

A Study of Prevalence and Pattern of Psychiatric Morbidity in Patients with Suicidal Attempt

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Abstract: **Introduction:** Suicide attempt is defined as a self-injurious behaviour with a non-fatal outcome accompanied by explicit or implicit evidence that the person intended to die. There is a high prevalence of psychiatric comorbidity in those who attempt suicide which can be identified with proper intervention and measurement of severity of intent of the attempt can guide us not only for current management, but also future outcome of the patient. **Aims & Objectives:** 1. To study prevalence and pattern of psychiatric morbidity in patients with suicidal attempt. 2. To study various socio-demographic factors in patients with suicidal attempt. 3. To find correlation of severity of attempt and psychiatric co-morbidity, method of attempt and immediate reasons for the attempt. **Materials & Method:** This cross-sectional study was carried out at various indoor departments on patients referred for psychiatric evaluation, PDU Govt. Medical College & Hospital, Rajkot. 220 cases were taken and diagnosed according to DSM-V. Beck's Suicide Intent Scale was the instrument used. **Results & Discussion:** Psychiatric morbidity was present in 66.46% patients, majority being unipolar depressive spectrum (34.09%). Statistically significant difference was found in age and sex in socio-demographic variables, whereas Unipolar Depression and Impulsive act, Self-inflicted injury, and Psychiatric illness and Domestic conflicts as Immediate reasons for attempt showed statistical significance with Beck's Suicide Intent Severity. **Conclusion:** The study suggests need for sensitization of psychiatrists to evaluate and treat co-morbid psychiatric illness in the patients with suicidal attempt. **Keywords:** Suicide, Suicidal attempt, Beck's Suicide Intent Scale

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I. Introduction

Suicide is derived from the Latin word for 'Self Murder', is a fatal act that represents the persons wish to die. There is a range however, between thinking about suicide and acting on it. Some person have ideas of suicide that they will never act on; some plan for days, weeks, or even years before acting ;and others take their lives seemingly on impulse, without premeditation.^[1] Suicide Attempt is defined as self-injurious behavior with a non-fatal outcome accompanied by explicit or implicit evidence that the person intended to die.^[13]

Gujarat has suicide rate of 11.6 per lakh, as compared to national average of 10.6, ranking overall 18th (combined states and UT). It was observed that Saurashtra traditionally reports the highest number of cases of suicides due to family issues and disputes in the community. In the number of victims; women are almost equal to men. Number of factors including inadequate chances for employment owing to social restrictions attribute to the rise in number of suicides.^[8, 9]

II. Material And Methods

Study Design: Observational cross-sectional study.

Study Location: This study was done on indoor patients referred from Medicine, E.N.T, Surgery and Orthopedic department of P.D.U. Hospital, Rajkot. The study was approved by Ethics Review Committee of the Medical College.

All patients admitted to before mentioned departments referred to our department on indoor basis for psychiatric evaluation were taken.

Study Duration: January 2016 to June 2017.

Sample size: 220 patients.

Subjects & selection method: Patients were evaluated in detail exploring history and mental status examinations. Diagnosis was done using DSM-V diagnostic criteria.

Total 380 patients were approached from the mentioned departments as indoor reference for psychiatric assessment, of which 46 of them refused to participate in the study, 80 got discharged against medical advice before we reached for assessment and 34 were declared dead before reaching for interview. Hence, the total sample size of the study was 220 patients.

Interview was conducted in separate room or isolation, ensuring autonomy and privacy of patients and caregiver. Other relevant details were taken from patient themselves.

A semi-structured proforma was used to record patient's socio-demographic details along with clinical variables such as diagnosis, duration of illness, age of onset, relevant psychiatric and other medical history. Beck's Suicide Intent Scale was used to assess the severity of the attempt. Data was obtained with the help of Proforma and entered into a master chart. All the collected data was appropriately tabulated and data was analyzed to find out statistical significance with the help of Chi-Square test. Probability value less than 0.05 was taken as statistically significant. Result is presented and discussed in reference to previous studies.

Inclusion criteria:

1. Patients admitted for suicide attempt in Medicine/Surgical/ENT/Orthopedic ward, referred to our department for the same.
2. Patients who were willing to participate in the study.
3. Patient who can communicate in Gujarati, Hindi or English.
4. Patient who were vitally stable and cooperative for giving the details during the interview.

