

## “KNOWLEDGE REGARDING FIRST AID FOR BURNS AND ITS PREVENTION AMONG MOTHERS OF UNDER FIVE CHILDREN”

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### **ABSTRACT**

#### **Background of the study:**

*It is estimated that over half a million children are hospitalized with burn injuries per year in the world, with the majority occurring in low to middle income countries in Asia. Worldwide burns in the under-five age group account for a quarter to a half of all burn injuries attending burn centres. The majority of burns to young children occur as accidents in the home environment.*

#### **Objective:**

*To assess the knowledge regarding first aid for burns and its prevention among mothers of under five children in selected rural area of tumkur district, Karnataka, India.*

#### **Methodology:**

*A descriptive study design was used to assess the knowledge of 60 Mothers of under-five children; mothers were selected by probability sampling method-simple random sampling technique (lottery method). Data was collected by semi structured interview schedule. The study was carried out in Gulur Village, Tumkur. Collected data was analyzed by using descriptive and inferential statistics.*

**Results:**

*The results of the study revealed that the mothers have inadequate knowledge regarding first aid for burns and its prevention and no mother have adequate knowledge regarding first aid for burns and its prevention.*

**Keywords:** First aid, Burns, Prevention, mothers, under five children

**INTRODUCTION****“COOL THE BURN”**

Children are the future of every country and all societies strive to ensure their health and safety. Since India's independence, continuous efforts have been made to improve the status of children. The large burden of communicable, infectious and nutritional disorders is gradually on the decline due to massive efforts and investments by successive Indian government, even though it is an unfinished agenda. Parallel to these changes, it is also becoming apparent that children saved from disease of yesterday are becoming victim of injury on road, at home and in public, recreational places.<sup>1</sup>

Children are naturally curious. As soon as they are mobile, begin to explore their surroundings and play with new objects, at the same time though, they come into contact with objects that can cause severe injuries playing with fire or touching hot objects can result in burns. This is a debilitating condition accompanied by intense pain and long term illness that creates suffering not only for the child but for the wider family and community.<sup>2</sup>

Burn is an injury to the skin or other organic tissue caused by thermal trauma, it occurs when some or all of the cells in the skin or other tissues are destroyed by hot liquids, hot solids or flames.<sup>3</sup>

According to data collected from the national burn information exchange reveal that 75 percent of all burn injuries result from the actions of the victim, with many of these injuries occurring in the home environment. Scald injuries are frequently the results in the performance of everyday tasks such as bathing, cooking, overturned coffeepots, overheated foods, liquids cooked in micro wave ovens and hot tap water have been identified as specific causes.<sup>4</sup>

Burns in children under the age of five year old at higher risk of hospitalization often occur from a mixture of curiosity and awkwardness.<sup>5</sup>

Burns in a child is a triple tragedy. First is the injury, which requires prolonged, painful and costly treatment. Secondly, the scars are visible and lifelong, deep burns to the skin even with optimal treatment heal to become unsightly fibrous scars. Thirdly, are the psychological problems, there is considerably parental guilt and the child has to endure the treatment and adjust to their new physical appearance.<sup>6</sup>

Many times death results because of delay in reaching the casualty to appropriate medical care and low lack of knowledge regarding first aid and treatment on the contrary, if help is provided to casualty as soon as possible following the accident or injury, a life could be saved.<sup>7</sup> It is therefore desirable that all individuals have basic training and knowledge regarding first aid.<sup>8</sup>

The overall aim must be to cool the burn, prevent ongoing burning and prevent contamination. Education on the effect of immediate application of cool water to burns should be promoted widely as an effective first-aid treatment. There are many studies assessing the first aid of burns, and from these, examples of good practices-such as to “cool the burn” -are drawn. Cooling the burn surface is one of the oldest methods of treatment.<sup>2</sup>

Burns are significant cause of mortality and morbidity among infants and children being depend on their matter or caretaker and they are unable to recognize hazardous situations leading to burn injury.<sup>9</sup> Burns in children result in the loss of precious life, or if the child survives, in much suffering from physical, emotional social and economic problems.<sup>10</sup>

Burn injuries represent an extremely stressful experience and constitute a major concern in the Paediatric age group with respect to morbidity and mortality. Pediatric bums are considerable because such disfigured and disabled children are-denied social acceptance and are unable to lead a productive life. Bums often require long periods of rehabilitation, multiple skin grafts and extensive physical therapy. Not only bum related injuries leave child with lifelong physical and psychological disabilities, they often also result in significant burden for the child, families and care givers. Moreover most of the bum injuries are preventable, it will reduce the healthcare cost of the country considerably and it can be diverted to other most needed health problems.

