



A study to assess the effectiveness of planned teaching programme on knowledge of mothers regarding prevention of home accidents among children (1 - 5years) of age in a selected day care centre of Gwalior (M. P.)

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ABSTRACT

Home accidents are an important cause of injury and death during the first year because of infant's rapid advances in motor and sensory development. Along with overwhelming, curiosity about their surroundings. Parents and other caregivers must consistently be alert to the potential dangers that exist in the environment. The common accidents among them are cuts, burns and scalds from boiling water or boiling oil, falls with wound of fractures while climbing or running, poisoning by drinking kerosene, petrol, chemical or from consuming insecticides, Rat poison, Poisonous berries, Pills or tablets and drowning in the tub, well and ponds (WHO, 1988). Early childhood period of 0 – 5 year of age is vulnerable period of life, when the children are prone to home accidents. They need special care and supervision of the parents or care taker, home accidents need to be categorized based on study (for example: - falls, injury, burns, poisoning, drowning, electric shock and suffocation) and guidelines should be prepared for the mother and care provider on the prevention of home accidents so that with simultaneous of knowledge the mother and care taker can demonstrate effective skills in protecting and this will prevent home accident. To assess the pre-test knowledge of mothers regarding prevention of home accidents among children (1 to 5 years) of age. To

assess the posttest knowledge of mothers regarding prevention of home accidents among children (1 to 5 years) of age. To evaluate the effectiveness of planned teaching programme on knowledge of mothers regarding prevention of home accidents among children (1 to 5 years) of age. To explore the association between the selected demographic variables and the knowledge score of mothers regarding prevention of home accidents among children (1 to 5 years) of age. In this study, Pre-experimental research approach and one group Pre-test posttest research design was adopted. Study included the 60 mothers who have children up to the age group of 1 to 5 years. The self-structured knowledge questionnaire was used to collect the data from the mothers in a selected urban community. The study was designed to assess the effectiveness of planned teaching programme on knowledge of mothers regarding home accidents among children 1 to 5 years of age. The findings of the study were compared with those of other similar studies conducted earlier in different settings. The Planned teaching programme was found effective in increasing the knowledge of mothers and found to be significant in all the aspects on Prevention of Home Accidents of children 1 - 5 years of age. However giving planned teaching programme is not sufficient to enhance the knowledge, as repeated enforcement is essential.

Keywords: Pre-experimental study, Effectiveness, Planned teaching programme, Home Accidents, Mothers, Prevention, knowledge

INTRODUCTION:

Home accidents occur, inside or around the home. The home accidents constitute approximately half of all accidents which is an increasing trend. The home accidents account for up 23.5% of all accidents in Sweden and therapeutic measures for a home accident victim costs approximately 1,300 USD annually in Norway. Home accidents among children pose a serious problem for public health in developed and developing countries. It has been reported 55% of victims are preschool children, the incident of home accidents among children under 5 years is 51/1000. 10% of cases of home accidents are serious enough to require hospitalization and are a major cause of infant death. Five percent (5%) of victims succumb before hospitalization.

Home accidents are an important cause of injury and death during the first year because of infant's rapid advances in motor and sensory development. Along with overwhelming, curiosity about their surroundings. Parents and other caregivers must consistently be alert to the potential dangers that exist in the environment. The common accidents among them are cuts, burns and scalds from boiling water or boiling oil, falls with wound of fractures while climbing or running, poisoning by drinking kerosene, petrol, chemical or from consuming insecticides, Rat poison, Poisonous berries, Pills or tablets and drowning in the tub, well and ponds (WHO, 1988).

Early childhood period of 0 – 5 year of age is vulnerable period of life, when the children are prone to home accidents. They need special care and supervision of the parents or care taker, home accidents need to be categorized based on study (for example: - falls, injury, burns, poisoning, drowning, electric shock and suffocation) and guidelines should be prepared for the mother and care provider on the prevention of home accidents so that with simultaneous of knowledge the mother and care taker can demonstrate effective skills in protecting and this will prevent home accident.

