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Correlates of Suicide Attempts among Individuals Referred To Psychiatric Unit of General Hospital

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Abstract: ***Introduction****: Around the world 78% of suicides occurred in low and middle income countries.However there is dearth of data from India.*
Aim: *To study sociodemographic, clinical variables and severity of the attempt of thecases of suicide attempt*
Method*: For this study cases of suicide attempt referred to the psychiatric unit were recruited. Detailed evaluation of suicide attempts and any psychiatric illness was done. Applied beck's suicide intent scale to asses severity of attempt.*
Results*: Majority of the subjects were male gender(65%), married(68.3%), employed(63.5%), belonged to urban(69.8%), belonged to low socioeconomic status(79.4%). Most common precipitating factor was serious financial problem(36.6%) and most common mode of attempt was poisoning(50.8%).*
Conclusion*: More than half of the subjectsdo not have diagnosable psychiatric illness, belongs to male gender and nearly half of the subjects presented with medium severity of attempt.*

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I. Introduction

Suicide attempt is defined as self injurious behavior with non fatal outcome accompanied by implicit or explicit evidence that the person intended to die[(1)].Itis the single most risk factor for suicide in general population. According to WHO every year 800,000 people are taking their own life by suicide[(2)]. Suicide is the second leading cause of death among 15-29 years old people. 78% of global suicide occur in low and middle income countries. Ingestion of pesticide, hanging and fire arms are the most common methods globally. Many suicides happen impulsively in moments of crisis with a breakdown in the ability to deal with life stresses, such as financial problems, relationship break-up or chronic pain and illness[(3)]. The quality of data that available on suicide and suicide attempts is poor. There is wide variations have been found in suicide attempt among different socio cultural contexts across the world[(4)].

The psycho social factors and clinical variables that determine suicide behaviour are age, gender, marital status, occupation, education, socio economic status, mode of attempt, stressful life events, suicidal ideation, lethality, impulsivity and intentionality[(5)]. All these factors have wide variations among both in Indian and western contexts. In western context according to Beautrais et al suicide attempts are characterised by female gender, lack of educational qualifications, history of mental illness and stressful life events[(6)]. Lewitzka et al reported that suicide behaviour is characterised by female gender(male to female ratio is 1:1.3), high education levels, personality traits and stressful life events[(6)]. According to Perquier et al there is no association found between multiple suicide attempts and motive to 'die' and multiple suicide attempts were associated with previous mental health care[(7)].

In Indian context compared to west Indian patients suffering from mental illness live with their families are married[(8)]. In India, poverty, illiteracy, and unemployment are much more common and social security system is not existent compared to the West[(9)].There is wide variation in suicide rates within the country the south states have suicide rate >15 while in north states <3. Though several studies conducted on suicide in south states like Tamil Nadu, Karnataka, and Kerala however there is dearth of literature is from state Andhra Pradesh[(10)]. This study examines the demographic and psychosocial factors for suicidal attempts in individuals referred to psychiatric unit of general hospital in Visakhapatnam.

II. Materials and Methods

this is a cross sectional study conducted during the period from January 2017 to may 2017. This study was conducted in King George hospital(KGH) Visakhapatnam. KGH is a multi speciality tertiary care teaching hospital providing services to major part of north Andhra Pradesh. All the patients attempted suicide referred to the department of psychiatry were enrolled in the study. Out of 72 patients 9 patients were refused to give

consent remaining 63 patients were evaluated by a trainee psychiatrist under supervision of qualified psychiatrist. A detailed history from patients, relatives, colleagues, eyewitnesses and various authorities was obtained. The data were recorded in specially designed proforma documenting the socio demographic variables, psychiatric and physical illnesses, psychosocial stress factors, substance abuse, past and family history and details of suicide attempt. The details of suicide attempts include number of times thought about suicide, impulsive or planned, number of previous attempts, mode of attempt, violent or nonviolent method and intentionality. To know about the severity of attempt beck suicidal intent scale was performed for all the patients. Diagnoses were made as per DSM-5 criteria.

Beck suicidal intent scale: The suicide intent scale was developed by Aaron T. Beck and his colleagues at the university of Pennsylvania for use with patients who attempt suicide but survive[(11).] It is important to understand a patient's will to die in order to assess the severity of the suicide attempt. The suicide intent scale is an attempt to redefine the meaning of attempted suicide, placing them on a scale based on intent. The scale was found to have high internal consistency and moderately high correlations with clinical ratings of suicidal risk and self-administered measures of self-harm. it has taken 15 factors into consideration like isolation, timing, precautions against discovery, acting to get help during/after attempt, active preparation for attempt, suicide note, alleged purpose of attempt, expectations of fatality, conception of method's lethality, attitude towards living/dying, conception of medical rescuability and degree of per mediation. Each domain has 3 points according to the responses. Scores 15-19 indicates low intent, 20-28 indicate medium intent 29+ indicates high intent.

