



Awareness of Domestic Accidents Among Mothers of Children Aged Less Than 10 Years in an Urban Locality of South Karnataka: A Cross-Sectional Study

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Abstract

Introduction: Domestic accidents are one of the five leading causes of death due to injuries in industrialised and developed countries. Awareness about domestic accidents and their prevention can help in eliminating risk factors of accidents. Since children are vulnerable to accidents, the immediate caregivers must have adequate knowledge regarding the causes and prevention to reduce the morbidity and mortality due to accidents. **Objective:** To study the socio-demographic profile of the study subjects; To assess the knowledge on prevention of domestic accidents among mothers of children aged less than 10 years. **Methods:** A cross-sectional study was undertaken in the urban field practice area of a medical college in Southern Karnataka among mothers of children aged less than 10 years using a pre-structured proforma. Data was analysed using descriptive and inferential statistics. **Results:** A total of 385 mothers were part of the study. 51.4% had good knowledge regarding domestic accidents and their prevention. There was a statistically significant association between the level of awareness of domestic accidents with maternal age, educational status, occupation, religion, type of family and standard of living. **Conclusion:** The knowledge of domestic accidents and their prevention was 51.4%.

Keywords: Domestic Accidents, Knowledge, Urban

1. Introduction

Accidents are events, independent of human willpower, caused by rapidly acting external forces resulting in physical injury with or without mental damage and injury¹. Accidents if prevented can reduce the morbidity, mortality and disability in a large number of people. A domestic accident is an accident which takes place in a home or its immediate surroundings. The most common causes are drowning, burns, falls, poisoning, and injuries from sharp or pointed objects¹.

Children under five years of age have the highest drowning mortality rates worldwide. Globally highest rates of drowning in children are between 1-4 years followed by 5-9 years. Some of the risk factors contributing to drowning may be access to water in the form of ditches, ponds or pools, leaving children unsupervised or alone and medical conditions like epilepsy².

The rate of child deaths from burns is seven times higher in low and middle-income countries than in high-income countries. Burns are the 11th leading cause of death in children in the age group of 1-9 years. Poverty, overcrowding, lack of proper safety measures and placing

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young girls in household roles such as cooking and caring for small children are some of the risk factors leading to burns³.

Childhood falls occur largely as a result of their evolving developmental stages, innate curiosity in their surroundings and increasing levels of independence that coincide with more challenging behaviours commonly referred to as 'risk-taking'. Inadequate adult supervision is a commonly cited risk factor, poverty, sole parenthood and particularly hazardous environments are some of the risk factors noted⁴.

The burden of childhood unintentional injury is highest in Southeast Asia and Africa, the cause-specific mortality being 64 and 55 children per 1,00,000 population respectively. The majority of unintentional injuries among children occur at home and they pose a major threat to the health of children, especially in the middle and low income countries⁵.

Those who spend the majority of their time at home are at increased risk of domestic accidents. The only way to interrupt this pathway depends on the awareness of various factors which result in these accidents. Mothers with children aged less than 10 years were chosen as a part of the study as this group has a major role in the prevention of domestic accidents if they have adequate knowledge about its cause and prevention. The study assessed the levels of knowledge among mothers and helped in creating awareness about common domestic accidents, immediate first aid measures to be administered and common preventive steps to be undertaken to safeguard children from domestic accidents.

2. Objectives

- To assess the knowledge on the prevention of domestic accidents among mothers of children aged less than 10 years.

- To describe the socio-demographic profile of study subjects.

3. Methodology

Study Place: Urban field practice area of a medical college in Bangalore. **Study Design:** Cross-sectional study. **Study Period:** Four months (March 2021 - June 2021). **Study Population:** Mothers with children aged less than 10 years. **Sample Size:** 385. **Sampling Technique:** Purposive sampling. **Inclusion Criteria:** Those willing to participate and residing in the area for at least six months. Informed verbal consent was obtained from the study participants. The study was undertaken after clearance from the Institutional Ethics Committee. **Data Collection:** A house-to-house survey was undertaken and mothers with children aged less than 10 years were administered a pre-structured proforma after getting informal verbal consent. Information was collected regarding socio-demographic profile and their knowledge of domestic accidents. Knowledge was assessed using a questionnaire containing 15 multiple-choice questions. Correct response was given a score of 1 whereas wrong response was given a score of zero. Those mothers who answered $\geq 50\%$ of questions correctly were considered to have good knowledge and those who gave $< 50\%$ correct responses were considered to have poor knowledge. **Statistical Analysis:** The data was entered in Microsoft Excel and analysis was done using SPSS version 26.0. The data was analysed using descriptive statistics like mean, SD, percentages and inferential statistics like the chi-square test.

4. Results

A total of 385 mothers of children aged less than 10 years were interviewed to assess their knowledge regarding the prevention of domestic accidents.

Table 1. Distribution of mothers based on age and education

Education	20-29 Years	30-39 Years	40-49 Years	Total
Illiterate	09	16	08	33 (8.5)
Primary School	46	24	05	75 (19.5)
High School	70	68	01	139 (36.1)
Pre-University / Diploma	56	56	-	112 (29.1)
Graduate/Post Graduate	12	14	-	26 (6.8)

*Figures in the parenthesis indicate percentages.

Table 1 shows the distribution of study subjects based on age and educational status. The majority i.e., 193 (50.12%) mothers were in the age group of 20-29 years and 139 (36.1%) were educated up to high school. Among 385 mothers, 320 (83%) were homemakers and the rest 65 (16.9%) were employed. 231 (60%) were Muslims by religion followed by 147 (38.2%) Hindus and Christians 7 (1.8%). 374 (97.1%) were married and living with a

spouse. The majority of them 158 (41.03%) belonged to three-generation families, 134 (34.81%) belonged to a nuclear family and 93 (24.16%) to a joint family.