Other studies of childhood accidents have revealed that there are many conditions contributing to accidents during the childhood years. After the age of one years the mobility of the children is increased. Children like to walk, run, climb up and down, they enjoy moving about always. Risk of accidents depend on many factors including the child's development level, caregiver's behavior, choices and the degree of supervision provided. 2/3 of the childhood accidents occur before the age of six years. Age group between 2 – 3 years is most vulnerable.

Marlow (1988)¹ has stated that accident or injuries are the leading causes of mortality in childhood. Besides mortality, injuries may render a child handicapped in various and the resulting in the need for rehabilitation may have a greater impact on the emotional wellbeing of the child and their parents. There's knowledge on prevention of accident and to take appropriate action. Parental education lays an important role in the prevention of accidents. Educated parents understand the risk factor involved in the accidents and consequently they create an accident free environment for the children.

Objectives:

- To assess the pre-test knowledge of mothers regarding prevention of home accidents among children (1 to 5 years) of age.
- To assess the posttest knowledge of mothers regarding prevention of home accidents among children (1 to 5 years) of age.
- To evaluate the effectiveness of planned teaching programme on knowledge of mothers regarding prevention of home accidents among children (1 to 5 years) of age.
- To explore the association between the selected demographic variables and the knowledge score of mothers regarding prevention of home accidents among children (1 to 5 years) of age.
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Methodology

Study design

In this study, Pre-experimental research approach and one group Pre-test posttest research design was adopted.

Study population

The population in this study included the mothers who have children up to the age group of 1 to 5 years.

Study area

The present study was conducted among the mothers in selected urban areas of Gwalior M .P.

Sample size

Size of the population consists of 60 mothers.

Sampling method

In this study convenient sampling technique is used. Convenient sampling technique is a non- probability sampling technique. In which samples are selected due to their convenient accessibility and proximity of the researcher. The subjects are chosen just because of fact that they are very easy to recruit for the study.

Inclusion criteria

- Mothers who were willing to participate in the study.
- Mothers who were available during the time of data collection.
- Mothers who were having children up to the age group of 1 to 5 year
- Mothers who had minimum secondary Education.

Exclusion criteria

- Mothers who were not willing to participate in the study.
- Mothers who did not have secondary education.

Data collection tool

The self-structured knowledge questionnaire was used to collect the data from the mothers in a selected urban community.

Development of tool

The study tool consists of two parts -

Section A: socio- demographic Performa:

Age of child, sex of child, Age of mother, Education, Occupation, Type of family, Family income, Source of information.

Section B: knowledge questionnaire:-

Self-Structured Questionnaire on prevention of home accident among children 1 to 5 years of age was prepared on the following aspects

- Knowledge about Home accidents
- Knowledge about Types and causes of home accidents among children 1 to 5 years of age
- Knowledge about preventive measures of home accidents
- Knowledge about management of home accidents

Data collection

The investigator conducted the study in the little lion daycare and play school Madhav Nagar Gwalior M.P. from 12th Feb 2019 to 27th Feb 2019. The research investigator took formal permission from the Principal of little lion daycare and play school Madhav Nagar Gwalior M P. 60 subjects were collected by using convenient sampling technique. The researcher introduced himself to the respondents. And explained the purpose of study to the mothers and an informed constant was taken before starting the study. A pre-test was conducted by administering a self-structured knowledge Questionnaire on prevention of home accidents among children 1 to 5 years of age towards mothers. On the same day, the planned teaching programme was administered by using of visual aids, lecture cum discussion and demonstration method for the duration of 45 minutes. The post-test of the study was carried out on the 6th day following the intervention by using same tool as in the pre-test.

Statistical analysis

The data analysis was done in accordance with the objectives of the study. the collected data was tabulated and analyzed by calculating frequency, Percentage, mean, mean percentage, standard deviation, chi square test paired 't' test at $P < 0.05$ levels of significance. Frequency, Column diagram, radius diagram, pie diagram, cone diagram, Cylinder Diagram, polygon and bar diagrams were used to depict the findings. The collected data was analyzed by using descriptive and inferential statistics.

