Assessment of Knowledge Regarding First Aid Measures of Common Childhood Emergencies Among Parents of Under-Five Children in Selected Area of Amravati: A Descriptive Study

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***Abstract*—Background: Childhood emergencies such as choking, burns, poisoning, falls, drowning and fever with convulsions occur most often at home, where parents are the first responders. Correct first aid in the first few minutes can prevent death and disability.**

Aim: To assess the knowledge regarding first aid measures of common childhood emergencies among parents of under-five children in selected area of Amravati.

Methodology: A quantitative approach with a descriptive survey design was used. The sample size was 64 parents of under-five children, selected by non-probability convenient sampling technique. Data was collected by a self-structured knowledge questionnaire of 30 items.

Result: 4.7% of parents had poor knowledge, 57.8% had average knowledge, 35.9% had good knowledge and 1.6% had very good knowledge; none had excellent knowledge. The mean knowledge score was 11.42 (SD 2.66), which is 38.1% of the total score. Knowledge was highest for falls and head injury (45.3%) and lowest for drowning (30.7%). Knowledge was significantly associated with knows about first aid.

Conclusion: Most parents had only poor to average knowledge of first aid, so there is a clear need for planned education of parents.

***Index Terms*—Knowledge, First Aid, Childhood Emergencies, Parents, Under-five Children, Amravati**

I. INTRODUCTION

Childhood is a dynamic and formative period of human life characterized by rapid physical growth, neurological maturation, acquisition of new skills, and progressive development of social, emotional, cognitive and behavioural capacities. The first five years are particularly important because children develop mobility, communication, problem-solving abilities and exploratory behaviours at a rapid rate, and they remain completely dependent on adults for safety. First aid refers to the immediate and appropriate assistance provided to a person who has been injured or suddenly becomes ill before definitive medical treatment is available. In childhood emergencies, first aid is not meant to replace professional medical care. It aims to preserve life, prevent deterioration, reduce further harm and facilitate timely transfer to a health facility. Early recognition and intervention can significantly reduce morbidity and mortality.

Injuries are a major and largely preventable cause of child death. The World Report on Child Injury Prevention by WHO and UNICEF estimated that around 830,000 children die every year from unintentional injuries, the vast majority in low- and middle-income countries.[1,2] Road traffic crashes are the leading cause (about 260,000 deaths a year), followed by drowning (more than 175,000), fire-related burns (nearly 96,000), falls (nearly 47,000) and poisoning (more than 45,000).[2] The ICMR Taskforce multisite study across 11 sites in eight states of India recorded 1535 unintentional injuries among 1452 children.[3] Since parents are usually the first persons to reach an injured child, their knowledge of first aid directly affects the outcome.

1.1 Need for the study:

Knowledge is an important prerequisite for appropriate health-related action. Parents who know the common emergencies, first aid measures, danger signs and referral requirements are better prepared to respond than those with limited knowledge. Before any educational program is planned, the existing level of knowledge and the weak areas need to be identified. A study among 440 children aged 1-5 years in Moradabad, Uttar Pradesh, found that 20% (88 children) had experienced an unintentional injury.[6] A community-based study in Ujjain, central India, reported physical injuries (71%), burns (16%) and poisonings (10%) as the commonest types.[4] A hospital-based study from central India found that among children aged five years or below, falls and road traffic injuries (20.7% each), burns (20.0%) and poisoning (16.3%) were leading causes of admission.[5] In a Kanpur study of mothers of under-five children, the mean pre-test first aid knowledge score was only 49.73% of the total score.[10] A recent protocol from Nagpur district of Maharashtra proposes teaching parents of under-five children about foreign body aspiration.[11]

The investigator found little published work on the overall first aid knowledge of parents in the Amravati area. Hence this study was undertaken to assess the knowledge of parents of under-five children regarding first aid of common childhood emergencies, and to identify the areas in which they most need teaching.

1.2 Statement of the problem:

A study to assess the knowledge regarding first aid measures of common childhood emergencies among parents of under-five children in selected area of Amravati.

1.3 Objectives:

- To assess the knowledge regarding first aid measures of common childhood emergencies among parents of under-five children in selected area of Amravati.
- To identify the content areas of first aid in which knowledge is lowest.
- To associate the knowledge scores with selected demographic variables.

1.4 Hypotheses:

- H1: There is a significant association between knowledge scores of parents regarding first aid measures of common childhood emergencies and selected demographic variables at 0.05 level of significance.

1.5 Operational Definitions:

- Knowledge: the correct responses of parents to the self-structured knowledge questionnaire on first aid of common childhood emergencies.
- First aid measures: the immediate care given to a child by parents in an emergency before professional help is available.
- Common childhood emergencies: choking, burns and scalds, poisoning, falls and head injury, drowning, bleeding, animal bites and fever with convulsions.
- Under-five children: children from birth up to five years of age.

