

**A STUDY TO ASSESS THE KNOWLEDGE OF RURAL MOTHERS REGARDING COMMON DOMESTIC CHILDHOOD INJURIES AND HOME-SAFETY MEASURES ADOPTED BY THEM IN WEST DISTRICT OF TRIPURA, INDIA**Manjulika Debnath<sup>1</sup>, Taranga Reang<sup>2</sup>, Amar Tripura<sup>3</sup>**HOW TO CITE THIS ARTICLE:**

Manjulika Debnath, Taranga Reang, Amar Tripura. "A Study to Assess the Knowledge of Rural Mothers Regarding Common Domestic Childhood Injuries and Home-Safety Measures Adopted by them in West District of Tripura, India". Journal of Evolution of Medical and Dental Sciences 2014; Vol. 3, Issue 20, May 19; Page: 5522-5528, DOI: 10.14260/jemds/2014/2623

**ABSTRACT: BACKGROUND:** Fragile, helpless and innocent, an infant enters the world completely dependent on its caretakers. The house is an exciting place for infants and small children, who love to explore but aren't aware of the potential dangers. **OBJECTIVES:** To assess knowledge of mothers regarding domestic childhood injuries and safety measures adopted by them. **METHODOLOGY:** A cross-sectional study was conducted among 230 rural mothers of west Tripura district during May to June 2012. A systematic random sampling technique was used to select individual participant and information collected using pre-tested semi-structured interview schedule. **RESULTS:** The majority (71.3%) of respondents were in the age group 20-25 yea, housewives (79.56%), nuclear families (67.7%), up to primary education (60.9%) and family income of <Rs 5000/- per month (53.5%). Only 3.9% met minor domestic injuries. Out of which 6(66.7%) of respondents' children 3 were treated at home, remaining at hospital and all of them recovered. No significant relationship between age of mother and level of knowledge ( $X^2$  for trend,  $p= 1.094$ ). There was significant relation ( $p= 0.016$ ) between sex of the child and level of knowledge of mothers. **CONCLUSION:** The study revealed that sex of the children was important factor for knowledge level of mothers. The reported incidence of domestic injury was low that might have been due to under reporting.

**KEYWORDS:** Knowledge, practice, mother of under-five children, domestic injuries, rural area.

**INTRODUCTION:** Fragile, helpless and innocent, an infant enters the world completely dependent on its caretakers. From the moment you see it; you take steps to keep it safe. Although the surroundings should be a safe heaven for the child, it can at times be dangerous. In today's world, in the developed as well as the developing countries, danger prevails not only on the roads, but it also exists in the home and playgrounds. Every year, thousands of children die or are permanently disabled as a result of accidental injuries. In many developing countries, injuries are one of the major causes of death in children in the age group of 1-5 years.<sup>1</sup> All children are at risk for injury because of their normal curiosity, impulsiveness and desire to master new skills and children imitate adult behavior from an early age.<sup>2</sup>

Life cannot be risk free but utilizing household safety measures can prevent most household accidents. Most of children feel safe and secure in their home, yet unfortunately at home is where many injuries and deaths occur.<sup>3</sup> The largest number of accidents happens in the living room, however the most serious accidents happen in the kitchen.<sup>4</sup> The main causes of accidents in the home are falls, fires and burns, drowning, suffocation, choking, poisoning and cuts and lacerations.<sup>5</sup> Also accident is the leading cause of death and is a major reason for hospital admission and long term of

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disability in this age group from 3 to 5 years.<sup>6</sup> In Egypt in 1998, the overall prevalence of injuries in indoor home environment were 72.5% among children below 5 years.<sup>7</sup>

The dangers to young children will be pointed out; mothers and fathers will be informed of their responsibility to make their home a safe place and to teach their children how to live safely in the environment.<sup>8</sup> Strategies have to develop to combat these threats to children's health. Parents are often very knowledgeable however, they are unaware of the scope of the child injury problem and do not routinely think about injury risk in the course of their day-to-day interactions with their child. They are aware that a child's risk of injury depends on the child's developmental level, caregivers' behavioral choices, and the degree of supervision provided, but this knowledge does not influence their supervision of children at high risk for injury. Mothers can help to prevent injuries in children by guiding children under their care and by setting a good example of safe behavior.

There is scanty data available on the frequency of domestic childhood injuries and its impact on the morbidity status of children in the states of North-Eastern India, particularly Tripura. There has been surprisingly little research to identify factors that motivate parents' decisions to engage in safety practices known to reduce child injury risk in the home. Hence, this study was carried out to assess the domestic accidents among under-five children so that suitable interventions could be suggested for enhancing maternal home-safety practices depending on the type of injury. The objectives of the study were, (i) to assess knowledge of mothers regarding domestic childhood injuries and (ii) home safety measures adopted by mothers.

