



CHILD SAFETY COGNIZANCE AND TUTELAGE - A MIXED STYLE.

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Abstract

Background: “Children are a heritage” according to the biblical scripture. Worldwide, safety mishaps claim the lives of one in five children .

Objective: This study was intended to answer the research problem ,“What are the Child Safety perspectives among mothers with toddlers?”. Since information has always had an impact on parental knowledge, a session of tutoring was believed to reform the parental apprehension.

Methods: A mixed method research employing Exploratory Sequential Design included an in-depth interview among 5 mothers which aided in preparation of the educational material and there after a “child safety session” among 60 mothers of toddlers between 1-3 years of age . Samples were selected using non-probability methods. The study was conducted at Institute of Child Health and Hospital for Children, Chennai . A self-structured questionnaire with 17 questions was used . The

approval of the institutional ethical committee has been obtained prior to commencement of the study.

Results: Three themes emerged at the end of the thematic analysis such as, Monitoring, Knowledge and Fear. The mothers had significant increase in knowledge scores, before and after the sessions . Significant association ($p>0.05$) of knowledge with mother's age, working status and Mother's education was similar as some Asian studies.

Conclusion: Safety precautions and remaining knowledgeable about child safety helps prevention of domestic accidents among children .

Implication : Health care professionals should insist the awareness and sensitization programs on supporting domestic child safety.

Keywords: Childhood, Domestic, Injury, Toddler

What does this paper add?:

- This study revealed the child safety perspectives of mothers of toddlers at home and how an educational session on "Child Safety" created an impact in their comprehension about safety of their children at home.
- Monitoring, Knowledge and Fear were the themes or leads from QUAL phase. "Parental Supervision" stood amid-st all the possible strategies of prevention of injuries at home on integration of results.
- Variables like mother's education and age showed a significant association with the knowledge post-session.

INTRODUCTION

Children learn and grow from the things they see, feel, and experience in a home that is full of love, warmth, and care. This fosters the development of their bodies and brains. Although a child's home is often a safe place, there may be unspoken risks. Even at home, children might be harmed or put at risk when playing. Children should be able to explore and learn at home without running serious risks of getting hurt.

Worldwide, safety mishaps claims the lives of one in five children .Young children are susceptible to accidents and unintended injuries, which are more frequently caused by everyday household activities and objects. In the developing countries, death in the second year of life commonly accounted for 50% of all deaths between 1-4 years of age (1).Toddlers, being explorers, tend to have more accidents than other developmental ages.

BACKGROUND:

Recent studies on Parental approaches to handle toddlers and prevent them from injuries have yielded certain strategies that parents follow to avoid those accidents in under-five children such as, making the environment safe by removing hazards, supervising children and by teaching the children to follow certain instructions to avoid the accidents . But being a toddler's parent it is much more challenging, that the children hardly can follow the rules or routines taught by the parents as they are always finding ways to explore things and manipulate them. Mothers have a significant role in their children's lives, caring for them, loving them, teaching them, and so much more. (1).

Parental factors associated with unintentional injuries were, younger parenthood, poor maternal mental health, substance misuse, low maternal education, low paternal involvement in childcare and routine and manual socioeconomic classification (9).

According to available data, globally, a significant proportion of childhood injuries occurred within home, with estimates suggest that around 50-60% of childhood injuries were domestic, with falls being the most common.Toddlers were particularly at risk, and low- and middle-income countries experience a higher burden of these injuries due to limited access to safety measures and healthcare (2). One third of all injuries occur in the home, yet there is insufficient evidence to demonstrate that modification of the home environment has an impact on the rate of injuries (3). the prevalence of

domestic injuries among children is significant, with a study reporting a rate of around 39.7% of children experiencing a home injury within a year, with the most common type being falls, often occurring in the 1-3 year age group; boys tend to have a slightly higher rate of injuries compared to girls; and factors like caregiver education level can play a role in the likelihood of accidents (4). Most injuries were related to falls, but burns and poisonings were frequent in the subsequent years (5).

The prevalence of domestic accidents among children accounted for about 4.8% of study population in parts of Tamil Nadu. Majority were male children and about 62% domestic accidents were mild in nature (6). Hence based on our local circumstances, we can conclude that there was a need for a Child Safety Program. The implementation of strategies for preventing childhood accidents is essential in promoting the health and well-being of this population, considering that external causes are among the leading causes of death in pediatrics (10).

Since there are only very few mixed method studies to explore child safety and hence there was a need for merging Qualitative and Quantitative details for exploring Child safety in broad context. A Program, especially among the parents of toddlers, who faced massive challenges in protecting the most active and manipulative tiny people was expected to be helpful to comprehensively understand about domestic child safety.

