

Research Article

An assessment of knowledge of mothers on prevention of home accidents among the mothers of children under five years in selected areas of urban community**Jayashree Rajesh Salvi**

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Abstract

“Home accidents are a substantial health problem for young children. An accident is a sudden cause of death or an emergency in children” Accidents are usually related to the growth and development of the children. **Aim** To prepare the information booklet and to assess the knowledge regarding prevention of home accidents among children (0-5 years). **Methods:** Fifty samples were selected using non probability purposive sampling and given Pre test & Post Test. The samples included are from mothers of 0-5 years old children in slum chawls of khar in Urban Mumbai. Fifty samples were selected using non probability purposive sampling. A self administer questionnaire was used to collect demographic information, and knowledge regarding prevention of home Accidents in mothers. It was established by experts in the field and reliability was tested using Split half method and Cronbachs Alpha. **Results** It is noted that 36% of the samples were having children between age group 1-2 years age, 32% samples were having children between ages 0-1 years, 26% samples were having children between 2-4 years age and remaining 6% samples had children between age group 4-5 years. Majority of the samples i.e. 96% have completed immunization till date and remaining 4% samples have not completed immunization till date. It is noted that pre test knowledge score of variables introduction, burns falls, electric shock and poisoning accidents shows significant association with monthly family income as calculated F value is more than table value 2.78 at 0.05 level.

Key Words: Knowledge, prevention, home accidents, urban community

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1. Introduction

The aim of preventive pediatrics is prevention of diseases, disability and promotion of physical mental and social wellbeing of children, with this goal in view physicians and nurses are extending their interest in the public health field to give more family and child centered care [1].

Home accidents are a substantial health problem for young children. An accident is a sudden cause of death or an emergency in

children [2]. Accidents are usually related to the growth and development of the children.

In 1979, over 22,000 Americans died in accidents occurring in their own homes, one out of ten those who died was a child under 5 years of age [3]. Children of 2 and 3 years of age have the greatest number of accidental injuries around their own homes.

Each year at-least 16 millions of children are treated in emergency rooms and more than 30,000 are permanently disabled due to injury in United states [4]. Injuries are the

leading cause of death in children older than 2 year [5].

"A study states that the Indian population is characterized by high proportions about 41% of children and infants tragedy of trauma is seen more in pediatric age group so it is very essential to look for the factors responsible for such accidents in the homes [6]. As Craig has pointed out that, a large group of children show exaggerated oral tendency so they try to put anything in their mouth [7]. Accidents in preschool and school children are also very common due to their increased initiative and desire to imitate the behavior of adults which put them in hazardous situation.

Though hazards in our surroundings cannot be eliminated completely but it can be minimized with the education of public. It has been aptly stated that, "If accident is a disease, education is its vaccine [8].

A descriptive study done to identify causes and types of accidents and their consequences in preschool aged children in villages of Iran on 6875 population. Study shows 75% home injuries were caused by burns alone and 86% of these are caused by hot fluids and suggests increasing people's knowledge for prevention of these injuries [9]. A comparative study was done on 127 populations. Accidentally poisoned children from emergency room study shows highest age incidents for both sexes in poisoned children was 36 months males outnumbered females at a ratio of 3:2 behaviors problems such as hyperactivity, temper tantrum aggression, enuresis, occurred were in poisoned children than in control and those who have poisoning for more than one occasion. The families of poisoned children differed with control group in low level of education, disturb home atmosphere etc [10].

Study done was to determine relationships among health beliefs, social influence and home injury proofing behavior in low income mothers with preschool children by structured interview and observation on 140 samples [11]. A total of 10,117 first time visits due to injuries were recorded, representing a rate of 182 injuries / 1000

children. Study shows proximity to accidents and emergency departments is a strong determinant of the use of the service by children with overall injuries occurring at home [12]. A Randomized controlled trial study done on 3433 samples to quantify the effectiveness of home visiting programmes in the prevention of child injury and child abuse. Study shows home visiting programmes have the potential to reduce significantly the rates of childhood injury [13].

Study done by C.N. Spiegel F.C. Lindaman (2002) an programme to prevent childhood morbidity and mortality from window falls population taken was children 10 year old and younger, conclusion shows significant reduction in falls resulted to 5% from 1973-75 [14].