III. Statistics

descriptive statistics were used to analyse demographic data. Bivariate and multivariate regression analysis was used to do correlations student t test (unpaired) and Pearson chi square tests were used as tests of significance. SPSS version 23 software was used for statistical analysis.

IV. Results

Table-1 showing demographic data. Out of 63 patients 41(65.1%) were males and 21(34.9) were females. The mean age of female patients was 27.30(SD10.52) and mean age of male patients was 35.24(SD10.6) and over all mean age was 32.48 with standard deviation of 10.66. majority among them were married 44(69.84%)employed43(63.5%), educated beyond matriculation 28(44.44%), belonged to urban region 44(69.84%) and 48 (76.2%) belong to low socio economic status. Most common mode of attempt was poisoning 32 (50.8%) patients followed by over dose of drugs 10(15.9%), hanging7(11.1%), burns 7(11.1%). Table-2,3 and pie diagrams showing clinical variables.The most common stressor was serious financial problems 23(36.5%) followed by serious interpersonal difficulties with family members 17(27%), serious interpersonal difficulties with spouse 8(12.7%). The most common psychiatric diagnosis among them was major depression 13(20.6%) followed by adjustment disorder 9(14.3%) ,personality disorder 3(4.8%) and 32(50.8%) were not diagnosed with any psychiatric illness. 73% of the patients had no history of previous suicide attempts and 93.7 % of the patients had no family history of suicide attempt. Table 1 shows the demographic profiles of the patients, table 2 shows the clinical variables of suicide attempts. Pie chart -1 shows the mode of attempt and pie diagram-2 shows the current psychiatric diagnosis

Table 1 shows demographic profiles

variable	**frequency**	**percent (N=63)**
male	41	65.1
female	22	34.9
married	43	68.3
unmarried	20	31.7
occupation		
employed	40	63.5
unemployed	8	12.7
House wife	7	11.1
student	8	12.7
Educational status		
Primary school	8	12.7
Secondary school	18	28.6
inter	15	23.6
graduation	13	20.6
Socio economic status		
low	48	79.4
middle	13	20.6
high	2	3.2
Domicile		

Rural	19	30.2
urban	44	69.8

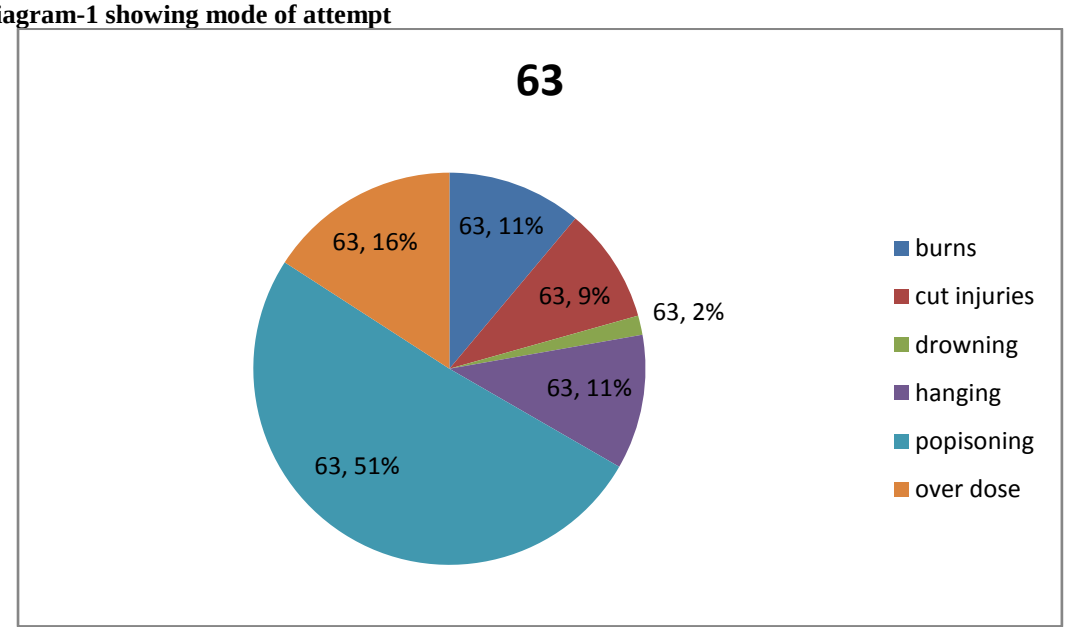
Table 2 clinical variables of suicide attempts

variable	**frequency**	**Percent(n=63)**
planned	18	28.6
impulsive	45	71.4
Family h/o suicide present absent	4 59	6.3 93.7
Substance abuse		
tobaco	15	23.8
alcohol	8	12.7
Multi substance abuse	5	7.9
Previous attempts of suicide		
1	11	17.5
2	3	4.8
3	1	1.6
4	2	3.2
Without previous attempts	46	73

