

EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING PREVENTION AND FIRST AID MANAGEMENT OF BURNS AMONG MOTHER OF CHILDREN (0-18 YEAR) IN SELECTED VILLAGE, CHENGALPATTU DISTRICT

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Abstract

Burn injuries are one of the common household emergencies among children, and mothers play an important role in preventing burns and providing appropriate first aid management before professional medical care is available. The present study was conducted to assess the effectiveness of a structured teaching programme on knowledge regarding the prevention and first aid management of burns among mothers of children aged 0–18 years in a selected village of Chengalpattu District, Tamil Nadu. The objectives of the study were to assess the pre-test level of knowledge regarding prevention and first aid management of burns among mothers of children aged 0–18 years, evaluate the effectiveness of the structured teaching programme by comparing pre-test and post-test knowledge scores, and determine the association between post-test knowledge scores and selected demographic variables. A pre-experimental one-group pre-test and post-test research design was adopted for the study. The study was conducted among 80 mothers of children aged 0–18 years selected from a village in Chengalpattu District using a purposive sampling technique. Data were collected using a self-structured knowledge questionnaire. A pre-test was conducted to assess the baseline knowledge of the mothers, followed by a 30-minute structured teaching programme focusing on the prevention of burns, immediate first aid measures, appropriate management, and measures to be taken during burn emergencies. A post-test was subsequently conducted among the same participants using the same knowledge questionnaire to evaluate the effectiveness of the intervention. The collected data were tabulated and analysed using descriptive and inferential statistics. The findings revealed that in the post-test, 30 mothers (37.5%) had moderate knowledge, while 50 mothers (62.5%) had adequate knowledge regarding the prevention and first aid management of burns. The findings indicate that the structured teaching programme was effective in improving the knowledge of mothers regarding burn prevention and first aid management. Therefore, structured health education programmes can be used as an effective strategy to enhance mothers' knowledge and preparedness for preventing burns and providing appropriate first aid to children during burn-related emergencies.

Keywords: Effectiveness, Knowledge, Structured Teaching Programme, First Aid Management, Burn Prevention, Mothers, Children, Burns.

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Introduction

Burn injuries are one of the most common causes of accidental injuries among children worldwide and remain a major public health concern, particularly in developing countries. Children are naturally curious, active, and often unaware of potential dangers in their

surroundings, making them more vulnerable to burn injuries caused by hot liquids, fire, electricity, chemicals, and hot objects. In developing countries, the risk of childhood burns is further increased by overcrowding, unsafe cooking practices, use of open fires,

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inadequate supervision, and lack of awareness regarding safety measures. Children aged 0–18 years are particularly vulnerable because of their developmental immaturity, limited understanding of danger, and dependence on adults for protection and care. Burn injuries can cause significant physical pain and suffering and may result in infection, scarring, psychological trauma, disfigurement, long-term disability, and, in severe cases, death. Most childhood burn injuries are preventable through proper supervision, awareness, and appropriate safety practices within the home environment. Mothers, as primary caregivers, play a crucial role in maintaining a safe home environment, supervising children, preventing exposure to hazardous situations, and providing immediate first aid when burn injuries occur. Therefore, adequate knowledge regarding prevention and first aid management of burns is essential for mothers to reduce the risk and severity of childhood burn injuries. Burns are injuries to the skin or other tissues caused by heat, electricity, chemicals, radiation, or hot liquids. A large number of burn injuries among children occur because of household accidents and may lead to pain, infection, tissue damage, disability, and even death. Immediate and appropriate first aid management plays an important role in reducing tissue damage and promoting recovery. However, lack of awareness, misconceptions, myths, and incorrect home remedies are commonly observed, particularly in rural communities. Mothers may use inappropriate substances such as oil, toothpaste, turmeric, mud, or other traditional remedies on burns, which may worsen the injury and contribute to complications. Correct first aid management includes immediate cooling of the affected area, protection of the injured part, prevention of contamination, appropriate pain management, and timely referral to a healthcare facility when necessary. Children living in rural and low socioeconomic settings may face additional risks because homes may lack adequate safety measures and families may depend on traditional cooking methods. Unsafe cooking practices, overcrowding, open-fire cooking, improper storage of flammable materials, and inadequate supervision can increase the possibility of burn injuries. Children may sustain burns while playing near cooking areas, handling hot liquids, or accidentally coming into contact with fire, electrical sources, or hot objects. Common causes include scalds from hot water, milk, or food; flame burns from open cooking fires; electrical burns from exposed wires; chemical burns from household cleaning agents; and contact burns from hot objects such as irons and

stoves. Mothers play a pivotal role in the prevention and management of childhood burns. As primary caregivers, they are responsible for supervising children, identifying potential hazards, maintaining a safe household environment, and responding promptly during emergencies. Adequate knowledge about burn prevention and first aid management can help mothers take appropriate action immediately after an injury and reduce the likelihood of complications. Immediate and appropriate first aid can help reduce the severity of burns, prevent infection, promote healing, and improve outcomes for affected children. However, many mothers may lack adequate knowledge regarding appropriate first aid measures. Lack of awareness, low literacy levels, cultural beliefs, traditional practices, and limited access to health education may contribute to poor knowledge regarding burn prevention and first aid management.