Ethical clearance and informed consent

Institution's ethical review committee's permission was taken. Written permission was obtained from the Principal of the little lion daycare and play school Madhav Nagar Gwalior M.P. After explaining the purpose of the study. The mothers had the freedom to withdraw from the study at any time without giving any reason and mothers concern was taken for the study.

RESULTS

Findings related to socio-demographic variables

It was founded that

- Age of Child: - Among the total children under study. It was evident that 30 (50%) were under 1 – 3 yrs. and 30 (50%) under 3 – 5 yrs.
- Sex of Child: - Among the total children under study, it was evident that 36 (60%) children were male and 24 (40%) were female.
- Age of Mother: - Indicates majority of mothers 27 (45%) belongs the age groups of 21-30 yrs., 24 (40%) of them were in the age group between 31-40 yrs. and 3 (5%) belongs to the age group Below 20 and 6 (10%) above 40 yrs.
- Education: - Among the total mothers under study, it was evident that 24 (40%) of them with the secondary level of education, 27 (45%) of them had higher level of education and 9 (15%) of them had graduation level of education.
- Occupation of Mother: - Occupation wise analysis showed that 26 (43.3%) mothers were housewives, 6 (10%) of the mothers were govt. employee. The numbers of mothers doing private work were 28 (46.7%).
- Type of family: - Majority of the family 39(65%) belonged to the Nuclear Family and 21 (35%) belonged to Joint Family.
- Family Income: - Distribution of the mothers according to Family Income showed that majority 34 (56.7%) of below 5000 Rs. 16 (26.6%) of family were having 5000 – 10000 Rs. and 10 (16.7%) of family were having above 10000 Rs.
- Source of information: - Distribution of the mothers according to the source of receiving information showed that majority of mothers 30 (50%) from mass media and 15 (25%) from both of health professionals and Relatives/Friends.

Findings related to knowledge score

➤ **Distribution of Subject Based on the Pre-test and Post-test knowledge level.**

The overall mean knowledge scores of Pre- test and Post-test, which reveals that in pre-test, majority of the mothers 48 (80%) had inadequate knowledge followed by 12 (20%) had moderate knowledge. In post-test, the entire Mothers gained adequate knowledge (75%).

➤ **Area wise mean percentage and mean gain of pre-test and post-test knowledge scores of mothers regarding prevention of home accidents among children 1 - 5 years of age.**

The mean percentage knowledge score of pre-test was maximum in the area of choking and suffocation (44%), and minimum in falls and poisoning (36%), whereas the mean percentage knowledge score of post-test was maximum in the area of Falls and Poisoning (89%) and minimum in Burns Scald and Drowning (74%).

➤ **Mean, Median and Standard deviation of Pre and Posttest knowledge score of mothers regarding Prevention of Home Accidents among children 1 - 5 years of age.**

Knowledge score of mothers regarding 'Prevention of Home Accidents among children 1 - 5 years of age pretest mean score is 22, median score is 21, standard deviation score is 4.56 and posttest mean score is 51, median score is 50, standard deviation is 1.76.

➤ **Mean, Mean difference, standard deviation difference and t value of pretest and posttest knowledge score**

Mean posttest knowledge score was higher than the mean pre-test knowledge score. The Computed 't' value ($t_{59}=3.26$) is greater than the table value ($t_{59}= 1.96$) at 0.05 level. Hence the null hypothesis (H_0) was rejected and the research hypothesis was accepted.

➤ **Association of selected demographic variables with the pre-test knowledge score on prevention of home accidents among mothers**

Depicts, significant association of age, sex of child, family income and previous experience with pretest knowledge scores. Chi square (χ^2) value is higher than the table value at 0.05 level of significance, hence research hypothesis is accepted and null hypothesis is rejected. And no significant association of selected demographic variables education, occupation, type of family, source of information with pretest knowledge scores. Chi square (χ^2) value is less than the table value at 0.05 level of significance, hence research hypothesis rejected and null hypothesis is accepted.

