Original Research Article

Socio-Demographic Characteristics of Adult Females with Self-Poisoning in A Tertiary Care Hospital

Abstract

Background: *Suicide in Bangladesh is a common cause of unnatural death and a long-term social issue. Self-poisoning is a common medico-social problem in our country causing around 300,000 episodes and around 2000 deaths per year. The incidence, etiology, nature, age group of affected persons and the outcome of self-poisoning in our country is different from that of the Western world. It is said that the number of self-poisonings in females is increasing in our country day by day.* ***Aim of the study:*** *This study aimed to evaluate the socio-demographic characteristics of adult females with self-poisoning.* ***Methods:*** *This was a descriptive type cross-sectional study that was conducted in the Department of Medicine, Dhaka Medical College Hospital, Dhaka, Bangladesh during the period from January 2016 to June 2016. In total 100 adult female patients with self-poisoning were enrolled in this study as study subjects. Properly written consent was taken from all the participants before data collection. All data were processed, analyzed, and disseminated by using MS Excel and SPSS version 23.0 program as per necessity.* ***Results:*** *The mean age of the participants was 28.19±9.84 years. Most of them were from rural (62%), 75% were Muslim, 55% were from a joint family, 'housewife' (30%) was the most common occupation, 51% of cases were from lower economic class, 48% patients had the educational status of primary level, 51% patients were married. Most of the self-poisoning occurred between 6 am to 12 pm (42%), insecticide was the most common poison material (43%), and most of the self-poisoning patients had no previous illness (81%) in this study.* ***Conclusion:*** *Younger-aged females are more prone to commit deliberate self-poisoning and most of them are housewives or students. The majority of the participants are from low socioeconomic conditions and illiterate with rural backgrounds. Daytime is the peak period for committing self-poisoning and insecticide is the most common material for self-poisoning in females. Among the reasons behind self-poisoning, familial disharmony, and romantic disappointment are the most frequent.*

Keywords: *Socio-demographic characteristics, Adult females, Self-poisoning, Social issue.*

1. INTRODUCTION

A self-poisoning episode may be defined as the self-exposure of an individual by ingestion or inhalation of an amount of substance associated with significant potential to cause harm. [1] Self-harm has often been thought of as a problem particular to the industrialized world. Suicide is becoming a public health concern in many countries among adult males and females. [2] Females are more likely to have suicidal tendencies than males. [3] Suicide and suicidal ideation is a significant issue in many countries [4]. Suicide is the tenth leading cause of mortality among adults in the USA. [5] A large-scale epidemiologic study conducted in the USA showed 19% of adults had reported suicidal ideation, 15% made a specific plan to attempt suicide, 8.8% reported a suicide attempt and 2.6% require significant medical attention. [6] The major method of suicide in adult males and females is reported to be deliberate self-poisoning. [6,7] Suicidal behavior is an increasing phenomenon, especially in adult females, and is a significant public health issue in Bangladesh. However, there are very few studies that have been carried out evaluating and focusing on our adult female population about attitudes toward suicide and suicidal behaviors. [8] A Turkish study revealed some common factors in the case of adult female suicides which were family conflicts, quarrel with spouse, and psychiatric disorders. [9] Although factors for self-harm tendency among adult females are more or less the same worldwide the poisoning agents involved in self-harm in adult females are different. Because the poisoning agents option is mainly based on the social structure, economic status, educational level, awareness of people, and availability of poisoning substances. [10] Agrochemical pesticides are considered a major public health problem throughout the developing world. [11] Bangladesh is a developing country that mostly depends upon agricultural resources. Organophosphorus compounds are widely used as insecticides in the agricultural sector by the farming community. A study demonstrated that 7% of all deaths among 10-50 years old females in Bangladesh were due to poisoning and the majority of them followed suicidal ingestion of pesticides. [12] Another study demonstrated that 44% of all deaths amongst 10-50-year-old women in Bangladesh were due to poisoning, the majority following suicidal ingestion of pesticides. [13] In urban areas of Bangladesh, deliberate self-poisoning in adult females by insecticide is uncommon and mostly by sedative drugs such as benzodiazepines. A study [10] conducted in

Dhaka Medical College Hospital in the year of 1994 showed that 36.3% of cases of self-poisoning were due to benzodiazepines and there was no death from benzodiazepines poisoning.