Childhood burns are largely environmentally conditioned and more than 90% are preventable. It would therefore seem natural that the prevention of burns should focus on a mixture of environmental modifications. Parental education and product safety, special attention needs to be paid to the kitchen. The scene of the majority of burns programmes are needed to ensure proper supervision of children and their general well being, particularly of

those with disabilities parents should receive better information about all types of burns. There must be much greater awareness everywhere about the dangers of storing flammable substances in the home.<sup>2</sup>

### **NEED FOR THE STUDY:**

According to the WHO global burden of disease estimates for 2004, Fire related burns are the 11<sup>th</sup> leading cause of death for children between the ages of less than 5 years. Overall children are at high risk for death from burns, with a global rate of 3.9 deaths per 1, 00,000 populations.<sup>2</sup>

Burns is a second leading cause of accidental death in children.<sup>11</sup>

WHO conducted a study on facts about burns, in this, Burns is the fourth leading cause of unintentional injury death in United States of America and children are at greatest risk of death from burns.<sup>12</sup>

In India more than 10,000 burn associated deaths and over 1 million non fatal moderate to severe burns occur each year.<sup>13</sup>

The record of a general hospital, Sangli, Maharashtra, India indicates, Burns constitute a major health problem in India. The causes were due to illiteracy, poor living condition, neglect of children and social customs that are unique in India. Overall Mortality rate is 68.5%.<sup>14</sup>

A recent population based survey from Bangalore covering 96,569 individuals from 19,919 reported an incidence of burns 2500/100000 with higher rate in slum is 4100/100000 and in rural area is 2300/100000.<sup>15</sup>

A survey in India found that only 22.8 percent of patients had received appropriate first aid for their burns. The remainder had either received no first aid or else inappropriate treatment such as raw eggs, toothpaste, mashed potato or oil being rubbed into the burn. Education on the effect of immediate application of cool water to burns should be promoted widely as an affective first aid treatment.<sup>16</sup>

A retrospective study was conducted to study the incidence, severity, extent, cause, risk factors and overall mortality. 309 children of burn injuries treated over last 10 years in Kasturbha Hospital, Manipal, and Karnataka, India. The study found that the children of less than 5 years were affected 76.1percent and more than children age >5 years is 23.9 percent.<sup>17</sup>

Asian children are at increased risk of burns due to the use of several unique cooking methods such as the heating of food on the floor.<sup>18</sup>

The usual fate of a child with an extensive third degree burn in a low income country is death. The risk of mortality from burns covering over 30 percent of total body surface area is roughly 50%. The risk of burns covering more than 50% of total body surface area is nearly 100%.<sup>19</sup>

According to American Burn Association, Burn Injury is the leading cause of accidental death in children. It reports that every year 1.1 million people have burn injuries that require medical attention and 50,000 of these people require hospitalization.<sup>20</sup>

Nearly 75 percent of the population of India reside in rural areas like elsewhere in these areas also women are primary caregivers of their off spring and are usually the first to react in case of any injuries to their children.<sup>16</sup>

The woman's role in the family in the Indian context is multidimensional. It is the woman who is the primary care giver. Women are considered to be the best teachers and have potential influence on the family members, particularly the children.<sup>21</sup>

Children living in rural areas have significantly higher rates of hospitalization due to injuries than those living in urban areas.<sup>22</sup> In terms of facilities; rural areas have been found lacking the requisite needful. However Studies have revealed that primary caregivers have lack of knowledge on home safety and first aid management of scalds and burns. In case of a crisis, basic knowledge on prevention and first aid measures for burns will help to reduce morbidity and mortality rate due to burns in under-five children. There is need to conduct studies on knowledge, among primary caregivers.