Aim

To prepare the information booklet and to assess the knowledge regarding prevention of home accidents among children (0-5 years).

2. Methods

Fifty samples were selected using non probability purposive sampling [14] and given Pre test & Post Test. The samples included are from mothers of 0-5 years old children in slum chawls of Khar in Urban Mumbai. Fifty samples were selected using non probability purposive sampling [15]. A self administer questionnaire was used to collect demographic information, and knowledge regarding prevention of home Accidents in mothers. It was established by experts in the field and reliability was tested using Split half method and Cronbachs Alpha.

The Data collection tool consisted of following sections

Section I

This part of the questionnaire schedule is included the demographic data. The items included in this are- age, education, occupation, monthly family income, type of family, total number of children, children under 5 years age and immunization status..

Section II

- This part is consisted of knowledge level of mothers of 0-5 year children about

Home accidents, types and causes of accidents.

- Prevention of home accidents such as burns and scalds falls cuts and injuries, electric shock, suffocation, poisoning and drowning.

Reliability of the tool

Assessed by using the software packages SPSS 16.0 version SAS, Minitab. Reliability analysis, percentages, distribution of data, mean and standard deviation values, test of significance by using t test and ANOVA is applied by using the above software statistical packages. Reliability analysis by using split half method is 0.80 and with cronbachs alpha method it is 0.78. The reliability of the tool is has been found to be effective and reliable since the reliability value is greater than 0.70 and is statistically significant.

Pilot study

A pilot study was conducted during 03.03.10 to 10.03.10 in the ambedkar nagar of khar west opposite to gurunanak municipal dispensary. An administrative approval was obtained from concerned authority. Five houses from slum chawls were selected and their consent for the participation in the study was taken. The time spent for each house was 30-40 minutes.

3. Results

Data has been analyzed, classified and tabulated on the basis of the study and is presented in the following sections:.

Section 1

This section deals with Demographic data of mothers of children o-5year old in urban community slum area is analyzed in terms of frequency and percentage.

Table 1: Distribution of data by age-group for mothers

SN	Age group	Number of cases	Percentage
1	14-18	0	0
2	19-23	14	28.0
3	24-28	26	52.0
4	29-33	7	14.0
5	34above	3	6.0
6	Total	50	100

With regards to Age, it was noted that majority of the sample i.e. 52% belonged to the age group of 24-28 years.28 % of sample belonged to the 19-24 years age group.14%sample belonged to the 29-33 years age group and remaining 6% sample belonged to the 34 years and above age group.

Table 2: Distribution of data by education

SN	Education	Number of cases	Percentage
1	Primary	9	18
2	Secondary education	34	68
3	Higher secondary	6	12
4	Graduation	1	2
5	Post graduation	0	0
6	Total	50	100

Majority, i.e.68 % of the samples have taken secondary education,18% samples are primary educators,12% samples have

taken higher secondary education, 2% samples are graduates and 0% are post graduated

Table 3: Distribution of data by occupation

SN	Occupation	Number of cases	Percentage
1	Service	2	4
2	Housewife	36	72
3	Business	0	0
4	Others	12	24
5	Total	50	100

It is noted that majority i.e. 72 % of the samples are housewives, 24% samples are house maids, 4% samples are doing service and nobody has their own business.

Table 4: Distribution of data by monthly family income

SN	Income	Number of cases	Percentage
1	Less than 5000	44	88
2	5001-10000	6	12
3	10001-15000	0	0
4	15000 Above	0	0
5	Total	50	100

It is noted that majority of the samples i.e. 88% have monthly family income less than Rs.5000/month, and remaining 12% samples have monthly income from Rs. 5001-10000/month

Table 5: distribution of data by type of family

SN	Family	Number of cases	Percentage
1	Nuclear	28	56
2	Joint	22	44
3	Total	50	100

It is noted that majority i.e.56% of the samples were having nuclear families and remaining 44% of the samples were from joint family.

Table 6: distribution of data by no. of children

SN	No. of children	Number of cases	Percentage
1	One	29	58
2	Two	19	38
3	More than two	2	4
4	Total	50	100

It is noted that majority i.e.58% samples had one child, 38% samples had two children and remaining 4% of samples were having more than two children.