2. METHODOLOGY

This was a descriptive type cross-sectional study that was conducted in the Department of Medicine, Dhaka Medical College Hospital, Dhaka, Bangladesh during the period from January 2016 to June 2016. In total 100 adult female patients with self-poisoning were enrolled in this study as study subjects. Properly written consent was taken from all the participants before data collection. The study was approved by the ethical committee of the mentioned hospital. The whole intervention was conducted under the principles of human research specified in the Helsinki Declaration [14] and executed in compliance with currently applicable regulations and the provisions of the General Data Protection Regulation (GDPR) [15]. As per the inclusion criteria of this study, all adult female patients who were admitted to medicine units of Dhaka Medical College Hospital with a history of deliberate self-poisoning by different substances and who were eligible to or whose attendant gave consent for this study were included. On the other hand, according to the exclusion criteria of this study, self-poisoned patients who were not adults, with a history of accidental, homicidal, or travel-related poisoning, and were unwilling to give informed consent by patients or patients' legal guardians were excluded. All the demographic and clinical data of the participants were recorded. A predesigned questionnaire was used in data collection. All data were processed, analyzed, and disseminated by using MS Excel and SPSS version 23.0 program as per necessity.

3. RESULT

In this study, the mean age of the participants was 28.19±9.84) years. The highest number of the study patients were from the 21-29-year age group (42%) followed by 29% from ≤20 year's 15% from 30-39 years, 8% from 40-39 years, and 6% from ≥50 year's age groups. Most of the self-poisoning patients (62%) were from rural and 38% of patients were from urban areas. Among self-poisoning patients, 75% were Muslim, and 25% patients were Hindu; 55% were from a joint family and 45% were from the nuclear family; 17% of patients reported previous suicidal attempts. In this current study, we found that housewife (30%) was the most common occupation in self-poisoning adult female patients, followed by student (25%), unemployed (13%), housemaid (12%), garment worker (8%), day labor (7%) and service holder (5%). Most of the self-poisoning patients were from the lower economic class (51%), followed by middle class (41%) and (8%) patients were from the upper class. In self-poisoning patients, 48% of patients had the educational status of primary level, 24% of patients had a secondary level, 22% patients had no education and 6% patients had graduate or above educational level. Most of the self-poisoning patients were married (51%), followed by unmarried (35%), divorced (9%), and widowed (5%) in this study. Most of the self-poisoning occurred between 6 am to 12 pm (42%), followed by 6 pm to 12 am (30%), 12 pm to 6 pm (20%), and 12 am to 6 am (8%). Insecticide was the most common poison material (43%), followed by drug ingestion (30%), household detergent (13%), rodenticide (6%), and others (8%) in this study. Most of the self-poisoning patients had no previous illness (81%). Besides this, 11% of patients had a previous psychiatric disorder and 8% of patients had a previous medical illness.

Table 1: Distribution of the study participants by age. (N=100)

Age (In the year)	Frequency (n)	Frequency (%)
≤20 yrs.	29	29.0
21 -29 yrs.	42	42.0
30 -39 yrs.	15	15.0
40- 49 yrs.	8	8.0
≥50 yrs.	6	6.0
Mean ±SD age	28.19 ± 9.84	
Age range	18-55 years	