Exclusion criteria:

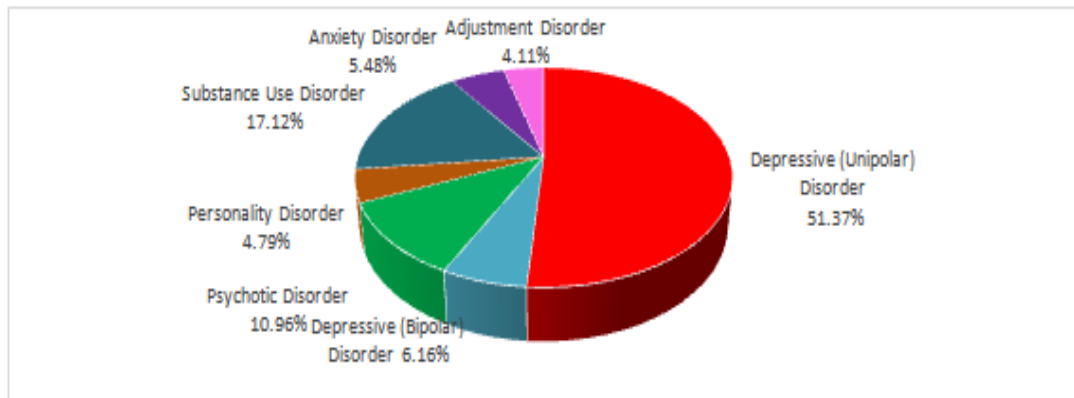
1. Patients who were unable to co-operate or give proper details due to disturbance by critical medical conditions.
2. Patient who are not willing to participate in the study.
3. Patients who do not understand Gujarati, Hindi or English.

Procedure methodology

- Initially we planned to administer our proforma to 10 patients with suicide attempt admitted under Medicine, Surgery, ENT, Orthopedic ward to find out any problems and if required to modify the proforma based on this experience. The study of these pilot cases revealed that there was no problem in administering the proforma in these 10 patients, so we later included them in the main study. Patients were evaluated in detail exploring history and mental status examinations. Diagnosis was done using DSM-V diagnostic criteria.
- Total 380 patients were approached from the mentioned departments as indoor reference for psychiatric assessment, of which 46 of them refused to participate in the study, 80 got discharged against medical advice before we reached for assessment and 34 were declared dead before reaching for interview. Hence, the total sample size of the study was 220 patients. Interview was conducted in separate room or isolation, ensuring autonomy and privacy of patients and caregiver. Other relevant details were taken from patient themselves.
- A semi-structured proforma was used to record patient's socio-demographic details along with clinical variables such as diagnosis, duration of illness, age of onset, relevant psychiatric and other medical history. Beck's Suicide Intent Scale was used to assess the severity of the attempt. Data was obtained with the help of Proforma and entered into a master chart.
- All the collected data was appropriately tabulated and data was analyzed to find out statistical significance with the help of Chi-Square test. Probability value less than 0.05 was taken as statistically significant.
- Result is presented and discussed in reference to previous studies.

III. Result

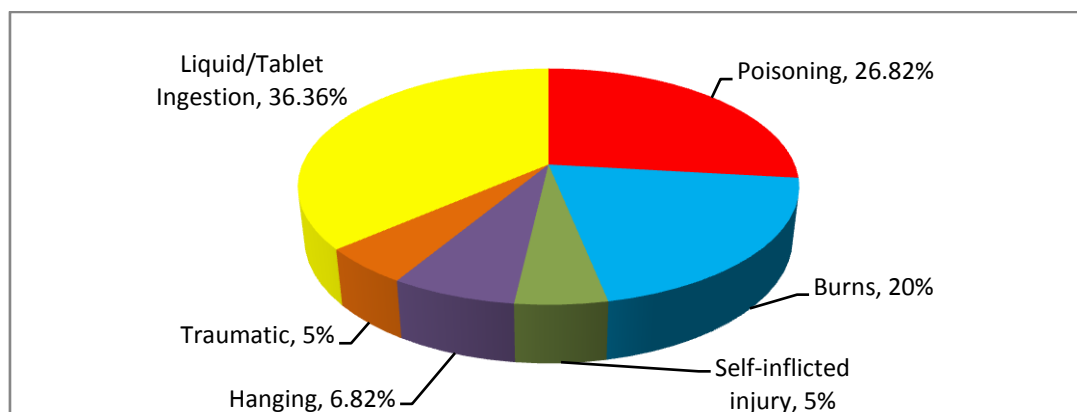
Psychiatric Morbidity	Frequency (n=146)	Percentage (%)
Depressive (Unipolar) Disorder	75	51.37
Depressive (Bipolar) Disorder	9	6.16
Psychotic Disorder	16	10.96
Personality Disorder	7	4.79
Substance Use Disorder	25	17.12
Anxiety Disorder	8	5.48
Adjustment Disorder	6	4.11