In rural communities, mothers may not receive adequate guidance regarding how to respond during burn emergencies. This creates a need for planned and systematic health education programmes that provide accurate information and correct misconceptions related to burn prevention and first aid. A structured teaching programme is an organized, systematic, and goal-oriented educational intervention designed to improve knowledge and understanding regarding a specific health topic. Such programmes can enhance learning, correct misconceptions, and promote appropriate health-related behaviours. In relation to childhood burns, a structured teaching programme can provide mothers with information regarding common causes and risk factors, preventive measures, household safety practices, appropriate first aid management, harmful practices that should be avoided, and the importance of seeking timely medical care. Community health nurses can play an important role in planning and implementing such programmes at the community level. Through systematic health education, mothers can be empowered with essential knowledge and confidence to prevent burn injuries and respond effectively during emergencies. According to the World Health Organization (WHO, 2023), an estimated 180,000 deaths occur annually due to burns, with the majority occurring in low- and middle-income countries. India contributes significantly to this burden, with millions of children sustaining burns each year, many of which occur in domestic settings. Most childhood burn injuries occur at home due to hot liquids, fire, electricity, and chemicals. Burn injuries are among the most devastating and

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preventable forms of trauma in children. According to the World Health Organization (WHO, 2023), more than 96% of fatal burn injuries occur in low- and middle-income countries, with young children being among the most affected groups. The National Health Portal of India (2022) estimates that nearly 10 lakh people suffer from moderate to severe burns annually, of whom a significant proportion are children under five years of age. Despite the preventable nature of most burn injuries, children continue to suffer because of inadequate awareness and improper first aid management. At the regional level, a retrospective study conducted at a children's surgery department in Tirunelveli, Tamil Nadu, among 100 children up to 12 years of age with thermal injuries found that 49% belonged to the 1–5-year age group and that scald burns were the most common type of burn injury. The findings emphasize the importance of improving mothers' knowledge regarding burn prevention and appropriate first aid management, particularly in rural communities where access to health education may be limited. Considering the preventable nature of childhood burn injuries, the potential for serious complications, and the important role of mothers in child care and emergency management, there is a strong need to assess and improve maternal knowledge regarding burn prevention and first aid management. Therefore, the present study was undertaken to evaluate the effectiveness of a structured teaching programme on knowledge regarding prevention and first aid management of burns among mothers of children aged 0–18 years in a selected village of Chengalpattu District, Tamil Nadu. The study aims to assess the existing knowledge of mothers, identify gaps and misconceptions, provide systematic health education, and determine the effectiveness of the structured teaching programme in improving their knowledge regarding prevention and appropriate first aid management of burns.

Objectives

1. To assess the pre-test level of knowledge regarding prevention and first aid management of burns among mothers of children (0-18 years).
2. To evaluate the effectiveness of the structured teaching programme on knowledge regarding prevention and first aid management of burns among mothers of children (0-18 years) by comparing pre-test and post-test scores.
3. To find the association between post-test knowledge scores with selected demographic variables.

Hypothesis

H1: There will be a significant difference between the pre-test and post-test knowledge scores regarding prevention and first aid management of burns among mothers of children (0–18 years) after administration of the structured teaching programme.

H2: There will be a significant association between post-test knowledge scores with selected demographic variables

Projected Outcome

The study is expected to demonstrate that the structured teaching programme improves mothers' knowledge regarding burn prevention and first aid management among children aged 0–18 years. Enhanced knowledge will help mothers identify common burn hazards, adopt safer household practices, and provide appropriate immediate first aid, including cooling the burn, protecting the affected area, and avoiding harmful home remedies. Improved awareness may promote timely medical care, reduce complications, and support better recovery outcomes. The findings may assist community health nurses, nursing educators, and health workers in developing effective health education programmes. Overall, the study is expected to promote maternal empowerment, child safety, and improved community health outcomes.

Review of Literature

The Review of Literature is an organized critique of relevant scholarly literature that provides a strong knowledge base for conducting a research study. It helps the researcher understand previous findings, identify knowledge gaps, and establish the need for the present study.

Rekha S. Sonavane and Aravind Kasthuri (2016) conducted a study on Effectiveness of Training Programme on Knowledge Regarding First Aid Management (Burns) using a cross-sectional pre/post-training quasi-experimental design. The pre-test revealed inadequate knowledge and incorrect practices regarding burn first aid. Following a structured training programme on burn prevention and appropriate first aid, post-test knowledge scores improved significantly ($p < 0.05$). The study concluded that structured training effectively improved knowledge and corrected misconceptions regarding burn management.

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Kattan et al. (2016) conducted a descriptive survey study on Knowledge of Burn First Aid Practices and the Use of Traditional Remedies. The findings showed poor knowledge of appropriate burn first aid, particularly regarding cooling burns with running water and avoiding irritants. Notably, 77.4% of participants reported using traditional substances such as honey, oil, and toothpaste. The study emphasized the need for community-based health education to replace harmful traditional practices with evidence-based burn management.

