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Original Article

Suicide in Young Age Group

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Abstract

This paper presents the study of 200 cases of death which were 'suicidal in nature' received in the dept. of Forensic Medicine, Sylhet M A G Osmani Medical College, Sylhet, Rajshahi Medical College, Rajshahi, Comilla Medical College, Comilla and Faridpur Medical College, Faridpur for Post Mortem examination (PME), during the period of 2007 to 2009, The post mortems were conducted by the authors. Out of 200 PME of Suicide cases 98 (49%) were hanging by neck, 86 (43%) were poisoning and 16 (8%) by other methods.

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Introduction

A 2006 report by the World Health Organisation (WHO) states that nearly one million people take their own lives every year, more than those murdered or killed in war. WHO figures show a suicide takes place somewhere in the world every 40 seconds. Suicide rates are highest in Europe's Baltic states, where around 40 people per 100.000 die by suicide each year. Data about Bangladesh is not available.

Table 1: Suicides per 100,000 people per year

Rank	Country	Year	Male	Female	Total
1	Lithuania	2005	68.1	12.9	38.6
2	Belarus	2003	63.3	10.3	35.1
3	Russia	2004	61.6	10.7	34.3
4	Kazakhstan	2003	51.6	8.9	29.2
5	Slovenia	2003	45.0	12.0	28.1
6	Hungary	2003	44.9	12.0	27.7
7	Latvia	2004	42.9	8.5	24.3
8	Japan	2004	35.6	12.8	24.0
9	Ukraine	2004	43.0	7.3	23.8
10	Sri Lanka	1996	*NA*	*NA*	21.6

In most countries the incidence of suicides is higher than the incidence of intentional homicides. Suicides represent a big proportion of unnatural deaths, accounting for more fatalities than motor vehicle accidents and homicides in many communities including Bangladesh.

Methods of suicide vary among countries and between regions influenced by the availability of materials required for the fatal episode and ideas of what constitutes an appropriate and effective lethal technique. The latter perceptions may be influenced by the age and sex of victims. Though suicide rates have remained relatively stable in a number of western countries, there have been marked changes in rates in different age groups. For example, a decline in number of victims over the age of 65 has been counter-balanced by an increase in numbers of suicides in young adult males since the 1960s. This change has been noted in the western community like USA, Canada, and in parts of Europe. This change has also been

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noted in Australasia, Male suicide rates are generally higher than female rates, except in countries such as China and Macedonia (Table 2).

Table 2: Selected national suicide rates for 15-19 year olds per 100,000 population

Country	Male rate	Female rate
Macedonia	1.8	3.7
Greece	2.3	0.5
China	3.9	6.4
United Kingdom	6.3	2.0
France	7.6	2.9
USA	4.9	3.2
Australia	17.5	5.4
Canada	19.1	4.9
Russian Federation	34.5	8.5

Data from Pelkonen M, Marttunen M (2003) Child and adolescent suicide: epidemiology, risk factors, and approaches to prevention. Paediatric Drug 5: 243-265.

Self-Destruction Methods

Self-inflicted injuries may be lethal or non-lethal. Lethal events are most often due to hanging, carbon monoxide toxicity, agricultural poison overdose, drug overdose, shooting, cutting or stabbing, drowning, suffocation, vehicle or train-related trauma, jumping from heights, electrocution, or burning. In Bangladesh hanging, agricultural poison overdose, drug overdose are common diagnosed methods. Jumping from heights, drowning and flame burn related suicide is very difficult to ascertain in Bangladesh and are mainly mixed with accidental deaths.

Preferred methods of suicide change over time and vary from community to community. For example, in Bangladesh hanging has become more common in females in recent years, whereas self-immolation and ingestion of caustic substances, methods favored in certain other countries, are relatively rare in western communities. Changes in methods may reflect substitution of al more available method for another. The decline in deaths due to drug overdose may have been influenced by reduced prescribing of barbiturates and other hypnotic drugs.

Methods that are chosen to terminate life also differ between the sexes, with females traditionally opting for less violent means such as drug or poison ingestion. This contrasts with males, who have tended to adopt more violent means of self destruction, such as hanging and cut throat.

Pathological Problems

Determination of the manner of death in certain cases of possible suicide may be difficult, resulting in misreporting in official data in inquest report done by police department in Bangladesh. For example, falls from heights may be accidental or intentional, or even homicidal if others were present. Drowning and heroin overdoses may represent accidents or suicides. Deaths on train tracks or in fires may be suspicious. There may also be under-reporting of suicides at very young ages. For this reason, careful evaluation of cases in important prior to assigning a particular manner of death.

Gender & Suicide

In the United States, males are four times more likely to die by suicide than females (Table 2). Male suicide rates are higher than females in all age groups (the ratio varies from 3:1 to 10:1). In our study of 200 cases male female rate in 11:9.

Youth Suicide

Suicide in the young has received considerable media attention in recent years; however, there has been a lack of clarification of terminology. For example "youth" has been used to refer not only to adolescents, but also to young adults, extending in some studies up to 29 years. The rates of suicide and predisposing factors in individuals aged between 25 and 29 years are different from rates and characteristics in the 15-19 year old age group. Thus, grouping these two quite disparate populations has confused interpretation of data.