**METHODOLOGY:** A cross-sectional study was conducted among mothers during May to June 2012 in rural area of West district of Tripura. A sample size of 230 was calculated using the formula  $(1.96)^2 PQ/L^2$  where,  $P = (63.4\%)$   $Q = 1 - P$  and  $L = 10\%$  (allowable error) with 3% non-response. Mothers who were <18 years of age, not having under-five children, critically ill children and not available after 2 successive visits were excluded from the study. After extensive review of literature, a semi-structured interview schedule was prepared and pre-tested in order to assess the knowledge and practice of home-safety measures of mothers of under five children regarding domestic injuries countered by children.

The interview schedule had 2 sections: section A included the demographic data, section-B contained knowledge and practice and questions of home injuries. Section A dealt with demographic data consist of 10 items used to collect the sample characteristics, which comprised of age, religion, type of family, occupation, educational status, income, age of the child, sources of information and any type of accident. Section B consisted of 33 items, which had knowledge and practice questions of home injuries. These statements had 3 options out of which one was the correct response. For every correct response a score of "one" and for every wrong response a "zero" was awarded. There were 33 questions out of which 14 were knowledge questions and 19 were practice questions resulting with a maximum score of 14, 19; and minimum score of 0 (zero), 0 (zero) respectively.

The knowledge and the practice level of respondents were classified as inadequate /low level with scores, moderate level with scores, and adequate/high level with scores. The population of the study area was approximately 6120. There were 1065 families in 11 numbers of Para's (Mahallas). Para wise list of mothers of under-five was prepared according to House number with the help of Anganwadi Worker and ASHA (Accredited Social Health Activist). A total of 230 mothers were selected using systematic random sampling technique. Interview schedule was administered face-to-

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face at the residence only. If the mother was absent on the day of interview, second visit was made on next day. Verbal informed consent was taken. Ethical clearance was obtained from the institutional ethics committee.

All information regarding socio-demographic variables, knowledge of the injuries and home-safety measures adopted for preventing them was elicited. Strict confidentiality was maintained. Analysis was done using Microsoft excel 2007 and Epi-info version 6.0. The percentage was calculated and X<sup>2</sup> test performed to find out the association between injuries with the selected important variables of interest.

**RESULTS:** The majority (71.3%) of respondents were in the age group 20-25 years, housewives (79.56%), nuclear families (67.7%), up to primary education (60.9%) and family income of <Rs 5000/- per month (53.5%). Majority (96.1%) of the respondents with under-five children did not reported of any home accidents but only 3.9% met minor domestic injuries. Out of which 6(66.7%) of respondents' children among who were injured 3 were treated at home, remaining at hospital and all of them recovered.

Almost ninety six percent (96.1%) of the respondents with moderate knowledge, while 3.9% of the respondents with inadequate level of knowledge. 98.3% of the respondents with moderate level of practice, 1.3% with high level of practice, and remaining 0.4% with inadequate level of practice. There was no significant association ( $p = 0.166$ ) between level of knowledge and practice regarding home safety measures. No significant relationship between age of mother and different level of knowledge (X<sup>2</sup> for trend,  $p = 1.094$ ). There was significant relation ( $p = 0.016$ ) between sex of the child and different level knowledge of mothers (table1). The practice regarding home safety measures was not associated with age of mother, mother's occupation, family type, sex and age of the children ( $p > 0.05$ ) (Table2).

**DISCUSSION:** The present study was conducted in a rural setting among the mothers who were at present having under-five children in home. The response rate was high and all the samples included were mothers of under-five children whereas a study by M Barbara, K et al, (2004)<sup>10</sup> reported that all recruited mothers were having children in the age group of 19-24 months and 25-30 months. The present study revealed that 3.9% met minor domestic injuries. Out of which 3 were treated at home, remaining at hospital and all of them recovered. An incidence of domestic childhood injuries of 63.4% was reported by Chowdhuri et al.<sup>9</sup> Nath A et al (2007)<sup>11</sup> in Karnataka reported that rate of accidents in the children was 3.13 per 100 child months or 0.35 per child per year. A majority of the accident episodes (70.3%) occurred in the males. The present study findings revealed low incidence of domestic injury compared to others that might be due to the fact that of difference in setting, living standards and parents' education.

