



Mothers' Knowledge and Practices about Accidents First Aid for their Children

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ABSTRACT

Background: Accidents are the leading cause of death among children and can lead to significant disability if not promptly and appropriately managed. Mothers, as caregivers, play a vital role in providing immediate assistance to their children during such incidents. First aid intervention can lower the disability and increase the chances of survival for the injured child. **Aim:** This study aimed to assess mothers' knowledge and practices about accident first aid for their children. **Research design:** A descriptive design was utilized for conducting the study. **Setting:** This study was conducted in the pediatric outpatient clinics at Beni-Suef University Hospital. **Subjects:** A convenience sample of 340 mothers accompanying their children to the previously mentioned settings. **Tools for Data Collection:** Two tools were used: Tool (1) a structured interview questionnaire format, and tool (2) a mother's reported practices. **Result:** The study revealed that 47.35% of the studied mothers were in the age group of 30 to less than 40 years and 60.88% of them lived in rural areas. 32.05% of mothers graduated from secondary education. Also, 80% of them had unsatisfactory level of knowledge regarding accident first aid for their children. Moreover, 93% of studied mothers had incomplete level of reported practices regarding first aid. **Conclusion:** The majority of studied mothers had unsatisfactory level of knowledge regarding accidents, first aid for their children, and incomplete level of reported practices. **Recommendations:** Training courses about first aid must be offered to mothers in pediatric settings. Health providers should continue their essential information to mothers and training courses about first aid periodically in the pediatric settings where they are working. TV and other media must also offer information about common children's accidents, and the first aid needed for each type.

Keywords: Accident, Children, First Aid, knowledge, Mothers, Practices.

INTRODUCTION

An accident is described as an unplanned and unintentional event or occurrence that can have immediate and long-term consequences. In the short term, accidents can cause pain, distress, and potential medical emergencies. Children may require medical treatment, such as stitches or casts, to aid their recovery. In severe cases,

accidents can result in disabilities or even fatalities (Sandhu & Singh, 2020).

Furthermore, childhood accidents can have a long-term negative impact on a child's physical, emotional, and psychological health. Serious injuries may require extended periods of medical care, rehabilitation, and psychological support. Children may develop anxiety, fear, or trauma associated with the accident, which can impact their overall

development and well-being (*Thenmozhi et al., 2020*).

Children's accidents can happen in various settings, such as homes, schools, playgrounds, roads, or any environment where children spend time. Children can experience various types of accidents that can impact their health and well-being. Some common types of children's accidents include falls, burns and scalds, poisoning, road traffic accidents, drowning, choking and suffocation, cuts and lacerations, and sports injuries. Falls occur from playground equipment, stairs, or while engaging in activities like climbing. Burns and scalds can result from contact with hot objects or liquids (*Banerjee et al., 2021*).

Additionally, poisoning can happen when children ingest household chemicals or medications. Road traffic accidents can occur while walking, cycling, or riding in vehicles. Drowning poses a significant risk near bodies of water. Choking and suffocation accidents can occur from swallowing small objects or getting entangled in cords or bedding. Cuts and lacerations can happen when handling sharp objects. Finally, sports injuries can result from collisions or improper equipment use. Understanding these types of accidents is crucial for implementing preventive measures and ensuring children's safety. Children are generally at a higher risk for accidents compared to adults (*Wang et al., 2021*).

The physical characteristics of children, such as their smaller size and fragile bodies, contribute to their increased susceptibility to injuries. Due to their limited strength and skeletal development, even minor accidents that may not cause significant harm to an adult can result in more severe consequences for a child. In addition, the immaturity of their bones, muscles, and vital organs makes them more prone to fractures, sprains, burns, and internal injuries. Therefore, parents, especially mothers, must understand and address these unique vulnerabilities when it comes to accident prevention and first aid for children (*Laswad et al., 2023*).

Furthermore, children's cognitive and emotional development affects their ability to perceive and respond to potential dangers, putting them at a higher risk of accidents. Their limited experience and reasoning skills make it challenging for them to assess risks accurately. Additionally, children have not developed the impulse control needed to refrain from engaging in risky behaviors. This combination of cognitive and emotional factors can lead to accidents stemming from poor decision-making, a lack of judgment, or impulsive actions (*Nor& Sutan, 2020*).

Mothers play a critical role in preventing and responding to childhood accidents. They are the primary caregivers for their children and are often the first responders in the event of an accident. Furthermore, mothers act as advocates for their children's health and safety. Mothers take preventative measures to minimize the risk of accidents in the first place, such as childproofing the home, ensuring proper use of safety equipment, and teaching their children about potential hazards. This proactive approach significantly reduces the likelihood and severity of injuries (*Al-Anazi et al., 2022*).