AIM & OBJECTIVES:

The core aim of the study was to explore the perspectives of Domestic Child Safety among mothers of toddlers. The hypothetical beliefs about this research were that, there will be a statistically significant difference between the pre and post-test knowledge levels among mothers who participated in the session and that there will be a significant association between the post-test knowledge levels among participants with their selected demographic variables.

METHODS

A mixed method research that applied Exploratory Sequential design was used to answer the research problem. For a researcher interested in creating a new tool, taxonomy, or treatment procedure, this two-phase method was especially helpful. (Fig 1)

- ✧ Qualitative phase - Phenomenological Design
- ✧ Quantitative Phase - Pre experimental design

In-depth interviews were conducted among 5 mothers which aided in preparation of the educational material, who were included for the education session also. Mothers of toddlers with terminally ill and congenital defects were excluded. For the interview, purposive sampling technique was employed to acquire a wide variety of data about areas of concern and identify knowledge gaps. This data was useful in determining the contents for the education session and its appropriate questionnaire. The “*child safety session*” was conducted among 60 mothers of toddlers between 1-3 years of age and its impact was established. This study was conducted at Institute of Child Health and Hospital for Children, Chennai. For the quantitative phase convenient sampling was used since only inpatient children’s mothers were included. A self-structured questionnaire containing 17 multiple choice questions was used for the session. The institutional ethical committee of Madras Medical College, Chennai approved the study.

The session was conducted for about twenty to thirty minutes. Following the session an information brochure was given to the participants. The day after the session, the post test was given and responses were obtained. The educational session included about the following leads such as Fire Safety, Kitchen Safety, Electrical Safety, Bathroom Safety and general domestic safety which were derived from results of Qualitative phase. The impact of Child safety Session among mothers of toddlers who were admitted in medical ward at Institute of Child Health and Hospital for Children, Egmore, Chennai was determined using **paired ‘t’ test**. **McNemar’s test** was used to compare the pre-test and post-test scores. **Chi-square test** was done to determine the association of post test results with the demographic variables of the participants. The qualitative in-depth interview

questions were checked by conducting mock interviews with mothers of toddlers who were attending OPD. Reliability of the tool was established using Test-retest method. **Reliability of knowledge score (0.82).**

RESULTS:

Three themes emerged at the end of the thematic analysis of the in-depth interview and they were, Monitoring, Knowledge and Fear. The sub-themes are as follows (Table 1). Out of 60 mothers who participated, majority (41.67%) were between 20-25 years, Maximum number (51.67%) had secondary school education, 61.67 % mothers had their parents as help in child care and 53.33% of mothers were not going for work while Majority of mothers (55%) had only one child. 88.33 % of mothers belonged to nuclear family and 1.67% mothers were married yet living apart. 13.33% had more than one toddler between 1-3 years of age. (Table 2)

About 53.33% had inadequate knowledge, 30.00% had moderate level of knowledge and 16.67% had adequate about child safety at home before the session. The knowledge comparison between pre-test and post-test yielded $p \leq 0.001$ showing very high significance. The participant mothers had 43.73% score and after intervention, mothers had 81.03% knowledge score (Table 3). So this difference showed the effectiveness of virtual education in improving the knowledge about prevention of domestic accidental injuries among the toddlers. Significant association of knowledge with mother's age ($p=0.01$), working status ($p=0.05$) and Mother's education ($p=0.05$) was same as several similar other studies (Table 4). Using the themes, sub themes and Statistical data from the intervention, the integration of Qualitative and Quantitative results was done using Matrix method of Integration (Fig 2).

Table 1 THEMES AND SUB-THEMES

THEMES	Monitoring	Knowledge	Fear
SUB- THEME 1	Parental presence	Previous knowledge	Drowning
SUB- THEME 2	Trusting others	rearrangement	Vicinity of hot objects

Table 2: Percentage Distribution Demographic Variables

Demographic variables		Number of mothers of toddlers	%
Mothers age	<20 years	20	33.33%
	20-25 years	25	41.67%
	25-30 years	13	21.67%
	>30 years	2	3.33%
Education	Primary Education	12	20.00%
	Secondary Education	31	51.67%
	Higher Secondary Education	13	21.66%
	Graduation	4	6.67%
	Post Graduation and above	0	0.00%
Total number of children	One	33	55.00%
	Two	15	25.00%
	More than two	12	20.00%
Help in child care	Parents	37	61.67%
	Grandparents	18	30.00%
	Babysitter	0	0.00%
	No one	5	8.33%
Nature of Work	Not going to work	32	53.33%
	Government employment	0	0.00%

