

Research Article**Prevalence of Domestic Accidents in Rural India: A Cross Sectional study**Sudhir¹, Deepa Krishna², Ashok Nagaralu Channabasappa³, Murali Dhar⁴¹Assistant Professor, Department of Community Medicine, Adichunchanagiri Institute Of Medical Sciences, B.G Nagara, Bellur, India²Assistant Professor, Department of Biochemistry, Mysore Medical College and Research Institute, Mysore, India³Professor, Department of Community Medicine, J.S.S Medical College, Mysore, India⁴Associate Professor, Department of Population Policies & Programmes, International Institute for Population Sciences Mumbai, India***Corresponding author**

Dr. Sudhir

Email: dheergowda@yahoo.co.in

Abstract: Domestic accidents are worldwide health problems. Domestic accidents have not not so far been recognized to the same extent as traffic and work related injuries, largely because they have not been effectively counted. Few studies are available regarding domestic accidents in India, and there is very few studies done in rural India. Hence the present study was done with an objective to assess the prevalence of domestic accidents in rural community. This cross sectional study was done on 3500 subjects by using simple random sampling technique, the study was conducted in rural field practice area of a medical college in South India between Jan to Dec 2010. Information regarding domestic accidents was gathered by interviewing the head of the family or the adult informant by using pretested and pre structured questionnaire. Total 330 domestic accidents were found in our study. 210 domestic accidents were due to falls, 225 accidents were seen in female, 217 subjects with accidents were illiterates 49.7% of accidents took place in the courtyard, 56.8% of accidents took place while playing or doing domestic work and 39.2% of accidents took place in the afternoon. Domestic accidents are more common in extreme age groups and in females. The reasons may be the higher amount of time spent at home and greater participation in daily home activities. Falls being the most frequent type of accidents, proper designing of house and adequate illumination may help in reducing their occurrence.**Keywords:** Domestic accidents, Falls and rural community.

INTRODUCTION

As the tide of infectious disease is receding in most of the developing countries, the threat to life and health is from non infectious disease. This transition from infectious to non infectious is called epidemiological transition. Among non infectious cause of ill health one of the main contributor is accidents. The public health experts have coined the name Modern Day Epidemic to accidents [1]. With in the accidents, domestic accident is gaining more importance among the researchers. By domestic accidents it is meant an accident which takes place in the home or in its immediate surroundings and more generally all accidents not connected with traffic, vehicles or sport [2].

In developing country like India knowledge about domestic accidents is less. Domestic accidents is an important public health problem and the the problem is more grave in rural India. Domestic accidents are one of the five leading causes of death in industrialized and developing countries [3]. In developing and industrialized countries 10-30% of all hospital

admissions are due to accidental injuries [4]. People from lower socio economic status, with underlying medical conditions, living in poor housing conditions and lack of proper safety measures are at higher risk of domestic accidents. Due to domestic accidents people may land up into economic loss, disability, deformity and premature death. Therefore this study was done to know the burden, types and factors contributing towards domestic accidents as there are very few studies done with respect to this.

MATERIAL AND METHODS

A cross sectional study was done in a rural field practice area of a medical college in Mysore district, South India. The study was conducted between Jan to Dec 2010. In order to calculate the sample size a pilot study was done in 50 household comprising 220 subjects, the prevalence of domestic accidents was found to be 22 (10%) which gives prevalence as 10%, with relative precision of 10% at 95% confidence interval. Sample size came out to be 3457, which was rounded up to 3500. Sampling technique used was

simple random sample. Information about domestic accidents among the family members in the past one year from the date of survey was obtained by interviewing the head of the family or responsible adult informant using a pre tested and pre structured proforma in local language.

Statistical analysis

The data was entered in Microsoft Excel sheath and analysed using SPSS 19 software. Tests of significance used was Z test. P value less than 0.05 was considered as significant.

RESULTS

The overall prevalence of domestic accidents in our study was 9.4%. There was only four cases of poisoning

and no case of drowning in the study subjects and fall was the most common domestic accident (Table-1).

In our study accidents were found to be more common in females (68.2%), age group 19-64 years, illiterates and house wives, this was statistically significant (Table-2).

If we see according to the place of accidents it was more common in the courtyards. Accidents were more common while playing and doing domestic works. If we see the timing of the accidents it was more common during morning and afternoon. Most of the accidents needed treatment (Table-3).