Hence the researcher decided to carry out a study regarding mothers' knowledge about first aid for burns and its preventive measures that can be given by themselves to prevent further complications and it is anticipated that the parents may be benefited in terms of knowledge gain, so that they can effectively deal with children in preventing and managing burns.

## RESEARCH PROBLEM:

**“A Study To Assess Knowledge Regarding First Aid For Burns And Its Prevention Among Mothers Of Under-Five Children In Selected Rural Area Of Tumkur.”**

## OBJECTIVES OF THE STUDY:

- To assess the level of knowledge among mothers of under-five children regarding first aid for burns in children.
- To assess the level of knowledge among mothers of under-five children regarding burns prevention in children.

## OPERATIONAL DEFINITIONS

1. **First aid:** First aid is the first assistance or treatment given to under-five children (casualty) by their mothers during burn injury before the arrival of qualified medical care by using facilities and materials at that time.
2. **Burn:** A burn is defined as an injury to the skin or other organic tissue caused by thermal trauma i.e. by heat, friction, electricity, radiation, or chemicals.
3. **Prevention:** It refers to the action taken by the mothers prior to the occurrence and development of risk factors of burns in under-fives, which removes the possibility that risk factors will ever occur.
4. **Mothers of Under- five children:** The mothers who are having children below five years of age group.
5. **Rural area:** Rural area is a group of people living in a geographical area where it doesn't have much facility and away from the cities and towns and fulfills the criteria of rural.

## ASSUMPTIONS:

The study assumes that:

- Mothers of underfive children may have inadequate knowledge regarding first aid measures for burns and preventive measures for burns

## DELIMITATION:

1. The sample size is limited to 60 mothers of under-five children,Gulur village.
2. Prescribed data collection is only 4 weeks.

## CONCEPTUAL FRAMEWORK:-

Conceptual framework is deliberately formed from experience and it conveys that human experience of the concept. It is created by considering all three sources of experiences related to the word, thing itself and the associated feelings. The investigator adopted Ernestine Widen Bach need for help [1969] to the present study because the community health nurse can use this theory model for the mothers of under-five children.

Widen Bach proposes a Prescriptive theory for nursing, which is described as conceiving of a desired situation and the ways to attain it. Prescriptive theory directs action toward an explicit goal. It consists of three factors, central purpose, prescription and realities of the situation. According to Widen Bach, a nurse's central purpose is based on a personal philosophy. The three essential aspect of a nursing philosophy are a reverence for life, a respect for dignity of each person, and resolve to act dynamically in relation to one's beliefs.

Widen Bach offers a conceptualization of nursing practice. It includes Identification, Ministration and Validation.

## IDENTIFICATION:

It determines patient's need for help based on the existence of a need, whether the patient realizes the need, what prevents the patient from meeting the need and whether the patient cannot meet the need alone. Mothers of under-five children need help which was assessed in the identification phase. The mothers of under -five children need to gain knowledge regarding first aid for burns and its prevention in children. Hence, they have lot of factors affecting such as age of the mother, residence, religion, educational status, economical status of the family, type of the family, type of house, number of living children, age of the children, any occurrence of burns in children, information about precaution and first aid measures for burns in children. Mothers of under-five children are divided in two groups as experimental and control group.

## MINISTRATION:

The nurse act according to the need, which is assessed in the identification phase. The teaching programme for mothers improves the knowledge regarding first aid for and its prevention.

## VALIDATION:

The investigator assesses the level of knowledge, and assume the level of knowledge on first aid for burns and its prevention in children will increase after educational programme.

## REVIEW OF LITERATURE:

The Review of Literature for the present study consists of 3 parts:

**Part-I** : Reviews related to burns in under-five children.

**Part-II** : Reviews related to first aid for burns.

**Part-III** : Reviews related to prevention of burns in under-five children

### PART I: REVIEWS RELATED TO BURNS IN UNDER-FIVE CHILDREN

A study was conducted to explore the patterns of severe burns injuries with a view to identifying, whether they could be prevented with better parent education. Study included, infants requiring admission or outpatient treatment in the burns unit between July 2005 and September 2007. The researcher found that, immobile infants are at significant risk of burns and majority of burns sustained in the home. The injuries were scalds (43%), contact burns (39%), total body surface area ranged from (0.5% to 30%). This study reveals that, infants less than 6 month old are at significant risk of burn and is usually caused by hazards in the home environment. These infants are vulnerable to inadequate first aid. Better parental education helps to reduce the number of injuries in this group.<sup>23</sup>

