ABSTRACT

Background: Violence is an emerging public health problem across the world, accounting for 1% of deaths globally. Interpersonal violence is drawing full attention of international agencies including national authorities.

Objective: This study was designed to explore the epidemiology of interpersonal violence in Bangladesh.

Materials and Methods: Nationwide cross-sectional study was carried out during January-December 2003 in 12 randomly selected districts of Bangladesh and in Dhaka Metropolitan City. This encompassed a total population of 819,429. Multi-stage cluster sampling was used to choose required sample size.

Results: About 7% of injury-related death was found due to violence and constitute fifth leading cause of death due to injuries. About 72% dead were male, and 28% were female. The overall incidence rate of violence death was 3.5/100,000 population per year. The highest rate was found in 40-49 years, it was 8.8/100,000 population per year. The rate was significantly higher among male compared to female. Home was found as the most frequent place, about 28% interpersonal violence took place at home. A sharp cutting instrument was the most frequently used tool in violence death. The most common context was robbery/burglary or other terrorist activities, and it was about 52%.

Conclusion: Interpersonal violence is a major cause of death in Bangladesh. Male and rural people were a more vulnerable group. Robbery/burglary or other terrorist activities are the major contexts of violence. Stranger, neighbor, and relatives are the most frequent perpetrator.

Key words: Aggression, Behavior, Cross-sectional study, Risk factors, Violence

INTRODUCTION

Violence is a growing public health problem across the world.\(^1\) Violence accounts for 1% of deaths globally,\(^2\) and it was estimated that more than 1.6 million people die every year due to violence, among them 57,000 were children.\(^3\) The highest homicide found among the age group 15-29 years, while it was found as the leading cause of death among the group 15-44 years.\(^4\)

All social classes experience violence, but people with the lowest socio-economic status are constantly at greatest risk. More than 90% of all violence-related deaths occur in low and middle-income countries.\(^1,2\)

Violence has been defined as “the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either result in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment, or deprivation.”\(^5\) Interpersonal violence is defined as violence occurring between individuals. It is usually subdivided into intimate partner, acquaintance, and stranger violence.\(^5\)

Bangladesh is passing through an epidemiological transition. Death and illness due to injury are gradually increasing. The injury is the leading killer of children after infancy.\(^7\) To better know the epidemiology of injury is a priority task for the...
researchers and policy makers. Unintentional injuries such as road traffic injuries, drowning are main killers in Bangladesh. In intentional injuries, suicide found as the leading cause of injury death in the age group of 10-19 years. Violence is a major problem in Bangladesh, especially partner violence. The World Health Organization has reiterated for further studies on all forms of violence for effective prevention. There is dearth of studies on interpersonal violence in low and middle-income countries. The number of death due to interpersonal violence is not yet documented in Bangladesh. This study was designed to explore the epidemiology of interpersonal violence in Bangladesh. The findings have given us an insight into the age and sex distribution of violence and provided us with information about the place and method of occurrence. Study findings have provided a basis for the development of a prevention program for interpersonal violence in Bangladesh.

MATERIALS AND METHODS

The paper has used and analyzed data from the Bangladesh Health and Injury Survey.

Study Design and Population

The cross-sectional study was conducted among a population of 819,429 from 12 randomly selected districts of Bangladesh and Dhaka Metropolitan City. A multi-stage cluster sampling was performed to achieve the required number of households. The study period was from January to December 2003.

12 randomly chosen districts were selected from a total of 64 districts of Bangladesh and each district consists of several sub-districts (upazilas). For our study, we selected one upazila randomly from each of the selected districts. From each of these selected upazila, we randomly chose two unions where each of this union was considered as a cluster. A union is known as the lowest administrative unit of an upazila in the rural area that comprises of a population of 20,000. Therefore, all households in the selected union were included in the survey as rural area population. On the other hand, the district headquarters of the 12 selected districts and Dhaka Metropolitan City constituted the urban areas. For urban areas, Mohallas served as clusters as these are the lowest unit of the city corporation and about 400-500 households constitute a Mohalla. A systematic sampling was performed to achieve the required number of households.

Ethical Issues

Ethical clearance was obtained from the Ethical Committee of Institute of Child and Mother Health (ICMH), Dhaka.

Data Collection and Interview

Data were collected by 48 data collectors through face-to-face interviews in the household level. Screening forms were used to identify any presence of mortality in the household level. If any death was identified, the interviewer proceeded with further clarification regarding the death. If the death caused by interpersonal violence, then structured questionnaires were employed.

Adjustment of Data

A national sample was generated through the stratified multi-stage sampling scheme, which required weighting for allowing the proper representation. For all districts except Dhaka, the weighting factors were calculated for the rural and urban populations in each selected district. For Dhaka district, weighting factors were calculated for slum, non-slum, and peri-urban populations. Besides, the proportional size of the population of Dhaka Metropolitan City and other districts was taken into consideration for the national estimation.