Characteristics of suicide in the young include male gender, mental illness with a history of mental health care, substance abuse, exposure to childhood sexual abuse, poor parental relationship, prior suicide attempts, low educational level, and stressful life events. Suicides in the young often occur in and around the home. Precipitating

factors are different in the elderly, for whom issues such as chronic illness. debility, social isolation and spousal loss are of greater significance.

Material & Methods

During the study period of 2007 to 2009 total 7345 autopsy was performed in the dept. of Forensic Medicine, Sylhet M A G Osmani Medical College, Sylhet, Rajshahi Medical College, Rajshahi, Comilla Medical College, Comilla and Faridpur Medical College, Faridpur. From them random 200 suicidal deaths in between age 11-29 years data was used for this study. Age group was again categorized under 17 and over 17 group.

Study Results

Results of a study comparing the characteristics of suicides under 17 years in different Medical College Autopsy reports in Bangladesh are summarized in Table 3 and Table 4. The 200 cases of suicide in the study accounted for only a low % of the total number of suicides over the study period from 2007 to 2009 in whole over Bangladesh. The average age of the males was 33 years and of female was 26years. Table 3 of under 17 years of age shows 24 (42.86%) out of 56 total cases died due to hanging of them male female ratio was 1.4:1. 27(48.21%) died due to poisoning, and of them male-female ratio was 1.1:1/6. Study shows more female liked poisons instead of hanging in these group and male choices hanging more than poisons. Poisoning is at the peak of choice in these group.

Table 3: Suicide by methods used and sex of victims in 56 cases under 17 years of age

Method	Male	Female	Combined
Hanging	14	10	24 (42.86%)
Poisoning	11	16	27 (48.21%)
Run over by train	1	0	1 (1.78%)
Others	0	4	4 (7.14%)
Total	26	30	56

Table 4 of over 17 years of age shows 74 (51.39%) out of 144 total cases died due to hanging; of them male-female ratio was 5.1:2.3. 59 (40.97%) died due toe poisoning, and of them male-female ratio was 2.8:3.1. Study shows more female liked poisons instead of hanging in these group and male choices hanging more than poisons. Hanging is at the peak of choice in these in these group.

Table 4: Suicide by methods used and sex of victims in 144 cases over 17 years of age

Method	Male	Female	Combined
Hanging	51	23	74 (51.39%)
Poisoning	28	31	59 (40.97%)
Run over by train	3	0	3 (2.08%)
Others	2	6	8 (1.54%)
Total	84	60	144

Other study shows suicides under the age of 17 years were less. Newer studies shows increase of youth suicides below 17 years. Self-destructive methods were different in the two populations with significantly more hanging suicides in above 17 years age group compared to below 17 years age group. The rate of suicides in younger victims is to a universal finding, however, with studies in other populations showing an increase in rates in younger age groups too. The significance of these apparently disparate findings is that suicide rates are subject to local social and cultural influences and thus is should not be a surprise to find different trends in different populations.

However, recent mean worldwide annual rates of suicide in the 5-14 year old age group have been cited as 0.5 per 100 000 for girls and 0.9 for boys, compared to 12 per 100 000 for females aged 15-24 years and 14.2 for males in that age range. Rates of suicide steadily increase through adolescence with a preponderance of 16year old male victims in cases under 17 years.

It has been asserted that the choice of method of suicide is not influenced by the age of the victim. However, this is incorrect. For example, some study shows drowning suicides are much less common in younger than older women. Poisoning and drug overdose are less common in certain adolescent populations compared to the general adult population, whereas trauma related to trains, jumping from buildings, and self immolation may be higher. Geographic variability also occurs, with shooting being much more common in USA than

in South Australia. Reasons for the variability in preferred methods of suicide among different populations and ages remain conjectural; however, accessibility to injurious agents and perception of the effects of certain actions are probably involved as found in this study that people choices agricultural poisons due to availability near hand. In North America, gunshot related deaths are far more common than other countries. It is difficult to dismiss the possibility that the widespread availability of firearms in the USA is the reason for the extremely high rate of gunshot trauma.

On the other hand, the effects of self-immolation by inferno, standing in front of a train, or jumping from a height are obvious, and matches, fuel, train tracks, and tall buildings are all easily accessible. Suicidal drownings are more common in populations living next to the sea, running river or large inland lakes. Jumping from a height is the most common method used in youth suicide in large cities, such as Singapore.

Conclusion

Despite media assertions to the contrary, suicide rates in adolescence are low when compared to rates among people in their thirties and forties. Methods of suicide in the young also vary among populations and are likely to be influenced by the availability and access to agents of self-destruction.

Although youth suicide may be increasing in some groups, this is not a general phenomenon as the t\rends in, and method of, youth suicide may vary considerably from community of community. To be effective, strategies to deal with suicide should therefore not rely upon pooled data, but should examine particular features of specific populations with analysis of subgroups bases on sex, and other local socio-demographic features.

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