	Private employment	28	46.67%
Type of family	Nuclear family	53	88.33%
	Joint family	7	11.67%
	Extended family	0	0.00%
Marital status	Married	58	96.66%
	living apart	1	1.67%
	Divorced	1	1.67%
How many children are there between 1-3 years of age?	One	52	86.67%
	More than one	8	13.33%

Table 3: Significance Of Difference Between Pretest And Posttest Level Of Knowledge Score

LEVEL OF KNOWLEDGE	ASSESSMENTS				MCNEMAR'S TEST
	Pretest		Posttest		
	n	%	n	%	
Inadequate	32	53.33%	0	0.00%	$\chi^2=52.90$ p=0.001*** (S)
Moderate	18	30.00%	14	23.33%	
Adequate	10	16.67%	46	76.67%	
Total	60	100.0%	60	100.0%	

Table 4: Association Between Post Test Level Of Knowledge Score And Mothers Demographic Variable

DEMOGRAPHIC VARIABLES		POSTTEST LEVEL OF KNOWLEDGE SCORE				N	CHI SQUARE TEST
		Moderate		Adequate			
		n	%	n	%		
Mothers age	<20 years	9	45.00%	11	55.00%	20	$\chi^2=8.39$ $p=0.05^*(S)$
	20-25 years	4	16.00%	21	84.00%	25	
	25-30 years	1	7.69%	12	92.31%	13	
	>30 years	0	0.00%	2	100.00%	2	
Education	Primary Education	7	58.33%	5	41.67%	12	$\chi^2=10.57$ $p=0.01^{**}(S)$
	Secondary Education	4	12.90%	27	87.10%	31	
	Higher Secondary Education	2	15.38%	11	84.62%	13	
	Graduation	1	25.00%	3	75.00%	4	
	Post Graduation and above	0	0.00%	0	0.00%	0	
Total number of children	One	9	27.27%	24	72.73%	33	$\chi^2=0.68$ $p=0.71(NS)$
	Two	3	20.00%	12	80.00%	15	
	More than two	2	16.67%	10	83.33%	12	
Help in child care	Parents	11	29.73%	26	70.27%	37	$\chi^2=2.38$ $p=0.30(NS)$
	Grandparents	2	11.11%	16	88.89%	18	
	Babysitter	0	0.00%	0	0.00%	0	
	No one	1	20.00%	4	80.00%	5	
Nature of Work	Not going to work	4	12.50%	28	87.50%	32	$\chi^2=4.49$ $p=0.05^*(S)$
	Government employment	0	0.00%	0	0.00%	0	
	Private employment	10	35.71%	18	64.29%	28	
Type of family	Nuclear family	12	22.64%	41	77.36%	53	$\chi^2=0.12$ $p=0.74(NS)$
	Joint family	2	28.57%	5	71.43%	7	
	Extended family	0	0.00%	0	0.00%	0	
Marital status	Married	14	24.14%	44	75.86%	58	$\chi^2=0.63$

How many children are there between 1-3 years of age?	living apart	0	0.00%	1	100.00%	1	p=0.73(NS)
	Divorced	0	0.00%	1	100.00%	1	
	One	11	21.15%	41	78.85%	52	$\chi^2=1.03$ p=0.31(NS)
	More than one	3	37.50%	5	62.50%	8	