Recall Bias in National Survey

For ensuring a sufficient number of deaths captured by the survey, the recall period was 3 years in Dhaka Metropolitan City (sample size 40,000), and 2 years elsewhere (N=130,000 households). It was found from the analysis of deaths by year of recall that most fatal events were recalled in the 1st year of the recall period with a rapid fall off in each subsequent year. Hence, a final analysis was carried out using deaths from the most recent year only.

Statistical Analysis

A standard descriptive statistical analysis was used for data analysis purpose. Deaths were demonstrated by different socio-economic variables such as gender, age categories, residence, monthly family income, and level of literacy. Relative risks (RR) were calculated to compare the suicidal risk in different age groups, place of residence, and sex. The yearly incidence of death due to interpersonal violence was calculated by selecting death occurring within 1 year from the date of interview. Rates were calculated with 95% confidence intervals (CI).

RESULTS

About 7% injuries-related death was found due to violence and constituted fifth leading cause of death due to injuries. Drowning, road traffic injury, fall, and suicides are other causes of injury deaths before violence. About 72% dead were male and 28% were female. No death was found due to violence among under-10 age group. Most of the people died were in low socio-economic condition. About 49% of victim’s monthly family income was less than $50, about 42% family’s monthly income was $5-$100, and only 9% family’s monthly income was more than $100. About one-third people who died due to violence were illiterate, only about 7% victim had education secondary or above others had secondary of below level education.

About 28% victim’s occupation was service, 24% were with business, and about 17% were housewives. Student, daily laborer, and farmer were the other profession of the victims (Figure 1).
The overall incidence of death due to violence was found 3.5/100,000 population per year. Death due to violence found highest in the age group of 40-49 years. No death due to violence was found in less than 10 years age and age 60 years and more. Rate gradually increased with age until 40-49 years then rate declined. The highest rate was found in 40-49 years, it was 8.8/100,000 population per year. Considering the overall incidence rate, it was estimated about 5,600 people die by violence every year in Bangladesh.

**Place of Occurrence**

About 28% violence-related death occurred at home, about 24% incidence occurred at highway/street or other transport areas. Agricultural field/farm, water reservoirs, and school were the areas to be noted here (Figure 2).

The higher rate of violence death was found in rural areas compared to urban. The rates were 4.6 and 2.3/100,000 population in rural and urban area, respectively. However, different was not found significant. Male was found more than 2.5 times vulnerable compared to female. Rates were 5 and 2/100 000 population year, respectively (RR - 2.54, 95% CI - 1.07-6.22)(Table 1).

About 52% cases, the context of violence was robbery/burglary or other terrorist activities. About 48% cases, the context of death was quarrel and fight (Figure 3). In 10% cases, relationship with victim or perpetrator was a spouse, 28% cases it was a stranger, 21% cases it was neighbors, and 24% cases it was friends or relatives.

About 28% cases, knife or other cutting tool was used in violence. About 14% cases, stick/club was used, and about 10% cases, gun or other firearms were used for interpersonal violence (Figure 4).

**DISCUSSIONS**

This paper described the epidemiology of interpersonal violence in Bangladesh. It was estimated that about 5,600 people die every year in Bangladesh due to violence, resulting an incidence rate 3.5/100,000 population per year. However, rate was found much higher in Tanzania (12.57) and other African countries and much lower in the USA (0.02) per 100,000 population. An excessive higher rate found in Iraq (37.63), which was about 10 times higher than Bangladesh. Maybe it is because of the war situation in the country.

The study indicated that, compare to female, significantly \((P = 0.02)\) higher rate of interpersonal violence were prevalent among male. Similar pattern of gender distribution was found in India and Tanzania. Scenario was found opposite in the USA, the rate among female was found significantly higher compared to male.

In 10% of the cases, spouses were the perpetrator; and in all of the cases, husbands killed their wives. Considering, almost half of the population were living with less than $50 per month, (close to poverty line), the economic stress, dowry, and other socio-economic stress could be leading issues for such killings. In the USA, much higher proportion of perpetrators were found the intimate partners.

We found that about 52% cases the context of violence was robbery/burglary or other terrorist activities, and almost similar proportion of death was due to quarrel and fight. The similar context was observed in Tanzania, about 54% cases context was robbery/burglary. In 48% cases, the context of violence was quarrel or fight at individual or group level. In the context of quarrel and fight, perpetrators were spouse, relatives, and friends. In 28% cases, knife or other sharp cutting weapons were the objects used in violence, about 10% cases...
Interpersonal violence is a major cause of death in Bangladesh. Male and rural people were a more vulnerable group. Robbery/burglary or other terrorist activities are the major contexts of violence. Stranger, neighbor, and relatives are the most frequent perpetrator. Sharp cutting weapon was the most commonly used objects in violence.

CONCLUSION

Interpersonal violence is a major cause of death in Bangladesh. Male and rural people were a more vulnerable group. Robbery/burglary or other terrorist activities are the major contexts of violence. Stranger, neighbor, and relatives are the most frequent perpetrator. Sharp cutting weapon was the most commonly used objects in violence.

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REFERENCES


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