First aid is the immediate assistance and care provided to an injured or ill child before professional medical help can be obtained. First aid plays a crucial role in minimizing the impact of accidents and injuries on children. Prompt and appropriate first-aid interventions can make a significant difference in preventing further harm, reducing pain, and even saving lives. One of the primary benefits of first aid is the ability to stabilize a child's condition until professional medical help is available (*Sarabi& Nosratabadi, 2022*).

Accidents can happen suddenly in emergencies; time is of the essence, and having mothers who are knowledgeable about first aid who can assess the situation allows for a quicker response and effective action. Providing immediate care can prevent the injury from worsening or becoming life-threatening. It is crucial for parents, especially mothers, to be trained in these life-saving techniques. This sense of confidence and calmness can extend to the child,

reassuring them during distressing times and facilitating a smoother management of the situation (*Ho et al., 2022*).

Significance of the study

Worldwide, accidents rank as the top cause of death for children. A child's developing body and lack of self-awareness make them more vulnerable to accidental harm and damage from the myriad environmental hazards they face. According to Venkatesan and Kamala (2020), 950,000 youngsters die each year as a result of these accidents. Every day, avoidable injuries claim the lives of about 1,600 children and adolescents around the world. The most common cause of mortality among those injuries is automobile accidents. Over a thousand per 100,000 people are believed to die as a result of injuries among youngsters under the age of eighteen. Injuries cause about half of all pediatric fatalities in the United States. Injuries constitute 13% of all illnesses in children under the age of 15 (Amadi & Azunwena, 2020).

The majority of participants (66.74%) were exposed to injuries, with boys having a higher rate (54.51%) than girls (45.49%), according to an Egyptian study of 2128 children that examined the prevalence, patterns of injuries, and associated risk factors among primary school pupils in Port Said City in 2020. Falling accounted for the greatest percentage of both sexes (16%), whereas dog bites accounted for the lowest percentage of males (1.50%) and females (0.7%). According to Zaghoul et al. (2020), private homes account for the vast majority of injuries (38.88%), with streets (25.22%), schools (14.15%), and clubs (5.02%) following closely behind.

According to the Statistical Office of Beni-Suef University Hospital, the incidence of children admitted to the emergency department due to accidents in 2022 was 1591, and in 2023, the incidence of children was 1207 (*The Statistical Office of Beni-Suef University Hospital, 2023*).

Accidents need quick and proper life-saving care before a child receives substantial

therapy. First aid is a life-saving intervention that entails an examination and actions that the mother can carry out quickly on the scene of the accident with little to no medical equipment. The protection of children is a mother's first and foremost responsibility. Since this is the case, first aid training and education should primarily target mothers (*Dirimeşe et al., 2020*). So, this study aimed to assess mothers' knowledge and practices about first aid for accidents involving their children.

AIM OF THE STUDY

This study aimed to assess mothers' knowledge and practices about accident first aid for their children.

Research questions

- 1- What is the mothers' knowledge about accident first aid for their children?
- 2- What are the reported practices of mothers about accidents and first aid for their children?
- 3- Is there a relation between the mothers' knowledge and reported practices about accidents first aid for their children and their socio-demographic characteristics?

SUBJECTS AND METHODS

Technical design

The technical design encompassed the research design, setting, subjects, and tools for data collection.

Research design.

The present study adopted a descriptive research design to attain its purpose.

Setting

This study was conducted in the pediatric outpatient clinics at Beni-Suef University Hospital, affiliated with the Ministry of Higher Education. The pediatric outpatient clinics work three days per week (Saturday, Monday, and Wednesday), which are located on the ground floor and consist of one room that contains six beds and a tray that contains equipment for

emergencies and examinations. This hospital was selected because it is one of the most important hospitals in Beni-Suef City and it provides healthcare services for pediatric patients.

Subjects:

A convenient selection of mothers who meet the following criteria and are accompanied by their children:

Inclusion criteria:

- Mothers who attended outpatient clinics can read and write
- Mothers who have children aged from birth to 15 years.

Exclusion criteria:

- Handicapped mothers.
- Mothers with mental or psychiatric disorders.

participants were 340 mothers according to the following equation: (Daniel, 1999)

$$N = \frac{t^2 \times p(1-p)}{m^2}$$

Description:

N = required sample size

t = confidence level at 95 % (standard value of 1.960)

p = total number of admitted mothers in the previously mentioned clinics

m = margin of error at 5% (standard value of 0.050).

Tools of data collection:

Data were collected using the following two tools:

Tool (I): A Structured Interviewing Questionnaire Format:

The researcher created a structured interview questionnaire after reviewing current relevant literature. It was written in a simple Arabic language to suit mothers' levels of understanding and consists of three parts:

Part I: Characteristics of the studied mothers such as age, residence, mothers' education, occupation, number of family members, children's previous types of accidents, sites of accidents to which the child was exposed, and sources of knowledge about first aid.

