

# Socio-Demographic Factors of the Child Injuries in an Urban Slum

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## Abstract

A cross sectional descriptive study was conducted among the children aged 16years and below at Tejgaon slum in Dhaka city during January'2015 to December'2015. Aiming to ascertain the factors associated with child injuries. Data were collected using random sampling technique. The total number of the injured children under study were 234. Nearly halves of participants were between 1-4 years and 13-16 years of age and 33% were in 5-8 years of age. The mean age was  $8.39 \pm 4.64$  years and Male – female ratio was 1:1.5. The highest injury rate was observed between 5-8 years in male (53.8%) and the lowest in 9-12 years (20%) which did not vary with respect to sex. And 75% injured children, 71% mothers and 90% fathers were illiterate and 46% mothers were housewife. Female children were more prone to injury,53%. Halves of them occurred at their own house. More than 50% were with low-income within 2000TK-3000TK. Adequate intervention is needed for prevention of injury to children.

**Keywords:** Injury, children, age, sex, monthly income, urban slum.

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## 1. Introduction:

Child injuries are a global public health problem. More than 95% of all injury deaths in children occur in low-income and middle-income countries and it is 3.4 times higher than high-income countries (WHO; World Report, 2004). The study of injury represents unparalleled opportunities for reducing morbidity and mortality and for realizing significant savings in both financial and human terms—all in return for a relatively modest investment. Injury may be defined as, physical damage to the body resulting from acute exposure to thermal, mechanical, electrical, or chemical energy or from the absence of such essentials such as heat or oxygen.(National committee for Injury Prevention and Control,1989). In South East Asia, injury is responsible for 30% of deaths in 1–3-year-olds, 40% in 4-year olds and 50% to 60% among those aged 5 to 17 years. The WHO-World Bank Report reviewed the disease transformation scenarios, indicates that suicide and violence will move from the twelfth and sixteenth to tenth and fourteenth positions by 2020 (WHO; World Report; 2004). In 1983, nine percent of all deaths among 1-4 years children were due to drowning; by 2000 this had risen to 53 percent (Bangladesh Demographic and Health Survey Reference Data 1985, 1989, 1995). This shift indicates a sharp

reduction in child mortality from infectious diseases, with accidents and injuries now the major concern for child health in Bangladesh. It has been estimated that each year about 25,000 children die of injuries; and half of these children are under five years of age (Baqi AH, Black RE, et al. 1998). The WHO-World Bank Report, which reviewed the disease transformation scenarios, indicates that rites will be the third leading cause of mortality by 2020, moving up from their present ninth position. Similarly, suicide and violence will move from the twelfth and sixteenth to tenth and fourteenth positions by 2020(WHO; World Report; 2004).

## 2. Materials and Methods:

This was a cross-sectional study done among the children of a selected urban slum dweller in Dhaka city, children aged up to 16years and below at Tejgaon slum, near Tejgaon rail station, Dhaka (ward-26) within the period of January'2015 to December'2015. Random sampling technique was applied for data collection. A total of 234 sample were included in this study by using standard formula for estimating prevalence. A pre tested semi-structured questionnaire was prepared in such manner that

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all the variables were measured categorically and the relevant data can be collected. After completion of data collection, data were checked meticulously, verified thoroughly and edited carefully. Data were analyzed as per the objectives of the study. Statistical analysis including generation of frequency table, computation of mean, median, standard deviation were done with the help of the computer Statistical Package for Social Science (SPSS).

### 3. Result:

Table 1: Distribution of injured children by age and sex, n=234

Age of injured	Sex of injured		Total
	Male	Female	
1-4	18(31%)	40(69%)	58(24.8%)
5-8	42(53.8%)	36(46.2%)	78(33.3%)
9-12	20(50%)	20(50%)	40(17.1%)
13-16	29(50%)	29(50%)	58(24.8%)
<b>Total</b>	<b>109(46.6%)</b>	<b>125(53.4%)</b>	<b>234(100%)</b>

Mean=8.39, median= 7.50, SD= ± 4.642

Table -1 shows, out of 234 respondents, 5-8 age group was the highest injured group where 42(53.8%) were male and 36(46.2%) were female. Nearly 50% injury occurred in 1-4 year and 13-16 years of children. Distribution of male and female were equal in an age group 9-12 years and 13-16years. In 1-4 years 40(69%) were female and 18(31%) were male. And male female ratio was 1:1.5.