Table 1: Prevalence of domestic accidents among the study subjects (n=3500)

Domestic accidents	Frequency	Percentage
Burns	53	1.5
Falls	210	6
Drowning	0	0
Poisoning	4	0.1
Injuries by sharp instrument	32	0.92
Bites by insect or animal	31	0.88
All domestic accidents	330	9.4

Table 2: Characteristics of victims of domestic accidents (n=330)

Category	Subcategory	Accidents (%)	Z Score	P value
Sex	Male	105(31.8)	9.06	<0.05
	Female	225(68.2)		
Age in years	1-5	51(15.5)	13.7	<0.05
	6-18	90(27.2)		
	19-64	165(50)		
	65 and above	24(7.3)		
Literacy status	Illiterate	217(65.7)	7.05	<0.05
	Literate	113(34.3)		
Occupation	Housewife	88(26.6)	21.62	<0.05
	Student	69(20.9)		
	Farmers	42(12.7)		
	Day Labourer	22(6.7)		
	Business	18(5.5)		
	Others	91(27.6)		

Table 3: Characteristics of the domestic accidents

Category	Subcategory	Accidents (%)
Place	Courtyards	49.7%
	Kitchen	15.8
	Bedroom	9.4
	Bathroom	4.7
	Cattle shed	3.5
	Others	17
	Activities during occurrence	Playing
Domestic works		28.1
Cooking		12.3
Bathing		5.8
Others		25.1
Time of occurrence		Afternoon
	Morning	29.2
	Evening	19.9
	Night	11
Necessity of treatment	Yes	84.24
	No	15.76

DISCUSSION

Out of 3500 study subjects 330 had suffered domestic accidents in the past 1 year time. In our study the overall prevalence of domestic accident was 9.4%. Ramesh Masthi *et al.* also reported prevalence of 9.6% in his study which was done in 2012 [5], which is very near to prevalence in our study. Bhandari *et al.* conducted a domestic accidents study in a semiurban area of Gujarat, however the prevalence was very less in their study (1.7%), this difference in the prevalence may be due to the study being done in semi urban and duration of study was 6 months, whereas our study was done in rural area and was done for a period of 1 year [6].

In our study falls was the most common domestic accidents and similar results were found in the study of Ramesh Masthi *et al.* [5] and Bhandari *et al.* [6]. Where as in the studies conducted by Avsarogullari *et al.* [7], Marsh *et al.* [8] and Neghab *et al.* [9] burns was the most common domestic accidents. This variation may be due to difference in socio cultural practices and level of awareness.

Females had domestic accidents more common than males which was similar to the findings of Bhandari *et al.* [6] and Ramesh Masthi *et al.* [5]. In our study courtyard and kitchen were the common places for domestic accidents which was similar to the findings of Shawon *et al.* [10]. Morning and afternoon were the commonest time period for the domestic accidents in our study which was similar to the results of Bhandari *et al.* [6]. Among 330 domestic accidents 278 required treatment. We found that most of the people took treatment at their home followed by the private clinic.

CONCLUSION

Domestic accident is one of the common cause of morbidity in our rural population. Falls was the most common domestic accident seen in the study. Some important risk groups for domestic accidents were children, female and elderly. Because of domestic accidents there is economical loss to the people and in turn to the country. Therefore, in order to prevent and control the domestic accidents, promotion of household safety measures, and creation of awareness among the community using IEC interventions have to be undertaken.

REFERENCES

1. Park K; Preventive and Social Medicine. 20th edition, Jabalpur: M/s Banarasidas, 2009: 355-356.
2. Govt of India, Swasth Hind. 1979; 25(12): 329.
3. Galal S; Working with families to reduce the risk of home accidents in children. East Meditr Hlth J., 1999; 5: 572-582.
4. Phelan KJ, Khoury J, Kalkwarf H, Lanphear B; Residential injuries in U.S children and adolescents. Publ Hlth Rep., 2005; 120: 63-70.

5. Ramesh Masthi NR, Kishore SG, Gangaboriah; Prevalence of domestic accidents in the rural field practice area of a medical college in Bangalore, Karnataka. Indian Journal of Public Health, 2012; 56(3): 235–237.
6. Bhandari DJ, Choudary S; A study of occurrence of domestic accidents in semi-urban community. Indian Journal of Community Medicine, 2008; 33(2): 104–106.
7. Avsarogullari L, Sozuer E, Ikizceli I, Kekec Z, Yurumez Y, Ozkan S; Adult burn injuries in an emergency department in Central Anatolia, Turkey: A 5-year analysis. Burns, 2003; 29: 571–577.
8. Marsh D, Sheikh A, Khalil A, Kamil S, Jaffer-uz-Zaman, Qureshi I, Effendi S; Epidemiology of adults hospitalized with burns in Karachi, Pakistan. Burns, 1996; 22: 225–229.
9. Neghab M, Fard AR, Habibi M, Choobineh A; Home accidents in rural and urban areas of Shiraz, 2000–02. Eastern Mediterranean Health Journal, 2006; 12(6): 824–833.
10. Shawon SR, Hossain FB, Rahman M, Ima SZ; Domestic accidents in a rural community of Bangladesh: A cross-sectional study on their incidence and characteristics. Developing Country Studies, 2012; 2(7): 14–19.