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Fatal Deliberate Self-harm in Adolescents- A Manipal Perspective

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ABSTRACT

An autopsy study of fatal deliberate self-harm in adolescents (10-19 years) was undertaken in the Department of Forensic Medicine, Kasturba Medical College, Manipal, South India, over a period of 5 years (2005 to 2009). Nearly four percent (31 cases) of the total unnatural deaths in whom autopsy was conducted at our mortuary were due to suicide in adolescent age group, which formed the material for the present study. Adolescents in the age group 15-19 years predominated. Females outnumbered males. Poisoning was the most common method employed to commit suicide. Organophosphorous poison was consumed in overwhelming majority of the cases. Disgust in life was the motive in nearly one third of the cases. Deaths occurred more during the day time and inside the house during the summer months.

Keywords: Adolescent, disgust in life, fatal deliberate self-harm, poison, organophosphorous.

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INTRODUCTION

Suicide has become one of the common causes of mortality in young and adolescent population. Suicidal behavior remains a vital clinical problem and a major cause of death in youth. There are crucial issues that need to be solved for better forecast of suicidality, prevention and treatment of youth suicide.

For proper assessment of cause and manner of death in such fatalities, it is important to have awareness about trends, risk factors, methods as well as pitfalls [1].

Adolescent deaths are carefully analyzed by several different government agencies, fatality review panels, researchers, and other groups. Many such deaths, especially those that involve external causes such as injury and poisoning, are responsive to prevention.

Characterizing the causes and circumstances of non-natural adolescent deaths may provide information that is useful for development of prevention strategies and programs.

Although data exists in this part of the country for suicides in overall age group, but same cannot be said of adolescent suicide.

The purpose of the present study is to generate data in relation to adolescent suicides in this part of the country which will help in identifying trends and patterns that may help in its prevention.

MATERIALS AND METHODS

The present study is a retrospective research which analyses 31 adolescent victims (10-19 years of age) of suicidal deaths from the medico legal autopsies done at the department of Forensic Medicine, Kasturba Medical College, Manipal, Karnataka State over a span of five years (2005-2009). The mortuary of the Kasturba Hospital, under the department of Forensic Medicine, conducts the medico legal autopsies referred from Manipal Police Station and also those referred from adjoining police stations of Karnataka, Kerala & Goa. Data was obtained from the autopsy files, police inquest reports, RFSL reports & hospital case records. The manner of death was construed as suicide based on the police inquest report.

RESULTS

A total of 878 medico legal autopsies were conducted during the study period & 161 cases were deaths due to suicide out of which 31 victims (3.5%) belonged to the age group of 10-19 years. Age group 15-19 years were commonly involved (Figure 1). Females outnumbered male victims (Figure 2). More than two thirds of the decedents allegedly died due to suicidal poisoning (Table 1). Organophosphorous insecticide was the involved agent in overwhelming majority (Table 2). Disgust in life was the most common motive to terminate life (Table 3). Majority of the suicides occurred indoors (Figure 3). Suicide was more during day time (Figure

4). More than one-third of the victims (34.6%) committed suicide during the summer months (Figure 5).

Table 1. Method employed

Method (n=31)	No of cases	Percentage
Hanging	04	12.9
Poisoning	21	67.7
Burns	04	12.9
Drowning	02	6.4

Table 2. Compound consumed

Compound (n=21)	No of cases	Percentage
Organophosphorous	16	76.2
Organochloro	01	4.8
Carbamate	03	14.3
Zinc phosphide	01	4.8

Table 3. Motive for suicide

Motive (n=31)	No of cases	Percentage
Physical illness	05	16.1
Mental illness	01	3.2
Financial problem	02	6.4
Disgust in life	11	35.5
Failure in love, studies	08	25.8
Not known	04	12.8