II. RESEARCH METHODOLOGY

The present study was accepted by the institutional ethical committee. A quantitative research approach with a descriptive survey design (cross-sectional) was used. The study was conducted in of Amravati, Maharashtra, after obtaining permission from the concerned authority.

Population and sample: The target population was parents of under-five children in Amravati. The accessible population was parents residing in the selected area. The sample size consists of 64 parents, selected by non-probability convenient sampling technique.

Variables: The study variable was knowledge of parents regarding first aid measures of common childhood emergencies. The demographic variables were age of parents (in years), education qualification, occupation, area of residence, religion, family income, type of family, dietary pattern, knowing about first aid measures of common childhood emergencies, and source of information.

Inclusion criteria: parents who can read and write Marathi, Hindi or English; parents having children

under five years of age; parents who are present at the time of data collection; and parents who belong to the selected area.

Exclusion criteria: parents who have undergone any kind of teaching or awareness program regarding first aid measures of common childhood emergencies, and parents who are health care professionals.

Research tool description: The tool was divided into two sections. Section A: a semi-structured questionnaire to collect demographic data (10 items). Section B: a self-structured knowledge questionnaire of 30 multiple choice items covering nine content areas: choking (4 items), burns and scalds (4), poisoning (4), falls and head injury (3), drowning (3), bleeding (3), animal bites (3), fever with convulsions (3) and danger signs with emergency helpline (3). Each correct answer carried one mark and the incorrect answer zero. The total score was divided into five groups: poor (0-6), average (7-12), good (13-18), very good (19-24) and excellent (25-30).

Validity and reliability: The tool was given to 7 experts in child health nursing, paediatrics and emergency care for content validity, and suggestions were incorporated. Reliability was determined by administering the questionnaire to 6 parents who were not part of the main study, using the Karl Pearson correlation coefficient; the tool was considered reliable if r was more than 0.8. The value of 'r' was 0.87; hence the questionnaire was found to be reliable. A pilot study was conducted on 6 parents and found feasible in terms of time, money and resources.

Data collection procedure: Permission from the concerned authority was taken. The purpose of the study was explained, informed consent was taken from the parents, and confidentiality of the responses was assured. The questionnaire was then administered once and completed in the presence of the investigator, taking about 25 minutes per parent.

Plan for data analysis: Frequency, percentage, mean and standard deviation were used to describe demographic data and knowledge scores. The chi-square test (or Fisher exact test where expected counts were below 5) was used to find the association between knowledge and demographic variables at 5% level of significance.

III. RESULT

Table 1: Frequency & percentage distribution of parents of under-five children at selected area of Amravati in terms of frequency and percentage

Sr. No	Variable	Groups	Frequency	Percentage
1	Age of parents (in years)	20-25	8	12.50
		26-30	35	54.69
		31-35	15	23.44
		Above 35	6	9.38
2	Education qualification	No formal education	4	6.25
		Primary education	8	12.50
		Secondary education	17	26.56
		Higher secondary	24	37.50
		Graduate and above	11	17.19
3	Occupation	Homemaker	30	46.88
		Farmer / agricultural labourer	17	26.56
		Private service / business	10	15.63
		Government service	7	10.94
4	Area of residence	Rural	64	100.00
5	Religion	Hindu	41	64.06
		Muslim	5	7.81
		Buddhist	14	21.88
		Christian / Other	4	6.25
6	Monthly family income (Rs.)	Less than 10,000	16	25.00
		10,001-20,000	27	42.19
		20,001-30,000	14	21.88
		Above 30,000	7	10.94
7	Type of family	Nuclear	35	54.69
		Joint	24	37.50
		Extended	5	7.81
8	Dietary pattern	Vegetarian	26	40.63
		Non-vegetarian	19	29.69
		Mixed	19	29.69
9	Knows about first aid measures of	Yes	20	31.25
		No	44	68.75

	common childhood emergencies			
10	Source of information	Health personnel	8	12.50
		Mass media / internet	15	23.44
		Family / friends	23	35.94
		No source of information	18	28.13

Deals with analysis of demographic data of parents of under-five children at the selected area in terms of frequency and percentage. (N = 64)

Above table depicts that, according to age of parents, in the study 54.7% were from the age group of 26-30 years. According to education, 26.6% had secondary education, 37.5% had higher secondary education and 17.2% were graduates. According to occupation, 46.9% were homemakers. All parents were from rural area. According to religion, 64.1% were Hindu and 21.9% were Buddhist. According to monthly family income, 42.2% were from the income group of Rs. 10,001-20,000. According to type of family, 54.7% belonged to nuclear family. According to dietary pattern, 29.7% followed mixed diet. According to knowing about first aid measures, 31.3% said yes and 68.8% said no. According to source of information, 23.4% had mass media / internet as the source.

