

# Presumptive Stressful Life Events and Psycho-Socio-Demographic Determinants in Attempted Suicide: A Comparative Study

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## ABSTRACT

**Background:** Attempted suicide is a common clinical problem seen in a general Hospital setting. There are 10-20 times as many suicide attempts as suicidal death. People with psychiatric illness have tenfold increase risk of suicide compared to people without illness. Unfortunately, it is not possible to predict suicidal behaviour with certainty however, the relationship between experience of problematic stressful life events and suicidal behavior has been well recognized.

**Objectives:** To study the socio demographic variables, Psychiatric disorder, precipitating life events, and mode of attempts in suicide attempters and those with suicidal ideation in a general hospital.

**Setting and Design:** A comparative study of 12 month duration, undertaken in the Department of Psychiatry, Sir Thutob Namgyal Memorial (STNM) Hospital, Gangtok, Sikkim from August 2014 to July 2015.

**Materials and Methods:** Cases were recruited from Psychiatry OPD, indoor admission and casualty of STNM hospital presenting with suicidal attempts. For each suicidal attempters recruited in the study, the next consecutive subjects presenting in the Psychiatry OPD with manifest suicidal ideation was incorporated for a comparison. Total 94 subjects were enrolled, 47 patients each with suicidal ideation and attempts. They were evaluated using pretested, self-administered Performa with variables including education, socio-economic status, occupation, age, gender, precipitating life events, family background and mode of attempts. Subjects were diagnosed on the basis of ICD 10 and were assessed on HAM-D for major depression, Suicide Intent Questionnaire for suicidal intent and Gurmeet Singh's presumptive stressful life events for assessing life events.

**Results:** Males were found more involved in suicidal attempts (51.1%) and ideation (63.8%) as compared to females (48.9% & 36.2%) with peak occurrences of suicidal attempts in second and third decades (20-29 years) of life. Majority (70.2%) of attempters and those with suicidal ideation (59.6%) were having education below metric and were mostly married

{(59.6%) & (83%)}. Significant numbers represented from the nuclear family, Hindu by religion mostly unemployed and from a rural background. Family history of psychiatric illness (10.6%) and past attempts (21.3%) were noted in attempters with (85.1%) of them having a psychiatric diagnosis.

Hanging were the main mode of suicide attempts (31.9%) followed by drug over dosage (21.3%). Majority of the attempters experienced more life events prior to suicide attempt than those with ideation. The common precipitating life event was disturbed spousal and family relationship. Similarly suicide attempters had higher score on Hamilton Depression (HAM-D) and Suicide Intent Questionnaire (SIQ) Score compared to those with ideation.

**Conclusion:** Suicide attempters were young adults, having low educational achievements with higher prevalence of psychiatric morbidity and precipitating stressful life events, hence early identification and treatment of psychiatric disorders would have prevented morbidity and mortality associated with suicide. Timely implementation of preventive and strategic measures to reduce the incidence of suicide is the need of an hour.

**Key words:** Attempted Suicide, Stressful Life Events, Psychiatric Disorders.

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## INTRODUCTION

Suicide is a complex, multidimensional phenomenon as a result of complex interaction of biological, psychological, clinical and socioeconomic factors similarly, attempted suicide is a common clinical problem in a general hospital setting and emerging as a

challenging public health issue.<sup>1-8</sup> Suicidal behaviour's are conceptualized as a continuum ranging from suicidal ideation to suicide attempts and completed suicide.<sup>1,9-16</sup> Suicidal attempts are 10-40 times more frequent than completed suicide and it is

amongst the top ten killer diseases in India, which ranks second in the world.<sup>17-19</sup> In view of suicide trends in the Nation, Sikkim has topped the suicide chart amongst the Indian States according to a report of National Crime Records Bureau (NCRB). With a rate of 29.1 (per one lakh population) in the year 2012 followed by Tamil Nadu (24.9) and Kerala (23.6). Therefore, the present study was undertaken to understand the complex multifactorial dimension in context to prevailing local scenario.