Fig 1 Illustration of Exploratory Sequential Design

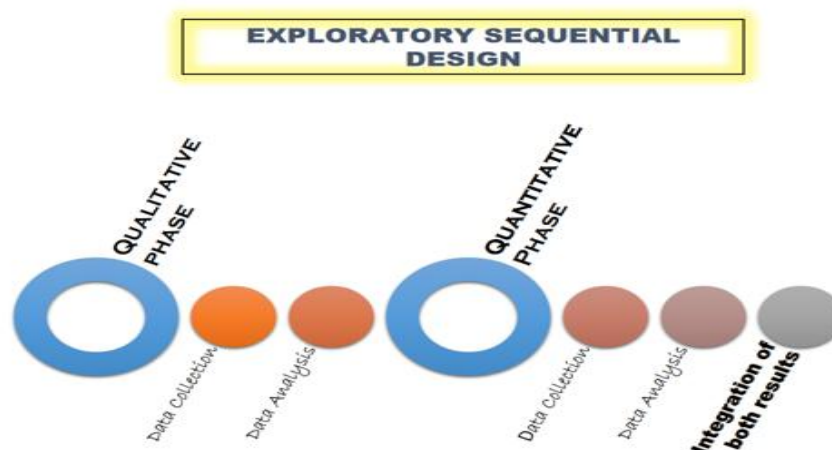
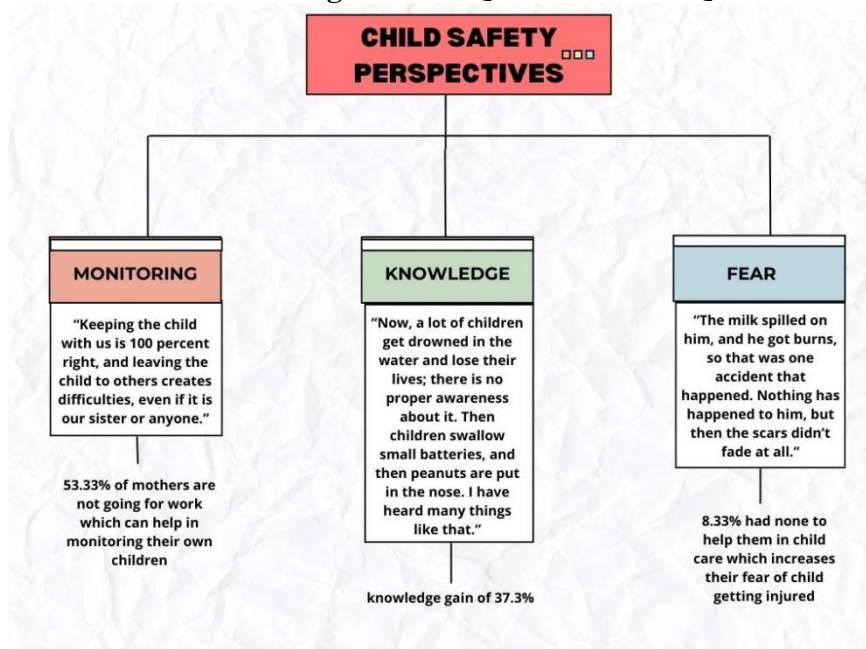


Fig 2: Matrix Method of Integration of Qualitative and Quantitative results



DISCUSSION

The study was intended to answer the research questions regarding child safety and prevention of accidental injuries at home. The role of home safety practices in prevention of childhood injuries among mothers of children aged one to five years about home safety practices to prevent childhood injuries was investigated and concluded that participant details such as age, occupation, education, family size and number of children did not affect, how mother and her family practiced safety measures (7). The demographic information of mothers in the present study such as, mother's age,

education, number of children, help in child care, number of children between 1-3 years, type of family and marital status, did not affect their safety practices. Three primary injury prevention tactics employed by parents such as a) environmental, such as removing risks and using safety gear; b) parental supervision; and c) instruction were identified using thematic analysis (8). The theme that remained common during comparison was “parental supervision”. This had been a convincing factor to state that parental supervision was the prime strategy in preventing domestic injuries among toddlers. The association of knowledge scores with demographic variables showed that variables such as mother’s education, work status and Mother’s age had significance, which was unlike to a study conducted which showed that Occupation and family income had significant association with the mother’s knowledge regarding child safety (9). In the current study statements of mothers such as “..we should make sure that they don’t take small objects...” and “..we should always watch their moves...”, during the interview aided in understanding their level of awareness about possible ways of childhood occurrences. Hence this proved that stay at home mothers were more informed about domestic accidents among children than those who had care taker and went for work directly supporting and integrating the findings of both methods.

IMPLICATIONS OF THE STUDY

This study provided practical insights, as below,

- ✓ Importance of educating parents about child safety at home.
- ✓ The need to include intervention-based learning in curriculum.
- ✓ Awareness among nurses in an institution about the safety needs of children approaching health care.
- ✓ Policy alterations to aid or include considerations for the educating parents about child safety while in health care setting.

Limitations

- ✓ This study was done only among toddlers’ mothers yet it can be done among mothers having children of all age groups.
- ✓ Small sample size limited generalizability.

Recommendations

A similar study can be replicated as a qualitative study alone focusing on “accident experiences” and a comparative study among two age groups on child safety with a self prepared tool among mothers in a particular community.

CONCLUSION

On the final note, Successful implementation of strategies requires a clear understanding of the circumstances surrounding injuries and the risk and protective factors that influence the likelihood that a child will be injured. By implementing safety measures and staying informed about child safety, parents and caregivers can create a safe and nurturing home environment for children.

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Ethical Approval:

The institutional ethical committee of Madras Medical College, Chennai has approved this study.

Informed Consent:

The author declares that an informed consent was obtained from all participants.

Conflict of Interest Statement

The authors declare that there is no conflict of interest.

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Authors' Contributions:

Conceptualization: G.A, **Methodology:** G.A, K.A, A.M, **Validation:** S.S.R, K.K, **Formal analysis:** G.A, S.S.R, A.M, **Writing- Original draft preparation:** GA, **Writing- Review and editing:** K.K, S.S.R, K.A, **Visualization:** G.A, S.S.R, G.K, W.T.

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