

Knowledge and Practice of Rural and Urban Mothers regarding Prevention of Common Accidents Among Children Under Five Years of Age: A Comparative Study

Anjali Hazarika¹, Jogesh Sarma²

Abstract:

In this study, a descriptive research approach was used to assess the knowledge and practices of urban and rural mothers regarding prevention of common accidents among children under five years of age. Multi-stage random sampling technique with a structured interview schedule was used to collect data from the samples. Result of the 200 samples revealed that the highest knowledge score of 14.51 was found in urban mothers with SD of 2.018 as against a score of 14.47 in rural mothers with SD of 2.213. The highest practice score of 14.24 found in urban mothers with SD of 1.980 and 14.23 in rural mothers with SD of 1.890. In chi-square test, no significance associations were found between knowledge of mothers with socio-demographic variables, but significant association was found between practices of both rural and urban mothers with education, family monthly income and number of children in the family at 0.05 levels.

Accidents are the largest single cause of death and disability below the age of live years and one of the most serious health problems the world today is facing. Every year 1,50,000 children die from unintentional injury and another 400 million are seriously hurt. Many injuries lead to permanent disability and brain damage (WHO, 2009). Equipped with knowledge and proper practices, mothers can prevent various types of accidents. Therefore, a comparative study was conducted in the Kamrup District of Assam to assess the knowledge and practices of rural and urban mothers regarding prevention of common accident among children under five years of age.

Accidents currently form the third leading cause of morbidity and mortality in the developed and developing countries as per the World Health Organisation (2009). Accidents take place in a wide variety of environment like playgrounds, gardens, fields, ponds, rivers, waste dump etc. There is a possibility of such a happening, in every sphere of human's life (Park, 2007). Injury-related disability leads to developmental delay and emotional problem of children that becomes a burden to the family and community.

As per 2009 report published by Child Accident

Prevention Trust, the largest single cause of accident is falls (55.8%). The majority of accidents occurred at home (77.5%): 24.2 percent in the living room, 12.5 percent in the kitchen, 11.7 percent on stairs, 8.3 percent in the bedroom, 5.8 percent in the bathroom, 15.0 percent in the garden, 11.7 percent in public places, 5.8 percent at school and 5.0 percent occurred on the road. The largest numbers of accident happen in the home, its surroundings and school. "If we are ultimately going to meet the millennium development goal to reduce the child mortality, it is imperative that we should take action to address the causes of childhood accidental injury (WHO, 2009).

The mother's role in Indian families is multidimensional. Mothers are primary care givers and considered to be the best teacher with potential influence on children. Mother's involvement can become an entry point for many developmental activities, and also can prevent the consequence of accidents or illness among children.

Objectives

In this study it was sought to (i) assess the knowledge of rural and urban mothers regarding prevention of common accident among children under five years of age; (ii) assess the practices of rural and urban mothers regarding prevention of common accident among children under five years of age; (iii) correlate relationship between knowledge and practices of urban mother with rural mother regarding

The authors are: 1. Assistant Professor, Regional College of Nursing, PO Indrapur, Guwahati (Assam); 2. Prof and HOD, Dept of Respiratory Medicine, Guwahati Medical College and Hospital, Guwahati (Assam).

prevention of common accident among children under five years of age; and (iv) find out the association between socio demographic variables with knowledge and practices of mothers regarding prevention of common accidents.

Hypothesis

H1: There is a significant difference between knowledge of urban and rural mother regarding prevention of common accidents among children under five years of age.

H2: There is a significant difference between practice of urban and rural mothers regarding prevention of common accidents among children under five years of age.

H3: There is a significant association between socio-demographic variables and level of knowledge of mothers regarding prevention of common accidents among children under five years of age.

H4: There is a significant association between socio-demographic variables and level of practices of mothers regarding prevention of common accidents among children under five years of age.

Conceptual Framework

Modified Health belief model (from Beaker MIT and Miamian LA. 1974) was used in the study. This model provides a way of understanding and predicting how clients will behave in relation to their health and how they will comply with health care therapies. The model comprises of 3 primary components: (i) Individual perception (ii) modifying factors, and (iii) likelihood of initiating or engaging in action as in Fig 1.

