Mothers' Knowledge and Practices Regarding First aids Management of Domestic Accidents among Under-Five Children in El-Beheira Governorate.

Nahla Sabry Zedain [1] Abeer Abdel Aziz Madian[2] Rehab Ibrahim Mostafa Radwan [3]

1. Clinical Nursing Instructor at Community Health Nursing, Faculty of Nursing, Damanhour University.Egypt
2. Professor of Community Health Nursing, Faculty of Nursing, Damanhour University. Egypt
3. Assisstant Professor of Pediatric Nursing, Faculty of Nursing, Damanhour University. Egypt

Abstract

Background: - Domestic accidents are the most common cause of death in children under 5 years of age. First aid intervention can lower the disability and increase the chances of survival of the injured child. Most of these accidents are preventable through increase mothers' awareness and improvements in the home environment. **Aim of this study to** assess mothers' knowledge and practices regarding first aids management of domestic accidents among under-five children in El- Beheira governorate. **Research design:** a descriptive exploratory research design. **Settings:** This study was conducted at the governmental primary health care centers in El-Beheira governorate. **Tools:** Mothers structured interview schedule and home safety assessment sheet. **Results:** the mean age of studied mothers was (27.22±5.02.) and 45.1% of them had secondary education. The most commonly reported source of information about first aid was mass media followed by relatives. Two fifths of the mothers had fair knowledge regarding first aid, while 51.7%of them had poor first aid measures. With regard to mothers' safety practices for prevention of domestic accidents 41.3% of the mothers reported fair safety practices. There was highly significance relation between mothers' knowledge and practices regarding first aid and their age, education and occupation. There was highly significant relation between mother's safety practices and education, marital status, family monthly income. **Conclusion:** the study concluded that the reported first aid practices among studied mothers weren't satisfactory particularly regarding drowning, foreign body aspiration. However, they had fair knowledge regarding first aid measures. **Recommendations:** inclusion of training program regarding first aid management and the prevention of home accidents in the educational curriculum of preparatory and secondary schools and Universities.

Keywords: Domestic accidents**,** under five children, first aid, safety measures, Knowledge, practices.

I. Introduction

Early childhood is a critical period in a child's development and young children are extremely vulnerable to accidents because their bodies are developing and they haven't the ability to be aware about themselves and various environmental hazards. Motor development during early childhood puts children at risk of injury because of exploration and interaction with the world coupled with lack of full physical coordination of their muscles and unrefined depth perception of danger which is a part of their prematurity **(Nour et al., 2018)**.

Child's environment plays an important role, in the occurrence of an injury. Most injuries take place in or near child's home where unsafe play areas or building designs as stairs and windows as well as easy access to dangers inside the home **(Jassem et al., 2019)**. An accident can be defined as an unexpected, unplanned occurrence of an event which usually produces unintended injury, death or property damage **(Üçüncü et al., 2019)**. Accidents are a major cause of morbidity and mortality in children. According to World Health Organization (WHO) up to 50% of the children presenting to a hospital with unintentional injuries are left with some form of disability **(Peden et al., 2008)**. It also, reported that nearly half of all young children injuries occurring at home. Under-five years children are more susceptible to home injuries because they spend most of their time indoors **(Phelan et al., 2011)**.

Globally, 5.82 million deaths occurred among under- five years children in 2015 **(Kassebaum et al., 2017).** The injury specific mortality rate in the under-five age group was 73 per 100,000 populations **(World Health Organization [WHO], 2015)**. Among children aged 1–5 years, injuries are the leading cause of death in the developed world. Additionally, there is an unequal distribution between the developed and the developing world, with the mortality rate from unintentional injuries in developing countries being nearly twice that of the developed world.(4) Egypt Demographic and Health Survey (EDHS) in (2014), reported that, 4% of children under 5 years old were always injured or involved in an accident. The most commonly reported injuries are open wounds ,fractures, burns (46%, 36%, 20%) respectively, and 2% of the

children have suffered from other types of injuries **(El-Zanaty & Way, 2015)**.