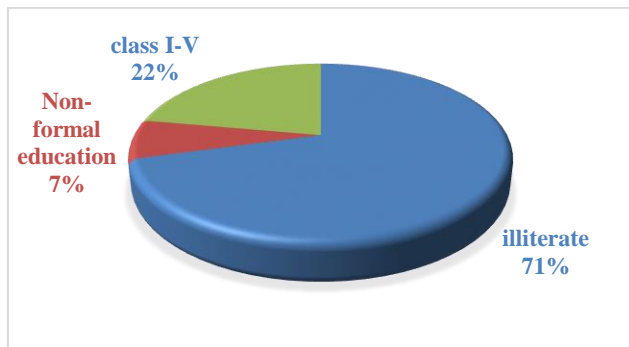


Fig-1: Distribution of injured children by mothers education, n=212

Fig-1 reveals the distribution of mother’s education. About 150(71%) were illiterate, 15 (7%) were non-formally educated and 47(22%) were class I-V learned.

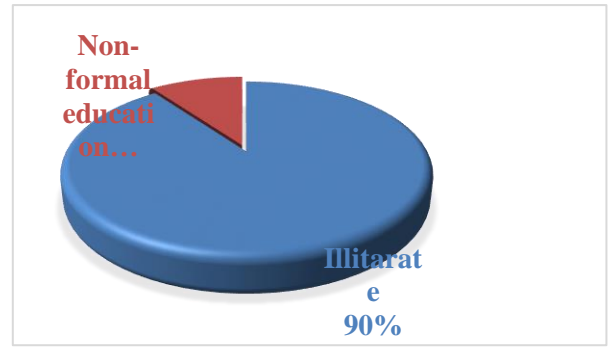


Fig 2: Distribution of injured children by fathers education, n=10

According to fig-2, total 9(90%) fathers of injured children were illiterate and the rest 1(10%) were non-formally educated.

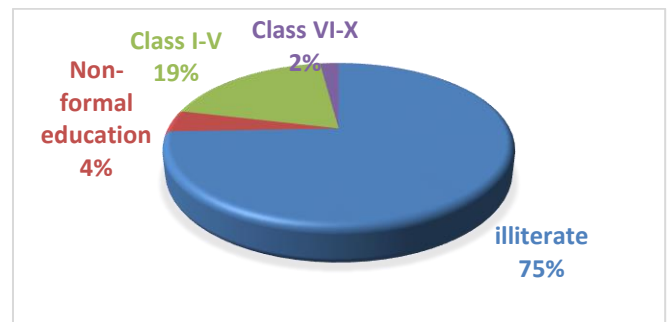


Fig-3: Distribution of education of injured children, n=234

Fig-3 shows that out of 234 respondents, 174(75%) of injured children were illiterate, 10(4%) were non-formally educated, 45(19%) were class I-V learned and 5(2%) were class VI- X learned.

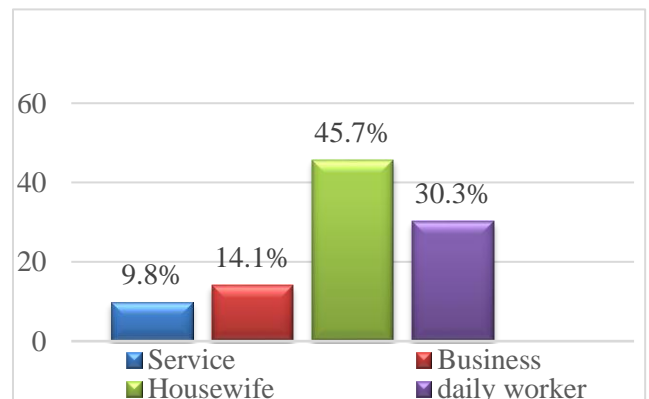


Fig-4: Distribution of injured children by mothers occupation, n=212

Fig-4 shows distribution of mothers occupation of injured children where 97(45.8%) were housewife, 65(30.7%) were daily worker, 27(12.7%) were business women, the rest 23(10.8%) were in service.

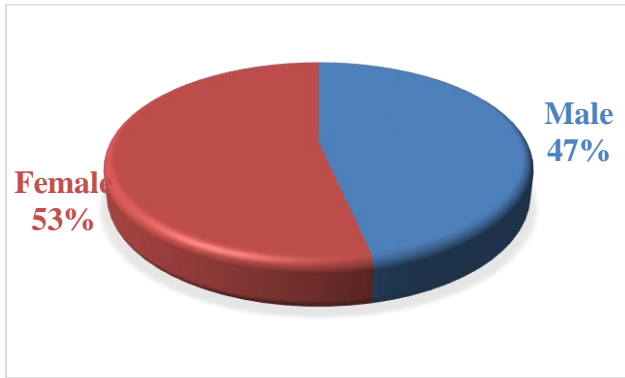


Fig-5: Distribution of injured children by sex,n= 234

Fig-5 shows distribution by sex of injured female were 125(53.4%) and the rest 109 (46.6%) were male.

Table 2: Distribution of respondents by place of injury,n=234

Place of injury	Frequency	Percent
Own house	117	50
School	1	0.4
Play ground	8	3.4
Road	74	31.6
Work station	34	14.5
Total	234	100.0

Table-2 shows that out of 234 participants 117(50%) children were injured at their own house, 74(31.6%) over road, 34(14.5%) at work station, 8(3.4%) during playing and the rest 1(0.4%) at school.