➤ **PREVALENCE OF PSYCHIATRIC MORBIDITY IN OUR STUDY (146 OUT OF 220 PATIENTS) : 66.46%.**

- Out of 146 patients who had some psychiatric illness, 75(51.37%) had unipolar depressive disorder, 9(6.16%) had bipolar depressive disorder, 16(10.96%) had psychotic disorder, 7(4.79%) had personality disorder, 25(17.12%) had substance use disorder, 8(5.48%) had anxiety disorder and 6(4.11%) had adjustment disorder.

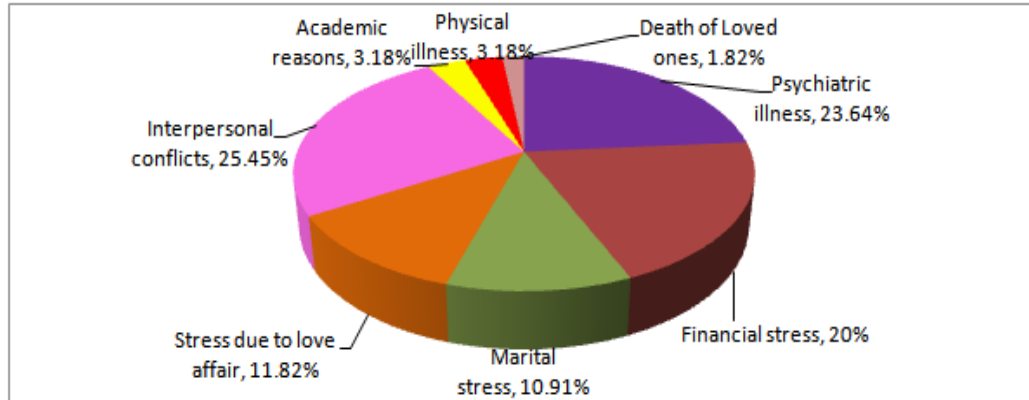
Method of Attempt	Frequency (n=220)	Percentage (%)
Poisoning	59	26.82
Burns	44	20.00
Self-inflicted injury	11	5.00
Hanging	15	6.82
Traumatic	11	5.00
Liquid/Tablet Ingestion	80	36.36



- Out of 220 patients, 59(26.82%) attempted by consuming some poison, 44(20%) by burns, 11(5%) by self-inflicted injury and traumatic means each, 15(6.82%) by hanging and 80(36.36%) by liquid/tablet ingestion.

Immediate Reason for Attempt	Frequency (n=220)	Percentage (%)
Psychiatric illness	52	23.64
Financial stress	44	20.00
Marital stress	24	10.91
Stress due to Love affair	26	11.82
Interpersonal conflicts	56	25.45
Academic reasons	7	3.18

Physical illness	7	3.18
Death of Loved ones	4	1.82



➤ Out of 220 patients, 52(23.64%) had psychiatric illness as immediate reason, 44(20%) had financial stress, 24(10.91%) had marital stress, 26(11.82%) had stress due to love affair, 56(25.45%) had interpersonal conflicts, 7(3.18%) had academic reasons and physical illness each and 4(1.82%) had death of loved ones.

Table 4

Correlation between various Psychiatric Disorder Spectrum and Beck's Severity Category

Psychiatric Spectrum	Beck's Severity Category			P value
	Low(15-19) (%)	Medium(20-28) (%)	High(29-45) (%)	
Depressive (Unipolar) Disorder	13(17.33)	25(33.33)	37(49.33)	0.00
Depressive (Bipolar) Disorder	2(22.22)	2(22.22)	5(55.55)	0.45
Psychotic Disorder	4(25)	7(43.75)	5(31.25)	0.96
Personality Disorder	7(100)	0(0)	0(0)	0.12
Substance Use Disorder	5(20)	13(52)	7(28)	0.31
Anxiety Disorder	1(12.5)	2(25)	5(62.5)	0.29
Adjustment Disorder	4(66.67)	2(33.33)	0(0)	0.28

