (p-value - 0.012). This may infer that female patients having psychiatric disorder may be more prone for suicide attempt than males having psychiatric diagnosis.

With respect to personality, (Table 8) mean extraversion score and mean psychoticism score were more in males than females whereas mean neuroticism score was more in females than males. The results were similar to PN Suresh kumar et al., study in which males scored high on extraversion.[9] In this present study, gender difference had statistical significance with respect to extraversion (p value=0.003) and this may infer that high score on extraversion in males may be a contributing factor to suicide attempt more in males than females.

Coping strategies slightly differed in males and females (Table 9). Mean score of problem Focused engagement (PFE), Emotion Focused Engagement (EFE) and Problem Focused Disengagement (PFD) were higher in females where as mean score for Emotion Focused disengagement (EFD) was higher for males slightly. But none had statistical significance with respect to gender differences in suicide attempt (p value is more than 0.005 for all parameters). In Mohammad-Rafi Bazrafshan et al., study, it was found that suicide attempted patients used less useful coping strategies more than other strategies. [28] In their study it was also found that people with low education level used less effective coping skills than higher education people. Significant gender differences were also found in their study (p-value - 0.029).But in this present study, females had higher mean score on problem focused coping than males. But it had no statistical significance. Males had scored higher mean score on emotion focused disengagement.

## VI. Conclusions:

1. Females were more than males in suicide attempters in the study..
2. Age group below 30 years had more risk for suicide attempt in both males and females.
3. Family disputes were the most common reason for suicide attempt in both males and females.
4. Suicide attempt with tablets over dose is the most common method of suicide attempt in both males and females.
5. Most of the suicide attempted patents did not seek any medical help before suicide attempt.
6. Most of the suicide attempts occur impulsively in persons who did not have psychiatric any psychiatric diagnosis (in both males and females).
7. Depression is the most common psychiatric diagnosis in suicide attempted patient in both males and females.
8. High extraversion score in males has significant influence on gender differences in suicide attempts.
9. There is no significant gender differences in suicide attempted patients regarding coping strategies used.

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