The common causes of domestic accidents include burn which is one of the leading causes of unintentional injuries in children, falls as from bed, crib on stairs, slippery floors, high windows and tipping furniture. Injuries from sharp and pointed instruments, choking, poisoning and toxic substances that may be found under the kitchen sink, in the medicine cabinet, in the garage or garden shed, or even in other place where medications are stored. In addition to suffocation some domestic accidents occur where there's water in the bathroom, kitchen, or swimming pools and less commonly firearms **(Al-Bshri & Jahan, 2021)**.

Prevention and control of domestic accidents among under five years children shown to be particularly effective in reducing injury mortality as well as lifelong disabilities **(Abbassinia et al., 2019)**. Parents especially mothers are always in direct contact with their children at home particularly from infancy and through the preschool age. So, they have a great, deal of responsibility to have appropriate knowledge and practice about accidents and first aid measures as well as take protective measure to ensure safety of home environment coupled with proper supervision **(Altundağ & Körükçü, 2022)**.

First Aid is defined as the emergency care and treatment of a sick or injured person before more advanced medical assistance. The main objective of providing first aid is to decrease suffering, promote recovery and prevent damage **(Pellegrino et al., 2020)**.

In the pre-hospital setting, the key contributors to survival and recovery from illness and injury are rapid and effective maintenance of the body's major functions as airway, breathing, circulation and bleeding control. Medical research data recommends that effective support of these basic functions provides the most significant contribution to positive outcomes for injured child. So that, rapid and right intervention from mothers can limit disability and increase the chances of survival of the injured child and make a big difference in the outcome **(Auerbach, 2015)**.

Community health nurses are essential member in the professional health care team. They are well educated about child's health and medical emergencies; they also have a direct contact with the mothers and their children and can assess environmental hazards **(World Health Organization [WHO], 2017)**. So this study aims to assess mothers' knowledge and practices regarding first aids management of domestic accidents among under-five children in El-Beheira governorate.

Aim of the study:

Assess mothers' knowledge and practices regarding first aids management of domestic accidents among under-five years children in El-Beheira governorate.

II. Materials and methods

i. Research design:

- A descriptive exploratory research design was carried out to demeanor this study.

ii. Setting:

- The study was conducted at the Governmental Primary and Family Health Care Centers. These centers are affiliated to the Ministry of Health and Population (MOHP) in 4 directorates in EL-Beheira Governorate namely: Damanhour, El-Mahmoudia, ItayElbaroud and Shubrakhit.

iii. Subjects

- Mothers who attended Primary and Family health Care Centers from the previously mentioned setting and who fulfilled the following inclusion criteria; Mothers who had children aged under-five years old and had Child exposed to at least one home accident.

Sampling technique

- A multistage sample technique was utilized as follows El-Beheira Governorate composed of 16 directorate four directorates were selected randomly, From each directorate, one Maternal and Child Health Center(MCH) and one rural health unit was randomly selected to be included in the study. A total number of (8) MCH centers and rural health unit were selected. A total sample of (288) mothers who fulfilled the inclusion criteria were selected from the previously selected four directorates by using equal allocation technique (72 mothers from each directorate). From each directorate, a purposive sample of 72 mothers was selected by equal allocation technique from both MCH centers (36) and rural health units (36).

Sample size

- The sample size was calculated by using "EPI-Info7" software program based on the total population of 1150 mothers who had under-five years children attendance per 3months and an expected frequency of 50% with margin error of 5% and confidence interval of 95%,this resulted in required sample size of 288mothers.

iv. Tools for data collection

Tool I: Mothers Structured Interview Schedule:

This tool was in an Arabic language designed by the researcher after reviewing of the related literature **(Auerbach, 2015; Pellegrino et al., 2020)**. In order to collect the required data from the study sample, It was included the following three parts:

Part (1): Socio-Demographic Data of Studied Mothers and Their Children:

This part consisted of socio-demographic characteristics of the mothers which include Mothers' age, education, marital status…etc. Socio-demographic characteristics of their child as age, gender …etc.

Part (2): Mother's Knowledge Regarding First Aid Measures

It included questions about most common types of domestic accidents and the most common place of accidents among under-five children. Meaning of first aid and it's importance. First aid measures for different types of domestic accidents as: first aid for burns, electrical shock, poisoning, chocking…etc.