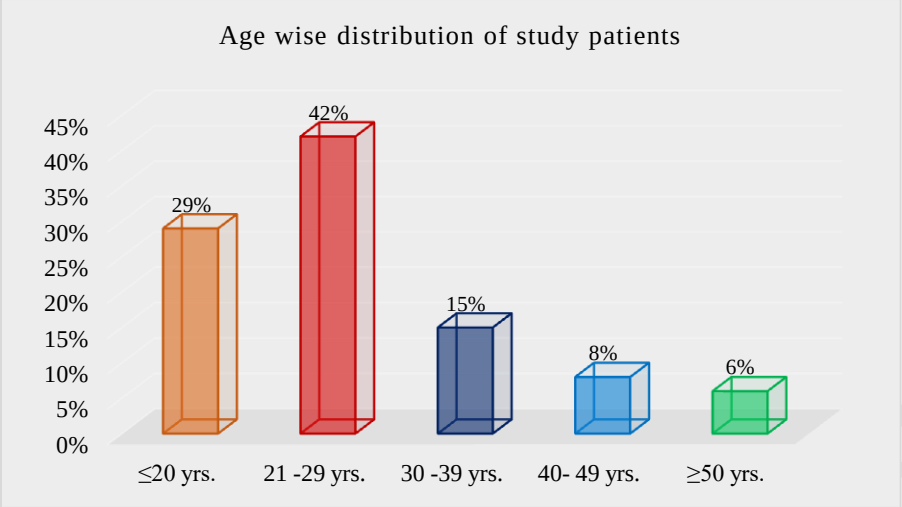

Figure I: Age-wise distribution of the study patients. (N=100)

Table 2: Distribution of the study participants by residence. (N=100)

Residence	Frequency (n)	Percentage (%)
Rural	62	62.0
Urban	38	38.0

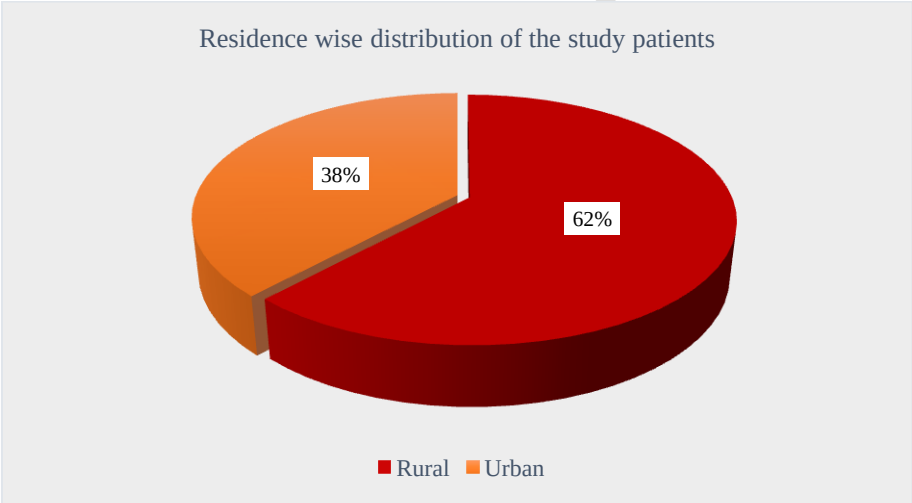

Figure II: Residence-wise distribution of the study participants. (N=100)

Table 3: Distribution of the study participants by religion. (N=100)

Religion	Frequency (n)	Percentage (%)
Muslim	75	75.0
Hindu	25	25.0

Table 4: Distribution of the study participants by type of family. (N=100)

Type of family	Frequency (n)	Percentage (%)
Joint	55	55.0
Nuclear	45	45.0

Table 5: Distribution of the study participants by occupation. (N=100)

Occupation	Frequency (n)	Percentage (%)
Student	25	25.0
Housewife	30	30.0
Unemployed	13	13.0
Housemaid	12	12.0
Garment worker	8	8.0
Day labor	7	7.0
Service holder	5	5.0