Review of Literature

According to the WHO Global Report, the leading cause of childhood injury and death were road accidents, which killed 260,000, drowning 175,000, burns 96,000 and falls 47,000, in a year globally and injured around 10 million more. About 50,000 children aged 0-14 years especially <5 years of age, die every year as a result of unintentional poisoning (WHO, 2010).

In a cross-sectional descriptive study conducted in Thailand on preventive behaviour of injury among mothers in the community, Transen (2012) showed that the common accident was falls (66%). Among the mothers, 16.6 percent mothers had good knowledge, 63.4 percent had moderate knowledge, 52.7 percent had positive attitude but poor practices. Only 9.8 percent of mothers had good preventive behaviour regarding accidents. Children of mothers with low knowledge, negative attitude and practices were the worst affected. The study recommended that mothers must have good knowledge to follow proper practices.

Donavane (2013) conducted a quantitative study to assess the knowledge, attitude and first aid awareness among mothers of 0-14 years children in South India. A total of 140 mothers were interviewed. The results showed that 35 percent had experienced domestic accidents, most of which were cuts (73.5%) and burn (22.4%). The mean knowledge score was 2.34 ± 1.98 . Only 56 mothers participated in the first aid training programme and their knowledge score was 12.24 ± 1.27 immediately after the programme. The study concluded that domestic accidents were common in rural areas and mothers needs more knowledge to increase their practices.

Material and Methods

A descriptive co-relational research design was used to assess the knowledge and practices of Rural and

Fig. 1: Modified health belief model based on Beaker & Miaman (1974)

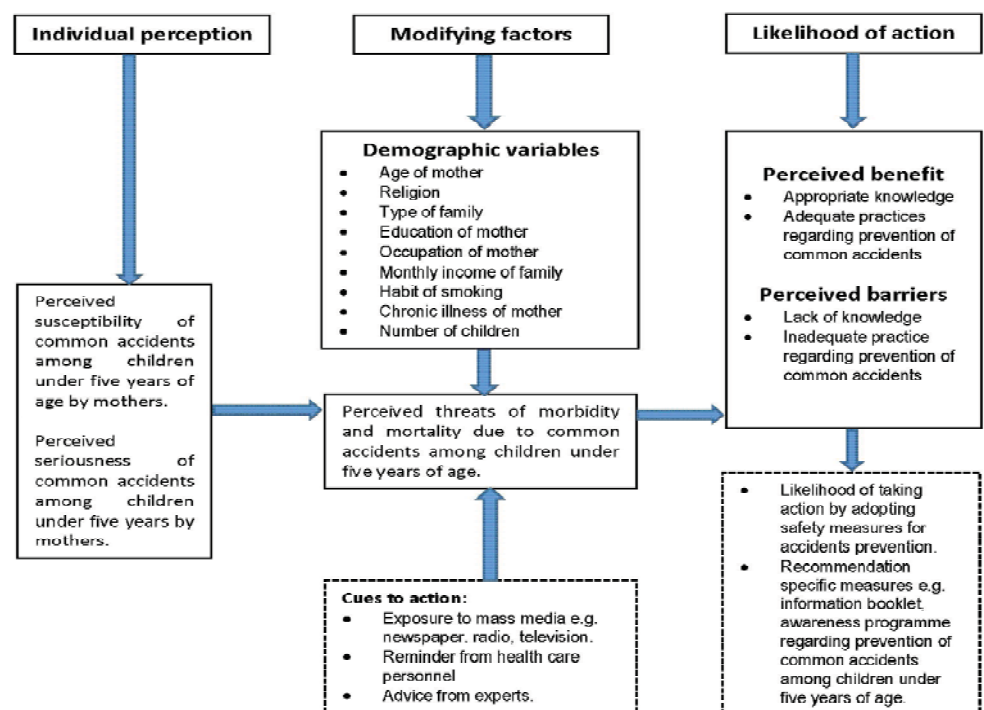


Table 1: Mothers' knowledge about prevention of common accidents (n=200)

