



## Original Research Article

### A Study of Domestic Accidents in the rural area of South India

Vani Madhavi Kommula<sup>1\*</sup> and G.N.Kusneniwar<sup>2</sup>

<sup>1</sup>Department of Community Medicine, KIMS, Amalapuram, East Godavari District, Andhra Pradesh, India

<sup>2</sup>Department of Community Medicine, MIMS, Ghanpur, Rangareddy District, Andhra Pradesh, India

\*Corresponding author

#### A B S T R A C T

##### Keywords

South India,  
Rural area,  
Domestic  
accidents

Background: Domestic accidents are worldwide public health problem. The problem is more grave in developing countries, particularly in rural areas, shanty towns or informal dwellings. Objectives: To know the prevalence and type of domestic accidents in the rural area. Study design: Cross sectional study. Setting: Rural field practice area of Medici Institute of Medical Sciences, Andhra Pradesh, India. Subjects: 5,682 individuals from Aliabad village were selected. Study variables: Age, gender, type and time of occurrence of accident, disability and mortality due to accident. Statistical analysis: It was done using Epi-info version 7.0. Results: Total number of domestic accidents found were 115, so the prevalence was 2.0% for all age groups. Accidents were more common (25.2%) in 31 to 45 years. 53.9% of the accident victims were females. Conclusion: Educating people regarding time management and safety precautions is necessary for reducing domestic accidents.

#### Introduction

Domestic accidents are worldwide public health problem. 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.<sup>1</sup> The problem is more grave in developing countries, particularly in rural areas, shanty towns or informal dwellings.<sup>2</sup> Domestic accident cases are a special group in themselves, reflecting the character and way of living of people. Quite a new pattern of injury attributable to domestic accidents emerges with technical or cultural change.<sup>3</sup>

They are no similar studies in this region. So we made an effort to know the prevalence and type of domestic accidents and the probable associated cause so that we can plan for appropriate measures to reduce them.

#### Material and Methods

The present cross sectional study was carried out in the rural catchment area of MediCiti Institute of Medical Sciences (MIMS), Medchal Mandal, Ranga Reddy district, Andhrapradesh, India. One village

was selected from the catchment area i.e., Aliabad which consists of 918 households and 5,796 individuals. Among them who ever were available at the time of visit and cosented were included in the study.

Approval from the Institutional Ethics Committee was taken prior to the study initiation. Written consent was taken from the head of the family/ adult person whom we have interviewed after explaining the objectives and procedure of the study. A pre tested, semi structured questionnaire was used to collect data on the background information, type and time of accident, mortality and morbidity due to that in the last six months. The data was processed and statistical analysis was done using Epi-info version 7.0.

## **Results and Discussion**

Study population was 5,682 among them majority were in the age group of 0-15 years (31.3%), gender wise 51.6% were males. Total no of accidents found were 115, so the prevalence of domestic accidents for all age groups was 2.0%. Similar findings were observed by Haniff et al.<sup>4</sup> Devroey et al. reported an incidence of 2.7% in their study done in Belgium.<sup>5</sup> In contrast to this in a study in Karnataka they found prevalence of 9.6% in the rural community.<sup>6</sup>

Most common accidents reported were injuries from sharp or pointed instruments (32.2%) followed by falls (26.9%). (Table 1) Similar findings were observed in LARES survey of the WHO regional office for Europe.<sup>7</sup> In other studies common accidents were falls in semi urban community of Gujarat 71%<sup>3</sup>, in the rural Karnataka 43.2%.<sup>6</sup> Where as burns and sharp object

injuries were most common type in Shiraz study.<sup>8</sup> Chaurasia et al. observed higher proportion of burns and scalds in their study.<sup>9</sup> Accidental poisoning was observed in five children with kerosene and two with shampoo. Two cases of drowning among them one was died. Out of 23 burns cases 3 were deep burns among them two died. So in our study the mortality rate was 2.6%. In Shiraj study they reported mortality rate of 1.3%.<sup>8</sup>

Age group wise domestic accidents were more common in 31-45years (25.2%), sex wise among the accident victims females were slightly more(53.9%) (Table 2). This may be due to compared to males females were more involved in the household work. Hanief et al. reported similar findings.<sup>4</sup> Bhanderi et al. mentioned that female gender was found to be a significant predictor of domestic accidents.<sup>3</sup> The falls were more commonly found in the above 60 yrs age group.

Most of the accidents (73.6%) occurred in the morning and evening hours. Dinesh et al. reported 46.4% accidents occurred during the morning hours.

Domestic accidents were found to be common in the middle aged females among them majority were working women. This may be due to multitasking, and psychological stress. This is the area where we have to focus on counseling to all the family members. Educating people regarding time management and safety precautions is necessary.

**Table.1** Occurrence according to type of domestic accidents

Type of accident	No. of cases N=115	Percentage
1) Drowning	2	1.7
2) Burns	23	20.0
3) Poisoning	8	7.0
4) Falls	31	26.9
5) Injuries	37	32.2
6) Bite of animals	14	12.2

**Table.2** Occurrence according to age and sex

Age (Years)	Study population N=5682	No. of cases N=115	Percentage
0-15	1782	36	2.0
16-30	1206	19	1.6
31-45	1025	29	2.8
46-60	902	13	1.4
≥ 61	767	18	2.3
$\chi^2 = 6.0525$		p value = 0.1953	
Sex			
Male	2932	53	1.8
Female	2750	62	2.3
$\chi^2 = 1.4290$		p value = 0.1169	

### Acknowledgements

To all the interns who are posted in the RHTC during the study period.

### References

- 1) Park K. Non-communicable diseases. In : Textbook of preventive and social medicine. 22<sup>nd</sup> edition Jabalpur: Banarasidas Bhanot Publishers;2013.p.378.
- 2) Galal S. Working with families to reduce the risk of home accidents in children. East Mediterr Health J 1999; 5:572-582.
- 3) Dinesh J Bhanderi, Sushilkumar Choudhary. A study of occurrence of domestic accidents in semi-urban

- community. Indian journal of Community Medicine 2008;33:104-106.
- 4) Haniff J, Aris T, Hairi F. Home injury in Malaysia: Findings from the 1996 NHMS.Malays J of Public Health Med 2000; 1:48-54.
  - 5) Devroey D, Van Casteren V. The incidence of home accidents is going down in Belgium. Int J Contr Saf Promot 2006; 13:200-2.
  - 6) N.R.Ramesh Masthi, S.G. Kishore, Gangaboriah. Prevalence of Domestic Accidents in The Rural Field Pracice Area of a Medical College in Bangalore, Karnataka. Indian Journal of Public Health 2012;56:3:235-37.
  - 7) Large analysis and review of European housing and health status (LARES):

Preliminary overview, WHO regional office for Europe, 2007.

- 8) Neghab M, Rajaei FM, Habibi M, Choobineh A. Home accidents in rural and urban areas of Shiraz, 2000-02. *East Mediterr Health J* 2006;12:824-33.
- 9) Chaurasia R, Shukul M. Home – is it the safest place? *J Soc Sci* 2006;12:171-176.