

The Influence of Common Risk Factors for the Patient with Attempted Suicide Hospitalized at the Teaching Hospital, Batticaloa

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Abstract

Suicidal behavior has increased since the onset of the global recession, a trend that may have long-term health and social implications. A high suicide rate in any society is an index of social disorganization and the awareness of the seriousness of suicide in our society would not be overlooked. Aim of this study was to assess the common risk factors for the patients with attempted suicide hospitalized at the Teaching Hospital, Batticaloa. A cross sectional descriptive study was conducted using semi-structured interviewer administered questionnaire involving a convenience sampling of 100 suicidal attempters.

Of the respondents, conflict with others was the most common risk factor (75%) for attempted suicide with significant associations with educational status, marital status and age range ($P < 0.05$). Other risk factors such as social and emotional related issues, financial related problems, and health related problems were found 13%, 6% and 6% respectively. Frequent mode of attempting suicide was with Yellow Oleander poisoning (30%). Effective suicide preventive and control measures need to be taken in the form of early identification of suicide-prone individuals. Prevention efforts should focus on planned attempts because of the rapid onset and unpredictability of unplanned attempts.

Keywords: Risk factors, attempted suicide, hospitalized patients

Introduction

Suicide is defined as the conscious act of self induced obliteration, best understood as a needful individual who defines an issue for which the act is perceived as the best solution (Harlod *et al.*, 1991). In the last 45 years suicide rates have increased by 60% worldwide. Suicide is among the third leading causes of death among those aged 15-44 years in some countries, and the second leading cause of death in the 10-24 years age group. Every year, almost one million people die from suicide (World Health Organization, 2013). The motivations are that attempted suicide is both one of the strongest risk factors for completed suicide and an important indicator of extreme emotional distress. Previous epidemiologic studies in the United States have estimated that between 1.1% and 4.3% of the population attempt suicide at some time in their life (Kessler *et al.*, 1999).

Over 500,000 suicides which amount to more than 50% of world's suicides occur in Asia. For the past 3 decades, one of the Asia's leading suicide rates are being reported from Sri Lanka (World Health Organization, 2013). Even though Sri Lanka is a country caught the attention of various religions and cultures, suicidal rates are seemed in the significant quantity: In 2011, the male suicide rate was 34.8/100,000 and female rate was 9.24/100,000. The male: female ratio was 3.76:1. In the 10-19 year age group the females suicide rates was high. The highest rates in females were in the 20-29 year age group and highest rates in males were among the 50-59 year and over 60 year age groups (DeSilva *et al.*, 2012). In Sri Lanka, Sinhalese had the highest suicide rate followed by the Sri Lankan Tamils who were predominantly Hindus. Moors who follow Islam, had the lowest suicide rates. The rural agricultural districts such as Vavunia, Polonnaruwa, Anuradhapura, Kurunegala, Matale, and Kegalle reported higher rates than rest of the country (Thalangala, 2009).

Suicide is often not recognized as a major public health problem due to the lack of statistics and the lack of research that would allow understanding of the problem (Jellinek & Synder, 1998). There was no well-established national program for prevention of suicide in Sri Lanka. Therefore, it was very much crucial to assess risk factors for suicide among public to acquire essential action to put a stop to the suicidal behaviors. Furthermore, this study will help to the health care providers and social workers to find out the areas where intervention of health care and social workers are needed to eliminate the suicidal behavior among the public. According to available records at Teaching Hospital, Batticaloa, 199 patients were admitted at the hospital from 1st of January to 31st of March 2013 as a result of attempted suicide. According to the available data, there is no study was carried out up to now to assess the risk factors for suicidal attempted in Batticaloa district. Aim of the study was to assess the influence of common risk factors for the patient with attempted suicide hospitalized at the Teaching Hospital, Batticaloa.

Materials & Methods

This was a descriptive cross sectional study which was conducted at the Teaching Hospital, Batticaloa among suicidal attempted patients. A case of suicidal attempt was defined as: "A person who had made deliberate act of self-harm aimed at self-destruction, irrespective of his/her intention to die". A total of 100 patients hospitalized at the Teaching Hospital, Batticaloa as a result of suicidal attempt during the research period from July to December 2013, mainly in Emergency Treatment Unit, Intensive Care Unit, Counseling Centre, Psychiatric wards such as 23 and 24 and Medical wards such as ward 01, 04, 16, 18, 21, 22, 34, and 35.

Convenience sampling method was used to select sample for this study and the clients who verbalize Tamil and willing to participate after the informed consent were considered as inclusion criteria. The clients who were refused give consent and physical instability at the time of study time were excluded from study. Data collection was done by using semi structured interviewer administered questionnaire among selected patients. The pre-tested questionnaires were conducted in 05 patients two weeks prior to the commencement of the main research at Base Hospital, Kaluwanchikudy. Through it, possible adjustments in the variables were made in questionnaire in order make the data collection process effectively.

