

**Knowledge, Attitudes and Practices of Mothers for
Prevention of Burn Among Children Under 5 Years at Home
in Baghdad Al-Rusafa 2016**

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Abstract. Objectives -To assess the mother's knowledge, attitudes about burns, and practices of first aid management among children under 5 at home. Methods: - A descriptive cross-sectional study was conducted during the period from 1st of January to 31 of May 2016. A convenient sample was used in this study. The total number was 300 mothers attending primary health care centers (AL- -Mustansiriya Family Medicine Center, AL- Sulaikh Family Medicine Center, Ure Family Medicine Medical Center and Al-Baldiat primary health care centers), in Baghdad/AL-Rusafa. Data was collected through introducing a questionnaire to the mothers containing data about sociodemographic characteristics and mothers, attitude, and practices (KAP) towards risk factors of bum and the practice of first aids Results: - Total number of mothers (300) attending PHC in Baghdad/Rusafa aged from 17-45 years. With regards to knowledge about bum the results revealed that between 47-59% of the participants completely agreed with the right statement or disagreed with the incorrect one and there was a smaller percentage partially agreed or disagreed with the statements related to knowledge about burn, about 6-17% of the participants reported no idea about the correct answer. More than three quarters (70.3-94.7 0/0) of the participants reported correct attitude about possible risk factors and prevention of bum accidents, and a nearly similar percentage of participants (75.3-91.3%) reported connect practices about first aid related to burn isianagncient at home. A significant association was reported between a score of KA1° and each of the educational level and history of attendees trailing coin scs (=0.001, 0.04) respectively.

Highlights:

1. Assess mothers' knowledge, attitudes, and practices on burn management.
2. Cross-sectional study of 300 mothers in Baghdad primary health centers.
3. Most participants showed correct attitudes, practices; knowledge linked to education, training.

Keywords: Burn, childreli, knowledge, Attitudes, Practice, mothers

Introduction

Burns, as defined by the World Health Organization, are "injuries to the skin or other organic tissue caused by thermal trauma (1)" They can result from hot liquids (scalds), hot solids (contact burns), or flames (flame burns). Annually, over 95,000

children succumb to burn-related injuries, with many more enduring disabilities and disfigurements that have profound personal and economic consequences for them and their families(2) . Children under five years old, especially those in low- and middle-income countries (LMICs), represent the most vulnerable population. Reducing the burden of injuries, including burns, which often result in either mortality or a significant decline in survivors' quality of life, remains one of this century's major public health challenges(3-5) .

The home, perceived as a safe haven by most, often serves as the site of such injuries, particularly for young children (6) . In many LMICs, burns are a leading cause of morbidity and disability (7) . Even in high-income countries, children who spend most of their time at home face significant risks from specific types of burns (8). Risk factors include age, gender, and environmental conditions such as inadequate supervision and unsafe housing(9) . Younger children are more prone to scalds from hot liquids or burns from house fires, whereas older children, particularly boys, are at risk due to activities like playing with fire or handling matches. Girls, who often assist in cooking, are at greater risk of burns from hot oil or open flames (10).

The aftermath of severe burns includes not only physical and psychological pain but also long-term impacts such as scarring, diminished self-esteem, and the need for repeated hospitalizations (11). These challenges place a significant emotional and financial strain on affected families. However, targeted public health interventions—combining education, environmental safety measures, legislation, and appropriate medical care—can substantially reduce burn-related mortality and morbidity (12-14).

Methods

Study Design:

This descriptive cross-sectional study was conducted from January 1 to May 31, 2016. A convenient sample of 330 mothers attending primary healthcare centers (PHCs) in Baghdad/Al-Rusafa was selected.

