Community Medicine

PATTERN OF DELIBERATE SELF HARM AMONG PATIENTS TREATED AT A TERTIARY CARE HOSPITAL IN KERALA: A CROSS SECTIONAL STUDY

Greeshma George*	MBBS Undergraduate, Amala Institute of Medical Sciences, Thrissur. *Corresponding Author
Dr Jose Vincent	Assistant Professor, Department of Community Medicine, Amala Institute of Medical Sciences, Thrissur.

ABSTRACT

Background:- Deliberate self-harm is cited as an emerging menace to global public health which needs specific intervention measures to reduce its contribution to the Global Burden Of Disease.

Methods:- This record based cross-sectional study aimed to determine the current pattern of deliberate self-harm amongst 181 cases treated from March 2018 to July 2019 by analysing case sheets filed at the Medical Records Library.

Results:- Poisoning (72.9%) was the most frequently used mode of deliberate self-harm followed by hanging (17.1%). Drug overdose accounts for 47.4% of poisoning cases of which Paracetamol, being the most commonly employed drug in 35.9% of drug poisoning cases. The most affected was the young age group (15-24 years) with a female preponderance. Alcohol dependence as a precipitating factor was identified only among males while Interpersonal relationship issues, Marital Discord were the most common among females.

INTRODUCTION

Deliberate self-harm is an important risk factor for subsequent suicide.

This is a retrospective analysis conducted to formulate the current pattern of Deliberate Self Harm among cases treated at a tertiary care hospital, Amala Institute Of Medical Sciences, Thrissur. These findings will assist in the recognition of those at risk and devise prevention strategies.

Southeast Asia accounts for roughly 40% of the estimated 800000 annual suicide deaths globally,(1) and is the frontline for delivering on the aspirational Sustainable Development Goal (SDG) of a one-third reduction in the suicide death rate (SDR) by 2030.(2) Globally, suicide is now the second leading cause of death among young people 15 - 29 years of age (1) With 18 per cent of the world's population living in India, 'addressing suicides in India is imperative to making a global difference in the burden of suicides'.(3)

A recent highlight has been the Mental Health Act 2017 through which there have been moves to decriminalise suicide. A pivotal next step will be to carry this momentum towards the development of a national suicide prevention plan.(2)

Poisoning, drug overdose and hanging have been reported as the most used means of suicide.(4,5) Personal or social factors such as socioeconomic circumstances, interpersonal, social and cultural conflicts, alcoholism, financial problems, unemployment, and poor health are known as major reasons for suicide in India for both men and women.(5–7) Married women account for the highest proportion of suicide deaths among women in India. (8) It has been found that aggression/impulsivity, severe alcoholism, negative affect, major depressive episodes and stressful life events, particularly interpersonal difficulties, are key predisposing factors for suicide among alcoholics.(9) In Western countries, there is a strong relation between mental illness and suicide, however, in Asia, this relation is much less pronounced.(10)

METHODS

A record based cross-sectional study aimed to determine the current pattern of deliberate self-harm was undertaken amongst 181 cases treated from March 2018 to July 2019 at a tertiary care hospital, Thrissur, Kerala by obtaining patient details from case sheets filed at the Medical Records Library. Data regarding precipitating factors, method of deliberate self-harm, psychiatric diagnosis, prior history of illness, history of alcohol intake or substance abuse, regular medications and family history were collected from the patients' medical records and was entered into Excel sheet. Institutional ethics committee clearance was obtained. Confidentiality was ensured and maintained throughout the study. Categorical variables were expressed as proportions and quantitative variables as mean and standard deviation. Statistical tests of significance included Chi-square test for categorical variables and Students t test for quantitative variables. Analysis of data was done using SPSS.

RESULTS

Demographic Characteristics

The age of the cases ranged from 13 years to 80 years. The most common age group was 15 – 24 years (74;40.8%). There were 62 males (34.3%) and 119 females (65.7%). The male mean age was 37.2 ± 15.7 SD years. The female mean age was 28.8 ± 12.0 SD years. The proportion of cases of either sex in different age groups reveals that females who attempt suicide were younger than males with 75.7%(56) of females falling in 15 – 24 years age group and 38.7%(12) aged above 45 years, whereas for males the corresponding figures were 24.3%(18) and 61.3%(19) as shown in Table 1. There was a statistical difference in age between the sexes ($P<0.05$; Students t test) as demonstrated in Figure 1.

Table 1 – Characteristics Of Study Population

Age	Gender		Total
	Female	Male	
<15	1(100)	0(0)	1
15-24	56(75.7)	18(24.3)	74
25-34	35(76.1)	11(23.9)	46
35-44	15(51.7)	14(48.3)	29
≥45	12(38.7)	19(61.3)	31
Total	119(65.7)	62(34.3)	181
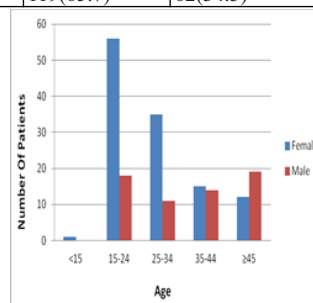
Figure 1 – Distribution of Deliberate self-harm by Age and Gender

Method of DSH

Poisoning (74%) was the most frequently used mode of deliberate self-harm followed by hanging (29;16%). There were 134 cases of self-poisoning, 46(25.4%) used self-injury alone and 1 (0.6%) employed both self-poisoning and self-injury. The types of self-injury were hanging, suicidal cut over wrist or throat, drowning and jumping into a well (Table 2).