Part II: Mother's knowledge assessment

The researcher based the mother's knowledge assessment on Mohammed& Elsayed (2022) in order to assess mothers' understanding of first aid in the event of an accident. The content was presented in the format of multiple-choice questions, comprising a total of 28 questions. 22 multiple choice questions on mothers' knowledge of accidents including definition, causes, risk factors, and prevention of children's accidents. In addition to mothers' knowledge about the definition, causes, and clinical manifestation of such types of accidents as choking, fracture, burn, poisoning, drowning, and epistaxis. Moreover, 6 multiple choice questions related to mothers' knowledge regarding first aid, such as the concept, and aim of first aid, as well as the basic principles of first aid, and the contents of the first aid bag. In addition to the importance of the first aid bag and Egyptian ambulance authority number.

Mothers' knowledge was scored as follows:

The responses of the mothers under study were compared to the model key answers: correct and complete responses received a score of (2), correct fragmentary responses received a score of (1), and neither do not know nor incorrect answers received a score of (0). The total knowledge scores varied from 0 to 56 points. Mothers' knowledge level was classified as follows: The unsatisfactory knowledge (< 60%) fell between 0 and 34 points, while the satisfactory level of knowledge (≥60%) spanned from 34 to 56 points.

Tool (II): Mother's reported practices:

It was adapted from (Rabia, 2002); El-Naggat (2009); (Zedain et al., 2022) to assess mothers' reported practices about first aid in accidents. It contained 57 items grouped under twelve domains that included

first aid for conscious choiced children below one-year-old (6 items), first aid for conscious choiced children above one-year-old (6 items), first aid for drowning (5 items), first aid for wound (7 items), first aid for bleeding (5 items), first aid for epistaxis (4 items), first aid for burns (4 items), first aid for skin poisoning (3 items), first aid for chemical poisoning (5 items), first aid for inhalation poisoning (6 items), first aid for eye poisoning (2 items) and first aid for fracture (4 items).

Mothers' reported practice was scored as follows:

The scoring system comprised two points: one for completed tasks and 0 for incomplete tasks. The total scores varied from 0 to 57 points. The mothers' reported practices were characterized based on their level of performance. An incomplete level of practices (< 60%) spanned from 0 to 34 points, while a complete level of practices (60%) varied from 34 to 57 points.

Operational design

The preparatory phase, pilot research, and fieldwork were all included in the operational design.

Preparatory phase:

Utilizing textbooks, evidence-based articles, the internet, periodicals, and journals, the researcher utilized a range of sources to gather theoretical knowledge and local and international literature pertinent to the study's various facets. This enabled the researcher to develop appropriate tools and familiarize themselves with the experimental challenges.

Tools Validity and reliability

- **Content Validity:**

A panel of three pediatric nursing experts from the Faculty of Nursing at Helwan University evaluated the data collection tools for their content validity. The experts were hand-picked to ensure the tools were clear, relevant, comprehensive, easy to understand, and applicable. From the experts' perspective,

the tools were deemed valid after soliciting their opinion on the structure, organization, and order of the questions. All of their comments were carefully evaluated.

Reliability:

The researcher used reliability for tools to ensure that the tools were internally consistent by giving them to the same participants in the same settings to check for consistency. The dependability of the tools' internal consistency was evaluated with Cronbach's alpha coefficient for each item. Mothers' reported practices related to accidental first aid for their children were (0.91), whereas the mothers' knowledge assessment sheet had a score of (0.93). This proves that the study tools are quite reliable.

Pilot study:

Pilot research was conducted in March 2023 with a sample size of 10% (34 women) out of a total of 340 mothers to evaluate the usefulness of the tools that were developed and the clarity of the questions that were included. Additionally, the pilot has helped to identify potential issues that may arise throughout the study and to predict how much time each subject will need to complete the questions. In the process of making small adjustments, such as rephrasing, organizing, removing, and adding questions to the study instruments, all individuals from the pilot study were dropped from the sample.

Field Work

Data collection was done by interviewing the studied mothers in the previously mentioned setting. The researcher attended the previously mentioned setting from 9:00 a.m. to 2:00 p.m. three days per week (Saturday, Monday, and Wednesday), it took three months, starting from April 2023 and ending in June 2023. The researcher interviewed the studied mothers before collecting the data for the actual study and introduced herself to them then the researcher provided a simple explanation of the objective of the study to gain their cooperation and to assure the mothers about the anonymity of their answers

and that the information would be used for scientific research only and would be strictly confidential. The researcher filled out the questionnaire. It took about 35 minutes for each mother to complete the questionnaire, which included 15 minutes to assess her knowledge and 20 minutes to assess her practices regarding accidents and first aid for their children by using questionnaire sheets.