Joseph and Thomas (2017) conducted a descriptive cross-sectional study on Knowledge of Mothers Regarding Prevention and First Aid Management of Burns among Children. The findings showed that most mothers had inadequate knowledge of burn prevention and first aid. Many were unaware of appropriate cooling techniques and avoided harmful substances. Higher educational status and previous exposure to health information were associated with better knowledge, highlighting the importance of maternal health education.

Kumar (2018) conducted a pre-experimental one-group pre-test and post-test study on Effectiveness of Structured Teaching Programme on Knowledge and Practice of First Aid among Mothers of Under-Five Children in Rural Areas. Pre-test findings revealed inadequate knowledge and poor first-aid practices. After the structured teaching programme, knowledge and practice scores improved significantly ($p < 0.05$). The study demonstrated the effectiveness of structured education in improving mothers' first-aid knowledge and practices.

Karaoz et al. (2019) conducted a descriptive study on First Aid Interventions and Knowledge among Mothers of Children with Burn Injuries. Most mothers demonstrated inadequate knowledge and poor first-aid practices. Only a small proportion correctly identified appropriate measures such as cooling burns with cool running water, while many used harmful substances. The study recommended structured health education to improve mothers' ability to manage childhood burn injuries.

Harish et al. (2020) conducted a descriptive cross-sectional study on Knowledge and Practice of Burn First Aid among Parents of Under-Age Children. The findings showed that 46.3% had inadequate knowledge, 47.5% had moderate knowledge, and only 6.3% had

adequate knowledge. Incorrect practices were also common. A significant association was found between knowledge and gender ($p < 0.05$). The study emphasized the need for targeted educational interventions to improve burn first-aid knowledge and practices.

Sharma et al. (2021) conducted a descriptive cross-sectional study on Knowledge and Attitude of Mothers Regarding First Aid of Burns in Under-Five Children. Most mothers had inadequate to moderate knowledge and were unaware of appropriate first-aid measures. Misconceptions regarding traditional remedies were also identified. Education, occupation, and previous exposure to health education were significantly associated with knowledge, indicating the importance of health education programmes.

Banu (2022) conducted a pre-experimental one-group pre-test and post-test study on Effectiveness of Structured Teaching Programme on Knowledge and Practice of Burn First Aid among Mothers. Pre-test findings indicated inadequate knowledge and poor practices. Following the structured teaching programme, significant improvement was observed in knowledge and practice scores ($p < 0.05$). The study concluded that structured teaching was effective in correcting misconceptions and promoting evidence-based burn first-aid practices.

D'cunha et al. (2022) conducted a community-based descriptive study on Understanding of Burn Injuries and First Aid Practices. Although 61% of participants had some knowledge regarding burn injuries, only 66–70% correctly identified cooling burns with running water as an immediate first-aid measure. Most participants obtained information from informal sources rather than healthcare professionals. The study highlighted the need for targeted community health education to improve practical burn first-aid knowledge.

R. Indira and K. Sesha Kumar (2022) conducted a pre-experimental one-group pre-test and post-test study on Effectiveness of Structured Teaching Programme on Knowledge Regarding First Aid for Burns and its Prevention in Children. Pre-test findings showed inadequate to moderate knowledge regarding burn prevention and first aid. Following the intervention, knowledge scores improved significantly ($p < 0.05$), demonstrating the positive effect of structured teaching in

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improving mothers' understanding of burn prevention and management.

Atique et al. (2023) conducted a descriptive comparative study on Knowledge of Burn First Aid among Parents and Non-Parent Adults. The overall knowledge was poor, with a mean score of 4.18 out of 14. Approximately 40.7% reported using toothpaste as a first-aid measure. No significant difference was found between parents and non-parents ($p > 0.05$). The study emphasized the need for public awareness and structured educational programmes to correct misconceptions regarding burn first aid.

Hegde et al. (2024) conducted a descriptive survey study on Knowledge Regarding Prevention and First Aid of Burn Injuries among Healthcare and Non-Healthcare Workers in India. Only 11.8% of participants answered all knowledge-related questions correctly. Deficiencies were observed in areas such as burn cooling, wound care, severity assessment, and indications for medical attention. The study emphasized the need for targeted burn first-aid education among healthcare workers and the general population to reduce preventable complications.

Methodology

The methodology is made up of research strategy, a research design, variables of general framework for collecting and processing research data is provided by the study population, sample and sampling technique, sampling criteria, development and description of tool, content validity and reliability of the tool, procedure, data collection process, plan for data analysis. The methodology of the research study is defined as the way the information is gathered in order to answer the question or analyses the research problem. It includes research approach, research design, and variable, description of tool, content validity, reliability, and method of data collection

Research Approach:

A quantitative research approach was adopted for this study since it involves the collection and analysis of numerical data to determine the effectiveness of the structured teaching programme on mothers' knowledge regarding burn management. Quantitative research is widely used in various fields, including psychology, sociology, economics, education, and health sciences, among others. It provides a structured and rigorous approach to studying phenomena, allowing researchers to make evidence-based conclusions and contribute to the advancement of knowledge in their respective fields.

Research Design:

The research design selected for this study is a pre-experimental one-group pre-test post-test design. This design involves assessing the same group of participants before and after the intervention to identify the difference in their knowledge levels. It helps determine the effectiveness of the teaching programme by comparing pre-test and post-test scores.

