



PREVALENCE OF DOMESTIC ACCIDENTS IN THE URBAN FIELD PRACTICE AREA OF GMCH, UDAIPUR, RAJASTHAN

Community Medicine

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ABSTRACT

Introduction: Domestic accidents are a major public health problem. These accidents go vastly unrecognised same as the occupational injuries. Generally, all accidents are not connected with traffic or vehicles, they can take place anywhere either in the home or in its immediate surroundings or even in the sports ground. They all are considered under domestic accidents. The consequences of these accidents may prove disastrous as it may result in disability and loss of productivity. Owing to the growing burden of domestic accidents, the present study focuses on the prevalence and risk factors for the occurrence of domestic accidents in urban field practice area of GMCH, Udaipur, Rajasthan

Methodology: A cross sectional study was conducted in the slum of UHTC, GMCH. Considering prevalence of domestic accidents in an urban setting to be 12%, 95% CI with 5% allowable error and 10% non-response rate, sample size calculated was 180. Multistage systematic random sampling was used. Data collection was done using a pretested semi structured questionnaire by house-to-house visit. Information about domestic accidents in the past 1 year was obtained by interviewing the head of the family or responsible adult informant.

Results: The overall prevalence of domestic accidents was found to be higher among females than the males. The most common cause of such accidents was fall followed by animal bite. Majority of the participants were in the age group of 0-15 years (40.02%), while only 16% were above 60 years. Occurrence of accidents was almost same in each age group whereas occurrence of falls was higher in the extremes of age groups i.e., in the younger age group of 0-15 years and elderly above 60 years and least in 16-30 year and 46-60 years. The occurrence of falls was found to be more in the houses which were overcrowded compared to houses which were not overcrowded and this was found to be statistically significant.

Conclusion: Accidents though are a major public health issue, but are completely preventable. The morbidity and disability due to domestic accidents can be avoided if timely intervention is taken. This requires adequate health education and promoting awareness among people.

KEYWORDS

Domestic accidents, morbidity, disability, urban area

INTRODUCTION

Major epidemic of non-communicable diseases is represented by accidents in our country. The name "Modern Day Epidemic" coined for accidents by our public health experts. Among all kinds of accidents, domestic accidents are a worldwide public health problem. There is a direct association between domestic accidents and human health and both of these are associated with a chain of socio-economic consequences.^[1] Domestic accidents, along with the communicable and non-communicable diseases also attribute to a remarkable morbidity and mortality. Hence, to bring out magnitude of domestic accidents and their pattern and associated risk factors in the urban field practice area of GMCH, Udaipur, Rajasthan, this study was conducted with an objective to find out the prevalence of domestic accidents in urban field practice area of GMCH and associated risk factors for the occurrence of these domestic accidents.

METHODOLOGY:

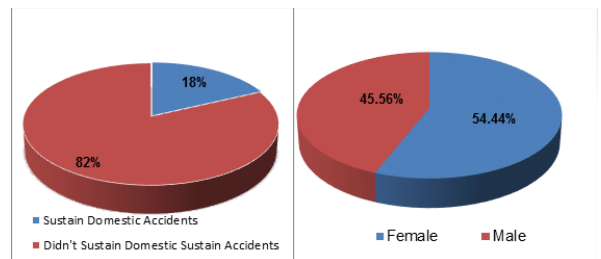
The current cross-sectional study was conducted in an urban field practicing area of GMCH, Udaipur. Study population was the head of the family or responsible adult informant of the family. Multistage systematic random sampling was used. A total of 180 study subjects who gave consent were enlisted by considering prevalence of 12%, 95% CI with 5% allowable error and 10% non-response rate. Individual interview by house-to-house visit was conducted using a predesigned semi-structured questionnaire and data collection was done after ethical clearance. Study was conducted over a period of 4 months i.e., February- May 2019. Study tool comprised of questions to elicit socio-demographic details, pattern and prevalence of domestic accidents, type of injury, health seeking behaviour and outcome of domestic accidents and its socio-economic consequences. Data was entered in Microsoft Excel sheet and statistical analysis was done using Epi info Software version 7.0.