P value is calculated based on chi-square test

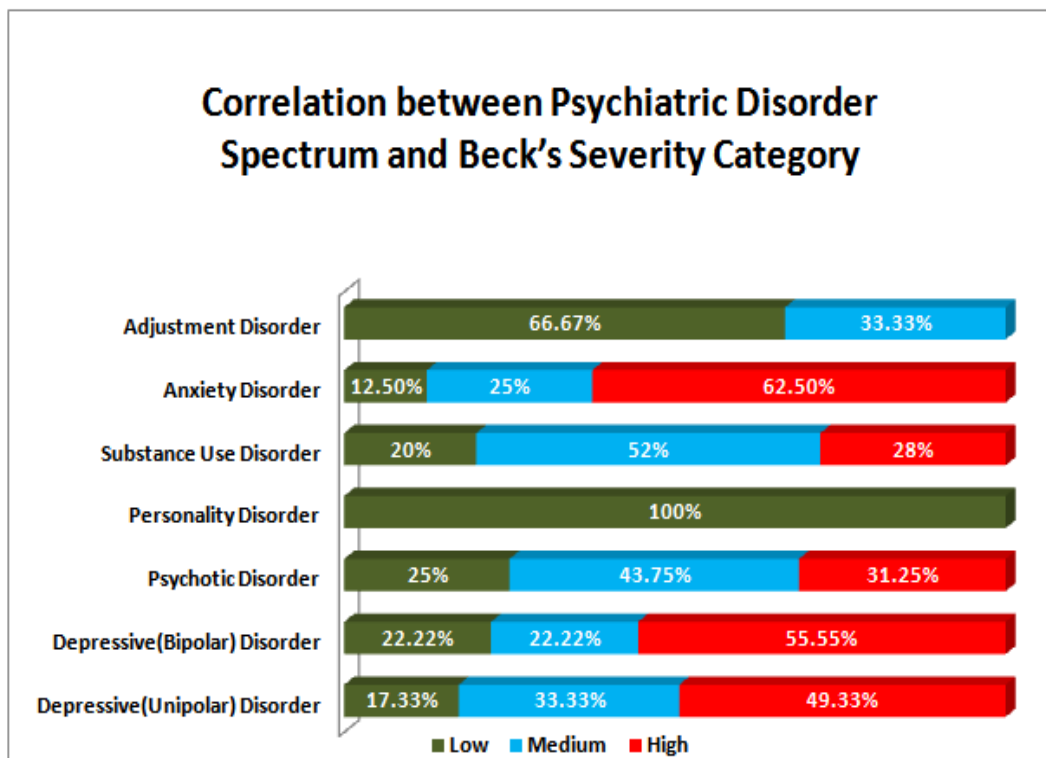


Table 5

Correlation between Method of Attempt and Beck's Severity Category

Method of Attempt	Beck's Severity Category			P value
	Low(15-19) (%)	Medium(20-28) (%)	High(29-45) (%)	
Poisoning	16(27.12)	25(42.37)	18(30.51)	0.73
Burns	11(25)	16(36.36)	17(38.64)	0.35
Self-Inflicted Injury	10(90.91)	1(9.09)	0(0)	0.00
Hanging	4(26.67)	5(33.33)	6(40)	0.87
Traumatic Injury	1(9.09)	6(54.55)	4(36.36)	0.47
Other Methods (Liquid / Tablet Ingestion)	26(32.5)	33(41.25)	21(26.25)	0.65