Table 7: Distribution of data by children below five years age

SN	Years	Number of cases	Percentage
1	0-1	16	32
2	1-2	18	36
3	2-4	13	26
4	4-5	3	6
5	Total	50	100

It is noted that 36% of the samples were having children between age group 1-2 years age, 32% samples were having children between age 0-1 years, 26% samples were having children between 2-4 years age and remaining 6% samples had children between age group 4-5 years.

Table 8: distribution of data by immunization status

S N	Immunization	Number of cases	Percentage
1	Completed	48	96
2	Not completed	2	4
3	Total	50	100

Majority of the samples i.e. 96% have completed immunization till date and remaining 4% samples have not completed immunization till date.

Section 2: Distribution of sample in relation to their knowledge in frequency and percentage regarding prevention of home accidents among children (0-5 years)-

4. Discussion

Accidental injury is one of the biggest single causes of death in the for children over the age of one. More children die each year as a result of accidents than from illnesses such as leukaemia or meningitis. Every year one million children under the age of 18 are taken to accident and emergency units after being involved in accidents in the home. Many more are treated at home or by their GP. Many of the accidents that happen in and around the home can be avoided. By identifying and understanding potential accident risks in the home, you can take some basic safety steps that will keep your children safe and give you peace of mind [16].

Section 1 : With regards to Age, it was noted that majority of the sample i.e. 52% belonged

to the age group of 24-28 years. 28 % of sample belonged to the 19-24 years age group. 14% sample belonged to the 29-33 years age group and remaining 6% sample belonged to the 34 years and above age group

Majority, i.e. 68 % of the samples have taken secondary education, 18% samples are primary educators, 12% samples have taken higher secondary education, 2% samples are graduates and 0% are post graduated. It is noted that majority i.e. 72 % of the samples are housewives, 24% samples are house maids, 4% samples are doing service and nobody has their own business., It is noted that majority of the samples i.e. 88% have monthly family income less than Rs.5000/month, and remaining 12% samples have monthly income from Rs.5001-10000/month. It is noted that majority i.e. 56% of the samples were having nuclear families and remaining 44% of the samples were from joint family. It is noted that majority i.e. 58% samples had one child, 38% samples had two children and remaining 4% of samples were having more than two children.

It is noted that 36% of the samples were having children between age group 1-2 years age, 32% samples were having children between ages 0-1 years, 26% samples were having children between 2-4 years age and remaining 6% samples had children between age group 4-5 years. Majority of the samples i.e. 96% have completed immunization till date and remaining 4% samples have not completed immunization till date.

The purpose of this study was to find out wheather information booklet is effective in improving the knowledge of mothers at home. It can be stated very emphatically that teaching by booklet is one of the factor which is effective to prevent accidents at home in children (0-5 years).

SN		Pretest		Post-test	
		F	%	F	%
1	Meaning of home accidents is				
	a) Accidents inside the house & vicinity of house.	41	82	50	100
	b) Accidents outside the house	6	12	2	4
	c) Accidents in the school	3	6	1	2
2	d) Accidents in the garden				
	Commonly occurring home accidents in the age group 0-5 years are	44	88	50	100
	a) Burns, falls, cut poisoning, electric shock, drowning	2	4	3	6
	b) Vehicle accidents	13	26	5	10
	c) Serious head injury	4	8	1	2
3	d) Epilepsy				
	Mother related causes for home accidents are	12	24	19	38
	a) Mother is tired	22	44	39	78
	b) Mother is sleeping	21	42	36	72
	c) Mother is sick	4	8	11	22
4	d) Mother is young				
	Child related causes for home accidents are	24	48	28	56
	a) Hyperactive child	10	20	27	54
	b) Curious child	13	26	25	50
	c) Abnormal child	7	14	16	32
5	d) Boys>Girls				
	Burn accidents				
	Causes of burn accidents are	35	70	44	88
	a) Boiling water, hot oil,	14	28	37	74
	b) Hot metals contact	3	6	9	18
6	c) Chemical burns	3	6	0	0
	d) None of the above				
	Following things to be kept away from children in kitchen to prevent burn accidents	41	82	49	98