RESULTS:

A total of 202 households were contacted, out of which 180 were included in the study as 22 household or individuals were not able to understand and respond to the complete questionnaire. Of total, majority of the participants were in the age group of 0-15 years (40.02%), while only 16.11% were above 60 years. About 56.1% of the participants belonged to class 4 and only 2.2% belonged to class 1

socio economic status according to Modified BG Prasad's classification. Majority of the participants (68.9%) were living in semi-pucca houses and 62.2% of the participants were residing in the overcrowded housing conditions.

Among the 180 study participants, 32 individuals sustained domestic injuries; hence the magnitude of domestic accidents is 18% [Fig 1]. Out of 32 individuals who sustained injuries, 54.4% were females and 45.6% were males [Fig 2].



[Fig 1]: Prevalence of domestic accidents among the study participants (N=180)

[Fig 2]: Gender wise distribution of domestic accidents (N=32)

Among the pattern of domestic accidents, the most commonly reported accidents were falls (59.8%) which includes slipping in bathroom, fall from stairs, fall on floor and fall from height etc. followed by animal bite (19%), Burns (13.7%) which includes burns in kitchen while cooking, burns due to spilling of hot liquids or due to hot water in the bathroom. Electrical accidents such as electrocution accounted for 4.6% cases whereas drowning accounted for 2.9% of cases. It was observed that majority of domestic accidents occurred during the evening hours (38.5%) followed by the morning hours (34.6%) and the most of it occurred in the front yard (39.4%) followed by kitchen (24%).

Bruises and abrasions (65.4%) were the most common type of injuries sustained followed by burns (14.6%), fractures (11%) and cuts and lacerations (9%).

The study showed the occurrence of accidents was almost same in each age groups [Table 1] whereas occurrence of falls was higher in the extremes of age groups i.e. in the younger age group of 0-15 years and elderly above 60 years and least in 16-30 year and 46-60 years of age group however this was not found to be statistically significant. (chi square = 0.036, p value <0.8). [Table 2]

[Table 1]: Occurrence of domestic accidents according to age group

Age group	Domestic accident		Total (%)
	Yes (N%)	No (N%)	
0 -15	14 (20.1%)	58 (79.9%)	72 (100%)
16-30	5 (19.3%)	23 (80.7%)	28 (100%)
31-45	5 (18.3%)	25 (81.7%)	30 (100%)
46-60	3 (16.5%)	18 (83.5%)	21 (100%)
61-75	5 (18.3%)	24 (81.7%)	29 (100%)
Total	32 (18%)	148 (82%)	180 (100%)

[Table 2]: Occurrence of falls according to age group

Age group	Falls (%)	No domestic accidents (%)	Total (%)
0 -15	11 (15.5%)	61 (84.5%)	72 (100%)
16-30	1 (2.5%)	27 (97.5%)	28 (100%)
31-45	2 (3.6%)	28 (96.4%)	30 (100%)
46-60	1 (4.5%)	20 (95.5%)	21 (100%)
61-75	4 (12.7%)	25 (87.3%)	29 (100%)
Total	19 (34.2%)	161 (65.8%)	180 (100%)

chi square = 0.036, p value <0.8

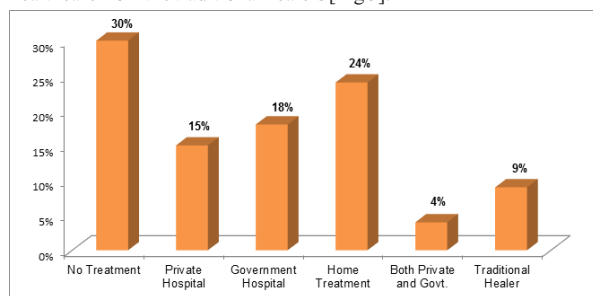
In our study, the occurrence of falls was found to be more in the houses which were overcrowded compared to houses which were not overcrowded and this was found to be statistically significant as well [Table 3] (chi square = 5.6259 , p value <0.05).