Knowledge score	Type of residence				Total
	Urban		Rural		
	f	%	f	%	
Inadequate (Score < Mean – SD)	16	16	20	20	36
Moderately adequate (Mean – SD ≤ Score ≤ Mean + SD)	63	63	61	61	124
Adequate (Score > Mean + SD)	21	21	19	19	40

Table 2: Distribution of practices of mothers regarding prevention of common accidents and type of residence (n=200)

Practice score	Type of residence				Total
	Urban		Rural		
	f	%	f	%	
Inadequate (Score < Mean – SD)	20	20	19	19	39
Moderately adequate (Mean – SD ≤ Score ≤ Mean + SD)	64	64	70	70	134
Adequate (Score > Mean + SD)	16	16	11	11	27

Urban Mothers regarding prevention of common accidents among children under five years. Two health care setting in Kamrup District of Assam were covered. The study population comprised of mothers having under-5 children. The sample size for this study was 200 mothers (100 rural and 100 urban) having children under five years of age who fulfilled the entry criteria. Multi-stage random sampling

technique was used to select the study samples.

Data collection instruments: In Part A, demographic variables e.g. age, education of mothers, family income etc. were assessed. Part B had 25 question on knowledge of mothers regarding prevention of common accidents under five years of age. Here knowledge of mothers was scored under three headings - Inadequate <12, Moderately adequate 13-18 and Adequate>19.

In Part C, 25 question on practices regarding prevention of common accidents among children under five years of age were included. Here practices of mothers were score in three heading - Inadequate <12, Moderately adequate 13-18 and Adequate >19. The tool was validated with the specialty experts and discussion with guide.

For reliability of the tools, 10 percent of the sample was tested by using Karl Pearson's formula. The reliability was 0.8164 which was found to be highly reliable to conduct the main study. Prior to the data collection ethical committee permission was obtained from the institutional ethical committee and respective health care authority for conduct this study. Consent was taken from the mothers before collection of data and were assured of maintain confidentiality regarding their response to the questions.

Results

Socio demographic variables: The frequency and percentage distribution of demographic variable of 200 mothers revealed that 46 percent of urban mothers aged 31-40 years and 48 percent of rural mothers were aged 18-31 years, 65 percent of urban mothers and 49 % rural mothers were Hindu, 39 percent urban mothers had education up to graduate and PG and 40 percent rural mothers were HS level, 30 percent 33 percent of urban mothers and 20-25 percent rural mothers income falls between Rs. 7323-19574 per month, 44 percent urban mothers had one child and 40 percent rural mothers had two children.

The highest knowledge score 14.51 found in urban mothers with SD of 2.018 and 14.47 found in rural mothers with SD of 2.213. The highest practice score 14.24 found in urban mothers with SD of 1.980 and 14.23 found in rural mothers with SD of 1.890. Distribution of knowledge and practices about prevention of common accidents and type of