P value is calculated based on chi-square test

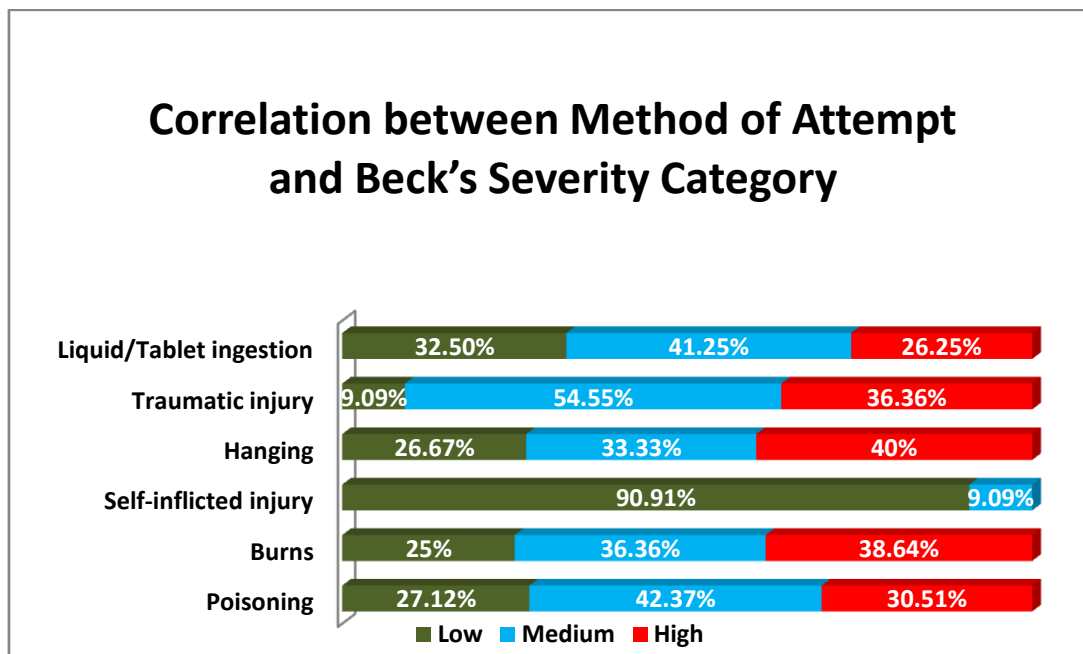
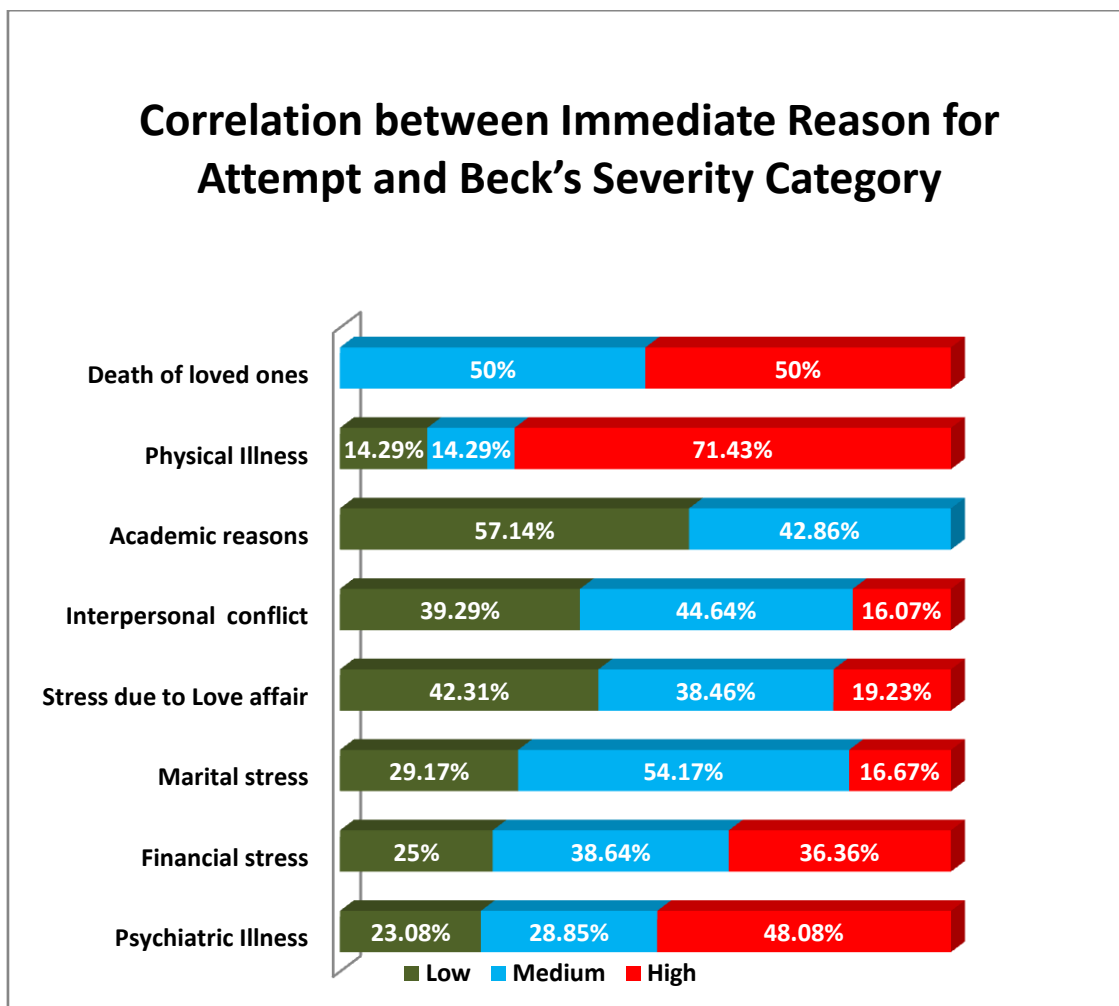