Figure 1 Age distribution

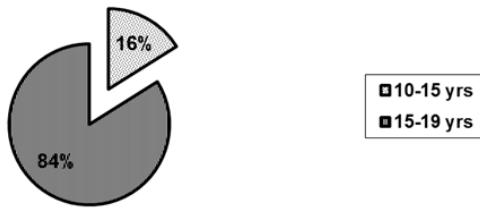


Figure 2 Gender differences

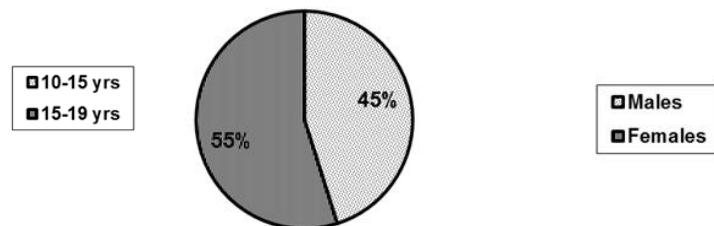
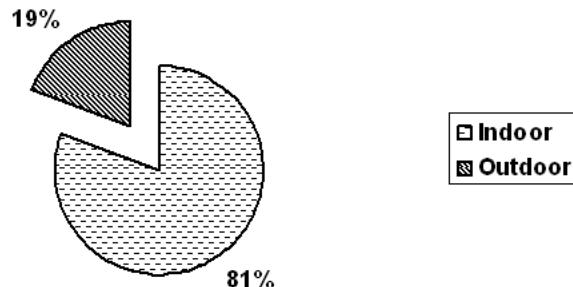
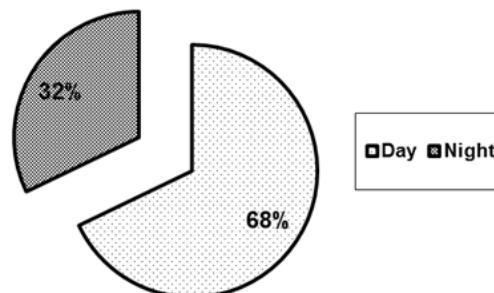
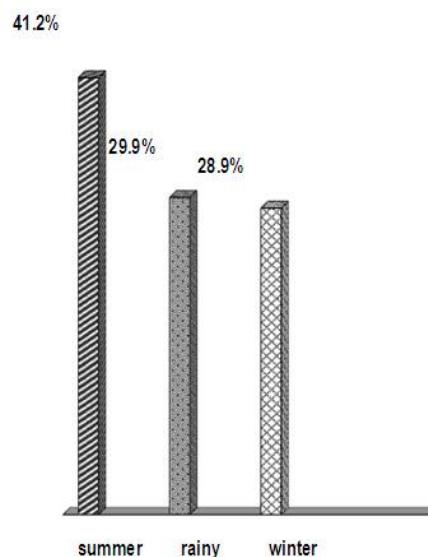


Figure 3. Place of occurrence

Figure 4. Diurnal variation

Figure 5. Seasonal variation


DISCUSSION

Deaths due to suicide in adolescents were 3.5% of total deaths due to which autopsy was conducted at our center. This is comparable with other reported works which varies from 2-12 % [2-4].

The most common age group involved was 15-19 years. This finding is consistent with other works [2-5]. At these ages most young person feel increased pressure from parents, friends and themselves concerning marks, jobs, sex and future plans.

Females outnumbered male victims in the present study. Similar findings were observed in studies from South Delhi [3] and Turkey [5]. However another study observed a male predominance [4]. Psychological disorders like anxiety, depression etc. may occur more often in females which may manifest more during adolescence. Social factors like subordinate roles of females may also contribute to increased frustration in them.

Majority of the decedents allegedly died due to suicidal poisoning. Other studies mention hanging as the most common method employed to terminate one's own life [3,4 & 6] whereas in other studies reported firearms predominated [2,5]. Data from Brazil suggests the most common methods of suicide in males were hanging and firearms and that in females was poisoning [7]. The choice of the method depends on availability, easy accessibility and the probability of the method which ensures a painless death.

Organophosphorous insecticide was the involved agent in vast majority of the cases. This is because of its easy availability since it is the common insecticide which is used for crops and whenever there is a tendency to commit suicide it is readily available in hand. Report from South Delhi suggests aluminium phosphide to be more common [3].

Disgust in life was the most common motive to commit suicide. Data from Turkey showed psychiatric disorders followed by family troubles as the motive responsible [5]. Depression was common motive in other work [4].

Children and adolescents exhibiting suicidal behaviour reported significantly more general mental health problems, depressive symptoms, anxiety, and hyperactivity as well as lower health-related quality of life [8].

Majority of the suicides occurred indoors. Similar findings were observed in other works [3-5]. Generally the victim prefers to commit suicide in surroundings familiar since they provide easy access to all the facilities required to complete the desired act without giving much time for reconsideration.

The incident occurred more during the day time. During the day, the stress could be in its peak and so is the tendency to end one's own life.

The suicides more commonly occurred during summer months. Similar findings were also noted in other study [3]. Stress due to examinations, results etc. may be at its peak during these months which may be responsible for the increased incidents in these months.

Extending psychiatric services to the community may help in identifying the high risk adolescents who are likely to commit deliberate self-harm. Effective legislation governing the sale of poisons.

Parental education and intensified supervision of adolescents are the indicated measures of prevention for intentional poisoning.

Poison prevention efforts should also discourse the suitable role of the poison information centre.

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