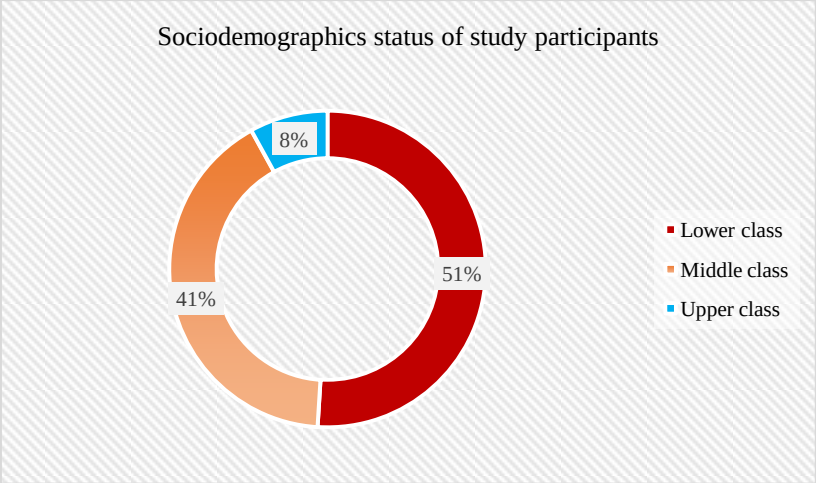

Figure III: Sociodemographic status of the study participants. (N=100)

Table 6: Distribution of the study patients by educational status. (N=100)

Educational status	Frequency (n)	Percentage (%)
Illiterate	22	22
Primary level completed	48	48
Secondary level completed	24	24
Graduate or above	6	6

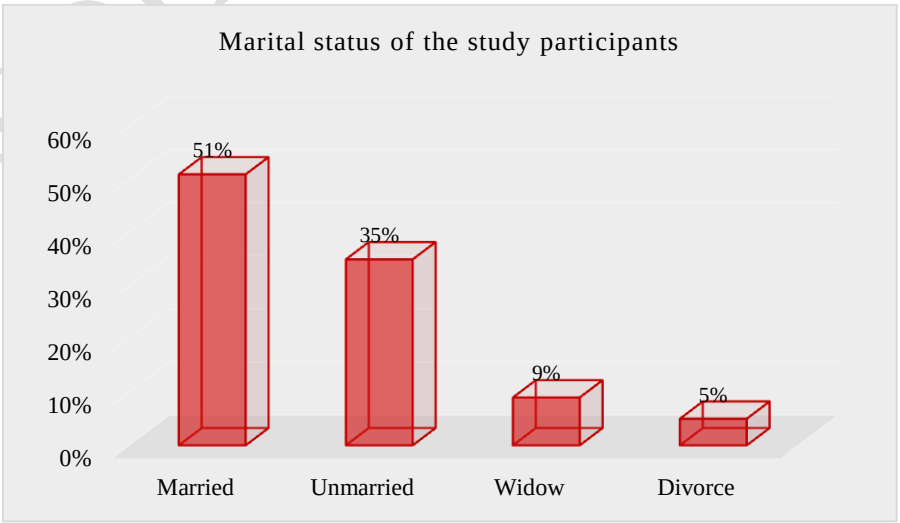

Figure IV: Marital status of the study participants. (N=100)