A team from Malmo University in Sweden looked at 148 children up to the age of 6 years who were admitted to university hospital and 21 health centres. They discovered that 96% of the accidents could have been prevented as they happened at the home when an adult was nearby and the 64% of the injured children are Boys. 80% of the children's injuries are scalds, with 71% of those caused by hot liquids and 29% causes by hot foods. 60% of the children sustained injuries on their hand or arm, followed by the trunk 42%, leg or foot 21% and face 17%. Parents need to be aware of the risk that the children face in the home, particularly when they are in the kitchen.<sup>24</sup>

A study was conducted on “characteristics of paediatrics burns patient”. In Rujia hospital at China. Study was carried out by review of all medical records of acute paediatric burn patients of age less than or 6 years old admitted. A total of 1494 paediatric burn patients are admitted. Children 0-3 years old were the most common victims of scalding, chemical burns and contact burns. Domestic burns resulted in 86.5%. The median TBSA was

4% of mild burn, 18% for extreme burns. This study concluded that education should focus on parents and care takers of under five children regarding burns.<sup>25</sup>

Paediatric homicides related to burn injury study was conducted on 124 cases. In this 121 cases are fire related fatalities and 3 are scald fatalities. 90 of burn victims were in the 0-5 year's age group. The manner of death showed 108 accidents and 12 homicides. In this 11 of 12 burns related to homicides occur at home with all victims in the 0-6yrs age group. This study concluded that further education should be given to the mothers regarding burns will reduce the morbidity and mortality rate of paediatric death.<sup>26</sup>

## **PART –II : REVIWS RELATED TO FIRST AID FOR BURNS**

A study was conducted on “Burns and scalds first aid home treatment” in London. Among 142 patients admitted in various hospitals. Of these 64 patients who had first aid treatment before admitted in hospital. 23 patients applied gelatin violet, 7 patients applied raw eggs, 13 patients applied both, 11 patients applied engine oil, 8 patients applied kerosene oil, 1 patient applied corn flour paste, one patient applied palm oil, Vaseline, honey and sand. This study shows that a prospective study was needed to educate people to apply only cold water for burn injuries must be emphasized.<sup>27</sup>

A prospective study was conducted to identify the adequacy of first aid care following minor burns in children at west mead children's hospital, Sydney. There were 109 children comparison of the adequacy of first aid delivered by parents and carers, general practitioners, local hospitals were done. This study reveals that, burns included scalds, contact, and flame, chemical or electrical burn. Adequate initial first aid had been given by parents or carers in only 24 of 109 cases (22%). The 85 children who presented to medical care after inadequate initial first aid was given by parents, carers included 14 of 14 (100%). This study shows that, there is a need to educate parents regarding appropriate first aid for burns.<sup>28</sup>

A UK study reported a case of a 99 childhood scald injury where immediate first aid consisted of the application of fountain ink pen. They concluded that continuing education is needed to inform parents for the use of cold water in the immediate first aid for burns.<sup>29</sup>

### **PART-III: REVIEW OF LITERATURE RELATED TO PREVENTION OF BURNS IN UNDERFIVE CHIKDREN**

A qualitative study was conducted to gain an in depth understanding of people's perceptions of childhood burns and their prevention in rural community areas. The sample consists of 50 parents of childhood under 5 years of age. The researcher found that home as the most common place for childhood burn injuries and the household members or caregivers responsible because of their lack of supervision and carelessness regarding first aid. The researcher concluded that, a safety education programme could be an effective intervention to improve knowledge and practices of parents in the rural area with regard to prevention of burn injuries in children.<sup>30</sup>

A study was conducted to assess risk factors and to suggest preventive measure for pediatric burn injuries in the Czech Republic. The study included 1064 children aged 0-16 years. The data was collected from the Czech Ministry of Health on national pediatric burn hospitalizations during 1996 to 2006. Personal, equipment and environmental risk factors were identified from hospital records. The researcher found that, around 31% of all burn hospitalizations were in 1 year-olds, 79% of burns occurred at home, 70% in the kitchen, 14% in the living room or bed room and 11% in the bathroom of the 18% occurring outdoors. Scalds from hot liquids accounted for 70% of all burns. This study reveals that, there is a need for passive preventive measures. Educational programmes should be developed for parents and caregivers.<sup>31</sup>