Variables

In the present study, the independent variable is the structured teaching programme on prevention and first aid management of burns, which serves as the educational intervention provided to the mothers. The dependent variable is the knowledge of mothers regarding prevention and first aid management of burns, measured through a structured knowledge questionnaire before and after the intervention.

Setting of the Study:

The study will be conducted in Poonjeri village, located in Chengalpattu District. The village was selected because of its mixed population and accessibility to mothers with children below 18 years of age.

Population:

The target population for the study consists of mothers of children aged 0–18 years residing in Poonjeri village.

Sample:

Mothers of children aged 0–18 years residing in Poonjeri village.

Sample Size:

The sample size (n) is calculated according to the formula:

$$n = \frac{[z^2 * p * (1-p) / e^2]}{[1 + (z^2 * p * (1-p) / (e^2 * N))]}$$

Where,

$z = 1.96$ confidence level (α) of 95%

p = proportion (expressed as a decimal)

N = Population size,

e = margin of error, $z = 1.96$,

$p = 0.5$,

$N = 100$,

$E = 0.05$

$$n = \frac{[1.96^2 * (1 - 0.5) / 0.052]}{[1 + (1.96^2 * 0.5 * (1 - 0.5) / (0.052 * 100))]}$$

$$n = 384.16 / 4.8416$$

$$n = 79.346$$

$n = 80$ the sample size (with infinite population correction) is equal to 80.

Sampling Technique

Purposive sampling technique

Selection Criteria

[A] Inclusion Criteria

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- Mothers having children aged 0–18 years
- Mothers residing in selected village
- Mothers who can understand Tamil/English
- Mothers willing to participate

[B] Exclusion Criteria

- Mothers who are healthcare professionals
- Mothers not available during data collection
- Mothers who have already attended similar training

PHASES OF THE STUDY

Expected Outcome of the Study

The structured teaching programme is expected to significantly improve mothers' knowledge regarding the prevention and first aid management of burns. Following the intervention, there will be a notable increase in post-test knowledge scores compared to pre-test scores, demonstrating its effectiveness. With enhanced knowledge, mothers are anticipated to better recognize common household burn hazards and adopt appropriate preventive measures to protect their children. Additionally, they will develop correct understanding of immediate first aid management, enabling them to provide timely and appropriate care while avoiding harmful traditional practices, thereby contributing to a reduction in burn injuries among children.

Selection and Development of Study Instrument:

The aim of the study is to assess the effectiveness of a structured teaching programme on knowledge regarding prevention and first aid management of burns among mothers of children (0–18 years). The researcher constructed the demographic variable proforma and structured knowledge questionnaire to assess the level of knowledge regarding prevention and first aid management of burns.

Description of Tool

A structured interview schedule will be used as the research tool to assess the knowledge of mothers regarding burn prevention and first aid management. The tool will consist of two sections:

- **Section A:** Demographic variables such as age, education, occupation, number of children, and prior exposure to burn information.
- **Section B:** Structured knowledge questions on prevention and first aid management of burns.

DATA COLLECTION PROCEDURE:

A study will be conducted in selected village at Chengalpattu district for a period of one week. The investigator will obtain consent from the head of the village and simple random sampling technique will be used to select the samples. Data were collected from the mothers of children under 18 in selected village at Chengalpattu district to assess the level of knowledge regarding effectiveness of structured Teaching Program on prevention and first aid management of burns among mother of children (0-18 year) in selected village ,Chengalpattu District We conducted the pre-test by giving the self-structure (knowledge) questionnaire to the mother was given and data was collected after the pre-test; 30 minutes intervention was given through computer assisted teaching program about prevention and first aid management of burns and post-test was conducted after the intervention with the same samples for data collection.

Statistical Analysis

The data was analyzed using descriptive and inferential statistics. Descriptive statistics used were mean, standard deviation, chi square test was used to find out the association between the level of knowledge and selected demographic variables.

Data Analysis and Interpretation

Data analysis is the systematic organization, synthesis, and interpretation of collected information to reduce the data into an understandable and meaningful form. It helps the researcher examine relationships, test research objectives and hypotheses, and draw appropriate conclusions using suitable statistical methods. In the present study, the collected data were analyzed and interpreted in accordance with the objectives of the study. The data were obtained using a self-structured knowledge questionnaire and checklist to assess the effectiveness of the Structured Teaching Programme on knowledge regarding prevention and first aid management of burns among mothers of children aged 0–18 years in a selected village of Chengalpattu District.

Organization of Findings

The collected data were organized and presented in the following four sections:

Section I: Frequency and percentage distribution of demographic variables of mothers of children (0-18 years).