4. DISCUSSION

This study aimed to evaluate the socio-demographic characteristics of adult females with self-poisoning. In our study, most of the victims of self-poisoning were from the 21-29 years of age group (42%) followed by ≤20 years (29%), 30 -39 years (15%), 40 - 49 years (8%) and >50 year's (6%) age groups. Younger aged females were found the prone to self-poisoning than older age. The age of the patients ranged from 18 to 55 years with a mean age of 28.19±9.84 years. All these findings correlate with other studies at home and abroad. A cross-sectional study carried out at a teaching hospital in Peradeniya, Sri Lanka [16] revealed that the median age of self-poisoning patients was 22 years and 61% of the participants were below 25 years. So, younger females were more involved in self-poisoning than older females. It was found that, the majority of the patients comprised housewives (30%) followed by students (25%), unemployed (13%), housemaids (12%), garment workers (8%), day laborers (7%), and service holder (5%). Findings were similar to the study of Dewan [17] where 18.3% of patients were students, 16.7% were housewives, 11.7% were unemployed, and 1.7% were service holders. The current study showed that most of the self-poisoning females were from the lower economic class (51%) followed by the middle class (41%) and upper class (8%). These findings were similar to other Bangladeshi studies where 48% were from the low-income group, 47% from middle-income, and 5% from the high-income group. [18] In this study, the maximum number of patients had education level primary (48%) followed by secondary (24%), illiterate (22%), and graduate or above 6%. A report by WHO [19] showed that educational status has an impact on suicidal tendencies. The illiterate and low-level educated females are a more vulnerable group to suicide. Our study findings were also consistent with the report. In the current study, most of the self-poisoning patients were married (51%) followed by unmarried (35%), divorced (9%), and widow (5%). These findings were in agreement with the findings of Howlader et al, [20] The study which was done in 2007 at Sir Salimullah Medical College Hospital showed that the highest number (62%) of the patients were married, 20% were unmarried and 12% were separated. In our study, the majority of the patients were from rural backgrounds (62%). This finding correlates with a report by WHO [19], which demonstrated that a higher percentage of rural areas in cases of self-poisoning in females. In this study, 75% of patients were Muslim by religion and 25% of patients were Hindu. The study by Rahman et al. [21] showed that 93.2% of the respondents were Muslim and 6.8% were Hindu. In the present study, 55% were from the joint family and 45% were from the nuclear family. These findings were almost similar to that of the study by Rahman et al [21] where they stated that 74.6% lived in a joint family and 25.4% in a nuclear family. But this result differed from Narang et al. [22] and Srivastava et al. [23] In this study, most of the self-poisoning occurred between 6 am to 12 pm (42.6%) followed by 6 pm to 12 am (30%), 12 pm to 6 pm (20%) and 12 am to 6 am (8%). Rahman et al [21] reported similar findings that most of the respondents attempted to commit suicide between 6 am to 12 pm (45.5%), others between 6 pm to 12 am (27.1%), 12 pm to 6 pm (22.0%) and 12 am to 6 am (5.1%). Ali et al. [24] In this study insecticides were the most common poison (43%), followed by drug ingestion (30%), household detergent (13%), rodenticide (6%), and others (8%). This result was supported by Dhanya et al. [25] that the most common substance used in poisoning was pesticides accounted for 37.3% followed by unspecified drugs accounted for 17.9%. In the present study, most of the self-poisoning patients had no previous illness (81%), 11% of patients had a previous psychiatric disorder and 8% of patients had a previous medical illness. Sorodoc et al. [26] found previous psychiatric disorders in 13.81% of the cases. Rahman et al [21] found that 11.2% of patients had a history of psychiatric disorder. Our result was also consistent with Ali et al. [24] where it was reported that 16.2% of suicide attempters had a previous history of psychiatric disorder.

Limitation of the study:

This was a single-centered study with small-sized samples. Moreover, the study was conducted in a very short period. So, the findings of this study may not reflect the exact scenario of the whole country.

5. CONCLUSION & RECOMMENDATION

From the present study, it is found that younger aged females are more prone to commit deliberate self-poisoning and most of them are housewives or students. The majority of the participants are from low socioeconomic conditions and illiterate with rural backgrounds. Daytime is the peak period for committing self-poisoning and insecticide is the most common material for self-poisoning in females. Among the reasons behind self-poisoning, familial disharmony, and romantic disappointment are the most frequent. A small but significant percentage of these female participants had a previous history of suicidal attempts and psychiatric illness. As

evident from the study, by intervene in these problems by various measures might be helpful to prevent deliberate self-harm. Early diagnosis and prompt institution of appropriate treatment can make a favorable outcome in deliberate self-poisoning participants.

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