Of cases of self-poisoning, 42 (31.3%) were males and 92 (68.7%) were females. Drug overdose accounts for 47.4% (64) of poisoning cases of which Paracetamol, being the most commonly employed drug in 35.9% (23) of drug poisoning cases. Other drugs included antihypertensives, oral hypoglycaemics, thyroxine, antiepileptics,

antipsychotics, and antihistamines. Other agents employed were house cleaning supplies (35;26%), Organophosphate pesticides (17;12.6%), rodenticides (11;8 %), and kerosene (8;6%).

Table 2 – Methods used in DSH

Method Of DSH	Gender		Total
	Male	Female	
Drowning	1(50)	1(50)	2(1.1)
Hanging	14(48.3)	15(51.7)	29(16)
Jump into well	0(0)	1(100)	1(0.6)
Poisoning	42(31.3)	92(68.7)	134(74)
Suicidal cut over wrist	5(35.7)	9(64.3)	14(7.7)
Suicidal cut throat & Poisoning	0(0)	1(100)	1(0.6)
Total	62(34.3)	119(65.7)	181(100)

Precipitating Factors

Precipitating factors were known only in 140 (77.3%) cases. The most common were interpersonal relationship issues, present in 35 (25%) cases, followed by marital discord (32, 22.8%). Other precipitating factors included depression (16;11.5%), disapproval of love affair (15;10.7%), financial stress (13;9.3%), alcohol dependence (8;5.7%), psychosis (8;5.7%), stress (7;5%), failure in exam (5;3.6%) and bereavement (1;0.7%).

Comparing the precipitating factor for Deliberate Self Harm, Alcohol dependence(8;100) as a precipitating factor was identified only among males while Interpersonal relationship issues (39;76.5%), Marital Discord (29;90.6%) were the most common among females (p < .00; Chi-square test). On assessment of association between precipitating factors and age, Marital Discord (23;71.9%), alcohol dependence (6;75%) were the most common among 25-50years whereas Interpersonal relationship issues (29;56.9%) were significant among <25 years (p < .00; Chi-square test).

Medical Comorbidities

Of 173 subjects, 25.4% (44) had a medical comorbidity. Patients with a history of chronic illness (31;17.1%) opted self-poisoning (25;18.7%) over others as a method of deliberate self-harm (p=0.049; Chi-square test).

Psychiatric Comorbidities

Psychiatric comorbid was identified in 99(54.7%) patients. Among psychiatric illness, Mood disorders (29;76.3%) and Personality disorders (27;90%) were significant among females as compared to Alcohol dependence (11;100%) among males (p<0.00; Chi-square test). Personality disorders were diagnosed in 17(56.7%) patients aged <25 years while Mood disorders (21; 55.3%) and Alcohol dependence (7; 63.6%) were significant among 25-50 years (p<0.00; Chi-square test).

Prevalence of Risk Factors

In this study populatioin, 27 (14.9%) were under psychiatric treatment at the time of DSH. Of these, 7 (25.9%) were on antidepressants, 2 (7.4%) were using benzodiazepines, 10 (37%) were on antipsychotics. 18.2 % (33) had previous history of deliberate self-harm. Assessing the familial risk factors, 18 (9.9%) patients had a family history of psychiatric illness and 16 (8.8%) with a history of deliberate self-harm in family. Forty (22.1%) patients had history of substance abuse, which included alcohol (32), opioids (4), and others (4). Sleep disturbances were recorded in 78 (43.1%) patients.

DISCUSSIONS

The World Health Organization (WHO) also estimates that for every suicide there are 10–20 attempts at suicide. Deliberate self-harm needs to be prioritised as a 'modern epidemic' which requires a multisectoral suicide prevention strategy.

The results of this study support some of the earlier findings with regard to DSH from southern India.(7) Poisoning (74%) was the most frequently used mode of deliberate self-harm followed by hanging (16%), similar to previous studies.(5) Drug overdose (47.4%) was the most common mode of self-poisoning, of which Paracetamol, being the most commonly employed drug in 35.9% of drug poisoning cases, whereas organophosphates have been reported as the most common mode of self-poisoning in the developing world. 12.6% of our subjects used organophosphate insecticides. The most common age group was 15 – 24 years (40.8%). Females constituted majority of the study population similar to study conducted in Western Nepal.(11) Female

suicide is exceptionally high by international standards and must be a core focus. Addressing the risk factors such as alcohol dependence associated with male suicides might help reduce female suicide rates.

The majority of cases reported that a precipitating factor led to their act of DSH. Males reported alcohol dependence and financial stress as precipitating factors for DSH more often than females. 22.1% of our subjects had a history of substance abuse. Alcohol and drugs like cocaine and marijuana have been associated with youth suicide and suicide attempts in other settings.(12)

Patients with a history of chronic illness opted self-poisoning over others as a method of deliberate self-harm (p=0.049). 79% of patients were offered a psychiatric consultation. Of those given a psychiatric consultation, 36.9% were diagnosed as suffering from depression, requiring further psychiatric treatment.

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