Table 1: Frequency and percentage distribution of demographic variables of mothers of children

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S. N O.	Characteristics	Category	Frequency	Percentage
1	Education level of mother	No formal education	1	1.3
		Primary	1	1.3
		Secondary	7	8.8
		Higher secondary	40	50.0
		Graduate and above	31	38.8
2	Occupation of mother	Home maker	7	8.8
		Govt employed	34	42.5
		Self employed	25	31.3
		Private employed	14	17.5
3	Number of children	1	11	13.8
		2	49	61.3
		3	19	23.8
		More than 3	1	1.3
4	Age of children	0-5	15	18.8
		5-12	43	53.8
		12-18	22	27.5

5	Family type	Nuclear	28	35.0
		Joint	52	65.0
6	Socio economic status	<25000	24	30.0
		>25000	56	70.0
7	Residence	Urban	19	23.8
		Rural	61	76.3
8	Type of house	Pakka house	44	55.0
		Kachcha house	36	45.0
9	Any prior first aid training?	Yes	24	30.0
		No	56	70.0
10	Any previous burn injury in the child or family?	Yes	26	32.5
		No	54	67.5
11	Are you a healthcare professional?	Yes	13	16.3
		No	67	83.8

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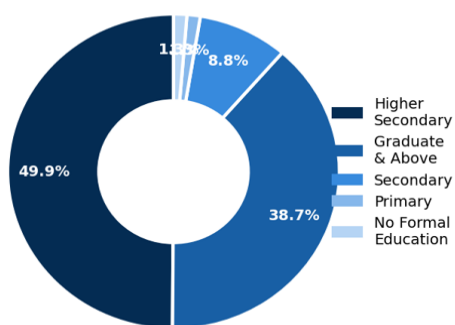


Figure 1: Education of Mother

The figure 1 shows the distribution of mothers according to their education level. Among the 80 mothers, the majority 40 (50%) had higher secondary education, followed by 31 (38.8%) who were graduates and above. Only 7 (8.8%) had secondary education, while very few mothers had primary education 1 (1.3%) and no formal education 1 (1.3%). This indicates that most mothers had at least a higher secondary level of education.

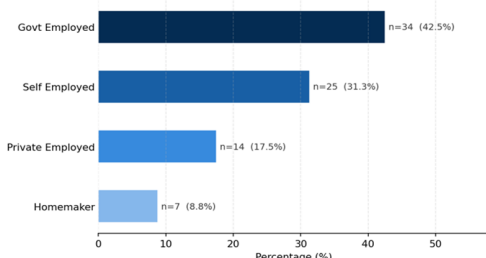


Figure 2: Occupation of Mother

The figure 2 illustrates the occupational status of mothers. Most mothers were government employees 34 (42.5%), followed by self-employed mothers 25 (31.3%). Private employees accounted for 14 (17.5%), while homemakers were the least represented group with 7 (8.8%). This shows that a large proportion of mothers were working.

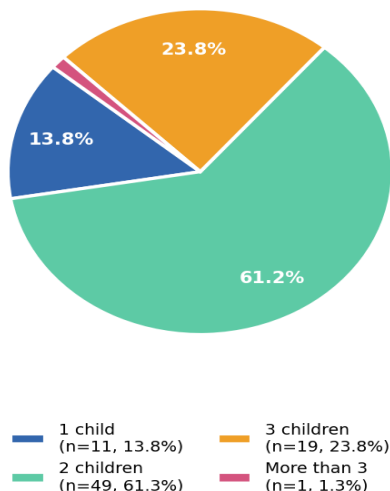


Figure 3: Number of Children

The figure 3 represents the number of children in each family. The majority of mothers 49 (61.3%) had two children, followed by 19 (23.8%) with three children. About 11 (13.8%) mothers had one child, while only 1 (1.3%) mother had more than three children. This indicates that most families had two children.

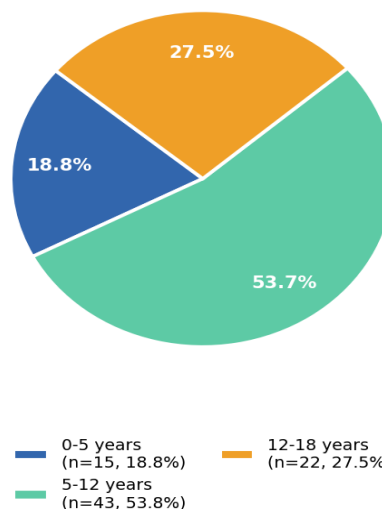


Figure 4: Age of Children

The figure 4 shows the age distribution of children. Most children belonged to the age group 5–12 years 43 (53.8%). This was followed by 12–18 years 22 (27.5%) and 0–5 years 15 (18.8%). This indicates that the majority of children were of school-going age.

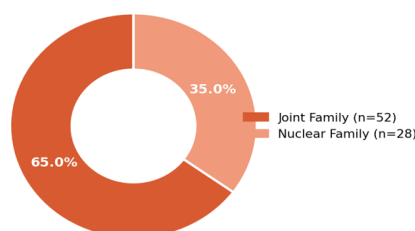
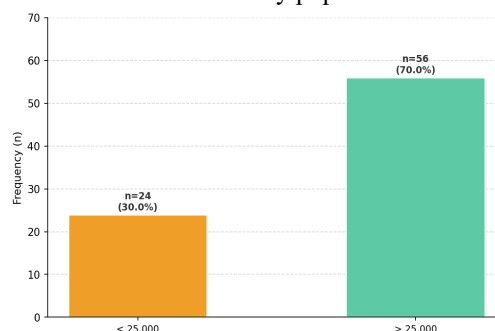


Figure 5: Type of Family

The figure 5 depicts the type of family. The majority of mothers 52 (65%) belonged to joint families, while 28 (35%) belonged to nuclear families. This indicates that joint families were more common in the study population.