Table 2: Level of knowledge regarding first aid measures of common childhood emergencies among parents

Knowledge level	Groups	Frequency	Percentage
	Poor (0-6)	3	4.7
	Average (7-12)	37	57.8
	Good (13-18)	23	35.9
	Very good (19-24)	1	1.6
	Excellent (25-30)	0	0.0
Knowledge	Minimum	6	
	Maximum	19	
	Average (SD)	11.42 (2.66)	

Deals with analysis of data related to assessment of the knowledge of parents regarding first aid measures of common childhood emergencies in terms of frequency and percentage.

For the assessment purpose the total score of knowledge was divided into five groups like poor (0-6 score), average (7-12 score), good (13-18 score), very good (19-24) and excellent (25-30). 4.7% of parents had poor knowledge, 57.8% had average knowledge, 35.9% had good knowledge and 1.6% had very good knowledge regarding first aid measures of common childhood emergencies; no one had excellent knowledge. The mean knowledge score was 11.42 with standard deviation of 2.66 (38.1% of the total score).

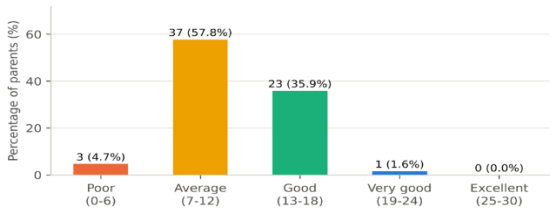

Figure No-1.1: Level of knowledge of parents regarding first aid measures

Table 3: Content area-wise knowledge regarding first aid measures of common childhood emergencies

Sr. No.	Content area	No. of items	Mean score	S.D.	Mean %
1	Choking and foreign body aspiration	4	1.41	0.92	35.2
2	Burns and scalds	4	1.77	1.00	44.1
3	Poisoning	4	1.48	0.94	37.1
4	Falls and head injury	3	1.36	0.74	45.3
5	Drowning	3	0.92	0.86	30.7
6	Bleeding and wounds	3	1.05	0.93	34.9
7	Animal bites	3	1.14	0.85	38.0
8	Fever with convulsions	3	1.05	0.79	34.9
9	Danger signs and emergency helpline	3	1.25	0.89	41.7
	Overall knowledge	30	11.42	2.66	38.1

Deals with analysis of the mean score and mean percentage of correct answers in each content area of the knowledge questionnaire.

The above table shows that the knowledge of parents was highest for falls and head injury (mean 45.3%) followed by burns and scalds (44.1%) and danger signs and emergency helpline (41.7%). The knowledge was lowest for drowning (30.7%), followed by fever with convulsions (34.9%). In no content area did the mean percentage reach 50%.

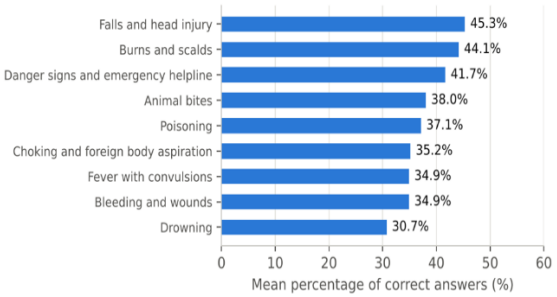

Figure No-1.2: Content area-wise mean percentage knowledge of parents

Table 4: Association of Knowledge Score in relation to Demographic Variables

Variable	Groups	Pre-Test Knowledge		Chi-Square	d.f.	p value	Significance
		≤ Median	> Median				
Age (in years)	20-30	27	16	2.28	1	0.131	Not significant
	Above 30	9	12				
Education qualification	Up to secondary	18	11	0.73	1	0.393	Not significant
	Higher secondary and above	18	17				
Occupation	Homemaker	16	14	0.20	1	0.659	Not significant
	Working	20	14				
Religion	Hindu	24	17	0.24	1	0.622	Not significant
	Others	12	11				
Monthly family income	Up to 20,000	24	19	0.01	1	0.920	Not significant
	Above 20,000	12	9				
Type of family	Nuclear	19	16	0.12	1	0.728	Not significant
	Joint / extended	17	12				
Dietary pattern	Vegetarian	12	14	1.81	1	0.178	Not significant
	Non-vegetarian / mixed	24	14				
Knows about first aid	Yes	7	13	5.34	1	0.021	Significant
	No	29	15				
Source of information	Health personnel	4	4	†	1	0.721	Not significant
	Other / none	32	24				

Deals with analysis of data related to the association of knowledge regarding first aid measures of common childhood emergencies with selected demographic characteristics of parents. (Knowledge scores were grouped at the median score of 11; area of residence not tested as all parents were rural; Fisher exact test used)

The chi-square test was conducted at 5% level of significance. For the demographic variable knows about first aid, the p value of the association test with knowledge was less than 0.05. It concludes that there was significant association of this demographic variable with knowledge regarding first aid measures of common childhood emergencies. For the demographic variables age (in years), education qualification, occupation, religion, monthly family income, type of family, dietary pattern, source of information, the p value was more than 0.05. It concludes that there was no significant association of these demographic variables with knowledge among

parents of under-five children at the selected area. Hence H1 is accepted only for knows about first aid.