Administrative design

The Dean of the Faculty of Nursing at Beni-Suef University granted official authorization to the general manager of Beni-Suef University Hospital, in exchange for cooperation and consent to carry out the research, subsequent to the explanation of the study's purpose and objectives.

Ethical considerations:

The Scientific Research Ethical Committee of the Faculty of Medicine Beni-Suef University gave their official approval for the study to go ahead (Approval No: FMBSUREC/12022023). Before completing the informed consent form, participants were provided with comprehensive information regarding the study and their role, and their participation was entirely voluntary. The study's ethical considerations included informing participants of their rights to withdraw at any moment, outlining the study's goal and nature, and taking measures to protect their privacy so that no one else could access their data without their explicit consent.

Statistical design

Statistical Package for the Social Science (SPSS) version 24 was used to compute and analyse the data after it had been collected. Frequencies and percentages were used for descriptive statistics about categorical factors. For continuous variables, standard deviations and means were utilized. To determine the degree of association between numerical variables, the Pearson correlation coefficient (r) was employed. To establish relationships between categories, we utilized (r). The direction and degree of the link between two ranked variables can be measured by the

correlation coefficient. When the P-value was less than 0.05, it was deemed statistically significant; when the P-value was less than 0.01 and greater than 0.0, it was deemed non-significant.

RESULTS

Table (1): Revealed that nearly one half (47.35%) of the studied mothers were in the age group $30 \leq 40$ years with a mean age of 21.2 ± 4.17 years and more than half (60.88%) of them were living in rural areas. Regarding the educational level, this table showed that nearly one third (32.05%) of them had secondary educational level. Moreover, more than half (55.59%, 55.58%) of them were employees and the number of family members between 5 to 7 individuals.

Table (2): Proved that nearly two thirds (65.58%) of the studied mothers didn't know the answers regarding the concept of first aid. Moreover, the majority of them (81.47 %, 83.52% and 88.23%) didn't know the principles of first aid, the importance of first aid kit contents and the Egyptian ambulance authority number respectively.

Figure (1): Concerning the most common sites of children's accidents, this figure illustrated that the majority (80.0%) of accidents occurred on the road, more than half (52.0%) occurred at recreational sites in addition, nearly one half (44.0%) of accident occurred at home and nearly one third (32.0%) were at school.

Table (3): Clarified that nearly two thirds (64.70%) and the majority (82.35% and 85.30%) of the studied mothers not cooled the burned area, not avoided using ice or flour, toothpaste, oil, or coffee directly on the burned area, and not avoided touching or popping blisters respectively.

Figure (2): Illustrated that 60.0%, 45.0%, 30%, and 20% of the studied mothers' source of knowledge was friends, neighbors, social media, and health teams respectively.

Figure (3): Indicated that the majority (80%) of the studied mothers had unsatisfactory level of knowledge regarding first aid of children's accidents. While the

minority (20%) of them had satisfactory level of knowledge.

Figure (4): Illustrated that the most (93%) of the studied mothers had incomplete reported practices regarding first aid. Meanwhile, the minority (7%) of studied mothers have complete reported practices.

Table (4): Demonstrated that nearly three quarters (73.53 %) and the vast majority (97.06 %, 97.94% and 97.06 %) of studied

mothers not done cessation of bleeding associated with fracture, cooling the affected area by placing ice cubes, immobilization of the affected part and seeking medical attention respectively.

Table (5): Revealed that there was a highly statistically significant correlation between mothers' total knowledge and their reported practices (p<0.05).

Table (1): Percentage distribution of the studied mothers according to their characteristics (n=340).

| Socio-demographic Data | No | % |
|----------------------------------|--------------------|--------------|
| Mothers age(years): | | |
| 20<30 | 144 | 42.35 |
| 30≤40 | 161 | 47.35 |
| > 40y | 35 | 10.29 |
| $\bar{X} \pm SD$ | 21.2 ± 4.17 | |
| Residence: | | |
| Rural | 207 | 60.88 |
| Urban | 133 | 39.11 |
| Mothers' education: | | |
| Illiterate | 54 | 15.88 |
| Read and write | 72 | 21.17 |
| Secondary education | 105 | 32.05 |
| Higher education | 109 | 30.88 |
| Occupation | | |
| Employee | 189 | 55.59 |
| Housewife | 151 | 44.41 |
| Number of family members: | | |
| 3 to 4 individuals | 117 | 34.41 |
| 5 to 7 individuals | 189 | 55.58 |
| More than 7 individuals | 34 | 10.00 |