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Figure 6: Socio Economic Status

The figure 6 shows the socio-economic status of the families. Most mothers 56 (70%) had a monthly income above ₹25,000, while 24 (30%) had an income below ₹25,000. This indicates that the majority of families belonged to a higher income group.

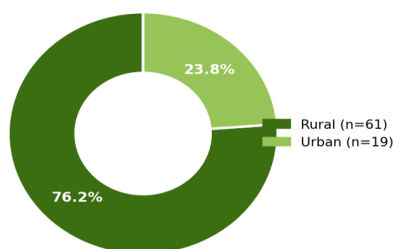


Figure 7: Area of Residence

The figure 7 illustrates the area of residence. The majority of mothers 61 (76.3%) lived in rural areas, while 19 (23.8%) lived in urban areas. This indicates that most participants were from rural areas.

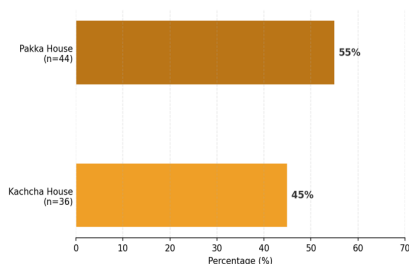


Figure 8: Type of House

The figure 8 shows the type of housing. Most mothers 44 (55%) lived in pakka houses, while 36 (45%) lived in kachcha houses. This indicates that slightly more families lived in permanent houses.

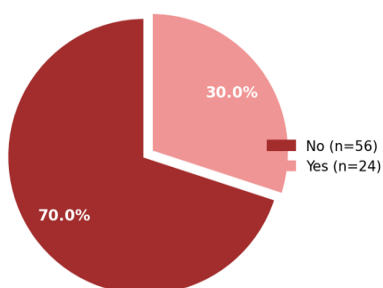


Figure 9: First Aid Training Among Mothers

The figure 9 represents prior first aid training among mothers. Most mothers 56 (70%) had no prior training, while only 24 (30%) had received first aid training. This indicates that the majority of mothers lacked first aid knowledge before the teaching programme.

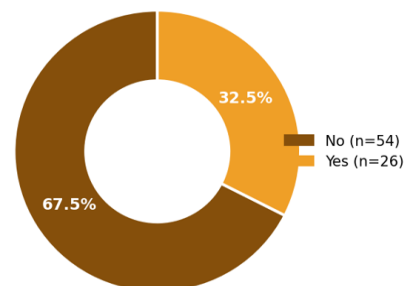


Figure 10: History of Burn Injury

The figure 10 shows the history of burn injury in the child or family. Most mothers 54 (67.5%) reported no previous burn injury, while 26 (32.5%) reported a history of burn injury. This indicates that burn injuries were present in about one-third of families.

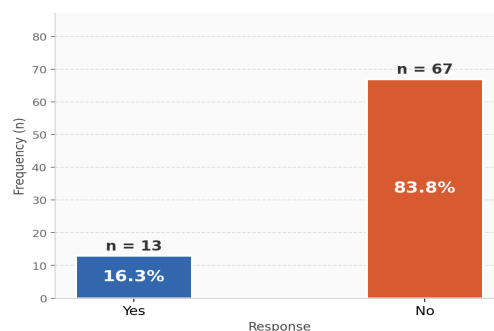


Figure 11: Healthcare Professionals

The figure 11 illustrates whether mothers were healthcare professionals. Most mothers 67 (83.8%) were not healthcare professionals, while only 13 (16.3%) were healthcare professionals. This indicates that the majority had no professional health background.

Section II: Mean and standard deviation of pre-test and post-test knowledge score

Table 2: Mean and standard deviation of pre-test and post-test knowledge score

S. N o.	Know ledge score	Mini mum score	Maxi mum score	Me an	Stan dard devia tion
1	Pre- test	7	15	11.41	1.840
2	Post - test	13	20	15.99	2.196

Pre-test

Mean is 11.41 and Standard deviation is 1.840

Post-test

Mean is 15.99 and Standard deviation is 2.196

Section III: Frequency and percentage distribution of level of pre-test and post-test

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knowledge score among mothers of children (0-18).

Table 3: Frequency and percentage distribution of level of pre-test and post-test knowledge score among mothers of children

S . N o .	CATE GORI ES	PRE-TEST		POST-TEST	
		Freq uenc y	Perc enta ge	Freq uenc y	Perc enta ge
1	Inadeq uate knowle dge	1	1.25	—	—
2	Moder ate knowle dge	77	96.2 5	30	37.5
3	Adequ ate knowle dge	2	2.5	50	62.5

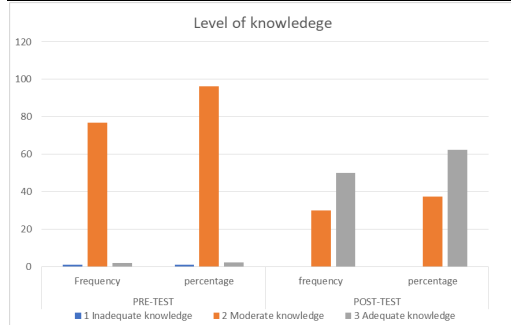


Figure 12: level of knowledge

The figure 12 shows the level of knowledge before and after the teaching programme. In the pre-test, most mothers 77 (96.25%) had moderate knowledge, while only 2 (2.5%) had adequate knowledge and 1 (1.25%) had inadequate knowledge. In the post-test, 50 (62.5%) mothers had adequate knowledge and 30 (37.5%) had moderate knowledge, with no mothers in the inadequate category. This indicates a clear improvement in knowledge after the teaching programme.