**MATERIALS AND METHODS**

The current study is conducted in the department of Psychiatry, Sir Thutob Namgyal Memorial (STNM) Hospital, Gangtok, Sikkim for a period of 12 months duration from August 2014 to July 2015. Total 94 subjects were enrolled, 47 subjects with attempted suicide were recruited as cases and the subject with manifest suicidal ideation who has come to the Psychiatric clinic has been

incorporated for comparison. Social class was determined using modified Prasad’s classification of social class.<sup>20</sup> The cases are evaluated for psychiatric illness and diagnoses are made as per the ICD-10 criteria.

The variables related to socio-demographic characteristics, psychiatric diagnosis, precipitating life events prior to attempt, methods used, family history of psychiatric disorders or past attempts, current mental status examination etc, were done using a self-administered performa. The life events score were calculated using presumptive stressful life events scale, designed by Gurmeet et al.<sup>21</sup>. To note the severity of suicidal intent the Suicidal Intent Questionnaire designed by Gupta et al<sup>[22]</sup> were administered. The subjects were treated with effective pharmacotherapy as well as psychotherapy and followed up till they became stable. Informed consent was obtained from all subjects after explaining the purpose of study.

**Table I: Age and Sex distribution in attempters and comparative group**

Age (Years)	Attempters		Comparative Group	
	Male n (%)	Female n (%)	Male n (%)	Female n (%)
Less than 20	03 (12.5)	05 (21.7)	01 (3.3)	01 (5.9)
20-29	13 (54.2)	06 (26.1)	06 (20)	07 (41.2)
30-39	05 (20.8)	07 (30.4)	11 (30.7)	05 (29.4)
40 and above	03 (12.5)	05 (21.7)	12 (40)	04 (23.5)
Mean	30		36	

**Table II: Socio demographic variables in attempters and comparative group**

Variables	Attempters n (%)	Comparative group n (%)
<b>Sex</b>		
Male	24 (51.1)	30 (63.8)
Female	23 (48.9)	17 (36.2)
<b>Education</b>		
Illiterate	05 (10.6)	04 (8.5)
Up to matriculate	33 (70.2)	28 (59.6)
Matriculation and above	09 (19.1)	15 (31.9)
<b>Marital status</b>		
Married	28 (59.6)	39 (83)
Unmarried	14 (29.8)	04 (8.5)
Divorce	05 (10.6)	04 (8.5)
<b>Occupation</b>		
Employed	10 (21.3)	18 (32.3)
Unemployed	37 (78.7)	29 (61.7)
<b>Socio economic status*</b>		
Low (III)	17 (36.2)	18 (32.3)
Middle (II)	22 (46.8)	23 (48.9)
High (I)	08 (17)	06 (12.8)
<b>Family</b>		
Nuclear	42 (89.4)	39 (83)
Joint	05 (10.6)	08 (17)
<b>Religion</b>		
Hindu	34 (72.3)	32 (68.1)
Budhist	08 (17)	09 (19.1)
Christian	05 (10.6)	06 (12.8)
<b>Residence</b>		
Rural	32 (68.1)	28 (59.6)
Urban	15 (31.9)	19 (40.4)
<b>Past attempts</b>	10 (21.3)	00 (p=0.0026) S
<b>Psychiatric illness in first degree relative</b>	05 (10.6)	06 (12.8)
<b>Past psychiatric illness</b>	10 (21.3)	05 (10.6)
<b>Alcoholism</b>	12 (25.5)	07 (14.9)
<b>Substance abuse</b>	09 (19.1)	03 (6.4)
<b>Love marriage</b>	20 (42.6)	34 (72.3) (P=0.0035)S**
<b>Media Influence</b>	05 (10.6)	00

\*B.G. Prasad modified classification of socio-economic status 2013; \*\*Chi Value =8.530

Table III: Current psychiatric diagnosis

Diagnosis	Attempters n (%)	Comparative group n (%)
Depression	21 (44.7)	30 (63.8)
Schizophrenia	09 (19.1)	00 (p=0.005) S*
Schizoaffective disorder	06 (12.8)	09 (19.1)
Adjustment disorder	04 (8.5)	08 (17)
Emotionally unstable/impulsive personality traits	04 (8.5)	00 (p=0.0199) S*
Intentional self-harm	03 (6.4)	00

\*Chi square with Yeats correction.