A study was conducted in Bradford, United Kingdom. Epidemiology and outcome analysis of 208 children with burns. The average patient age was 5 years, with most cases involving of infants and young children. 51% of injuries are scalds, 36%o were contact burns. Burn size varied from 1% body surface area. This study concluded that Education and prevention programmes are still require at all levels to help the problem of childhood burns.<sup>32</sup>

Data were obtained from the National hospital Ambulatory Medical care system to determine the magnitude and causes of unintentional burn injuries children aged birth to 4 years in the United States. Annually 78,000 infants and toddlers were treated in ambulatory care setting for injuries due to contact with a hot object or substance. Hot foods, curling irons or clothing irons were the main causes of burns. This study concluded that due to the varied causes of burns combinations of health education and product design interventions are likely necessary to prevent those injuries.<sup>33</sup>

## RESEARCH METHODOLOGY

### RESEARCH APPROACH:

In the present study the research approach is Descriptive research approach

### RESEARCH DESIGN:

The research design used for the study is Descriptive research design.

### RESEARCH SETTING:

The study was conducted at Gulur Village, Tumkur district.

### RESEARCH VARIABLES

Level of Knowledge of mothers of underfive children.

#### Demographic variables:

**Mothers:** Age, residence, religion, educational status, economical status of the Family, occupation, type of family, type of house, number of children and sources of Information.

**Child:** Age, occurrence of burns in children.

### POPULATION:

**Target Population:** Target Population of the present study includes all mothers of under-five children.

**Accessible Population:** Accessible Population of the present study includes the 60 Mothers of under- five children who fulfill the inclusive criteria.

## SAMPLE AND SAMPLING TECHNIQUE

### SAMPLE

60 mothers of under-five children in Gulur Village, Tumkur and who are available at the time of data collection and fulfill the inclusion criteria.

## **SAMPLING TECHNIQUE**

In this study, Probability Sampling was used, in that Simple random sampling- Lottery method is chosen.

## **SAMPLE SIZE**

The sample size of the study constitutes 60 mothers of under-five children (n=60).

## **CRITERIA FOR SELECTION OF THE SAMPLE**

### **INCLUSION CRITERIA:**

1. Mothers who are having under-five children [0-5 years].
2. Mothers who are residing in Gulur village at Tumkur.
3. Mothers who can able to understand Kannada.
4. Mothers who are willing to participate.

### **EXCLUSION CRITERIA**

1. Mothers who are not available at the time of data collection.
2. Mothers who are not willing to participate in the study

## **DEVELOPMENT AND DESCRIPTION OF THE TOOL**

A structured interview schedule was developed by the investigator in order to obtain answers from the mothers of under-five children. The tool used for research study was semi structured interview questionnaire which was prepared to assess the knowledge regarding first aid for burns and its prevention in children. The tool was formulated on the basis of the clinical experience of the investigator, review of literature, extensive library search and consultation with experts.

The following steps are followed by the investigator to construct the tool

- 1) Literature was reviewed in preparation of the tool.
- 2) Guidance and suggestion was taken from experts.
- 3) Consultation was obtained from statistician

## DESCRIPTION OF THE TOOL

The structured interview schedule consisted of 2 parts covering the following areas.

### Part: I- Demographic data of Mothers of under- five children and base line data of the child.

Sought information on demographic data of mothers includes 12 items such as Age of the mother, residence, Educational qualification, Occupation, monthly income, religion, type of house, type of family, number of children, age of the child, occurrence of burns in children and Source of Information.

### Part: II -Knowledge regarding first aid for burns and its prevention in children

**Part A-** This section sought information to assess the knowledge of mothers regarding prevention of Burns in children. It contains 15 items.

**Part B-** This section sought information to assess the knowledge of mothers regarding first aid measures for Burns in children. It contains 15 items

There were totally 30 items. Each item was multiple choices in nature with 4 responses in each question. There was one correct response that carried one mark and the wrong response carried zero. The total score was 30 for 30 items. The mothers were expected to choose the correct response.