Section IV: Association of selected demographic variable with level of knowledge towards mothers of children (0-18).

Table 4: Association of selected demographic variable with level of knowledge

S . N o	Dem ogra phic Vari able	Ina deq uat e Kn owl edg e	Mo der ate Kn owl edg e	Ad equ ate Kn owl edg e	C hi S q u ar e	D F	P V al ue
1	Edu catio n Leve l				0. 85	4	0. 93 (N s)
	No For mal Edu catio n	-	1	-			
	Prim ary	-	-	1			
	Seco ndar y	-	3	4			
	High er Seco ndar y	-	17	23			
	Grad uate And Abo ve	-	13	18			
2	Occ upati on				0. 37	3	0. 95 (N s)
	Hom ema ker		3	4			

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	Govt Emp loye d		15	19			
	Self Emp loye d		11	14			
	Priv ate Emp loye d		5	9			
3	Num ber Of Chil dren				2. 73	3	0. 43 (N s)
	1		5	6			
	2		19	30			
	3		10	9			
	Abo ve 3		0	1			
4	Age Of Chil dren				0. 58	2	0. 75 (N s)
	0-5		6	9			
	5-12		20	23			
	12- 18		8	14			
5	Fam ily Type				3. 10	1	0. 07 8
	Nucl ear		8	20			
	Joint		26	26			(N s)
6	Soci o Eco nom ic Stat us				7. 92	1	0. 00 49 (S)
	<25 000		16	8			
	>25 000		18	38			
7	Resi denc e				3. 78	1	0. 05 11 8 (N s)
	Urba n		4	15			
	Rura l		30	31			
8	Type Of Hou se				0. 67	1	0. 41 (N s)
	Pakk a Hou se		17	27			
	Kac hcha Hou se		17	19			
9	Any Prior First Aid Trai ning ?				4. 21	1	0. 04 0 (S)

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	Yes		14	10			
	No		20	36			
10	Any Previous Burn Injury In The Child Or Family?				3.86	1	0.049 (S)
	Yes		14	12			
	No		20	34			
11	Are You A Healthcare Professional?				0.52	1	0.47 (Ns)
	Yes		4	9			
	No		30	37			

S – SIGNIFICANCE

Above Table 4 shows that, based on the provided demographic data, a chi-square test was conducted to determine the association between level of knowledge and selected demographic variables among mothers of children (0–18 years). The findings reveal that there is a statistically significant association between level of knowledge and socio-economic status ($p < 0.05$), prior first aid training ($p < 0.05$), and previous burn injury in the child or family ($p < 0.05$). Since the obtained p values are less than 0.05, these variables show a positive association with the level of knowledge.

NS – NON-SIGNIFICANCE

Above Table 4 also shows that, there is no statistically significant association between level of knowledge and education level ($p > 0.05$), occupation ($p > 0.05$), number of children ($p > 0.05$), age of children ($p > 0.05$), family type ($p > 0.05$), residence ($p > 0.05$), type of house ($p > 0.05$), and healthcare professional status ($p > 0.05$). Since the obtained p values are greater than 0.05, these variables show no significant association with the level of knowledge.

Discussion

The present study was conducted to assess the effectiveness of a Structured Teaching Programme on knowledge regarding prevention and first aid management of burns among mothers of children aged 0–18 years in a selected village, Chengalpattu District. A pre-experimental one-group pre-test and post-test design was used among 80 mothers. Data were collected using a self-structured knowledge questionnaire. A 30-minute Structured Teaching Programme was administered after the pre-test, followed by a post-test.

Objective 1: Pre-test Knowledge

In the pre-test, 77 (96.25%) mothers had moderate knowledge, 2 (2.5%) had adequate knowledge, and 1 (1.25%) had inadequate knowledge. These findings indicate the need for structured health education regarding burn prevention and first aid management.

Objective 2: Effectiveness of the Teaching Programme

Post-test findings showed that 50 (62.5%) mothers had adequate knowledge, 30 (37.5%) had moderate knowledge, and none had inadequate knowledge. Thus, adequate knowledge increased from 2 (2.5%) to 50 (62.5%), indicating that the Structured Teaching Programme was effective in improving knowledge.

Objective 3: Association with Demographic Variables

A significant association was found between post-test knowledge and socio-economic status, prior first-aid training, and previous burn injury in the child or family ($p < 0.05$). No significant association was found with education, occupation, number or age of children, family type, residence, type of house, or healthcare professional status ($p > 0.05$).

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Hypothesis

The findings support H1, indicating a significant improvement in knowledge following the Structured Teaching Programme.