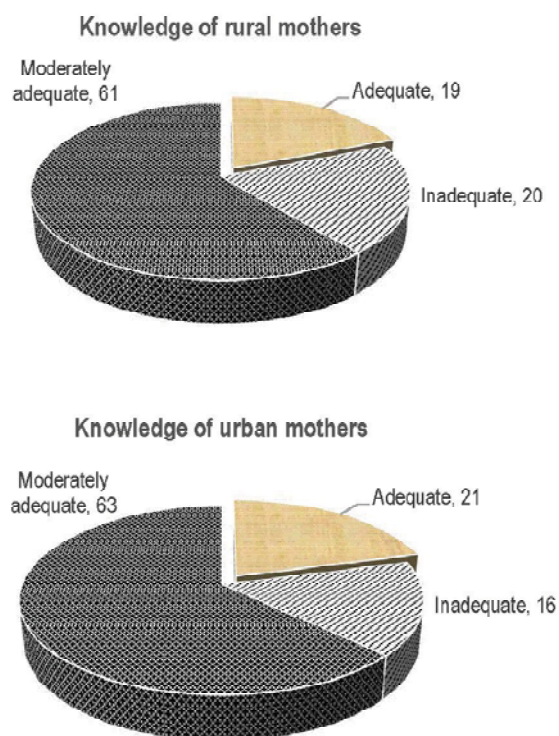


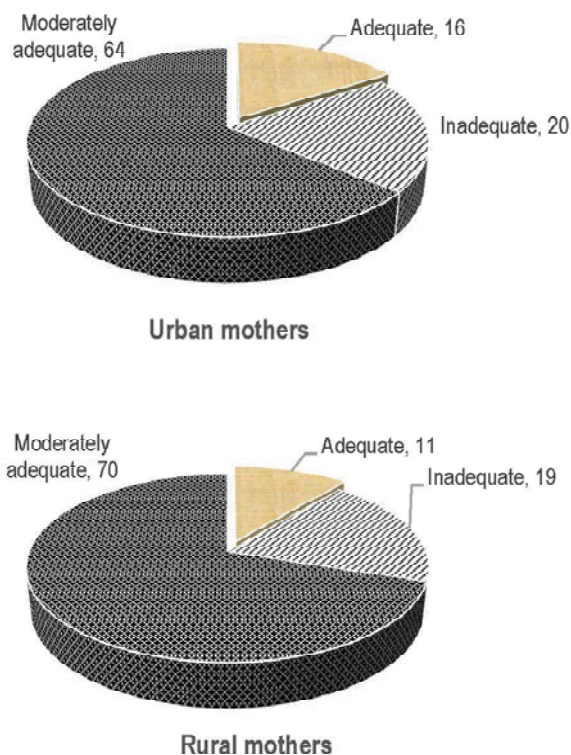
Table 3: Overall mean knowledge and practice score of respondents on prevention of common accidents (n=200)

Aspect of score	Urban		Rural		Mean		SD	
	Max	Min	Max	Min	Urban	Rural	Urban	Rural
Knowledge	20	11	20	11	14.51	14.47	2.018	2.213
Practice	20	11	20	11	14.24	14.23	1.980	1.890

Table 4: Correlation between the levels of knowledge and practices of urban and rural mothers

Dimensions	Correlation	p-value
Knowledge of urban and rural mothers	1	0.672
Practices of urban and rural mothers	1	0.672

Fig 2: Practices of urban and rural mothers



residence are shown in Tables 1-2 and Fig 1.

Fig 1 shows that 63 percent urban and 61 percent rural mothers had moderately adequate knowledge, 21 percent urban and 19 percent rural mothers had adequate knowledge and 16 percent urban and 20 percent rural mothers had inadequate knowledge.

Fig 2 shows that 64 percent and 70 percent rural mothers had moderately adequate practices, 16 percent urban and 11 percent rural mothers had adequate practices and 20 percent

urban and 19 percent rural mothers had inadequate practices. Overall mean knowledge and practice score is in Table 3. Table 4 outlines the correlation between knowledge and practice of urban and rural mothers.

Table 5 indicates that there were no significant differences between the knowledge and practice of rural and urban mothers regarding prevention of common accidents among children. Table 6 indicates that there were no significant differences between the practices of rural and urban mothers regarding prevention of common accidents among children.

Highest mean knowledge score was found in urban mothers (14.51) as compared to rural mothers (14.47). This result is supported by Sullivan et al (2010) who assessed the knowledge, attitude and first aid among mothers of 0-14 years, as mothers had average knowledge score of 12.24 ± 1.27 . The highest mean practice score found in rural mothers (14.23) in comparison to urban mothers (14.24). These findings are supported by an experimental study conducted by Trensén (2012) that the primary care givers had average knowledge and good practices on the first aids and home safety on prevention of accidents. There were no significant differences in knowledge and practices of urban and rural mothers. Chi-square test was computed to find out the association between knowledge and practices of mothers with socio-demographic variable. There were no significant associations between knowledge of mothers with socio-demographic variables, but significance association found between practices of both rural and urban mothers with education, family monthly income and number of children in the family ($p \leq 0.05$).