Table (2): Percentage distribution of the studied mothers' knowledge about first aid in children's accidents (n=340)

| Knowledge items | N=340 | |
|---|-------|--------------|
| | No | % |
| Concept of first aid: | | |
| Complete correct | 63 | 18.52 |
| Incomplete correct | 54 | 15.88 |
| Don't know | 223 | 65.58 |
| Aims of first aid: | | |
| Complete correct | 0 | 0.0 |
| Incomplete correct | 210 | 61.76 |
| Don't know | 130 | 38.23 |
| Principles of first aid: | | |
| Complete correct | 7 | 2.05 |
| Incomplete correct | 56 | 16.47 |
| Don't know | 277 | 81.47 |
| First aid kit importance and contents: | | |
| Complete correct | 0 | 0.0 |
| Incomplete correct | 56 | 16.47 |
| Don't know | 284 | 83.52 |
| The Egyptian Ambulance Authority Number: | | |
| Complete correct | 40 | 11.76 |
| Incomplete correct | 0 | 0.0 |
| Don't know | 300 | 88.23 |

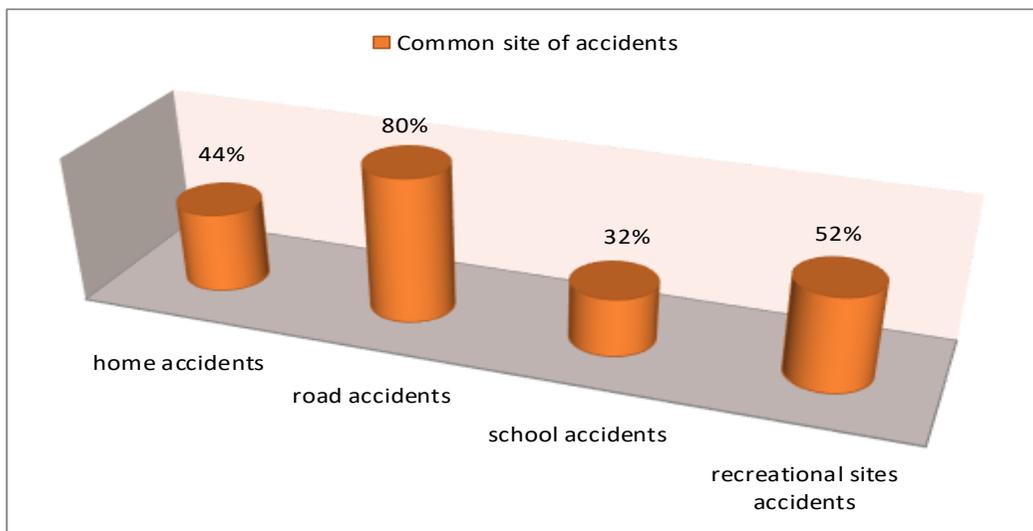


Fig. 1. Percentage distribution of common sites of accidents as reported by mothers
Percentages are not mutually exclusive

Table 3. Percentage distribution of the studied mothers’ reported practices regarding first aid of burns (n=340).

| Reported practices items | (n= 340) | |
|---|----------|--------------|
| | No | % |
| Removal of clothes | | |
| Done | 215 | 63.76 |
| Not done | 125 | 36.76 |
| Cooling the burn under running water for 10-15 minutes | | |
| Done | 220 | 5.88 |
| Not done | 20 | 64.70 |
| Avoid using ice directly or using flour, toothpaste, oil, or coffee on the burned area | | |
| Done | 60 | 17.64 |
| Not done | 280 | 82.35 |
| Avoid touching or popping blisters | | |
| Done | 50 | 14.70 |
| Not done | 290 | 85.30 |