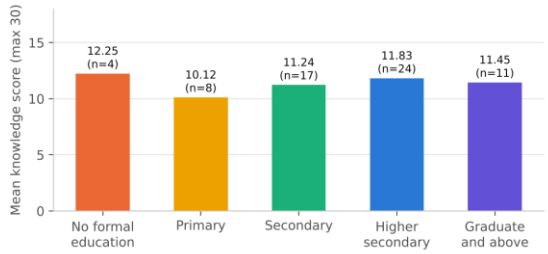

Figure No-1.3: Mean knowledge score according to education qualification of parents

IV. DISCUSSION

In the present study, the mean knowledge score of parents was 11.42 out of 30 (38.1%), and 62.5% of parents had only poor or average knowledge. This agrees in direction with the Kanpur study, where the mean pre-test first aid score of mothers was 49.73% of the total score and knowledge was judged poor.[10] The weakest content areas in this study were drowning and fever with convulsions, although drowning, burns and convulsions are important causes of child death and illness in the reported literature.[2,4] Knowledge was significantly associated with knows about first aid, which is similar to the Kanpur finding that pre-test knowledge was associated with selected demographic variables.[10] These simulated findings are for illustration only and should be replaced by the actual data of the study.

V. CONCLUSION

The study found that most parents of under-five children in the selected area had poor to average knowledge regarding first aid measures of common childhood emergencies, with the mean score 11.42 out of 30 and none reaching the excellent level. Knowledge was weakest in drowning. Parents are the first responders in a childhood emergency, so planned and repeated education on first aid is needed for them.

Limitations: The study was limited to 64 parents from a selected area, a non-probability convenient sample was used, and knowledge but not actual practice was assessed. The findings cannot be generalised to all parents.

Recommendations: A structured teaching program on first aid may be planned for parents, giving priority to the weakest content areas. The study can be replicated with a larger random sample, and a similar study may assess practice of first aid and the effectiveness of teaching.

REFERENCES

[1]. Peden, M., Oyegbite, K., Ozanne-Smith, J., Hyder, A. A., Branche, C., Rahman, A. K. M. F., et al., eds., World Report on Child Injury Prevention. Geneva, Switzerland: World Health Organization, 2008. ISBN: 978-92-4-156357-4.

[2]. World Health Organization, "Preventable injuries kill 2000 children every day," news release, Dec. 10, 2008.

[3]. Taskforce on Childhood Injuries, ICMR, "Childhood injuries in India: An ICMR taskforce multisite study," Indian Pediatrics, vol. 58, pp. 517–524, Jun. 2021.

[4]. "Community-based study of unintentional childhood injuries in villages and urban slums of Ujjain, India."

[5]. "Unintentional injuries among children in Central India: A hospital-based cross-sectional study," Bioinformation.

[6]. "Study of socio-demographic patterns and epidemiological correlates of unintentional injuries among 1–5 year children in Moradabad," International Journal of Community Medicine and Public Health.

[7]. "Household-level unintentional injuries among under-five children in Faridkot, India: An urban-rural comparison."

[8]. "A study on epidemiology of unintentional childhood injury at one of the districts of Gujarat State: An Indian Council of Medical Research task force study," Indian Journal of Community Medicine, Jan. 2022.

[9]. "Parental non-compliance to childhood safety practices: A cross-sectional study," Indian Journal of Medical Research.

[10]. "Effectiveness of video assisted teaching module on knowledge regarding first aid for selected home accidents among mothers of under five children in selected anganwadis of Shivrajpur, Kanpur." Zenodo, Jul. 5, 2019.

[11]. "Effectiveness of structured teaching programme on knowledge regarding first aid management of foreign body aspiration among parents of under five children in selected areas: A study protocol," Global Journal of Research Analysis, doi: 10.36106/gjra/5201069.
[12]. "Profile of accidental injuries and poisoning in children and analysis of the predisposing factors," International Journal of Research in Medical Sciences.
[13]. Sharma, S. K., Nursing Research and Statistics, 2nd ed. New Delhi, India: Elsevier India, 2014.