	a) Matchbox b) Lighter c) Kerosene d) Scissor	18	36	37	74
		11	22	26	52
		2	4	1	2
7	To prevent burn accidents while giving bath to small child, following things to be checked a) Temperature of water b) Light in bathroom c) Type of soap d) Hot bath tub				
		34	68	46	92
		1	2	2	4
		3	6	1	2
		18	36	44	88
8	While preparing hot tea/coffee in kitchen avoid for a) Children on laps b) Children on bed c) Children nearby d) Children in kitchen				
		21	42	27	54
		4	8	4	8
		17	34	29	58
		20	40	42	84
9	Ideally cooking is to be done on a) Table b) Floor c) Platform above waist level d) Platform below waist level				
		6	12	6	12
		4	8	1	2
		40	80	49	98
		2	4	0	0
10	Hot cooked food to be kept always a) Away from children reach b) On kitchen platform c) On Table d) None of the above				
		22	44	37	74
		23	46	21	42
		7	14	9	18
		0	0	0	0
11	Following to be avoided inside house to prevent fire accident a) Lighting crackers b) Smoking c) Climbing kitchen platform while cooking d) None of the above				
		26	52	38	76
		15	30	40	80
		18	36	21	42
		1	2	0	0
	Fall accidents				
12	Following are the precautions to be taken to avoid fall from				

	bed in children age between 6-10 months	22	44	25	50
	a) Putting side rails on bed	25	50	37	74
	b) Supporting both sides with pillows	7	14	20	40
	c) Supervision by elder children	4	8	8	16
	d) All the above				
13	To prevent fall from window and balcony the precautions are				
	a) Avoid leaning out of window	21	42	30	60
	b) Place grill on window	30	60	45	90
	c) Not to keep stool or chair near window to climb on	9	18	28	56
	d) None of the above	0	0	0	0
14	Following precautions are taken to avoid fall from slippery floors inside the house				
	a) Wipe off extra water immediately	28	56	35	70
	b) Keep a wiping mat or towel to wipe legs	25	50	45	90
	c) Walk slowly	10	20	21	42
	d) Walk hurriedly	0	0	0	0
	Cuts and injuries / accidents				
15	Following things to be avoided/to prevent cuts and injuries				
	a) Keeping table fan near children	20	40	32	64
	b) Sharpening pencils with blade	21	42	36	72
	c) Keeping sharp objects like scissors, knife, blade, needles nearby	20	40	33	66
	d) None of the above	2	4	2	4
16	While selecting toys for children check for				
	a) Size	7	14	2	4
	b) Shape	5	10	1	2
	c) Colour / Paint	24	48	6	12
	d) Sharp edges	22	44	48	96
Aspiration of foreign bodies/suffocation/choking – Strangulation					
17	To prevent aspiration of foreign bodies/choking in children avoid the following at home				
	a) Playing with football	5	10	0	0
	b) Playing with marbles, peanuts, buttons	41	82	45	90
		7	14	36	72

	c) Playing with balloons d) Playing with plastic bags	3	6	24	48
18	While playing insist your child not to hide inside a) Table b) Cupboard c) Refrigerator d) All the above				
		7	14	8	16
		24	48	25	50
		22	44	20	40
		6	12	20	40
19	To avoid choking/strangulation, children should not be allowed to play with a) Dupatta b) Pillow c) Neck tie, cord d) Bed Sheet				
		18	36	32	64
		16	32	24	48
		22	44	35	70
		11	22	16	32
20	To avoid choking while breast feeding a child, mothers position is a) Sitting position b) Sleeping position c) Sitting while supporting breast with 2 fingers d) None of the above				
		13	26	3	6
		6	12	0	0
		34	68	49	98
		0	0	0	0
	Electric shock accident				
21	To avoid electric shock, children to be taught the following a) Not to put anything into sockets b) Not to touch socket with wet hands c) Not to touch socket with metals d) None of the above				
		26	52	34	68
		22	44	38	76
		10	20	21	42
		2	4	1	2
22	At home electric sockets to be always placed at a) Low level b) At the reach of children c) Above the reach of children d) None of the above				
		0	0	0	0
		5	10	0	0
		45	90	50	100
		0	0	0	0
	Poisoning accidents:				
23	To prevent poisoning following things to be				