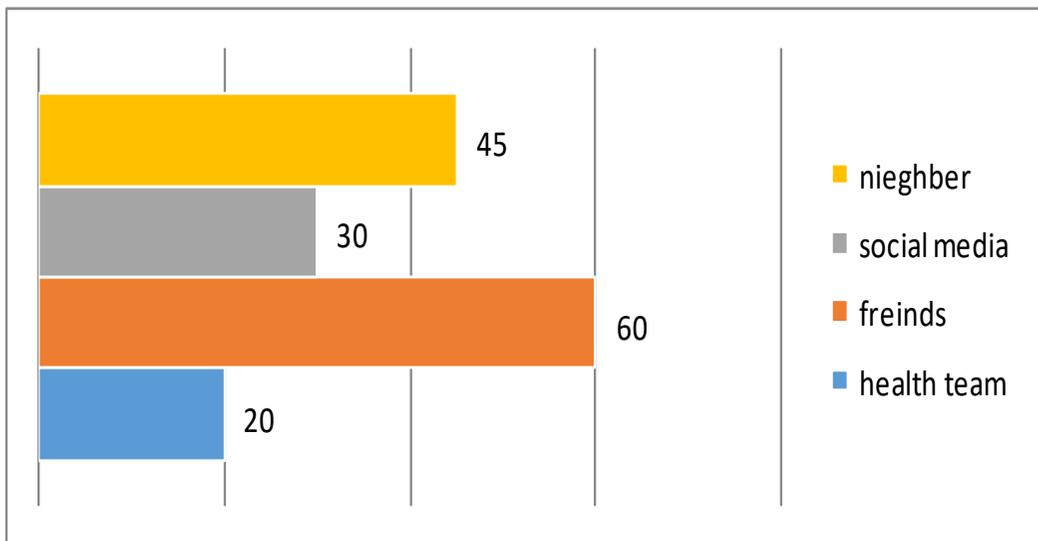


Fig. 2. Percentage distribution of the studied mothers according to their sources of knowledge about first aid accidents in children (n=340).

Percentages are not mutually exclusive

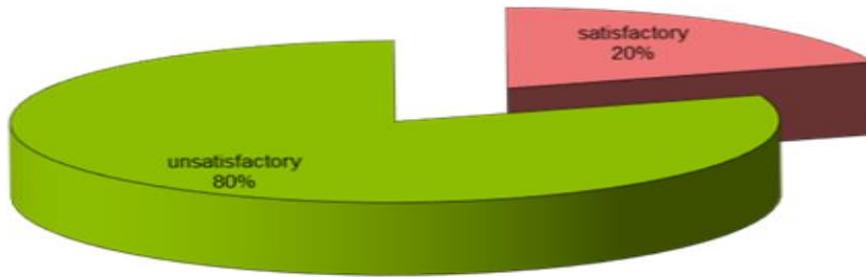


Fig. 3. Percentage distribution of the studied mothers’ total knowledge regarding first aid of children accidents (n=340).

Table 4. Percentage distribution of the studied mothers’ reported practices regarding first aid of fracture (n=340).

| Reported Practices items | n= 340. | |
|--|---------|--------------|
| | No | % |
| Cessation of bleeding associated with fracture. | | |
| Done | 90 | 26.47 |
| Not done | 250 | 73.53 |
| Cooling the affected area by placing ice cubes | | |
| Done | 10 | 2.94 |
| Not done | 330 | 97.06 |
| Immobilization of the affected part | | |
| Done | 7 | 2.06 |
| Not done | 333 | 97.94 |
| Seeking medical attention. | | |
| Done | 330 | 97.06 |
| Not done | 10 | 2.94 |

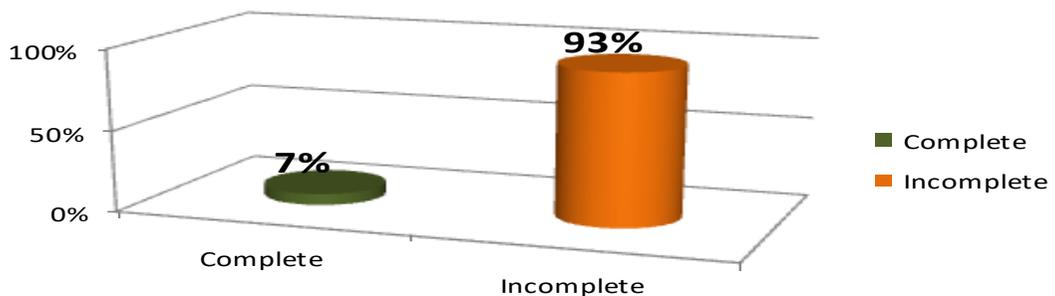


Fig. 4. Percentage distribution of the studied mothers' total reported practices regarding first aid of children accidents (no. 340)

Table (5) Correlation between studied mothers' total knowledge and their total reported practices (no. 340)

| Variables | n= 340. | | | |
|--------------------|-----------|---------|--------------------|---------|
| | Knowledge | | Reported practices | |
| | R | P-value | r | P-value |
| Knowledge | -- | | 3.207 | 0.002* |
| Reported practices | 2.112 | 0.040* | -- | |

DISCUSSION

Children's curiosity, adventurous nature, and limited understanding of danger often lead to situations where accidents can occur. Additionally, children have less developed coordination, balance, and judgment compared to adults, which result in more susceptibility to accidents in their daily lives (*Loos et al., 2020*).