Sampling Technique:

The Rusafa Health Directorate is divided into nine sectors, encompassing 109 PHCs, of which six include Family Medicine Centers (FMCs). A stratified random sampling approach was employed, selecting four sectors with FMCs. One FMC was randomly

chosen from each sector, except for the Ure Family Medicine Center, which was directly included as the sole center in its sector. The selected centers were:

Al-Mustansiriya Family Medicine Center (Al-Rusafa sector),

Al-Sulaikh Family Medicine Center (Al-Adhamia sector),

Ure Family Medicine Center (Al-Shaab sector),

Al-Baldiat Family Medicine Center (Al-Baldiat sector).

Data Collection Methods:

A pilot study was conducted on 30 randomly selected women to refine the questionnaire. The pilot responses were excluded from the final analysis. Participants provided verbal consent, with assurances of confidentiality and the exclusive use of their information for research purposes.

The questionnaire comprised four sections:

- Demographic Information
- Knowledge about Burns Participants answered seven multiple-choice questions, choosing from five options. Correct answers were awarded one point, and unanswered or "Not Sure" responses received no credit.

Attitudes Towards Burn Prevention (Section C): Participants rated their agreement with statements on a five-point Likert scale.

First Aid for Burns (Section D): This section assessed participants' responses to burn-related emergencies.

Scores were standardized to a 0-100 range. Mothers scoring 50% or higher were classified as having "good knowledge," while those scoring below this threshold were categorized as having "poor knowledge."

Statistical Analysis:

Data was entered and analyzed using SPSS version 20. Qualitative variables were summarized using descriptive statistics. Associations between dependent and independent variables were tested using the Chi-Square test and Fisher's Exact Probability test. A p-value < 0.05 was considered statistically significant.

Result and Discussion

Table 1 highlights the distribution of mothers based on various sociodemographic factors. The majority of mothers (72.3%) were aged 17–30 years, while 27.7% were in the 31–45 years age group. Regarding marital status, 69.0% were married, 16.3% were divorced, 8.0% were widowed, and 6.7% were separated. In terms of education levels, 34.7% of mothers were highly educated, while 6.7% were illiterate. Employment data showed that 55% of mothers were unemployed, while 45% were employed. Additionally, 93% of mothers were nonsmokers, reflecting a low prevalence of smoking in the study group.

Age category	17-30	217	72.3%
	31-45	83	27.70%
Marital status	married	207	69%
	divorce	49	16.3%
	widow	24	8%
	separated	20	6.7%
Education level/mother	illiterate	20	6.7%
	primary	68	22.6%
	secondary	108	36%
	College	104	34.7%
Occupation/mother	employed	165	55%
Smoking status/mother	un-employed	135	45%
status mother	Yes	21	7%
	no	279	93%

Table 2 shows: The results indicate that 42.3% of husbands were highly educated, while 8% were illiterate. Regarding employment status, 48.3% were self-employed, and 39.7% were officially employed. Additionally, 61% of husbands were smokers, highlighting a high prevalence of smoking within the group.

Table2-Distribution of study sample according to sociodemographic factors of them

Education	illiterate	24	8.0%
	primary	60	20.0%
	secondary	89	29.7%

level/husband	college or higher	127	42.3%
Occupation/husband	official employed	119	39.7%
	self-employed	145	48.3%
	Un-employed	36	12.0%
Smoking status/husband	yes	185	61.7%
	no	115	38.3%

Table 3 shows that 32% of mothers identified books and schools as their primary sources of information. Relatives, friends, and neighbors accounted for 26%, while 19% gained their information from doctors and nurses. Additionally, 11.3% relied on TV and radio, and 11.7% on the internet and news. The results also revealed that 25% of mothers participated in training courses for primary first aid. Regarding the history of burn accidents, 10% reported burn incidents involving male children, and 10.3% reported similar incidents involving female children.

Table.4-Distribution of study sample according to source of information and history of bum accidents

Source of information about bum	books and schools	96	32.0%
	"fvandradio	34	11.3%
	Internet and news	35	11.7%
	relative, friends and neighbor	78	26.0%
	doctors and nurses	57	19.0%
participate in training	Yes	75	25.0%
	No	225	75.0%
History of burn accident /male	yes	30	10.0%
	No	270	90.0%
History of bum accident /female	yes	31	10.3%
	No	269	89.7%

The table4 illustrates the frequency and percentage of knowledge about burns among mothers. It shows that 47% of mothers completely agreed that a burn is a tissue injury caused by exposure to hot objects, electric shock, radiation, or chemical materials. Additionally, 57.3% agreed that all types of heaters and cooking instruments could cause burn accidents at home.