Table 6

Correlation between Immediate Reason for Attempt and Beck's Severity Category

Immediate Reason for Attempt	Beck's Severity Category			P value
	Low(15-19) (%)	Medium(20-28) (%)	High(29-45) (%)	
Psychiatric Illness	12(23.08)	15(28.85)	25(48.08)	0.00
Financial Stress	11(25)	17(38.64)	16(36.36)	0.50
Marital Stress	7(29.17)	13(54.17)	4(16.67)	0.20
Stress due to Love affair	11(42.31)	10(38.46)	5(19.23)	0.30
Interpersonal conflicts	22(39.29)	25(44.64)	9(16.07)	0.02
Academic reasons	4(57.14)	3(42.86)	0(0)	0.34
Physical illness	1(14.29)	1(14.29)	5(71.43)	0.16
Death of loved one	0(0)	2(50)	2(50)	0.76

P value is calculated based on chi-square test



IV. Discussion

❖ **Prevalence Of Psychiatric Morbidity In Patients With Suicide Attempt :**

- In our study, we found prevalence of psychiatric morbidity in 66.36% of the patients with suicidal attempt. Similar findings were observed in various Indian studies. Anuj Mittal et al. (1999)^[4] found psychiatric morbidity in 74%. RL Narang et al. (2000)^[5] also found similar results with psychiatric morbidity reported in 57% of the patients. Bansal et al. (2011)^[6] found psychiatric illness in 50% of the cases whereas Ghanate et al. (2013)^[7] reported slightly higher prevalence of 79% psychiatric illness in their study. Pandey et al. (2013)^[8] found similar results of prevalence of 60%. Similar prevalence was reported from many previous studies in India.

❖ **Pattern Of Psychiatric Morbidity In Patients With Suicide Attempt:**

- In the present study, we categorized psychiatric diagnosis in various spectrum and found out 146 out of 220 were having some psychiatric morbidity out of which: unipolar depression (51.37%), bipolar depression (6.16%), psychotic disorder (10.96%), personality disorder (4.79%), substance use disorder (17.12%), anxiety disorder (5.48%) and adjustment disorders (4.11%).
- Pandey et al. (2013)^[8] found major depression (18.8%), borderline personality disorder (15%) adjustment disorder (10%) and substance dependence (5%). Ghanate et al. (2013)^[7] reported depression was the major psychiatric morbidity in their study (34%). Bansal et al. (2011)^[6] found out depression (36%), schizophrenia (3%), alcohol use disorder (2%). Narang et al. (2000)^[5] found out that mood disorders were in 35%, adjustments disorders in 13%, substance dependence and psychosis 3% each and anxiety disorders were in 3% of the cases.
- Our findings were similar to most of the other studies in that unipolar depressive disorder (major depression) was the most common psychiatric morbidity.

❖ **Method of Attempt:**

- In the present study, we found 26.82% of the patients consumed some poison, 20% attempted by self-immolation, 5% each self-inflicted injury and traumatic means each, 6.82% by hanging and majority of them, 36.36% by ingestion of some liquid/tablet. Our findings were near to Ramdurg et al (2011)^[9] corrosives (30%), insecticides (22%), immolation (19%) and psychotropic drugs (7%). RL Narang et al (2000)^[5] reported majority in their study attempted by poisoning (91%). Chowdhury et al (2007)^[10] reported same in 85.1% of the patients. Prajapati et al (2010)^[11] reported poisoning (35.51%), hanging (31.16%), burns (27.54%) and drowning (3.62%) whereas Kumar S et al (2000)^[12] reported in their study that majority (80%) of the patients consumed poison, 12.2% by self-immolation, 9.1% hanging and 5.4% by drug overdose. In our study, liquid/tablet ingestion was the most common method of attempt followed by poisoning, whereas in other studies it was poisoning as the most common cause.
- No statistical significance was found between various methods of attempt and psychiatric morbidity present or absent.