Regarding to the characteristics of the studied mothers, the present study findings showed that, nearly one half of the studied mothers were in the age group 30 to less than 40 years with a mean age of 21.2 ± 4.17 years. This could often be associated with a significant portion of mothers who have young children. This study was paralleled with *Nageh et al., (2020)* who conducted a study at Mansoura City, Egypt, which entitled “Mothers’ knowledge and subjective practice toward most common domestic injuries among under-five children in Mansoura “and found that less than two thirds of mother's mean age was 21 years. Conversely, the study disagreed with *AL-Abedi et al., (2023)* who conducted a study at AL-Najaf City _ Al-Zahra Teaching Hospital, Egypt, which entitled "Effectiveness of an awareness program on mothers' knowledge toward household accidents among their children at AL-Najaf City _ Al-Zahra Teaching Hospital” and mentioned that more than half of mothers within age group (20-29) years.

Regarding residence, the results of the current study detected that, more than half of the studied mothers lived in rural areas. This

was likely due to the fact that mothers who live in rural areas faced a lack of medical facilities, low socioeconomic status and Beni-Suef University Hospital offers free services for all children, so mothers coming to this hospital for high quality care and free services. This result agreed with *Mahmoud et al., (2023)* who carried out the study at Fayoum General Hospital, Egypt, which entitled “Assessment of mothers' awareness regarding first aid of choking among their children under five years” who stated that, almost one half of mothers were living in rural areas.

Related to mothers' level of education, the present study findings documented that, nearly one third of studied mothers had a secondary education. This may be due to the fact that the study was conducted in a governmental hospital with a high percentage of low social standards for mothers attending Beni-Suef University Hospital to get medical treatment for their children. This finding in the same line with *Bassam, (2022)*. who conducted a study at Buraidah City, Saudi Arabia Kingdom (KSA), which entitled "Evaluate maternal knowledge and attitude regarding first aid among their children in Buraidah City, Saudi Arabia Kingdom (KSA)" and found that, more than half of mothers had secondary education. Meanwhile, this study different with **Dilek& ÖZBEY (2022)** who carried study at Kahta State Hospital, Adiyaman, which entitled “Frequency of home accidents of children between 0-6 years and levels of diagnosis of mothers’ safety measures” and mentioned that, the majority of mothers had higher education.

The current study findings revealed that, more than half of the studied mothers were employees. This may be due to the employed mothers had the desire and motivation to contribute insights and perspectives. Furthermore, they saw the participation as an opportunity to share knowledge and practices about first aid for children's accidents. This result was in the same direction as Aly, (2020) who conducted a study at Benha City, Egypt, which entitled "Education program for new and experienced mothers around childhood accidents safety and emergency intervention in Benha City, Egypt" who demonstrated that, over three quarters of mothers employed. Conversely, this finding was incomparable with Sabry et al., (2022), who conducted a study at El-Beheira Governorate, Egypt, which entitled "Mothers' knowledge and practices regarding first aid management of domestic accidents among under-five children El-Beheira Governorate" and mentioned that, the majority of mothers were housewives.

Concerning the number of family members, the present study results showed that, more than half of the studied mothers' families consisted of 5-7 individuals. This was likely owing to the fact that, the studied mothers lived in rural areas with cultural norms regarding the increase in the number of children. This finding was in accordance with Mohammed & Elsayed (2022) who conducted a study at Tanta, Egypt, which entitled "Mothers' knowledge, practice, and attitude about children's injuries and first aid in Tanta" who found that, almost three quarters of mothers' families consisted of 5 - 7 individual.

Concerning the accident sites as reported by the studied mothers, the results of the current study detected that, the majority of accidents were on the road. This was likely owing to the fact that children may not developed the necessary skills and judgment to navigate traffic safely, increasing their vulnerability to accidents. Additionally, they may haven't received from their mother sufficient education or training about road safety. They may not be aware of basic rules such as looking both ways before crossing the road, using pedestrian crossings,

or wearing reflective clothing in low-light conditions. The current study accepted with Theofilatos et al., (2021) who conducted a study at Greece, which entitled "Exploring injury severity of children and adolescents involved in traffic crashes in Greece" who concluded that, the majority of children's accidents were on the road.

Regarding the source of knowledge about first aid for children's accidents, the current study findings revealed that, more than half of studied mothers got knowledge from friends. This was likely owing to the fact that friends may unintentionally misinterpret or miscommunicate first aid information, leading to confusion or incorrect actions. Moreover, they may not have the expertise of healthcare professionals or trained first aid providers. This result was in the same direction as Alsdairi et al., (2021) who conducted a study at Hail City, Saudi Arabia, which entitled "Knowledge, attitude and practice of pediatric drowning first aid among parents in Hail population, Saudi Arabia" who demonstrated that, almost one half of mothers got knowledge from friends. Conversely, the study disagreed with Asif et al., (2021) who conducted a study at Fauji Foundation Hospital Islamabad, Pakistan, which entitled " Knowledge, attitude and practices regarding first aid against domestic injuries in mothers of children less than 5 years of age attending Fauji Foundation Hospital Islamabad" who found that, nearly one third of mothers got knowledge from the media.