However, 49% completely disagreed with the statement, "When the degree of burn increases, the risk decreases," and 59.7% completely disagreed with the statement, "Burns do not lead to severe complications or death." Furthermore, 54% completely disagreed with the statement, "The degree of burn does not depend on surface area."

Meanwhile, 51.7% of mothers agreed that hot liquids, hot objects, fire, electrical sources, or chemical materials could cause burns. Lastly, 54.3% agreed that burns are classified into three degrees based on their severity.

Table 4: frequency and percentage of knowledge about burn among study group

born is tissue damage due to exposure to a hot object or electric shock radiation or chemical materials?	Completely Agree	141	47.0%
	Partly Agree	129	43.0%
	Neutral	18	6.0%
	Partly Disagree	4	1.3%
	Completely Disagree	8	2.7%
All types of heaters and cooking instruments could be causing burn accident at home?	Completely Agree	172	57.3%
	Partly Agree	74	24.7%
	Neutral	38	12.7%
	Partly Disagree	6	2.0%
	Completely Disagree	10	3.3%
When the degree of burn increased the risk decreased?	Completely Agree	5	1.7%
	Partly. Agree	2	0.7%
	Neutral	51	17.0%
	Partly Disagree	95	31.7%
	Completely Disagree	147	49.0%

Burn not leading to sewer complications or death?	Completely Agree	4	1.3%
	Partly Agree	3	1.0%
	Neutral	26	8.7%
	Partly Disagree	88	29.3%
	Completely Disagree	179	59.7%
Degree of burn does not depend on type, death of skin?	Completely Agree	16	5.3%
	Partly Agree	7	2.4%
	Neutral	30	10.0%
	Partly Disagree	85	28.3%
	Completely Disagree	162	54.0%
Causes of burn are?	hot liquid	25	8.3%
	hot object	2h	9.3%
	fire	58	19.3%
	electrical	17	5.7%
	chemical	12	4.0%
	all	155	51.7%
	don't know	5	1.7%
Burn classified to?	first degree	108	36.0%
	first and second degree	29	9.7%
	first, second and third degree	163	54.3%

Table 5: Relative frequency and percentage of mothers regarding practices of first aid towards burn accident.

In the case of a simple burn, can we use ice or oil or toothpaste or other materials on burns for children	Completely Agree	226	75.3%
	Partly Agree	23	7.7%
	Neutral	17	5.7%
	Partly Disagree	18	6.0%
	Completely Disagree	16	5.3%
Use tap water reducing the temperature of simple burn in	Completely Agree	274	91.3%
	Partly Agree	2	0.7%
	Neutral	8	2.6%
	Partly Disagree	5	1.7%

the children	Completely Disagree	11	3.7%
	Completely Agree	262	87.3%
	Partly Agree	4	1.3%
Keep your child away from source of burn and take off the burned clothes	Neutral	8	2.7%
	Partly Disagree	9	3.0%
	Completely Disagree	17	5.7%
In case of chemical burn; remove the chemical material by using the moderately warm water and wearing gloves to protect yourself	Completely Agree	265	88.3%
	Partly Agree	3	1.0%
	Neutral	8	2.7%
	Partly Disagree	10	3.3%
	Completely Disagree	14	4.7%
It is not necessary to switch off the electricity and extinguish the flames when the children get burn	Completely Agree	12	4.0%
	Partly Agree	5	1.7%
	Neutral	10	3.3%
	Partly Disagree	4	1.3%
	Completely Disagree	269	89.7%
Child rolling on the ground helps in extinguish the flames	Completely Agree	24	8.0%
	Partly Agree	121	40.3%
	Neutral	110	36.8%
	Partly Disagree	32	10.7%
	Completely Disagree	13	4.3%
Wrapping the burned child with clean clothes or blanket and taken him to the nearest health institution	Completely Agree	263	87.7%
	Partly Agree	0	0.0%
	Neutral	13	4.3%
	Partly Disagree	15	5.0%
	Completely Disagree	9	3.0%

Also the result show:

*Incidence of Burns:

The majority of scalds or burns at home occurred during the use of heating and cooking appliances such as gas stoves, heaters, and similar devices.