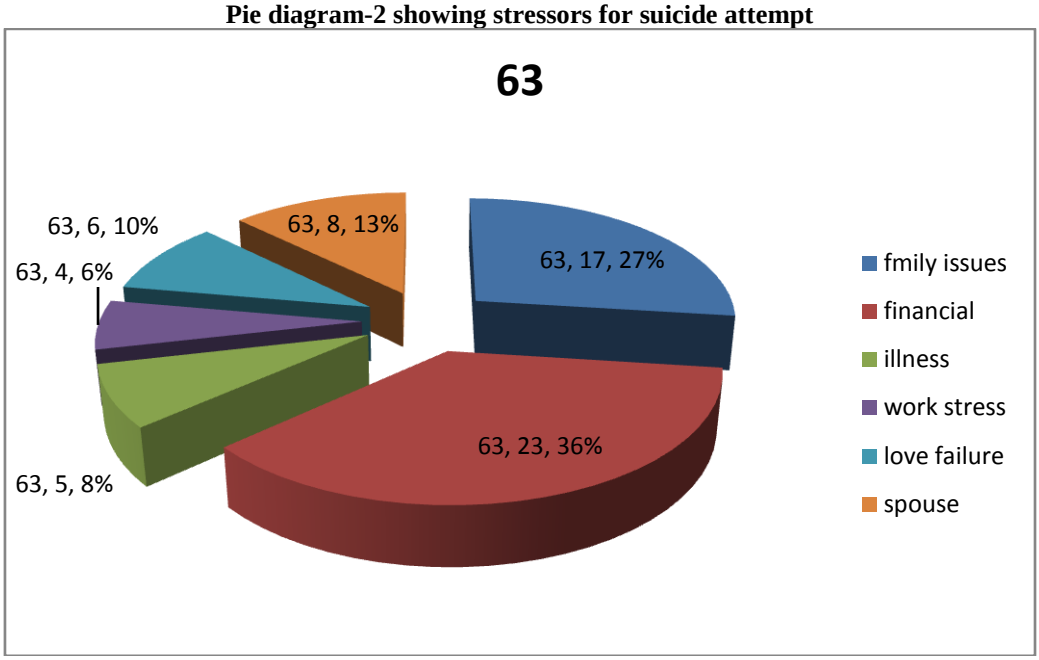
Table 3 shows current psychiatric illness

diagnosis	**frequency**	**Percent(n=63)**
Adjustment disorder	9	14.3
Alcohol dependent syndrome	2	3.2
Major depression	13	20.6
GAD	2	3.2
Personality disorder	3	4.8
schizophrenia	2	3.2
Without psychiatric illness	32	50.8