Scoring system of mothers' knowledge:

The mothers' knowledge regarding first aid measures were calculated for each item it consisted of 22 items. A correct complete answer was given a score of "2". A correct incomplete answer was given a score of "1" whereas incorrect or missing answer was given a score of "0". The total score was calculated and ranged from (0-44) which further categorizing into three levels as follows.

Classification	Score
Good knowledge	≥75% (≥33)
Fair knowledge	50%-75% (22-33)
Poor knowledge	<50% (<22)

Part (3): Mothers Reported First Aid Practices

This part included. No of child exposure to domestic accidents at the last year. Type of accidents that the child exposes. Site of body exposure. Severity of accident…etc.

Scoring system of mothers reported first aid practices sheet

The reported practices of the mothers regarding first aid measures were calculated for each item it consisted of 10 items. A correct complete action was given a score of "2". A correct incomplete action was given a score of "1" whereas incorrect action was given a score of "0". The total score was calculated and ranged from (0-20) which further categorizing into three levels as follows.

Classification	Score
Good practice	≥75% (≥15)
Fair practice	50%-75% (10-15)
Poor practice	<50% (<10)

Tool II: Home Safety Assessment Sheet as reported by mothers

This tool was in an Arabic language designed by the researcher after reviewing of the related literature **(Abbassinia et al., 2019; Altundağ & Körükçü, 2022)**. It was included items of safety practices for prevention of domestic accidents among children and all the questions were answered with yes or No.

Scoring system

The mothers answers regarding reported safety practices at home were calculated for each item it consisted of (37) items. A correct response to those items was computed in the way that correct answers were given a score of "1" whereas incorrect answers were given a score of "0". The total score was calculated and ranged from (0-37) which further categorizing into two levels as follows.

Classification	Score
Satisfactory home safety	≥ 60 (≥22)
Unsatisfactory home safety	<60(<22)

Methods

- An official letters from the Faculty of Nursing Damanhour University was directed to the representative of the Ministry of Health and Population in El-Beheira governorate to inform him about the study objectives and take permission to conduct this study in the selected settings.
- Official letter from the representative of the Ministry of Health and Population was directed to the directors of the selected setting to obtain their approval, clarify the purpose of the study as well as to gain their cooperation and support during data collection.
- Approval was obtained to collect the data from the selected settings
- The study tools were developed by the researcher based on relevant literature review.
- Tool I and tool II were tested for validity by a Jury composed of five experts' in the field of Community Health Nursing (3 experts) and Pediatric Nursing (2 experts) for content validity.

- Their opinions and suggestions were taken into consideration and recommended modifications were done as modification of tool (I) questions.
- Reliability of tools performed to confirm its internal consistency by Cronbach's Alpha reliability. Tool I had a reliability of calculated(α =0.862) for the part of knowledge and (α =0.876) for the part of first aid practices .Tool II had a reliability of calculated (α =0.871).
- A pilot study was carried out before performing the actual study on 28 mothers (10% of the selected subjects) who were chosen randomly and were not be included in the study.
- The data was collected by interviewing every mother who fulfilled the inclusion criteria attended to the waiting area of the previously mentioned settings after a brief explanation of the purpose and the nature of the research in order to gain their cooperation and confidence
- Data was collected over a period of 6 months (from August 2020 to January 2021)
- Variables were analysed using the descriptive statistics which included: percentages, frequencies, range (minimum and maximum), arithmetic mean, and standard deviation (SD). They are used as measures of central tendency as dispensing respectively for normally distributed quantitative data.
- The level of significance selected for this study was $p \leq 0.05$.
- Chi square test (X2) and Fisher Exact Test (FET) were used to test the significance of the results and to test the association between two qualitative variables or to detect difference between two or more proper.
- **Ethical considerations**
- Permission to conduct the study was obtained from ethical committee in the Faculty of Nursing, Damanhour University.
- Informed consent was obtained from each mother to participate in the study after explanation of the study aim and assured that collected data was used only for the study purpose and informed them about their voluntary participation.
- Confidentiality and privacy of mothers response was guaranteed by using code numbers instead of names.

