

■ *Original Article*

## Hundred psychiatric outpatients presented with attempted suicide

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### Abstract

**Introduction:** Suicide is a major public health concern and it is one of the commonest Psychiatric emergencies. Suicide rates are increasing and have become a global concern with more than 600,000 suicidal attempts every year in the United States, alone. There is no national data available for Nepal. This hospital based study may help in understanding about the cause and methods of suicide attempts. **Objective:** The aim of the present study was to assess the (i) methods and precipitating cause for attempted suicide (ii) to study the relationship between major socio-demographic variables and attempted suicide. This study may be helpful in formulating suicide prevention strategies at different levels. **Methods:** Cross-sectional study in a tertiary level hospital. Consecutive 100 cases of attempted suicide coming in contact to an investigating team were evaluated for methods opted for attempting suicide and underlying cause was explored. Demographic variables were recorded and analysed. **Results:** Majority of the suicide attempters (67%) were less than 35 years of age, and female outnumbered male. Sixty one percent of the subject belonged to rural background. Out of 100 suicide attempters 40% of them have completed SLC and majority of them were students. Fifty-four percent of the sample consumed pesticides and 25% of the cases used highly lethal means. Majority of the persons (58%) had psychiatric co morbidities in which depression was the commonest. Interpersonal conflict accounted for 18% of the cases followed by marital problems (13%) as triggering factors of attempted suicide. **Conclusion:** Majority of the suicide attempters were young and having psychiatric disorders. Most of the attempters were from rural areas.

**Keywords:** Attempted suicide, psychiatric co morbidities, Interpersonal conflict.

### Introduction

Suicide is one of the commonest psychiatric emergencies. It is a major public health concern with more than 30,000 persons committing suicide and more than 600,000 suicidal attempts every year in

the United States. Suicide rates are increasing and have become a global concern.<sup>1</sup> According to WHO statistics, the annual worldwide incidence of completed suicide was 16 per 100000 in 1995 which accounts for 1-2% of global mortality.<sup>2</sup> Attempted suicide occurs 6-8 times more often than completed suicide.<sup>3</sup> The term attempted suicide is defined in several different ways. According to WHO it is “An act with a non-fatal outcome in which an individual

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deliberately initiates a non-habitual behaviour that, without intervention from others, will cause self-harm, or deliberately ingest a substance in excess of the prescribed or generally recognized therapeutic dosage, and which is aimed at realizing changes which the subject desired, via the actual or expected physical consequence".<sup>4</sup> There are many studies focusing on various factors related to suicides and ample of studies has been done in Indian sub-continent which shows the prevalence of suicide attempts are increasing every year.<sup>5,6,7</sup> It is a significant problem in India with a reported rate of 9.74% per 1,00,000 population.<sup>8</sup> Sri Lanka leads among South Asian countries with the reported incidence of 3.7/100000 population a year<sup>9</sup>. There is paucity of these types of studies in Nepal though there are several hospital based studies that has been fundamental in knowing the extent of the problem<sup>10</sup>. In a study conducted by Thapa et al in the Lalitpur district of Nepal showed the suicide rate of 3.7/100000 population/year.<sup>11</sup> This sample does not represent the country as a whole. It may be the tip of the iceberg, as many cases go unreported. When it comes in media it might be the different story sometimes politicizing the issue. There is significant medical and social implication with lifelong stigma attach with it. There is high chance that the person who attempts suicide may be discharged after the medical treatment and legal procedure are over without exploration of cause and psychiatric treatment. The underlying psychiatric comorbidities that may account for the majority of the cases for the cause of suicidal attempt will be missed and treatable psychiatric conditions may be the harbinger for further attempt. Hence we thought it is our responsibility to know about the patients referred to us for evaluation and decided to conduct an OPD based hospital study.

The aim of the present study was to assess the relationship of socio-demographic correlates and to establish the commonest methods and cause of

attempted suicide. This study may be helpful in formulating suicide prevention strategies at different levels.

### Methods

B P Koirala Institute of health sciences is a tertiary referral centre situated in Eastern part of Nepal. Patients from hilly, terai, madhesh regions of Nepal and along the border districts of Bihar and West Bengal of India take the service of this hospital. The department of psychiatry runs its own patient department (OPD) services including consultation liaison and community services at various centers. It has 30 beds inpatient service with excellent referral system. Each case of attempted suicide has to be referred to psychiatric service while providing medical or surgical management and also before discharge.

Hospitalised hundred cases hospitalized in different wards and referred to psychiatric OPD at BPKIHS over a period of one year (September 2008-September 2009) were included in this study. Every consecutive cases coming in contact with the treating team was evaluated by a Psychiatrist and their detail histories including their socio demographic profile were noted. Methods of attempting suicide, and factors leading to suicide attempt were recorded in a self developed Proforma. Due care regarding the confidentiality was given and consent was taken and those who refused to participate in the study were not included. The diagnoses of psychiatric comorbidities were made according to ICD-10(WHO, 1992).