Significance of the Findings

The study demonstrates that structured health education can improve mothers' knowledge regarding burn prevention and first aid. Improved knowledge may help mothers identify household hazards, adopt preventive measures, provide appropriate immediate first aid, and seek timely medical care.

NURSING IMPLICATIONS

Nursing Practice: Community health nurses should regularly educate mothers about burn prevention and first aid using demonstrations, pamphlets, and visual aids.

Nursing Education: Burn prevention and first aid should be emphasized in nursing education through lectures, demonstrations, workshops, and seminars.

Nursing Administration: Nurse administrators should organize and evaluate community-based health education programmes and provide appropriate teaching materials.

Nursing Research: Further studies may be conducted with larger samples and in rural and urban settings to assess knowledge, attitude, and practice regarding burn prevention and first aid.

Summary

The study assessed the effectiveness of a Structured Teaching Programme among 80 mothers of children aged 0–18 years in a selected village, Chengalpattu District. A pre-experimental one-group pre-test and post-test design was adopted. Pre-test findings showed that most mothers had moderate knowledge. After the 30-minute Structured Teaching Programme, adequate knowledge increased substantially, with 50 (62.5%) mothers achieving adequate knowledge. The findings indicate that the Structured Teaching Programme was effective in improving mothers' knowledge regarding prevention and first aid management of burns and may

contribute to improved child safety and community health practices.

Limitations

1. The study was limited to a small sample size.
2. The study was conducted in only one selected village.
3. Some mothers were not available during data collection.
4. The study included only mothers of children aged 0–18 years.

Recommendations

1. Similar studies can be conducted with a larger sample size.
2. Studies can be conducted in different villages.
3. Follow-up studies can be conducted to assess knowledge retention.
4. Health education programmes should be conducted regularly.
5. Comparative studies can be conducted between rural and urban mothers.

Major Findings of Study

The major findings of the study are presented according to the objectives.

1. Demographic Findings

Among 80 mothers, 50% had higher secondary education and 38.8% were graduates or above. Most were government employees (42.5%), had two children (61.3%), and belonged to joint families (65%). The majority lived in rural areas (76.3%), had a monthly income above ₹25,000 (70%), had no previous first-aid training (70%), had no previous burn injury experience (67.5%), and were non-healthcare professionals (83.8%).

2. Pre-test and Post-test Knowledge Scores

The pre-test knowledge score ranged from 7–15, with a mean of 11.41 ± 1.840 . The post-test score ranged from 13–20, with a mean of 15.99 ± 2.196 , showing an improvement in knowledge following the Structured Teaching Programme.

3. Level of Knowledge

In the pre-test, 77 (96.25%) mothers had moderate knowledge, 2 (2.5%) had adequate knowledge, and 1 (1.25%) had inadequate knowledge. In the post-test, 50 (62.5%) had adequate knowledge, 30 (37.5%) had moderate

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knowledge, and none had inadequate knowledge.

4. Comparison of Knowledge

Adequate knowledge increased from 2.5% to 62.5%, while moderate knowledge decreased from 96.25% to 37.5% and inadequate knowledge decreased from 1.25% to 0%. This indicates that the Structured Teaching Programme improved mothers' knowledge.

5. Association with Demographic Variables

A significant association was found between post-test knowledge and socioeconomic status ($p = 0.0049$), prior first-aid training ($p = 0.040$), and previous burn injury in the child or family ($p = 0.049$). No significant association was found with education, occupation, number or age of children, family type, residence, type of house, or healthcare professional status.

The study concluded that the Structured Teaching Programme was effective in improving knowledge regarding prevention and first aid management of burns among mothers of children aged 0–18 years in the selected village of Chengalpattu District.

Conclusion

The present study was conducted to assess the effectiveness of a structured teaching programme on knowledge regarding prevention and first aid management of burns among mothers of children aged 0–18 years in a selected village of Chengalpattu district. The findings of the study revealed that the majority of mothers had moderate knowledge regarding burn prevention and first aid management in the pre-test. After the implementation of the structured teaching programme, the knowledge level of mothers improved significantly, with the majority achieving adequate knowledge in the post-test. The comparison of pre-test and post-test knowledge scores showed a clear improvement in knowledge. The mean post-test knowledge score was higher than the mean pre-test knowledge score, indicating that the structured teaching programme was effective in improving knowledge among mothers regarding burn prevention and first aid management. The study also found a significant association between knowledge level and selected demographic variables such as socioeconomic status, prior first aid training, and previous burn injury experience. This indicates that mothers with previous exposure to burn injuries or first aid training had better

knowledge compared to others. However, there was no significant association between knowledge level and other demographic variables such as education, occupation, number of children, age of children, family type, residence, type of house, and healthcare professional status. Overall, the study concluded that the structured teaching programme was effective in improving knowledge regarding prevention and first aid management of burns among mothers of children aged 0–18 years. Educating mothers through structured teaching programmes can help in early prevention and proper first aid management of burn injuries among children, thereby reducing complications and promoting better health outcomes. The study emphasizes the importance of providing health education programmes for mothers in the community to improve their knowledge and skills in burn prevention and first aid management.

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