Overall, abrasions accounted for the majority of the injury types (72.6%), followed by cuts and lacerated wounds (11.8%), avulsions (6.6%), contusions (4.4%), burns (3.8%), and bite wounds (0.8%).<sup>11</sup> Alwash R et al (1998) in London hospital reported on the severity of injuries from home accidents which was assessed on 402 children under the age of 5 where burns, scalds and poisoning caused more severe injuries than other accidents. A strong correlation was found between the parent's social class and the severity of the accident. Programs of prevention of accidents to children of home were stressed.<sup>12</sup> Home accidents rank highly among all accidents and occur in or around the

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house. The home was the place where children spend most of their time. Most home injuries occurs especially among children of 4-5 years because they were not aware of the hazards and were more susceptible to environmental risks and were curious and desire to master news kills. Injury in home was extremely common, accounting for approximately 1/3 rd of all injuries in the united states and children under the age of 5 years were in the highest risk groups for home injuries.<sup>13</sup>

As home accident becoming important cause of death in children world over, it could be minimized or prevented through measures that could be taken by parents at home so parents should control and supervise the environmental conditions, elimination of hazardous condition from the areas where children play and live which could minimize the frequency of home accidents. So training should be given to parents especially mothers on risk factors and ways to prevent home accidents so as to protect the 0-6 age group children from accidents.<sup>14</sup>

In the present study revealed that 98.3% of the respondents with moderate level of practice, 1.3% with high level of practice regarding home safety measures. No significant relationship between age of mother and level of knowledge. There was significant relation between sex of the child and level of knowledge of mothers. Rivera FP (2002) reported that knowledge of safety practices was low for many items. Results indicated the need to improve parental knowledge of injury prevention and to educate parents about normal childhood development.<sup>15</sup>

Garling A et al (1993) in Canada reported that the mother's anticipation and prevention of unintentional injury to young children at home mothers anticipated by 57% and 47% of all injury events. Results of the study showed mothers of young children most frequently reported preventing injury by a physically restricting or moving the child away by changing the environment.<sup>15</sup> The incidence of domestic injuries were aggravated by the house condition such as the house floor was too smooth, unsafe balcony, untidy objects in houses, electric equipment, hot or burn objects and other issues like chemicals, spoiled food, well or water container without covers, animals specially dogs without muzzles, sharp objects etc. some factors like number of children of the family or family economic conditions related to an increasing rate of home injury.<sup>16</sup>

**CONCLUSION:** The study revealed that sex of the children was important factor for knowledge of mothers regarding domestic injuries and home safety practices. The reported incidence of domestic injury was low that might have been due to under reporting. The literacy, family type, occupation were not important role to play in regards to knowledge and practice of domestic injuries in this set up. The sample was concentrated in locality where one population group was studied and hence, that could not be generalized. Further research is recommended including different sub group of populations.

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<b>Table 1: Association of knowledge with type of family, occupation, Literacy of mother, sex of children and age of the children</b>			
Variables	Level of knowledge		P value
	Moderate	Low	
<b>Type of family</b>			
Nuclear	152(%)	4(%)	2.347
Joint	69(%)	5(%)	
<b>Occupation</b>			
Housewife	174(%)	9(%)	2.406
Labourer	38(%)	0(%)	
Govt. employee	9(%)	0(%)	
<b>Literacy</b>			
Illiterate	58(%)	2(%)	1.715
Primary school	133(%)	7(%)	
Secondary school	30(%)	0(%)	
<b>Sex of the child</b>			
Male	118(%)	5(%)	<b>0.016</b>
Female	103(%)	4(%)	
<b>Age of child</b>			
Below 1 yr	69(%)	2(%)	0.793
1-3 yrs.	90(%)	5(%)	
3-5 yrs.	62(%)	2(%)	

<b>Table 2: Association of practice with age group of mothers, type of family, occupation, literacy, sex of the children and age group of children</b>			
Variables	Practice		P value
	Good, N (%)	Satisfactory, N (%)	
<b>Age group of mothers</b>			
18-20 years	0(%)	38(%)	6.116
20-25 years	3(%)	164(%)	
>25 years	0(%)	27(%)	
<b>Type of family</b>			
Nuclear	2(%)	154(%)	2.120
Joint	1(%)	72(%)	
<b>Occupation</b>			
Housewife	3(%)	178(%)	1.046
Labourer	0(%)	38(%)	
Employee	0(%)	9(%)	
<b>Literacy</b>			
Illiterate	2(%)	58(%)	9.364

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Primary school	1(%)	139(%)	
Secondary school	0(%)	29(%)	
<b>Sex of the child</b>			
Male	1(%)	121(%)	1.360
Female	2(%)	105(%)	
<b>Age group of children</b>			
Below 1 yr	1(%)	70(%)	3.904
1-3 yrs.	2(%)	93(%)	
3-5 yrs.	0(%)	63(%)	

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