### Results

Socio Demographic correlates: Majority (67%) of the suicide attempters were less than 35 years age group and were females (56%); 57% unmarried; 40% of them have completed at least SLC. Majority of them were students (37%) and 5% of them were working in foreign countries. Sixty one percent of the sample belonged to rural background. (Table 1-4).

**Table 1:**

SN	Age in yrs	Male 44 (44%)	Female 56 (56%)	Total (100)
1	15-24	15(15%)	22(22%)	37(37%)
2	25-34	12(12%)	18(18%)	30(30%)
3	35-44	8(8%)	13(13%)	21(21%)
4	45-54	5(5%)	2(2%)	7(7%)
5	55 & above	4(4%)	1(1%)	5(5%)

**Table 2:**

SN	Marital status	No. 100
1	Un married	57 (57%)
2	Married	34 (34%)
3	Divorced	2 (2%)
4	Widowed/Widower	7 (7%)
SN	Domicile	No. 100
1	Rural	61 (61%)
2	Urban	39 (39%)

**Table 3:**

SN	Education	No 100
1	Illiterate	8 (8%)
2	Literate with no formal education	15 (15%)
3	Primary	21 (21%)
4	Middle	16 (16%)
5	SLC	14 (14%)
6	Intermediate	23 (23%)
7	Graduation & above	3 (3%)

**Table: 4**

SN	Occupation	No 100
1	Business	3 (3%)
2	Laborer	8(8%)
3	Student	37 (37%)
4	Unemployed	15 (15%)
5	Farmer	13 (13%)
6	Service	6 (6%)
7	House wife	10 (10%)
8	Teacher	3 (3%)
9	Foreign job	5 (5%)

Methods of attempting suicide: A majority of the cases consumed pesticides(54%) followed by consumption of psychotropic medication (10%). Under lethal category 25% of the cases used lethal method like hanging(9%), Jumping(5%), sharp object(9%) drowning(2%). This lethal means were opted by patients either during intoxication or

withdrawal from alcohol and in some cases chronic psychiatric illness like schizophrenia was implicated. There were 11% of the cases with unknown poisoning. Table(5)

**Table: 5**

	Methods	No 100
1	X60 Pesticides	54 (54%)
2	X61 Psychotropic overdose	10 (10%)
3	X70 Hanging	9 (9%)
4	X80 Jumping from ht.	5 (5%)
5	X78 Sharp object	9 (9%)
6	X 71 Drowning	2 (2%)
7	X83 Unknown	11 (11%)

Causes of attempting suicide: Majority of the persons (28%) suffered from mood disorders among which depression being the commonest (22) followed by dysthymia (3) Bipolar Affective disorder (2) and cyclothymia (1) case. Interpersonal conflict accounted for 18% of the cases followed by marital problems (13%). Failure in love, affair/ romantic relationship was responsible for 11% of the cases.(Table 6)

**Table: 6**

SN	Causes	No100
1	Interpersonal problem with in-laws, parents, siblings.	18 (18%)
2	Substance related D/o	13 (13%)
	Alcohol Intoxication	8%
	Alcohol withdrawal	4%
	Opiod Intoxication	1%
3	Psychotic D/O	4 (4%)
	Schizophrenia	2%
	Unspecified Psychosis	1%
	Persistent delusional D/O	1%

4	Mood D/O	28 (28%)
	Depression	22%
	Dysthymia	3%
	Bipolar Affective D/O	2%
	Cyclothymia	1%
5	Adjustment D/O	7 (7%)
	With brief depressive reaction	2%
	Prolonged depressive reaction	4%
	Mixed Anxiety & depressive reaction	1%
6	Marital problems	13 (13%)
7	Personality D/o	6 (6%)
	Emotionally Unstable	4%
	Histrionic	1%
	Dissocial (Anti social)	1%
8	Failure in love, affairs/ Romantic relationship	11 (11%)