## SCORING

The knowledge regarding first aid and prevention of Burns in children was measured in terms of knowledge scores. Each correct answer was given a score of one and a wrong answer score of zero. The maximum score was 30. To interpret level of knowledge the scores were distributed as follows;

## VALIDATION OF THE TOOL:

### CONTENT VALIDITY

The entire section of the tool was validated by experts from various fields such as community health, community medicine, pediatrics, nursing and research. Their suggestions were considered and modifications were made in all the sections. The modifications were incorporated in the final preparation of the structured interview questionnaire.

## **TRANSLATION OF THE TOOL**

The modified tools were translated into Kannada by a language expert. The content validity of the translated tool was established by another language expert.

## **RELIABILITY**

Reliability is the degree of consistency or accuracy with which an instrument measures the attribute it is designed to measure. Reliability was established from data of 8 samples by split half method by using Karl Pearson correlation co-efficient and the reliability is obtained was  $r=0.8$ , which was highly positive. Hence the tool was highly reliable.

## **PILOT STUDY**

Pilot study was conducted on 25-10-2010 to ensure the feasibility of the tool and to incorporate changes if required. The pilot study was done by taking 8 mothers. The average time taken for each mother was about 30-45 minutes. Pilot study revealed that it was feasible to conduct the main study. The investigator did not face any difficulty for carrying out the pilot study.

## **PROTECTION OF HUMAN SUBJECTS**

The study was conducted after approval of research committee from the college. Permission was obtained from the concerned primary health center, chief medical officer. The procedure was explained to mothers and got consent to make them participate in the study. Assurance was given to the study participants regarding the confidentiality of the data collected.

## **METHOD OF DATA COLLECTION:**

Before starting the study, researcher was obtained written permission from district health officer, health and family welfare officer, and chief medical officer, primary health center, Gulur, Tumkur. The data collection period for this study was 2<sup>nd</sup> November 2010 -2<sup>nd</sup> December 2010, The samples for this study were identified through probability sampling. The consent from each participant was obtained and data collected using structured questionnaire.

## METHOD OF DATA ANALYSIS AND PRESENTATION

The Data collected and observed from mothers of under-five children who met the inclusive criteria through structured questionnaire. The collected data will be carefully recorded, summarized, tabulated and analyzed through frequency and percentage analysis to describe the demographic characteristics of mothers of under-five children. Mean, standard deviation, and mean score percent was used to assess the knowledge regarding first aid for burns and its prevention among mothers of under-five children.

## ANALYSIS AND INTERPRETATION

The data collected were edited, tabulated, analyzed, interpreted and findings obtained were presented in the form of tables and diagrams represent under following sections.

**Section I:** Frequency and percentage distribution of demographics variables of mothers of under-five children.

**Section II:** Distribution of knowledge scores of mothers on first aid measures for burns.

**Section III:** Distribution of knowledge scores of mothers on preventive measures for burns.

**Section IV:** Comparison of knowledge scores of first aid for burns and its prevention among mothers of under- five children.

### Section-I: Data on Demographics Variables of Mothers of Under-Five Children

**Table 1: Distribution of socio demographic variables among mothers of under-five children.**

SOCIO DEMOGRAPHIC VARIABLES		n	%
Age	15-20 years	8	13.33
	21-25 years	35	58.33
	26-30 years	10	16.67
	31-35 years	7	11.67
Residence	Rural	50	83.33
	Sub rural	10	16.67
Religion	Hindu	46	76.67
	Christian	7	11.67
	Muslim	7	11.67
Education	Primary school	13	21.67
	High school	37	61.67
	Higher secondary	10	16.67
Family income	Rs .1001-2000	5	8.333

	Rs.2001-3000	5	8.333
	Rs.3001-4000	31	51.67
	Rs.4001-5000	19	31.67
Occupation	Coolie	12	20
	Farmer	21	35
	Land lord	4	6.667
	Employed	12	20
	Self employed	11	18.33
Type of family	Nuclear family	50	83.33
	Joint family	10	16.67
Type of house	Katcha	15	25
	Pucca	31	51.67
	Semi pucca	14	23.33
No. of children	One	23	38.33
	Two	32	53.33
	Three	5	8.333
Children age	0-1 years	11	18.33
	1-2 years	17	28.33
	2-3 years	14	23.33
	3-4 years	11	18.33
	4-5 years	7	11.67
Occurrence of burns	Once	23	38.33
	Twice	2	3.333
	Nil	35	58.33
Information source	Radio	7	11.67
	TV	38	63.33
	Magazine	2	3.333
	News paper	13	21.67