III. Results

Table 1 displayed distribution of the studied mothers according to their socio- demographic characteristics. It was revealed that mothers' age ranged from 18-40 years old with a mean age of 27.22±5.02. As regard to mothers' education it was found that more than two fifths (45.1%) of the mothers had secondary education, and 18.8% of them had university education .With respect to marital status the same table portrayed that the vast majority (94.8%) of the mothers were married.. Pertaining to mother's working status the table depicted that more than three quarters (83.7%) of the mothers were housewives. In addition, in relation to family monthly income the table showed that more than half (61.1%) of the mothers had enough family income. Furthermore, it was observed that the mothers are equally distributed between urban and rural areas with fifty per cent (50%) for each in addition that, approximately half of the mothers were living in nuclear families

Table (1): Distribution of the studied mothers according to their socio-demographic characteristics

Mother's socio demographic characteristics	No (n.288)	%
Age		
≥ 20	14	4.9
20 <25	74	25.6
25 <30	119	41.3
30 <35	46	16.0
≥35	35	12.2
Mean±SD	27.22±5.02	
Min-Max	18-40 year	
Educational level		
Illiterate	35	12.2
Read and write	2	0.7
Primary education	11	3.8
Preparatory education	43	14.9
Secondary education	130	45.1
Institute	13	4.5
University	54	18.8
Marital status		
Married	273	94.8
Widow	6	2.1
Divorced	9	3.1
Occupation		
Working	47	16.3
Housewife	241	83.7
Family monthly income		
Enough	176	61.1
Not enough	82	28.5
Enough and saving	30	10.4
Residence		
Rural	144	50.0
Urban	144	50.0
Type of family		
Nuclear	145	50.3
Extended	143	49.7

With respect to mothers' knowledge about first aid measures for different types of domestic accidents table 2 revealed that more than half (54.2%) of the reported answers when asking mothers about first aid for first degree of burn were apply ointment\cream for burns. On the other hand the same table indicated that vast majority (94.1%) of the mothers reported take child immediately to the hospital in case of second- and third-degree of burns.

Concerning to first aid for electric shock the table showed that nearly two thirds (65.6%) of the answers were turn off the source of electricity. In relation to first aid for drug and chemical poisoning the same table cleared that the majority of the responses were take child immediately to the hospital. Pertaining to first aid for choking and suffocation in less than one years old children the table indicated that more than half (59.4%) of responses were "give five back blows, with the heel of hand.

Table (2): Distribution of the studied mothers according to their knowledge regarding first aid measures for different types of domestic accidents

Mother's knowledge regarding first aid for each type of accidents	No. (n.288)	%
Knowledge of first aid for first degree burn #		
Apply ointment\cream for burns	156	54.2
Wash the burn with tap water for10 minute	143	49.7
Gently remove any jewelry, watches, belts, or constricting clothing from the burned area	34	11.8
Cover burn with clean dressing, take child to hospital if burn extended to large area	21	7.3
Other like (flour, oil, butter, salt)	11	3.8
Knowledge of first aid for second- and third-degree burn #		
Take child immediately to the hospital	271	94.1
Gently remove any jewelry, watches, belts, or constricting clothing from the burned area	38	13.2
Cover burned area with sterile dressing	24	8.3
Cover child and warming him	16	5.6
Other like (honey, toothpaste, Egg)	12	4.2
Knowledge of first aid for Electric shock #		
Turn off the source of electricity	189	65.6
Don't touch the child	100	34.7
Take child immediately to hospital	46	16.0
Check pulse and respiration\perform CPR	1	0.3
Other like(push child away quickly without disconnection)	1	0.3
Knowledge of first aid for Drug poisoning #		
Take child immediately to the hospital	257	89.2
Keep samples of any vomited material and give to the hospital	24	8.3
Reassure, put child into comfortable position	7	2.4
Start CPR if pulse, breathing are absent	4	1.4
Other like (water with salt, enforced vomiting, egg with milk)	3	1.0
Knowledge of first aid for Chemical poisoning #		
Take child immediately to the hospital	243	84.4
Give child cold milk or water	74	25.7
Keep samples of any vomited material and give to hospital know type, quantity of poison substance.	19	6.6
Start CPR if pulse, breathing are absent	1	0.3
Knowledge of first aid for Choking among less than one year old child #		
Give up to five back blows, with the heel of your hand.	171	59.4
Lay child face down along forearm, with his head low, and support his back and head.	112	38.9
Go immediately to hospital if obstruction not cleared	116	40.3
turn the infant onto his back and give chest compressions using two fingers Check the infant's mouth remove any obvious obstructions with fingertips.	26	9.0
Other like(give mouth breath into child anterior fontanel, hang a chocking child upside down by the feet)	21	7.3