➤ **Association of selected demographic variables with the post-test knowledge score on prevention of home accidents among mothers**

Depicts, no significant association of selected demographic variables age of child, sex of child, age of mother, education, occupation, type of family, family income, source of information with posttest knowledge score. Chi square value is less than the table value at 0.05 level of significance, hence research hypothesis rejected.

Discussion

The purpose of the study was based on the objectives of the study. The study was designed to assess the effectiveness of planned teaching programme on knowledge of mothers regarding home accidents among children 1 to 5 years of age. The findings of the study were compared with those of other similar studies conducted earlier in different settings. The Planned teaching programme was found effective in increasing the knowledge of mothers on Prevention of Home Accidents of children 1 - 5 years of age. However giving planned teaching programme is not sufficient to enhance the knowledge, as repeated enforcement is essential.

Conclusion:

It can be inferred that the mean knowledge score on Prevention of Home Accidents among children 1-5 years of age were inadequate in the pre-test. The planned teaching programme was considerably effective in enhancing the knowledge and found to be significant in all the aspect on Prevention of Home Accidents among children 1 - 5 years of age under study.

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DECLARATIONS

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Ethical approval: the study was carried out after obtaining approval from the institutional ethical committee of the little lion daycare and play school Madhav Nagar Gwalior M.P.

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TABLE-1

Subjects	Pre-test	Treatment	Post-test after 6 days
Mothers	O ₁	X	O ₂

Table -1 one group Pre-test Post-test Design**TABLE-2**

Characteristics	Category	N = 60 Respondents	
		Number	Percent
Age of Child	1 – 3 Years	30	50
	3 – 5 Years	30	50
Sex of Child	Male	36	60
	Female	24	40
Mother Age group (Years)	Below – 20	03	05
	21-30 yrs.	27	45
	31-40	24	40
	Above 40	06	10
Education	Secondary	24	40
	Higher	27	45
	graduation	09	15
Occupation	House wife	26	43.3
	Govt. Employee	06	10
	Private Employee	28	46.7
Type of family	Nuclear	39	65

	Joint	21	35
Family Income	Below 5000	34	56.7
	5000 – 10000	16	26.6
	Above 10000	10	16.7
Source of information	By health Professionals	15	25
	By Relatives/Friends	15	25
	By Mass Media	30	50

Table-2 Frequency and percentage distribution of mothers according to their Baseline characteristics

TABLE-3

Knowledge Level	Classification of Respondents			
	Pre-test		Post-test	
	No.	Percent	No.	Percent
Inadequate (Below 50%)	48	80.00%	-	-
Moderate (51-75%)	12	20.00%	-	-
Adequate Above 75%	-	-	60	60
Total =	60	100%	60	100%

Table-3 Distribution of Subject Based on the Pre-test and Post test

TABLE-4

S. NO.	AREA	MEAN PERCENTAGE		MEAN GAIN
		PRE-TEST	POST-TEST	
	Home Accident General Questions	39	78	39
	Burns Scalds And Drowning Questions	36	74	38

Falls And Poisoning	40	89	49
Chocking And Suffocations	44	88	45
Foreign Body In Ear, Nose And Throat And Bodily Damage	42	81	39

Table-4 Area wise Mean Percentage and Mean gain of pre-test and post-test knowledge scores of mothers regarding Prevention of Home Accidents among children 1 - 5 years.

TABLE-5

KNOWLEDGE LEVEL	MEAN	MEDIAN	SD
Pre-test	22	21	4.56
Post-test	51	50	1.76

Table-5 Mean, Median and Standard deviation of Pre and Post-test knowledge score of mothers regarding 'Prevention of Home Accidents among children 1 - 5 years.