Table IV: Major Life Events in Attempters and Comparative group

Life events	Attempters n (%)	Comparative group n (%)
Interpersonal relationship problems with family members	7 (14.9)	6 (12.8)
Interpersonal relationship problem with spouse	8 (17)	7 (14.9)
Extra marital relationship	5 (10.6)	3 (6.4)
Death of spouse	4 (8.5)	2 (4.3)
Failure in exam	3 (6.4)	5 (10.6)
Broken love affairs	4 (8.5)	5 (10.6)
Divorce	5 (10.6)	4 (8.5)
Financial problem	3 (6.4)	2 (4.3)
Illness of family members	2 (4.3)	4 (8.5)
Drug abuse by family members	2 (4.3)	5 (10.6)
Large loan	2 (4.3)	3 (6.4)
unemployment	2 (4.3)	1 (2.1)
Mean	63	59

Table V: Methods of suicidal attempts

Methods	Attempters n (%)
Hanging	15 (31.9)
Drug overdose	10 (21.3)
Organo -phosphorus poisoning	08 (17)
Burning	07 (14.9)
Drowning	04 (8.5)
Cutting/slashing	03 (6.4)

Table VI: Mean SIQ, PSLE, HAM-D, Age in attempters and comparative group

Variables	Attempters	Comparative group
SIQ	10.95	6.06
PSLE	63	59
HAM-D	24.2	19.8
AGE	30	36

**RESULTS**

**Socio Demographic Characteristics**

Subjects were young in both the group with a mean age of 30 years in attempters and 36 years for cases having suicidal ideation. Males were representing more in suicide attempts (51.1%) and suicidal ideation (63.8%) as compared to females (48.9% & 36.2%). Majority of the subjects in both the groups represented were Hindu, married, unemployed from a nuclear family background having secondary education. Study has shown 46.8% attempters from middle socioeconomic group while 48.9% of cases with suicidal ideation were from low socioeconomic group (Table I).

**Past History**

Attempters had significant history of past suicidal attempt (21.3%) and psychiatric illness (21.3%), with a concurrent history of alcoholism (25.5%) and substance abuse (19.1%) which was seen lower in cases having suicidal ideation. (Table II).

**Clinical Features**

Most common psychiatric diagnosis in attempters and those with ideation were depression (44.7% & 63.8%) followed by schizophrenia and schizoaffective disorder (19.1% & 12.8%).

Emotionally unstable personalities were seen amongst suicide attempters (14.9%). (Table III)

**The Precipitating Life Events**

Majority of the subjects in both had prior precipitating stressful life events more or less in the similar number but the attempters scored higher in the mean life events score (63). The most common of which was interpersonal problems with spouse (17%), followed by interpersonal relationship problem with the family members. The third consecutive common precipitating events were the extramarital relationship and divorce (10.6%). (Table IV)

**Mode of Suicide Attempts**

Hanging (31.9%) was found to be the most common mode of attempt followed by drug overdose (21.3%) and Organo-Phosphorous poisoning (17%). (Table V)

**Suicide Attempt – Related Variables**

The most revealing fact that has emerged from this study was the suicide intent questionnaire score which were considerably higher in attempters (mean SIQ 11) than those with suicidal ideation (mean SIQ 6) consequently , the attempters scored higher HAM-D score (mean 24.2) than those with suicidal ideation (mean 19.8). (Table VI)

## DISCUSSION

Present study revealed more male than females were seen attempting suicide which is also supported by many other Indian studies.<sup>23-25</sup> contrary to western literature where females outnumbered males.<sup>26</sup>

Subjects were mainly young (mean age 30 years) suggesting that they constitute a vulnerable age group and is identical with previous study from India and the west.<sup>27,28</sup> These implicates that cases of attempted suicides are rising rapidly among the youths while in contrast, the Chinese study<sup>29</sup> has reported the peak occurrence of suicides mainly in third and fourth decades. Having a lower education is an important risk factor for suicide too this study are in agreement with other similar studies.<sup>3,23,25,30</sup> Higher representation of unemployment among the sample is also consistent with other western studies.<sup>31</sup> Low education, less chances of employment and low income levels places an individual's at a high risk of financial stress and a sense of economic insecurity culminating in to suicidal behavior<sup>24</sup> as evident from other study.