More than one answer

Figure1 showed distribution of mothers' total knowledge scores It was evident that approximately two fifths (41%) of the mothers had fair knowledge furthermore, more than one quarter (29.1%) of them had good knowledge. On the other hand 29.9% of the mothers had poor knowledge regarding first aid measures when their children confronting domestic accidents.

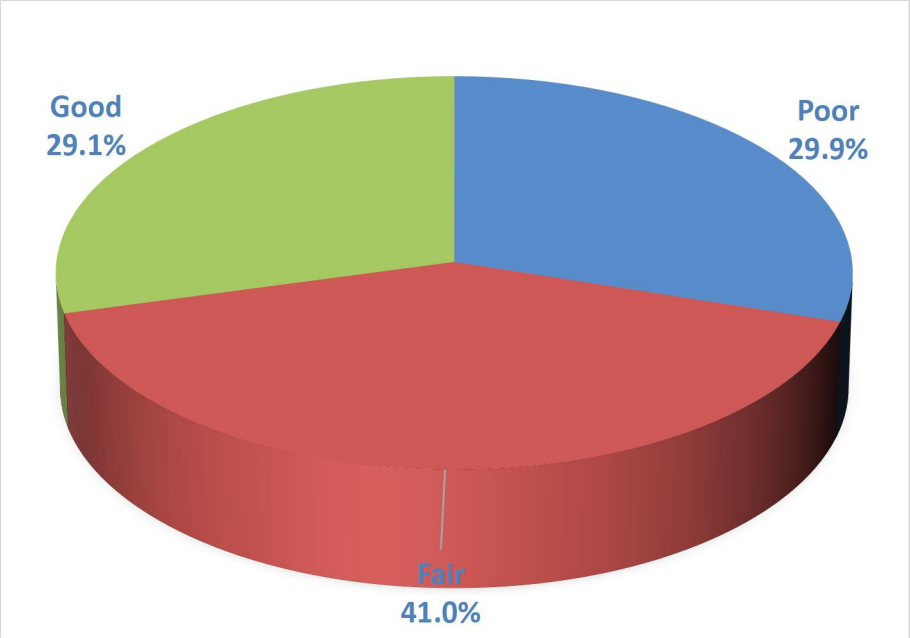

Figure (1): Distribution of mothers' total knowledge scores

Table 3 displayed distribution of mothers' reported practices about first aid at the time of domestic accident. It was evident from the table that the highest percent (100%, 90%, 85%, 70%, 54.5%) of the studied mothers gave in correct action related to drowning as (apply pressure on child abdomen or apply perfume),foreign body aspiration as :give child water to drink, give bread to eat or just pat on child chest),poisoning as: inducing vomiting with salt water, fracture as : move the site of affected part or go to bone fixer in village and burns as: using honey, tooth paste, flour, egg, butter ,salt respectively.

Meanwhile the highest percent of studied mothers gave in complete correct action related to hitting by object, cut/wounds, falling, chocking and suffocation (50%, 36.4%, 35.8%, 33.3%) respectively. In addition, the same table showed that the highest percent (30.8%) of mothers gave complete correct action related to electrical burn.