TABLE-6

VARIABLE	MEAN		MEAN DIFFERENCE	S.D. DIFFERENCE	't' VALUE
	PRE-TEST	POST-TEST			
Knowledge Score	22	51	30.24	28.24	3.26

Table-6 Mean, Mean difference, standard deviation difference and t value of pre-test and post-test knowledge score.

TABLE-7

Characteristics	Category	Knowledge		Chi. Square Value	df	Critical Value
		Pre-Test				
		Below Mean	Above Mean			
Age of Child	1 – 3 Years	20	10			

	3 – 5 Years	13	17	2.19	1	3.84
Sex of Child	Male	19	17	1.19	1	3.84
	Female	14	10			
Mother Age group (Years)	Below – 20	01	02	7.99	3	7.82
	21-30 yrs.	17	10			
	31-40	12	12			
	Above 40	03	03			
Education	Secondary	11	13	7.01	2	5.99
	Higher	15	12			
	graduation	07	02			
Occupation	House wife	14	12	6.02	2	5.99
	Govt. Employee	3	03			
	Private Employee	16	12			
Type of family	Nuclear	23	16	7.02	1	3.84
	Joint	10	11			
Family Income	Below 5000	14	20	1.26	2	5.99
	5000 – 10000	10	06			
	Above 10000	09	01			
Source of information	By health Professionals	06	09	3.06	2	5.99
	By Relatives/Friends	09	06			
	By Mass Media	18	12			

Table-7 Association of selected demographic variables with the pre-test knowledge score on prevention of home accidents among mothers.

TABLE-8

Characteristics	Category	Knowledge		Chi. Square Value	df	Critical Value
		Post-Test				
		Below Mean	Above Mean			
Age of Child	1 – 3 Years	21	09	1.7	1	3.84
	3 – 5 Years	19	11			
Sex of Child	Male	24	12	2.7	1	3.84
	Female	16	08			
Mother Age group (Years)	Below – 20	02	01	6.26	3	7.82
	21-30 yrs.	19	08			
	31-40	17	07			
	Above 40	02	04			
Education	Secondary	16	08	3.26	2	5.99
	Higher	16	11			
	graduation	08	01			
Occupation	House wife	20	06	2.69	2	5.99
	Govt. Employee	04	02			
	Private Employee	16	12			
Type of family	Nuclear	25	14	1.64	1	3.84
	Joint	15	06			
Family Income	Below 5000	20	14	3.9	2	5.99
	5000 – 10000	13	03			
	Above 10000	07	03			
Source of information	By health Professionals	10	05	4.24	3	5.99
	By Relatives/Friends	08	7			
	By Mass Media	22	18			

Table-8 Association of selected demographic variables with the post-test knowledge score on prevention of home accidents among mothers.

TABLE-9

Characteristics	Category	Knowledge		Chi. Square Value	df	Critical Value
		Post-Test				
		Below Mean	Above Mean			
Age of Child	1 – 3 Years	21	09	1.7	1	3.84
	3 – 5 Years	19	11			
Sex of Child	Male	24	12	2.7	1	3.84
	Female	16	08			
Mother Age group (Years)	Below – 20	02	01	6.26	3	7.82
	21-30 yrs.	19	08			
	31-40	17	07			
	Above 40	02	04			
Education	Secondary	16	08	3.26	2	5.99
	Higher	16	11			
	graduation	08	01			
Occupation	House wife	20	06	2.69	2	5.99
	Govt. Employee	04	02			
	Private Employee	16	12			
Type of family	Nuclear	25	14	1.64	1	3.84
	Joint	15	06			
Family Income	Below 5000	20	14	3.9	2	5.99
	5000 – 10000	13	03			
	Above 10000	07	03			
Source of information	By health Professionals	10	05	4.24	3	5.99
	By Relatives/Friends	08	7			

	By Mass Media	22	18			
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Table-9 Association of selected demographic variables with the post-test knowledge score on prevention of home accidents among mothers