Pie diagram-1 showing mode of attempt

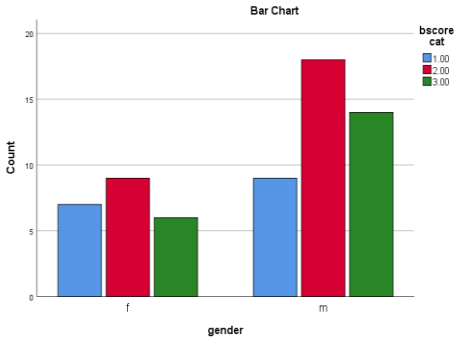


Pie diagram-2 showing stressors for suicide attempt

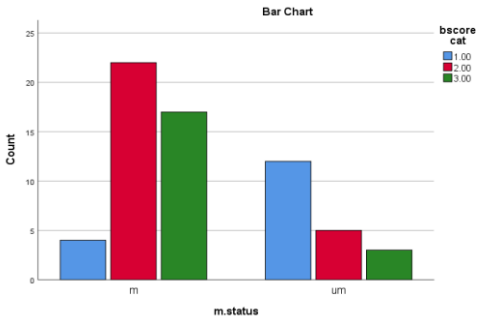


V. Comparison statistics:

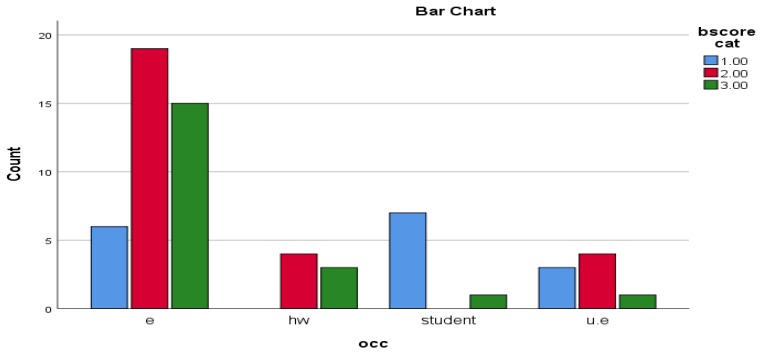
Correlation between beck score and various demographic variables revealed significant differences were found among different variables.There was significant correlation was noted between Beck score and age. Male gender(bar chart-1) had high beck scores compared to females. (x^2=0.792, p=0.0497), married patients(bar chart-2) had significant high beck scores(x^2=1.584, p=o.oo1), rural domicile had significant high scores(x^2=6.0, p=o.0457), significant high score in low socio economic population(x^2=9.5, p=0.o41)and significant high scores also noted in impulsive attempts, stressor like serious financial problems, patients without any psychiatric diagnosis, patients without past and family history of suicide and substance abuse with tobacco, no differences were observed among variables like occupational status, educational status and number of previous attempt.



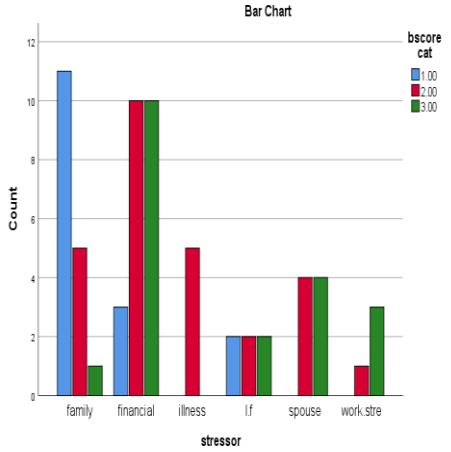
Bar chart -1.



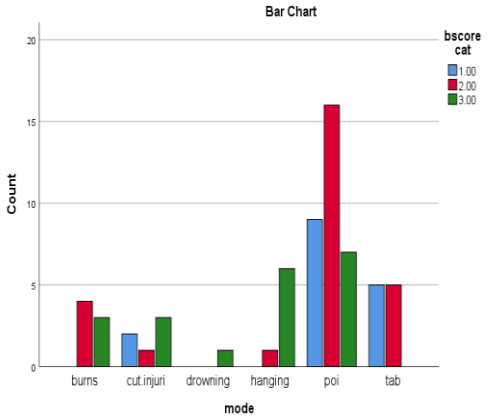
Bar Chart-2.



Bar Chart -3.



Bar Chart-4.



Bar Chart-5.

VI. Discussion

The mean age of the patients is 32.28 and there was a positive correlation between beck score and age most of the previous studies reported that majority of suicide attempters were below 30 years age[(4)]. It was not replicated in current study. Narang et al reported that 73% of the suicide attempters are below 30 years age. Das et al, VijayKumar et alalso reported that mean age was below 30. Current study revealed that there was male patients higher than female patients but it was not comparable with previous studies[(9)(12)(13)]. Most of the previous studies found that suicide attempts were related to low socio economic status and urban population, unemployment and not related to educational status and occupational status[(14)]. It was replicated in current study.

Like our current study most of the previous studies reported that most common mode of suicide attempt was poisoning with pesticides and insecticides. Unlike previous studies our study revealed that most common precipitating factor was serious financial problems,impulsive attempts were higher than planned suicide attempts and majority of the patients not diagnosed with any psychiatric illness[(3)(15)]. Whereas previous studies reported that most common stressor was serious interpersonal relation difficulties with family and most of the patients had psychiatric illness. Like previous studies current study revealed that most common psychiatric diagnosis was major depression followed by adjustment disorder[(1)(16)].

We had assessed severity of the attempt with beck suicide intent scale 42.9% patients had medium scores,31.7% had high scores and 25.4% had low scores. The beck scores significantly correlated with age, married patients, low socio economic status and urban domicile, which means these risk foctors for suicide.Further beck scores were also correlated with stressor like financial problems, impulsive attempts, without past and family history of suicide and substance abuse. But literature revealed that suicide intentionality was high in substance abuse, with previous mental illness, previous suicide attempts and stress full life events. Which was not replicated in our study includes high intentionality in patients without previous attempts, past and family history of suicide attempt

VII. Conclusion

Suicide attempts were common in male gender, married, low socio economic status and urban domicile. Most common attempt was poisoning with pesticides and insecticides, most common stress full life event was serious financial problems and majority were not diagnosed with any psychiatric illness. High suicide intentionality was noted in male gender, married,substance abuse, impulsive attempts and without ant psychiatric illness.

Limitations of the study: small sample size. control group was not taken into account. Cross sectional design of study

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