Among 385 mothers interviewed, 356 (92.5%) of mothers had heard about domestic accidents. Friends and neighbours (67.13%) and mass media (54.21%) were common sources of information. The mean correct response among study subjects was 7.56 ± 3.23 .

Table 2. Awareness regarding domestic accidents among mothers of children aged less than 10 years

S.No	Questions	Correct Response (n= 356)
1	Items that children should be allowed to play with.	330 (92.7)
2	The age group which is more prone to domestic accidents.	285 (80.1)
3	Reasons for drowning in children.	281 (78.9)
4	Common types of domestic accidents among children.	264 (74.2)
5	Cause of falls.	251 (70.5)
6	Risky behaviour resulting in burn injury.	226 (63.5)
7	Environmental conditions contributing to domestic accidents.	223 (62.6)
8	First aid measure following burn injury.	187 (52.5)
9	Common location of accidents in children.	161 (45.2)
10	Medical conditions contributing to domestic accidents.	152 (42.7)
11	The outcome of domestic accidents.	134 (37.6)
12	Different types of domestic accidents.	134 (37.6)
13	Reasons for poisoning in children.	118 (33.1)
14	First aid measures for a bleeding wound.	112 (31.5)
15	Psychosocial factors contributing to domestic accidents.	54 (15.2)

Table 3. Association between the level of awareness regarding domestic accidents and various socio-demographic characteristics

Demographic Variables Good		Knowledge		X ² , p-value
		Poor		
Age Group (in Years)	≤ 30 Years	63 (31.8)	118 (63.1)	37.78, <0.001
	≥ 30 Years	135 (68.2)	69 (36.9)	
Educational Status	< High School	28 (14.1)	62 (33.2)	19.41, < 0.001
	≥ High School	170 (85.9)	125 (66.8)	
Occupation	Not Working	145 (73.2)	175 (93.6)	28.38, < 0.001
	Working	53 (26.8)	12 (06.4)	
Religion	Muslim	85 (43.0)	145 (77.5)	47.9, < 0.001
	Hindu	113 (57.0)	42 (22.5)	
Type of Family	Nuclear	27 (13.6)	107 (57.2)	80.5, < 0.001
	Non- Nuclear	171 (86.4)	80 (42.8)	
SLI (Standard of Living Index)	High	140 (70.7)	157 (84.0)	9.576, 0.0019
	Medium	58 (29.3)	30 (16.0)	

*Figures in the parenthesis indicate percentages.

Table 2 displays the questions used to evaluate the awareness of the study participants regarding domestic accidents.

Table 3 shows the association between the level of awareness regarding domestic accidents and various socio-demographic characteristics. There was a statistically significant association between the knowledge regarding domestic accidents and the mother's age, educational status, occupation, religion, type of family and SLI.

5. Discussion

More than half of the mothers of children aged less than 10 years i.e. 51.4% had a good knowledge regarding domestic accidents and their prevention. 80% of the respondents were aware that children < 10 years old were more prone to accidents. 74% of the mothers knew common types of domestic accidents. With regards to drowning 78% of them were aware of the reason for drowning and 71% of the mothers were aware of the reason for falls. 62.6% were aware of the role of environmental factors in causing accidents. Only 52.5% were aware of first aid measures following burn injury and 31.5% were aware of first aid following a bleeding wound. The level of awareness was found to be associated with maternal age, educational status, occupation, religion, type of family and SLI.

According to a study done by M.M. Thein, mass media was the most common source of information. The majority of the caregivers had poor knowledge regarding home safety and first aid measures. A higher level of mother's education was more likely to lead to correct knowledge and practice regarding childhood injury prevention⁶.

In a study done by Lafta R K in a primary health centre of Baghdad city to assess the mother's knowledge of domestic accidents in children, it was observed that only 9.2% of the mothers had good knowledge regarding injuries resulting from chemicals and detergents. 11.6% of mothers had good knowledge about accidents caused by fire and the least number of mothers that is 6.3% had good knowledge concerning accidents caused by sharp instruments in the kitchen⁷.

In a study done in Nigeria, it was found that the educational status of the mother did not influence the knowledge regarding domestic accident prevention⁸.

A study done in the rural village of Chennai to assess the knowledge of mothers regarding first aid management

of domestic accidents among under 5 children showed that the majority of mothers i.e. 56% had inadequate knowledge. A statistically significant association was found between the level of knowledge and various socio-demographic variables of a mother like age, education occupation, Socio-Economic (SE) status and type of family⁹.

A similar study regarding knowledge on domestic accidents among mothers by T.C Suguna showed that the majority of the mothers had average knowledge regarding the nature and types of domestic accidents, first aid measures to be given and the prevention of domestic accidents and this was found to be associated with mothers age, religion and the family's income¹⁰.

A study done by P Thenmozhi on knowledge and prevention of domestic accidents among mothers of under 5 children, observed that 50% had adequate knowledge and 48.4% had the best practice of the prevention of domestic accidents¹¹.

6. Conclusion and Recommendation

Among mothers of children aged less than 10 years, 51.4% had good knowledge regarding domestic accidents. There was a statistically significant association between the level of awareness of domestic accidents with maternal age, educational status, occupation, religion, type of family and SLI. Since awareness levels are just above average it would benefit the individuals if regular awareness programmes are organised about causes of domestic accidents, their prevention and management at the community level.

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