Ethical Clearance was obtained from Ethical Review Committee, Faculty of Health-Care Sciences, Eastern University, Sri Lanka. The permission was obtained from the Director, Teaching Hospital, Batticaloa for data collection. The principal investigator explained the purpose of the research and the outcome to patients. An informed verbal consent was obtained before to carry out the research. Anonymity was ensured during data collection. All the data were maintained confidentially on personal computer with password. The personal data of the sample were not exposed to anyone other than the investigators. At the end of the research, all data obtained from paper materials of questionnaires were submitted to the Faculty of Health-Care Sciences, Eastern University Sri Lanka for keeping for a period and then destroyed. When the patients were exhausting at that movement of data collection either, bystander's help was obtained with permission of participant to complete the data collection.

After the completion of data collection, the data were entered to Statistical Package for Social Science (SPSS – Version: 16) and were analyzed based on research problems, objectives and variables. Chi-square test used to check the significant association among variable.

Results

| Characteristics | | N (%) |
|---------------------------|-------------------|----------|
| Residential Area | Rural | 76 (76%) |
| | Urban | 15 (15%) |
| | Municipal | 9 (9%) |
| Sex | Male | 54 (54%) |
| | Female | 46 (46%) |
| Age group (year) | Upto 10 | - |
| | 11-20 | 37 (37%) |
| | 21-30 | 32 (32%) |
| | 31-40 | 16 (16%) |
| | 41-50 | 8 (8%) |
| | 51-60 | 4 (4%) |
| | 61-70 | 2 (2%) |
| | 70 above | 1 (1%) |
| Occupation | Yes | 44 (44%) |
| | No | 56 (56%) |
| Marital status | Single | 38 (38%) |
| | Married | 58 (58%) |
| | Separated | 2 (2%) |
| | Other affairs | 2 (2%) |
| Educational status | Less than Grade 5 | 10 (10%) |
| | Grade 5 – 10 | 29 (29%) |
| | O/L completed | 9 (9%) |
| | A/L completed | 3 (3%) |

| | | |
|-----------------|--------|----------|
| | Others | 3 (3%) |
| Religion | Hindu | 92 (92%) |
| | Islam | 8 (8%) |

Socio-Demographic characteristics

Table 1: Socio Demographic characteristics of the attempted suicide

Attempts for suicide was found to be high (76%) among people living in rural areas. Among the gender 54% of persons attempted suicide were males. The peak age group is 11-20 years (37%). The other variables identified with incidence are; unemployed (56%) and married person (58%).

Method used for attempted suicide

Table 2: Method used for attempted suicide

| Type | | Male N (%) | Female N (%) | Total N (%) |
|-----------------------|----------------|------------|--------------|-------------|
| Chemical poison (39%) | Pesticides | 10 (10%) | 2 (1%) | 12 (2%) |
| | Weedicides | 10 (10%) | 1 (1%) | 11 (11%) |
| | Repallents | 1 (1%) | 3 (3%) | 4 (4%) |
| | Others | 4 (4%) | 8 (8%) | 12 (12%) |
| Plant poison (37%) | Yellow Olender | 18 (18%) | 12 (12%) | 30 (30%) |
| | Cerebra Manga | 4 (4%) | - | 4 (4%) |
| | Others | 3 (3%) | - | 3 (3%) |
| Drug over dose (21%) | Paracetamol | 1(1%) | 8 (8%) | 9 (9%) |
| | Others | 3 (3%) | 9 (9%) | 12 (12%) |
| Self injury (3%) | Hanging | - | 1 (1%) | 1 (1%) |
| | Others | - | 2 (2%) | 2 (2%) |

The use of chemical poison (39%) and plant poisons (37%) comprise the most attempts of suicide in our study. Yellow Olender is found to be the significant mode (30%) of method used for suicide attempts.

Risk factors for attempted suicide

Table 3: Risk factor for attempted suicide

| Risk factors | | Male N (%) | Female N (%) | Total N (%) |
|--|----------------------|------------|--------------|-------------|
| Conflict with others (75%) | With husband | - | 9 (9%) | 9 (9%) |
| | With wife | 16 (16%) | - | 16 (16%) |
| | With relations | 10 (10%) | 6 (6%) | 16 (16%) |
| | With family | 15 (15%) | 16 (16%) | 31(31%) |
| | With neighbors | 3 (3%) | - | 3 (3%) |
| Social& Emotional related problems (13%) | Love affairs | - | 5 (5%) | 5 (5%) |
| | Marital dispute | - | 1 (1%) | 1 (1%) |
| | Relationship failure | 2 (2%) | 1 (1%) | 3 (3%) |
| | Loss of member | 2 (2%) | 1 (1%) | 3 (3%) |
| | Emigration of father | - | 1 (1%) | 1 (1%) |
| Financial related problems (6%) | Loan | 3 (3%) | - | 3 (3%) |
| | Loss of property | 2 (2%) | 1 (1%) | 3 (3%) |
| Health related problems (6%) | Disability | 2 (2%) | - | 2 (2%) |
| | Other diseases | 1 (1%) | 2 (2%) | 3 (3%) |
| | Psychiatric disorder | 1 (1%) | - | 1 (1%) |