	kept away from the reach of children	30	60	39	78
	a) Insecticides and detergents	18	36	36	72
	b) Medicines	20	40	29	58
	c) Phenyl bottles	2	4	1	2
	d) None of the above				
	Drowning accidents:				
	To avoid drowning at home following are kept covered in bathroom / toilets				
	a) Drums	26	52	39	78
	b) Buckets	21	42	41	82
	c) Vessels	13	26	19	38
	d) None of the above	1	2	1	2
	First aid kit:				
	Following are the first aid box contents at home				
	a) Savlon or dettol	25	50	17	34
	b) Cotton balls	18	36	16	32
	c) Gauze pieces	19	38	16	32
	d) All the above	8	16	27	54

Conclusion

From this we can conclude that the pre test knowledge score of mothers shows no significant association with demographic variables most of the time but after giving information booklet it shows association with demographic variables in post test knowledge score. Which suggest instructional materials are useful for mothers in providing knowledge also help line numbers in case of emergency or accidents are printed on back side of booklet, which proved useful for them.

References

- [1] Slonim, AD & Pollack, M.M. (2006). Pediatric critical care medicine. 1sted. United states: *Lippincott Williams and wilkins kluwer business*;. 19-30.
- [2] Steven, E. K., Thomas, B., & Margaret, A.D. (2007). Patient- and Family-Centered Care and the Role of the Emergency Physician, Providing Care to a Child in the Emergency Department. *Amer Acad of Pediatr.*;118(5) ;2242-2244.
- [3] Cloherty, J. P., Eichenwald, E.C, & Stark A.R. (2009). Manual of neonatal care. 6th ed. New Delhi; Walters Kluwer (India) Pvt.Ltd.. 331-332.
- [4] Scharer, K., & Brooks, G. Mothers of chronically ill children and

- intensive care unit. *J of Pediatr Nurs.* 1993 Oct;8 ;6-8.
- [5] Parslow PC, Tasker RC, Draper ES, Parry GJ, Jones S, Chater T et al. Epidemiology of critically ill in England and Wales incidence, mortality, deprivation and ethnicity. *Pediatr Nurs.* 2008 Dec;(30)6;17-20.
- [6] Kasper JW, Nyamathi AM. Parent's of children in the Pediatric intensive care unit: what are their need?. *Heart Lung.* 1998 Sep;17(5); 574-81.
- [7] Craig J.O, & Fraser M.S. (1953). Accidental poisoning in childhood. *Arch Dis Child.*; 28(140):259–267.
- [8] Smith AD, Hefley GC, Anand KJS. Parel bedspaces in the PICU: Effect on parental stress. *Pediatr Nurs.* 2007 Aug; 33(3);215-221.
- [9] Arshi, S, Sadeghi-Bazargani, H, Mohammadi, R, Ekman, R, Hudson, D, Djafarzadeh, H, Delavari, A, & Sezavar Noyes, H (2007). Prevention oriented epidemiologic study of accidental burns in rural areas of Ardabil, Iran. *Elsevier*; 32,3: 366-371
- [10] Miles, M., & Carter, M. (1985). Coping strategies used by parents during their child's hospitalization in an intensive care unit. *Children's Health Care*, 14, 14-21, 103
- [11] Russell, K M. & V Champion, V.L. (2007). Health Beliefs and Social Influence in Home Safety Practices of Mothers with Preschool Children. *The Journal of Nursing Scholarship* 28, 1: 59–64,
- [12] Needle JS, O'Riordan M, Smith PG. Parental anxiety and medical comprehension within 24 hrs of a child's admission to the pediatric intensive care unit. *Pediatr Crit Care Med.* 2009 Nov;10(6):699-700.
- [13] Roberts, I, Kramer, M.S & Suissa, S. (1996) Does home visiting prevent childhood injury? A systematic review of randomised controlled trials. *BMJ* ;312:33-4
- [14] Polit D.F, Hungler, Essentials of nursing research methods appraisal and utilization, 3rd edition, Saunders publications, 1998.
- [15] B.T. Basavanthappa, Nursing research, Reprint-1998, Jaypee brothers, Medical publications.
- [16] Meharban Singh. Medical emergencies in children. 4th ed. .sagar publications. New Delhi 2007. 690 – 69