Concerning the concept of first aid for children's accidents, the current study findings showed that, nearly two thirds of studied mothers don't know the correct concept which may be due to lack of access to proper education and training. The study parallel to Bassam, (2022) who found that, nearly two thirds of studied mothers don't know the concept.

About first aid kit importance and contents, the current study results showed that, the majority of studied mothers don't know about first aid kit contents and importance. This was likely owing to the fact that the largest number of the mothers in the

rural area don't receive formal training or education on first aid procedures and the importance of first aid kits. Conversely, the study disagreed with Mohammed & Elsayed (2022) who found that nearly two thirds of mothers know about the contents and importance first aid kit.

The findings of the current study documented that the majority of studied mothers don't know the ambulance number. This was likely owing to the fact that societal beliefs may prioritize seeking help from family members or local resources first, rather than relying on emergency services like ambulances. This result in the same line as Ala'a et al., (2018) who conducted a study at Madinah City, Saudi Arabia, which entitled "Knowledge and Practice of first aid among Parents Attending Primary Health Care Centers in Madinah City, Saudi Arabia, A cross-sectional study" where they found that more than half of the respondent don't know ambulance number.

On assessing mothers' total knowledge regarding first aid of accident for children, the present study findings revealed that, the majority of studied mothers had unsatisfactory level of knowledge regarding first aid of accident for children. This may be due to mothers' level of education and their work time, which could be factors that affect mothers' health-related behavior with their children. This study similar to Sabry et al., (2022) they found that, about three quarters of mothers had unsatisfactory level of knowledge regarding first aid for child accidents.

The present study findings revealed that, when mothers deal with burned children, the majority of them use ice directly and use flour, toothpaste, oil, or coffee on the burned area, touching or popping blisters. This may be due to mothers may rely on these traditional practices instead of seeking medical help or following evidence-based first aid guidelines. Conversely, the study disagreed with Mortada et al., (2020) who conducted a study at Jeddah, Saudi Arabia, which entitled "Parental Knowledge, attitudes, and practices towards burn first aid and Prevention of Pediatric Burns in Jeddah,

Saudi Arabia: a cross-sectional Study" and found that, the majority of the respondents avoided applying ice directly or using flour, toothpaste, oil or coffee on the burned area and also avoided touching or popping blisters.

Concerning mothers' reported practices regarding first aid of fracture, the current study results illustrated that, the vast majority of studied mothers did not cool the affected area by placing ice cubes and did not fix it. Conversely, the study disagreed with Al-Bshri & Jahan (2021) who conducted a study at Buraidah City, Qassim, Saudi Arabia, which entitled "Prevalence of home-related injuries among children under 5 years old and practice of mothers toward first aid in Buraidah, Qassim" who demonstrated that, the majority of mothers stabilized the affected part.

Concerning mothers' total reported practices regarding first aid for children's accidents, the present study findings showed that, the most of studied mothers had incomplete level of reporting practices, which may be due to mothers not having access to formal training or educational programs on first aid for children's accidents. These programs can equip individuals with the necessary skills and knowledge to respond effectively in emergency situations. The absence of such training opportunities can contribute to the incomplete level of practices observed. In the same line as Alhadjaj et al., (2021) who conducted a study at Qassim region, Saudi Arabia, which entitled "Knowledge, misconceptions, and practice about first aid measures among mothers in Al Qassim" who demonstrated that, about three quarters of mothers had poor practices about first aid for children's accidents.

As regarding the correlation between total mothers' knowledge and total reported practices, the present study results showed that, there was a highly statistically significant correlation between mothers' total knowledge and their reported practices. This could be due to that mothers who had good knowledge had good practices and knowledge is the baseline for the practices.

This result was agreed with Devi& Massey (2023) who carried out a study at primary schools of Gurgaon which entitled “A study to assess the knowledge and practices regarding first aid and emergency care among mothers at Gurgaon” and found a statistically significant relation between mothers’ total knowledge and their reported practices.

CONCLUSION

Based on the findings of the current study, it was concluded that:

The majority of the studied mothers had an unsatisfactory level of knowledge regarding first aid accidents for their children. Also, the majority of studied mothers had an incomplete level of reported practices. Meanwhile, there was a significant relationship between mothers’ knowledge and reported practices and their education and place of residence. While there was no significant relation between mothers’ age and their knowledge and reported practices. Additionally, there was a highly significant correlation between mothers’ total knowledge and their reported practices.

RECOMMENDATIONS

Based on the current study's findings the following recommendations are suggested:

- Training courses about first aid must be offered to mothers in pediatric settings.
- Health providers should continue their essential information to mothers and training courses about first aid periodically in the pediatric settings where they are working in.
- TV and other media must also offer information about common children's accidents, and the first aid needed for each type.

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