Table 5: Difference between knowledge of urban mothers with knowledge of rural mothers

Variables	Df	p-value	z-value
Knowledge of urban mothers	48	0.733706	0.34022
Knowledge of rural mothers			

Table 6: Difference between practices of urban mothers with practices of rural mothers

Variables	Df	p-value	z-value
Practices of urban mothers	48	0.913202	0.10908
Practices of rural mothers			

Conclusion

Accidents are a common problem for both developed and developing countries. Equipped with knowledge and proper practices, mothers can help to prevent various types of accidents. Identification of the risk factors and arrangements can also be made for improving education to the different community regarding prevention of common accidents.

Implications of the study

Nursing education

- There are many opportunities for nursing professional to educate mothers regarding prevention of accidents among under five children.
- Nurse educator can teach the nursing students to acquire knowledge and skills in prevention of accidents among under five children.
- Nurse Educator can work as team health educator to provide planned and incidental teaching to mothers about the maintenance of safe home-, environment.
- School health nurse can provide education to children in preparatory school or Anganwadi centres regarding prevention of accidents.

Nursing practice

- Nurses can conduct community awareness campaigns and programmes during home visit on prevention accidents among children.
- Health education is one of the nurses responsibility; therefore nurses can impart knowledge among mothers of under five children.
- Nurses can teach grass root level health professionals to teach mothers during their home visits for prevention of accidents.

Nursing administration

- Nurse Administrator can organise and conduct health awareness programme in the hospital or in the community with the help of other health professionals.
- Organisation of staff development programmes for nurses to update their knowledge regarding prevention of accidents among under five children.
- Nursing administrator can bring awareness among the public in general and specific focus groups about causes and prevention of accidents among under-fives.
- Community health / nursing administrator

should encourage and instruct nurses or other health personnel for educating parents, family members specially mothers regarding preventive measure of accidents among under five children.

Nursing research

- Nurses must be motivated to conduct research related to prevention of some common accidents among children up to the age of 18 years.
- Nurse researcher can develop appropriate health education tools for educating mothers on prevention of accidents among under-five children.

Recommendations

(a) Similar study can be conducted on a larger sample for generalisation. (b) The same type of study can be conducted by including both fathers and Mothers to compare the knowledge between them. (c) An evaluative study can be done to observe the effectiveness of structured teaching programme on prevention of common accidents. (d) An observational study can be carried out to find out the actual practice for a period of time regarding preventive aspect of accidents.

References

1. WHO. Global Burden of common childhood accident in the Community 2009: A report-[http://www. home.ropsa.com/](http://www.home.ropsa.com/).
2. Park K. Text Book of Social and Preventive Medicine. Accidents and injuries by Banarasidas Bhanot. 19th edn, 2007; pp 342
3. Global childhood injury. A world report on child injury prevention. WHO Library report publication, 2009: 60-69
4. UNICEF Regional web link: <http://www.unicef.org>. 2010. The United Nations Children Emergency Fund (UNICEF) ISSN: 1014 - 7837
5. Child Accident Prevention Trust. Basic principles of childhood accidents - A gap in child health burden estimation, London CAPT. 2009
6. World Health Organization. WHO Global Status Report on Road Safety 2010: Supporting and Action: World Health Organization.
7. A Report (2009); Epidemiology on drowning. *Journal of Trauma* 29(9): 1273-75
8. Child Accident Prevention Trust. Basic principles of Child Accidents - A Guide to Action. London CAPT. 2011
9. Sullivan et al. Knowledge, attitude and first aids of childhood accident injury. *Journal of Pediatric* 2010; 26: 465
10. Transen M. An experimental study report on cues of childhood accident and mothers attitude. *Journal of Pediatrics Nursing* 2012; 22(3): 206-07
11. Villaba Cotta. Risk factors identification; prevention of home accident. *Journal of Child Health Care* Sept 2013; 10(2): 149-51