**Section II: Data on level of knowledge of mothers on first aid for burns.**

**Table 2: Distribution of mean score of knowledge of mothers on first aid for burns.**

Content	No. of Questions	Min-Max Score	Mean Scores	
			Mean score	%
First aid measures for burns in children	15	0-15	5.55	37%

**Table 3: Distribution of level of knowledge on first aid for Burns.**

Content	Level of knowledge		
	Inadequate	Moderately adequate	Adequate
First aid for burns in children	92.3%	7.7%	0.0%

**Section III: Data on level of knowledge of mothers on prevention of burns.**

**Table 4: Distribution of mean score of knowledge of mothers on prevention burns.**

Content	No. of Questions	Min-Max Score	Mean Scores	
			Mean score	%
Prevention of burns	15	0-15	6.23	41.56%

**Table 5: Distribution of level of knowledge on prevention of burns.**

Content	Level of knowledge		
	Inadequate	Moderately adequate	Adequate
Prevention of burns	84.5%	15.5%	0.0%

**Section IV: Data on comparison of knowledge scores of first aid for burns and its prevention among mothers of under- five children.**

**Table 6: Distribution of mean score of knowledge of mothers on first aid for burns and its prevention.**

Content	No. of Questions	Min-Max Score	Experimental Group	
			Mean score	%
First aid measures for burns in children	15	0-15	5.55	37 %
Prevention of burns	15	0-15	6.23	41.56 %
Overall mean score	30	0-30	5.89	39.28 %

**Table 7: Distribution of level of knowledge of mothers on first aid for burns and its prevention.**

Group	Content	Level of pre test knowledge		
		Inadequate	Moderately adequate	Adequate
Experimental	First aid for burns in children	92.3 %	7.7%	0.0%
	Prevention of burns	84.5 %	15.5 %	0.0%
	Overall knowledge score	88.4%	11.6%	0.0%

## DISCUSSION

The objective of the study was to assess the knowledge regarding first aid for burns and its prevention among mothers of under five children in selected rural area of tumkur district, Karnataka, India.

**The first objective was to assess the level of knowledge among mothers of under-five children regarding first aid for burns.**

**Table (2, 3)** shows the distribution of mean knowledge scores and level of knowledge of mothers on first aid for burns.

**The Second objective was to assess the level of knowledge among mothers of under-five children regarding prevention of burns.**

**Table (4, 5)** shows the distribution of mean knowledge scores and level of knowledge of mothers on prevention of burns.

**Table (6, 7)** shows the distribution of overall mean knowledge scores and overall level of knowledge of mothers on first aid for burns and prevention of burns.

It is inferred that in this study, the mothers have inadequate knowledge regarding first aid for burns and its prevention, no mother have adequate knowledge regarding first aid for burns and its prevention.

The findings of present study were similar to a descriptive study conducted among 130 families in Milas, Turkey, who have children ages 0 to 14 years. Among the 130 families, a total of 53 children (40.8%) experienced a burn event. Twenty-seven subjects (51%) had treated the burn with inappropriate remedies including yogurt, toothpaste, tomato paste, ice, raw egg whites, or sliced potato. 28 subjects (52.8%) who had applied cold water to the burn site, 21 patients (39.6%) applied only cold water and 7 patients (13.2%) used another substance along with cold water. In addition, 13 subjects (24.5%) applied ice directly on the skin at the time of the burn. Excluding the subjects who had treated their burns with only cold water or with only ice, raw egg whites were the most commonly used agent, both alone ( $n = 3$ ) or accompanied by cold water or ice ( $n = 6$ ) in a total of 11 subjects (21%) who applied eggs. Based on these observations, it is suggested that educational programs emphasizing first-aid application of only cold water to burn injuries would be helpful in reducing morbidity and mortality rates.<sup>34</sup>