*Exploration of Risk Factors:

The study assessed various home safety measures related to cooking, heating appliances, and behaviors to identify potential risks contributing to burn accidents.

***Children's Vulnerability:**

Young children are particularly prone to accidents due to their curiosity and inability to recognize dangers.

-Parental Knowledge:

***Responses from mothers showed that:**

47% completely agreed that burns are tissue injuries caused by exposure to hot objects, electricity, radiation, or chemicals.

57.3% agreed that all types of heaters and cooking instruments could cause burn accidents at home.

49% completely disagreed that "increasing the degree of a burn reduces risk."

59.7% disagreed that "burns do not lead to severe complications or death."

54.3% agreed that burns are classified into three degrees based on severity.

*** Knowledge and Demographics:**

Mothers attending high-class community centers (e.g., AL-Sulaikh) scored significantly higher in burn-related knowledge ($p=0.03$).

Knowledge levels were higher among older mothers, married women, and those with more children.

*** Influence of Education and Training:**

Mothers with higher education or those who attended training courses demonstrated significantly better knowledge of burn safety ($p=0.02, 0.03$).

Burn History and Gender:

The study found no significant difference in burn accidents based on the child's gender (10% male, 10.3% female).

***Living Conditions and Risk:**

Single-room houses where cooking, dining, and sleeping occurred in the same space increased the risk of burns.

Discussion

***Home Safety and Burn Prevention:**

- Providing a safe environment, along with close supervision and setting clear safety limits, can significantly reduce the risk of burns.
- Parents must balance protecting their children while allowing them to learn about hazards.

***Parental Knowledge and Behavior:**

- The findings indicate moderate knowledge among mothers regarding burn safety. Knowledge gaps were evident in rural and low-income communities.
- Education programs targeting illiterate or less-educated mothers could help improve burn prevention knowledge.

***Gender Differences:**

- The slight gender difference in burn accidents may reflect societal roles, with girls more often assisting in kitchens and thus exposed to hazards.

***Source of Knowledge:**

Books and schools were the primary sources of information (32%), followed by TV/radio (11.3%) and healthcare professionals (19%).

The internet was an underutilized source of information.

***Cultural and Economic Factors:**

Cultural practices like "bride burning" and economic challenges such as overcrowded living conditions contribute to burn risks.

Improved housing designs and public awareness campaigns could mitigate these risks.

***Attitudes and Practices:**

Positive attitudes towards burn prevention were significantly associated with education level, training, and socioeconomic status.

Mothers who had prior experience with burn incidents in their children showed improved attitudes and practices.

***Global Perspectives:**

Studies in low- and middle-income countries revealed limited access to proper first aid, with traditional remedies like toothpaste or oil still prevalent.

Industrialized countries have seen reductions in burn mortality through education, prevention strategies, and specialized care centers.

Conclusion

This study concludes that mothers in Baghdad demonstrate a good level of education regarding the prevention and management of burn accidents involving children at home. There is a significant association between knowledge, attitudes, and practices related to burns and factors such as social status, education level, and attendance at training courses on burns. Additionally, the study identified a strong link between the practice of first aid for burns and both education level and history of training course participation.

Recommendations

Educational Programs:

Implement widespread educational initiatives through mass media and social organizations to enhance awareness of burn prevention and management at home.

Targeted Training:

Develop specialized training courses tailored for young and less-educated mothers to provide practical knowledge and skills for preventing and managing burns effectively

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