[Table 3]: Occurrence of falls with overcrowding

Overcrowding	Falls		Total
Yes	16 (15.1%)	90 (84.9%)	106 (100.0%)
No	03 (4.1%)	71 (95.9%)	74 (100.0%)
Total	19 (10.6%)	112 (89.4%)	180 (100.0%)

chi square = 5.6259 , p value <0.05

The health seeking behaviour of the participants who sustained injuries was also studied. Once injured, very few (4%) sought health care from both government and private hospitals while 15% visited private hospital, 18% visited government hospital. On the other hand one fourth (30%) of injured subjects had taken no treatment at all because of the minor injuries. Among these 24% were found to have taken self-medication or the home remedies like applying toothpaste, turmericpaste, oil massage for minor burns etc. while 9% sought healthcare from the traditional healers [Fig 3].



[Fig 3]: The health seeking behaviour of the participants who sustained injuries

It was observed that the majority of the people who sustained injuries recovered completely (81.1%), while 17% had temporary disability and 1.9% had permanent disability. The mean days of restricted activity were 33 days. The average amount spent on treatment was Rs.5302.8 and the income lost due to accident was Rs.7677.27 [Table 4].

[Table 4]: Outcome of domestic accidents and socio economic consequences (N=32)

Variable	Frequency (N=32)	Results
Hospitalization		
Yes	4	12.5%

No	28	87.5%
Outcome of injury		
Recovered fully	26	81.1%
Temporary disability	5	17%
Permanent disability	1	1.9%
Total	32	100%
Mean days of hospitalization	13.6 days	
Mean days of restricted activity	33.09 days	
Average money spent on treatment	Rs 5302.8/-	
Average income lost due to accident	Rs 7677.27/-	

DISCUSSION:

The current study showed that the overall prevalence (18%) is more compared to study conducted by Masthi et al^[2], Sudhir et al^[3] and Shawon et al^[4] which showed prevalence of 9.6%, 9.4% and 14.6% respectively. In contrast, study by Bhanderi et al^[5] in Gujarat showed very low prevalence of 1.7%. This disparity is may be due to adequate safety precautions taken to avoid any such injuries.

The data of this study showed, males were less affected by the domestic accidents as compared to females, though it is not significant but these observations are consistent with the studies done by Masthi et al, Bhanderi et al and Haniff et al. This may be due to females spending more time at home as compared to males.^[2,5,6-8]

Studies done by Masthi et al, Sudhir et al, Shawon et al and Bhanderi et al showed falls was the most common domestic accidents which was also reported in present study.^[2-5] Although, some studies conducted in Turkey, Pakistan and Iran revealed burns as the most common domestic accident.^[9-11] This dissimilarity was may be due to the differences in the lifestyle, habits and level of people's awareness among these countries.

Among children and elderly falls was more commonly reported, which is similar to the results of Bhanderi et al^[5] and Sudhir et al.^[3] Shawon et al showed that most common place for such accidents were courtyards and kitchen, on the other hand, in this study front yard and kitchen were most common areas.^[4] This might be due to absence of courtyards in most of the houses in our study area. Inadequate lighting during evening hours might be the factor that majority of these accidents occurred during evening hours. Results of study conducted by Madhavi et al were consistent.^[12] In contrary study carried out in Gujarat, domestic accidents were more during morning hours.^[5] About 50% of the injured received treatment either in government/private hospitals or in both, which is lower compared to the study carried out in Bangladesh (84%)^[4] In our study 24% took self-treatment by home remedies which might be because the injuries were very minor. Out of the participants who sustained injuries and gone to hospital 12.5% were admitted in in-patient wards whereas in study conducted in Gujarat it was 17.4%.^[5] The mean duration of hospital stay was 13.6 days in our study. We have observed that most of the victims of domestic accident had recovered completely (81.1%), some were in the temporary disability phase (17%) and few victims had permanent disability (1.9%) and no mortality was reported. Which is in contrast to the results of the study by Bhanderi et al where full recovery was observed in 83% cases of domestic accidents.^[5] Whereas in shiraz by Neghab et al reported permanent disability as 0.05% and mortality as 1% in their study.^[11]

CONCLUSION

The present study was an effort to highlight the epidemiological features of domestic accidents in the study area. The study showed that the extreme age groups specifically females were more vulnerable to these accidents where falling being the most frequent type specially during the evening hours because of the dim light inside and outside the houses. Other common domestic injuries were caused by either animal bite or by burns. Creation of awareness by promotion of household safety measures among the community using information, education and communication (IEC) interventions have to be undertaken to prevent and control these accidents.

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