The findings of present study were also similar to a descriptive study conducted to determine first aid knowledge and practices of ill or injured children in parents. Convenience samples of 654 adult parents were selected. The data was collected by the administration of multiple choice questionnaires. The researcher found that, mean age (SD) was 38.5 (13.8), 56% were female, 56% had at least a high school education. None of these surveyed answered all questions correctly with roughly half being familiar with 60% of the questions. Knowledge of specific guidelines ranged from 21% to 92%, subjects especially lacked knowledge regarding the need to cover victims of large burns, only 43% aware. This study reveals that, many adults are unfamiliar with the first aid measure. Further education is required to improve knowledge of first aid practice.<sup>35</sup>

## SUMMARY

The study was conducted to assess the knowledge regarding first aid for burns and its prevention among mothers of under five children in selected rural area of tumkur district, Karnataka, India.

### **The data were analyzed on the bases of objectives of the study:**

- To assess the level of knowledge among mothers of under-five children regarding first aid for burns in children.
- To assess the level of knowledge among mothers of under-five children regarding burns prevention in children.

A descriptive study design was used to assess the knowledge of 60 Mothers of under-five children; mothers were selected by probability sampling method-simple random sampling technique (lottery method). Data was collected by semi structured interview schedule. The study was carried out in Gulur Village, Tumkur. Collected data was analyzed by using descriptive and inferential statistics.

## CONCLUSION

The data was collected from 60 mothers by structured interview schedule. Simple random sampling technique was used to select the samples. The findings of the study have-been discussed with reference to the objectives, hypothesis and with the findings of other studies. The data is organized, analyzed and presented in two parts. The findings revealed that the mothers have inadequate knowledge regarding first aid for burns and its prevention, no mother have adequate knowledge regarding first aid for burns and its prevention.

On the basis of the findings, the investigator concluded that mothers need to be aware of the risk that the children face in the home and it is important to educate parents, make them aware of the potential danger of the home environment and how to prevent common burn accidents.

This study recommends that further education should be given to the mothers regarding first aid for burns and its prevention and this will reduce the morbidity and mortality rate among underfive children and Public Health programme can be insisted to promote immediate cooling of burns with cool water .<sup>42</sup>

## IMPLICATIONS OF THE STUDY:

The findings of the study have implications for Nursing Education, Medical Surgical Nursing Practice, Nursing Research and Nursing administration.

### A. Nursing Education:

The present study emphasizes on knowledge on various aspects of burns, first Aid measures for Burns and prevention of burns in Children encourages the mothers to provide a safety environment for their child and seek appropriate health care. In order to achieve this,

- ❖ The Diploma & Degree curriculum should include health teachings to mothers and children on prevention of accidents.
- ❖ The student nurses from School of Nursing and College of Nursing should be encouraged to attend specialized courses and seminars regarding first aid for burns and its prevention in children
- ❖ Nursing schools, colleges and teachers should come forward and encourage the students to provide information on first aid for burns and its prevention with the help of audio visual aids.
- ❖ All the health care settings can be given awareness about first aid for burns and its prevention in children through group teaching.

### B. Nursing Practice:

- ❖ Nurses can conduct Teaching Session with return demonstration for mothers who are visiting to PHC which will help in improvement of knowledge for both nurses and mothers.

### C. Nursing Administration:

- ❖ Nursing leaders must utilize available resources which are technologically sound in teaching public through mass health education program in community setup.
- ❖ Professional interaction between the nurses and the public will help to improve professional standards and creates better image in the community.
- ❖ Teaching program can be conducted at hospital for people using various channels of communication regarding prevention of burns in children.

**D. Nursing Research:**

- ❖ The study helps the investigator to develop insight regarding first aid for burns and its prevention in children through Planned Teaching Program.
- ❖ This study will serve as a valuable reference material for future investigators
- ❖ Interior research studies can be conducted including all the three domains i.e. knowledge, attitude and practice.
- ❖ Large scale studies can be conducted.

**RECOMMENDATIONS:**

- ❖ A similar study can be under taken on large scale.
- ❖ A comparative study may be conducted between mothers of urban and rural area.
- ❖ An explorative study may be conducted to identify the awareness, knowledge, practice and attitude of health personnel regarding prevention of accidents in children.
- ❖ A similar study can be under taken using different teaching methods in different aspects of prevention of accidents in children.

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