## Discussion

In contrary to the western literature and earlier epidemiological studies cited in various standard text books<sup>2</sup> the commonest age groups attempting suicide in both the sexes were 15-24 years followed by 25-34 years. Taken together this constitutes 67% of the cases. This finding is consistent with the findings observed in the study conducted at BPKIHS in the department of psychiatry.<sup>10</sup> Most of the Indian studies also reveals similar findings.<sup>12,13</sup> The study conducted by Beautrais<sup>14</sup> and Mc Kenzie et al<sup>15</sup> have also shown the higher rate in young people. However Sato et al<sup>16</sup> from Japan have reported suicidal attempts is more common in elderly age group where they have cited the stronger suicidal ideas in them than younger people. In this study, females outnumbered males. Weissman et al.<sup>1</sup>, Cantor et al.<sup>17</sup> and Gaynes et al.<sup>18</sup> have also reported similar findings. However, in contrary to this finding, many western workers have reported the rate of attempted suicide for men has been two to three times higher than those for women<sup>19</sup>. Some of the studies from india<sup>7, 13</sup> have found male cases more common in their studies. The female preponderance in this study could be because of their predominance in the sample itself. Further, 67 % of the samples in this study used chemical poisons which are less lethal

in comparison to 25 % of the samples who has opted more lethal means for attempting suicide. It is well known fact that females are known to chose less violent means<sup>9</sup>. However, this hospital based study itself could be a limitation. Further, no community based studies so far have been found on the prevalence and gender difference of attempted suicide in Nepal. Present study shows that attempted suicide is more common in unmarried (57%) which contradicts some of the findings in India where Shukla et al.<sup>6</sup> have reported several reasons for suicide being more common in married in India. But our findings are consistent with other study from India<sup>20, 21</sup> and abroad where marriage is believed to be a measure of emotional stability.<sup>19</sup>

In Nepal, a large population about 80% resides in rural areas. This could be the reason why 61% of the cases were from rural areas. This institute is situated in eastern Nepal and covers most of the eastern part of Nepal and few neighbouring districts of Bihar, India. This may be another reason for sample bias.

In the current study majority of the cases were students (37%) followed by unemployed (15%) and farmer (13%). Sethi et al<sup>13</sup> found 29.3% students and Gupta and Singh<sup>12</sup> noted 31% of the cases were students among the suicidal attempters. This is consistent with our studies. However, they have noted housewives 18.7% and 16% respectively as the second most common occupation involved whereas only 10% noted in this study. As those studies were conducted in 70s and 80s where women education accorded less priority but now things have been changed so this could be the reason why house wives ranked in fourth place indicating females heading towards securing jobs rather than confined to four walls of their house.

Regarding the methods used, pesticides was the most common accounting for 54% of the cases. This is in agreement with what has been reported in other developing countries: India<sup>5, 12</sup> Srilanka<sup>20</sup>, China<sup>21</sup> and Malaysia.<sup>22</sup> The WHO reports that pesticides are now the most common methods of suicide

worldwide.<sup>23</sup> The availability of potent pesticides in the most Nepalese farmer's homes and its easy accessibility from the market with lenient legal regulation and cheaper price could be the reason why this method is common. The study conducted by Joshi et al.<sup>10</sup> and Pradhan et al.<sup>24</sup> in Nepal also showed poisoning to be the most common method. We found that 58% of the cases had a psychiatry diagnosis. Mood disorder (28%) were the most common cause followed by substance related disorders(13%), adjustment disorders 7% and schizophrenia and other psychotic disorders 4%. This is consistent with the finding observed by Vajda J et al.<sup>25</sup> Various studies from India and abroad have also reported high incidence of psychiatric illness in suicide attempters with mood disorders in which depression being the most common<sup>12,26</sup>. Interpersonal problems with in laws, parents and siblings accounted for 18% of the cases. This was the second most common cause for suicidal attempts. Marital problems and failure in love affair have also accounted for significant number of cases attributing 13% and 11% respectively. These findings are consistent with other findings observed by Ponnudurai et al.<sup>7</sup>, Sethi et al.<sup>13</sup> and Sato et al<sup>16</sup>. Many of the attempted suicide are under reported due to various reasons. Most suicide attempters have a psychiatric illness although majority of the cases has not had contact with psychiatric care. Many studies which have been coded earlier including this reveal that suicide attempt is high among young generation. So the government should launch the awareness programs targeting young generations for preventing suicides. Accessibility and availability of pesticides to only authorized persons and restricted sale may help in decreasing the overall incidence of attempted suicide. There should be strong regulations of the accessibility to the pharmaceutical drugs should be done. Moreover, early identification of suicide prone individuals, supportive measures and timely referral is strongly suggested. There should be programmes to sensitize the police and administrative

personnel about the problem. Help lines and laws related to suicide should be formulated.

### **Limitation**

This finding is based on patients attending tertiary level hospital so it cannot be generalized in the general population. The factors clinically assessed as the strongest in relation to suicide attempt were recorded and analyzed to the patients meeting the dual psychiatric diagnosis.

### **Conclusion**

Majority of the suicide attempters were young and having psychiatric disorders. Most of the attempters were from rural areas. So, public education regarding early identification and seeking help for psychiatric problems, awareness regarding this in health care staffs and facilities for treating mental disorders in rural areas would probably help a population at large. Restriction of the availability of highly toxic pesticides its proper monitoring would probably decrease the number of attempters. Over the counter availability of psychotropic medication should be monitored strictly.

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