A number of 75% of those attempted suicide stated that conflict with others was the common reason and it was the pivotal risk factor for suicidal tendency. Conflict with immediate relatives was found as the most common risk factor for attempted suicide, which was shown significant associations with educational status, marital status and age ($P < 0.05$). However, suicide attempts due to financial issues was found to be 6%.

Discussion

The results of this study provide valuable and previously unavailable information about the risk factors of suicidal attempts in Batticaloa district. Most notably, across all countries examined, 60% of the transitions from suicidal ideation to first suicide attempt occurred within the first year of ideation onset. Moreover, risk factors included female gender, younger age, fewer years of education, unmarried status and the presence of a mental disorder, with psychiatric comorbidity significantly increasing risk. Interestingly, the strongest diagnostic risk factors were conflict with others which was found to be the commonest risk factor for attempted suicide. Among those, family conflicts were the major causes for attempted suicide. Patients with social and emotional related issues, financial problems, health related were other causes. But, a study noted that unemployment also as the major cause for attempting suicide (Srivastava et al., 2004).

Present study shows, males have attempted suicides more than females. Similar result was seen in Desilva et al. (2012). The Study shows the peak occurrence of suicidal attempts had occurred in the second and third decades of life. These findings confirm that attempted suicides are rising rapidly among the youths. Contrary to these results, a study in China has reported the peak occurrence of suicides in third and fourth decades (Philipps et al., 2002). Religion has long been regarded as an important factor in suicide and attempted suicide. Research has shown that suicide rates are more in countries where religious practices are prohibited or strongly discouraged and where Buddhism, Hinduism or the Asian religions predominate (Gururaj & Isaac, 2001). Suicidal rates were lower in Muslim community throughout Sri Lanka (Thalangala, 2009). Education is an important risk factor for suicide. The individual with higher educational levels and employed as professionals and semi-professionals constitute less number of suicides and attempted suicides (Arun et al., 2004 and Latha et al., 1996). Present study also shows similar result. It emphasize that low level of education is an important risk factor for suicidal attempt.

The suicidal rate was very high in rural areas in the present study. Upon questioning, it was revealed that social isolation, easy availability of pesticides, greater difficulty in identifying warning signs, limited access to health facility and doctors, and lower levels of education were the possible reasons for this findings. The findings of this study shows that more numbers of suicides are among married people. Whereas WHO reports that divorced, widowed and single people are at a higher risk of suicide than married people (NagendraGouda & SambajiRao, 2008). Further some studies observed more number of suicide attempts in unmarried, divorced and widowed (Latha et al., 1996 and Narang et al., 2000). The main mode of attempting suicide was Yellow oleander (30%) in this study. Opposite to this result, a study done in India has reported the main mode of attempting suicide was organo-phosphorous compounds, followed by self-poisoning with over dosage of drugs and other common household substances (NagendraGouda & SambajiRao, 2008).

Conclusion

Risk factors for suicidal behavior in patients who presented to Teaching Hospital, Batticaloa include conflict with others mainly with close relatives, social & emotional related problems, less likely of financial related problems and health related problems. Most of the attempted suicides were found in rural areas. Frequent mode of attempting suicide was done by chemical & plant poisoning with Yellow oleander poisoning taking precedence. Males have attempted to suicide more than females. Age group between 11 to 20 years and who completed secondary education showed peak occurrence in attempted suicide. Married people have attempted suicide more than unmarried people.

Recommendations

Effective suicide preventive and control measures need to be taken in the form of early identification of suicide-prone individuals. There is an urgent need to institute a national suicide surveillance policy.

Healthcare providers, i.e. primary healthcare doctors, emergency personnel, psychologists, psychiatric nurses, human science professional social workers, clinical psychologists and teachers, should be adequately, and continuously, trained in the following areas:

- Suicide risk assessment and recognition.

- Treatment of medical emergencies owing to attempted suicide and the follow up after acute management, for referral to relevant specialties for further management
- Use of new prevention technologies, by identifying those prone to high-risk suicide behavior.
Further research should be carried out to better understand the risks and protective factors, their effects, and their interaction, on suicide and suicide behaviours.

Limitations

Ours appears to be the first study in Batticaloa district on the factors connected to the attempted suicide. Based on the findings of this study a further well controlled research is needed with adequate sampling to represent the communities.

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