Present days society with more demanding nature of nuclear families coupled with poor stress coping and poor family support adds emotional distress to vulnerable groups that might drive a person to attempt suicide.<sup>30</sup> Higher rates of suicide attempts in rural areas might be contributed by social isolation, poor socio-cultural network and also difficulty in identifying the warning signs of suicide, concomitant with a limited source and access to health facility.

Religion has been regarded as an important factor in suicide. Research has shown higher suicide rate in countries where religious practices are prohibited or discouraged and where Hinduism, Buddhism, or the Asian religious predominates.<sup>24,30</sup> Since studies in India were conducted in Hindu-dominated areas, it is difficult to interpret the religious aspect of suicides. Significant history of past attempt and past psychiatric illness (21.3%) in the study is in accordance with other studies.<sup>3,32</sup>

Modern lifestyle with higher preponderance towards love marriage against traditional arranged marriage would probably reflects immature coping of marital stress and poor parental and emotional support. Many studies have linked high alcohol consumption strongly associated with suicidal risk.<sup>33</sup> The available evidence suggests that alcohol abuse may be relevant to emotional distress and suicidal behavior among the young.<sup>34</sup> The easy availability of alcohol, low cost, higher consumption leading to difficulties in relationship and social adjustment, by precipitating undesirable life events, driving towards family conflict with family maladjustment, would probably reflects the driving factors for alcoholic suicides.

As reflected in Indian Study, the current study reveals that mental disorder is a primary driving factor in precipitating suicide, affective disorders being the most common diagnosis related to suicide.<sup>35</sup> Robin et al also opined that suicide does not occur without the presence of mental illness, most prevalent diagnosis were depression and alcoholism.<sup>36</sup>

Many study from India and the west have reported recent life events to be important risk factors for suicide attempt<sup>37,38</sup> which is consistent with the present study. The higher prevalence of stressors prior to suicidal attempt may be due to poor problem solving and immature stress coping skills wherein the 'psychic pain' is looked upon as "one and the only solution" to solve their problems.<sup>39</sup>

The HAM-D has emerged as the most widely used scale for patient's selection and follow up in research studies of treatments for depression.<sup>40</sup> In the study attempters scored higher on HAM – D compared to those with suicidal ideation. This might reflects that the severity of depression poses a high risk for suicidal behavior. The clinical evaluation of depression in patients who attempted suicide may have been an important consideration in determining the suicidal risk and appropriate psychopharmacologic or psychotherapeutic treatment modalities would prove useful in diminution of the intensity of wish to die thereby reducing the risk of death by suicide. The Suicidal Intent Questionnaire (SIQ) has proved to be a reliable tool in discriminating suicidal and non-suicidal psychiatric patients.<sup>22</sup> Present study concerns that the attempters significantly scored higher SIQ compared to the subjects with suicidal ideation. High suicidal intent has been shown to predict reattempts among adolescent and adult suicide attempters and completers among adults.<sup>41</sup>

## LIMITATIONS

The sample size cannot be considered as truly representative of the population, as attempters with serious health implications have been admitted to the hospital and many attempters in the community are not identified and included in the study. In some cases family do not disclose the facts for fear of legal consequences. Community-based studies would reveal more information and avoid selection bias. Even with such limitation the present study shed some light to the suicide scenario which would add a strategy for suicide prevention.

## CONCLUSIONS

Young age represented the most vulnerable group. The other risk factors evident were being male, having low educational and socioeconomic status with inter-personal family problems with more undesirable multiple perceived stressful life events before contemplating suicides.

Should there be early, prompt diagnosis and effective treatment of mental disorders, holistic approach to suicide prevention yields promising results. Effective suicide prevention strategies and a planned control measures including early identification of high risk individuals, and a village level mechanism to identify the risk individual and a timely referral for psychiatric services is the needed of an hour. Promoting healthy coping mechanism, stress management and modifying interpersonal family conflicts along with effective dealing of alcohol dependence would prove helpful in reducing incidence related to suicidal behaviors before culminating in to suicide.

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