❖ **Psychosocial Factors And Suicide Attempt:**

- In the present study, we found out that Interpersonal conflicts (25.45%) and Psychiatric illness (23.64%) were the most common immediate reasons for the attempt, others being financial stress (20%), marital stress (10.91%), stress due to love affair (11.82%), academic reasons and physical illness (3.18% each) and death of loved ones.
- Ramdurg et al (2011)^[9] reported that 86% of the patients with suicide attempt have some precipitating events. Interpersonal conflicts (with spouse-19%, with other family members-22%, with friends-15%) was the most common reasons for the attempt, others being delusions (7%) and failure in exams, broken love affair and insufferable pain (4% each). These findings were matching nearly to our study. Kodali et al (2013)^[13] reported in their study that majority of the patients had domestic conflicts (48%) which was also present in our study. Other reasons were relationship issues (23%), financial problems (18%), failure in exams (7%) and medical illness (4%). Prajapati et al (2010)^[11] reported both the aforementioned reasons in our study also to be in their- family quarrels (10.87%) and mental illness (10.15%). Other reasons were chronic illness (7.97%), failure in love (7.25%), marital conflicts (6.52%), financial reasons and cruelty by in-laws (2.17%), failure in exams (3.62%) and dowry (1.45%).
- In our study, like in most of the studies, Interpersonal conflicts were the most common immediate reasons for the attempt.
- We found statistical significance in Psychiatric illness ($p=0.00$) and Interpersonal Conflicts ($p=0.00$) as Immediate reason in psychiatric morbidity present and absent group. No statistical significance was found in other Immediate reason in both groups.

V. Conclusion

We conclude from our study that there is high prevalence of psychiatric morbidity in patients with suicidal attempt (66.36%). Amongst those with psychiatric morbidity, Unipolar depressive disorder was the most common spectrum (51.37%). Liquid/Tablet ingestion followed by Poisoning were the most common methods adopted for attempt and Interpersonal conflicts followed by Psychiatric illness were the most common Immediate reasons for the attempt.

There was statistically significant difference in Age as well as Sex with psychiatric morbidity present and absent group amongst socio-demographic variables. No statistically significant difference was observed amongst other socio-demographic variables. There was statistically significant difference between psychiatric morbidity present and absent group with respect to Interpersonal conflicts as well as Psychiatric illness as Immediate reason for the attempt. No statistically significant difference was observed amongst other Immediate reason for attempt. There was statistically significant difference between Beck's Severity Category and Unipolar Depression amongst various psychiatric disorder spectrum. No statistically significant difference was observed in other psychiatric disorder spectrum. There was statistically significant difference between Beck's Severity Category and Self-inflicted injury amongst various methods of attempt. No statistically significant difference was observed in other methods of attempt.

Limitations of the Study

The major limitation of this study was that it is cross-sectional in nature. We have studied the prevalence and pattern of psychiatric morbidity in patients with suicidal attempt and follow up was not done. There was no control group in our study. So we cannot directly compare the prevalence and pattern of psychiatric morbidity with general population.

Many patients who were seriously ill or who succumbed to death at the time of interview were not included, but they might be having some psychiatric morbidity at that time. Therefore, this fact may alter prevalence and pattern of psychiatric morbidity in the patients.

We have conducted the study on patients indoor in various department of our hospital. These patients may not be representative of all the patients in the community, particularly those who have no access to mental health care. The sample size of patients included finally in the study was small, resulting in limitation of statistical analysis. A larger sample size is needed to comment more accurately on the prevalence and pattern of psychiatric morbidity in patients with suicidal attempt. Our sample represents patients from poor and middle class who access health-care facility at government hospital. Higher socio-economic class and other patients who had been treated at private and corporate hospitals may have different kind of psychiatric morbidity have not been there in our study.

Direction for Future Study

To get a more accurate idea of prevalence and pattern of psychiatric morbidity in patients with suicidal attempt, a large scale, community based, case control, longitudinal study of such patients can be helpful.

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