Table-3: Distribution of respondents by family income with housing type,n=234

Total family income (Tk)	Housing type		Total
	Jhupri	Kancha	
3000-5000	103(68.2%)	37(44.6%)	139(59.8%)
5000-7000	41(27.2%)	29(34.9%)	70(29.9%)
7000-9000	6(4.0%)	15(18.1%)	21(9.0%)
>9000	1(0.7%)	2(2.4%)	3(1.3%)
Total	151(100.0%)	83(100.0%)	234(100.0%)

Table-3 reveals that out of 234 respondents, 139(60%) had 3000-5000 Tk of total family income per month where 103(68.2%) were lived in jhupri and 37(44%) in kancha houses. 70(29.9%) had 5000-7000Tk of monthly family income where 41(27.2%) were lived in jhupri and 29(34.9%) were lived in kancha houses. And only 3(1.3%) had more than 9000 Tk monthly income and the rest 1(0.4%) had below 3000 Tk of total family income per month.

#### 4. Discussion:

In 2011, WHO estimates that over 630 000 children under the age of 15 were killed by an injury. Every day more than 2000 children and teenagers die from an injury. More than 95% of all injury deaths in children occur in low-income and middle-income countries and it is 3.4 times higher than high-income countries (WHO; World Report, 2004). According to World Health Organization (WHO), every year more than 5.8 million people die from injuries, with a rate of 97 per 100,000 populations. Of this, 3.9 million (128.6 per100, 000 population) are male and 1.9 million (66.7 per 100,000 population) are female (Krug E; 1999). A quarter of the deaths are due to road traffic accidents, 16 percent are suicides and 10 percent are homicides (Berger L.R. and D. Mohan; 1996). More than one-quarter of injury deaths occurred in South East Asia (WHO; 2002). In South East Asia, injury is responsible for 30% of deaths in 1–3-year-olds, 40% in 4-year olds and 50% among those aged 5 to 17 years (WHO; World Report; 2004).

Out of 234 participants, 150(71%) of mothers were illiterate, 47(22%) were learned class I-V and 15(7.1%) were non-formally educated and 97(46%) were housewives, 65(31%) were daily workers, 27(12.7%) were business-women and 23(10.8%) were in services whereas 9(90%) of father were illiterate and 1(10%) were non-formally educated. All were they lived in jhupri 151(64%) and kancha houses 83(35%). 137(59%) were from nuclear family and the rest 97(41%) from joint family. About 139(60%) of respondents of injured children had total family income in between 3000-5000 Tk whereas 70(29.9%) had earned 5000-7000 Tk, 21(9%) had 7000-9000 Tk and only 3(1.3%) had above 9000 Tk. That means poverty invites children injury.

Distribution by sex of injured female were 125(53.4%) and the rest 109 (46.6%) were male were 174(75%) of injured child were illiterate, 10(4%) were non-formally educated, 45(19%) were class I-V learned and 5(2%) were class VI- X learned.

In Viet Nam, the cost of injury to poor households was estimated as equivalent on average to 11 months' income. The risk of a poor household falling below the poverty line was 21% higher among those that had an injury than among those that had not (World Report on Child Injury Prevention, 2004).

Children are most prone to injury at their own house and surroundings of houses. About 117(50%) of children were injured at their own household, 74(31.6%) were over road or rail, 34(14.5%) at work station, 8(3.4%) at play-ground and very least 1(0.4%) at school.

A population based survey conducted over 15000 population encompassing both urban rural areas (8,188 urban and 7035 rural residents) showed that rural residents were more likely to experience injuries due to falls (OR = 1.6; 95% CI = 1.1 – 2.3) and cuts(OR = 4.3; 95% CI = 3.0 – 6.2) but had lower risk of transport injuries and falls (Bangladesh Demographic and Health Survey Reference Data (1985, 1989, 1995) (Dr. Mithun Alamgirs, Dr. Sarwar Mahboob,et al, 2012)

#### 5. Conclusion & Recommendation

Injury and violence is a major killer of children throughout the world, responsible for about 950 000 deaths in children and young people under the age of 18 years each year. The WHO-World Bank Report, indicates that RTIs will be the third leading cause of mortality by 2020. (WHO Global Burden of Disease: 2004 update).Child injury is a public health menace in Bangladesh. On

the basis of the findings of the study, the following measures are recommended. Awareness building through health education about traffic rules, personal hygiene, nutrition, environmental sanitation and so on among families, children, school authority. Health care supervision in slum through scientific sanitation system, water seal drainage system should be provided through government and NGO. Use of safe electricity, the separation of cooking areas from living areas and the development of safer stoves. First aid treatment for any emergency condition should be available such as slum-community clinic, mobile dispensary. Provision of law enforcements agency to prevent crime.

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