Table (3): Distribution of mother's reported practices about first aid measures at the time of domestic accidents

Mother's reported practices	No.	%
Cut/wounds	**n.77**	
Incorrect action **like using coffee powder, tea powder**	38	49.4
Incomplete correct action	28	36.4
Complete correct action	11	14.2
Falling	**n.134**	
Incorrect action **like carrying child quickly and move his body part incorrectly**	69	51.5
Incomplete correct action	48	35.8
Complete correct action	17	12.7
Fracture	**n.20**	
Incorrect action **like move the site of affected part and go to bone fixer in village**	14	70.0
Incomplete correct action	2	10.0
Complete correct action	4	20.0
Burns	**n.77**	
Incorrect action **like ,using honey, tooth paste ,flour, egg, butter ,salt**	42	54.5
Incomplete correct action	21	27.3
Complete correct action	14	18.2
Drowning	**n.3**	
Incorrect action **like apply pressure on child abdomen, apply perfume**	3	100.0
Incomplete correct action	0	0.0
Complete correct action	0	0.0
Poisoning	**n.20**	
Incorrect action **like inducing vomiting with salt water**	17	85.0
Incomplete correct action	2	10.0
Complete correct action	1	5.0
Chocking/suffocation	**n.21**	
Incorrect action **like using perfume, give mouth breath into child anterior fontanel**	11	52.4
Incomplete correct action	7	33.3
Complete correct action	3	14.3
Foreign body aspiration	**n.10**	
Incorrect action **like give child water to drink ,give bread to eat, just pat on child chest**	9	90.0
Incomplete correct action	1	10.0
Complete correct action	0	0.0
Electric burn	**n.13**	
Incorrect action like touch child without switch off home electricity	5	38.4
Incomplete correct action	4	30.8
Complete correct action	4	30.8
Clash or Hitting by object	**n.10**	
Incorrect action like **not performing any first aid** or using coin to press	5	50.0
Incomplete correct action	5	50.0
Complete correct action	0	0.0

Figure 2 showed distribution of total score of mother's reported practices of first aid measures at the time of domestic accident. It was indicated that slightly more than half (51.7%) of the mothers had poor first aid measures in the time of domestic accidents in addition 31.6% of the mothers had fair first aid measures on the other hand only (16.7%) of the mothers had good first practices at the time of domestic accidents**.**

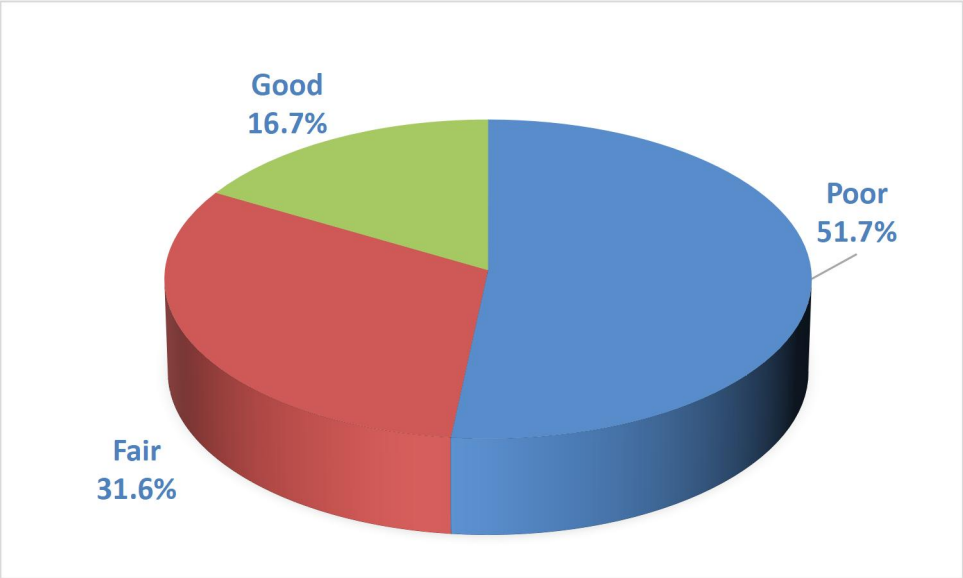

Figure (2): Total score of mothers' reported practices of first aid measures (n.288)

Figure 3 depicted total score of the mother's reported safety practices for prevention of domestic accidents. It was evident that approximately two fifths (41.3%) of the mothers had fair safety practices for prevention of domestic accidents, furthermore, 26.1% of them had good practices whilst nearly one third (32.6%) of them had poor safety practices at their home.

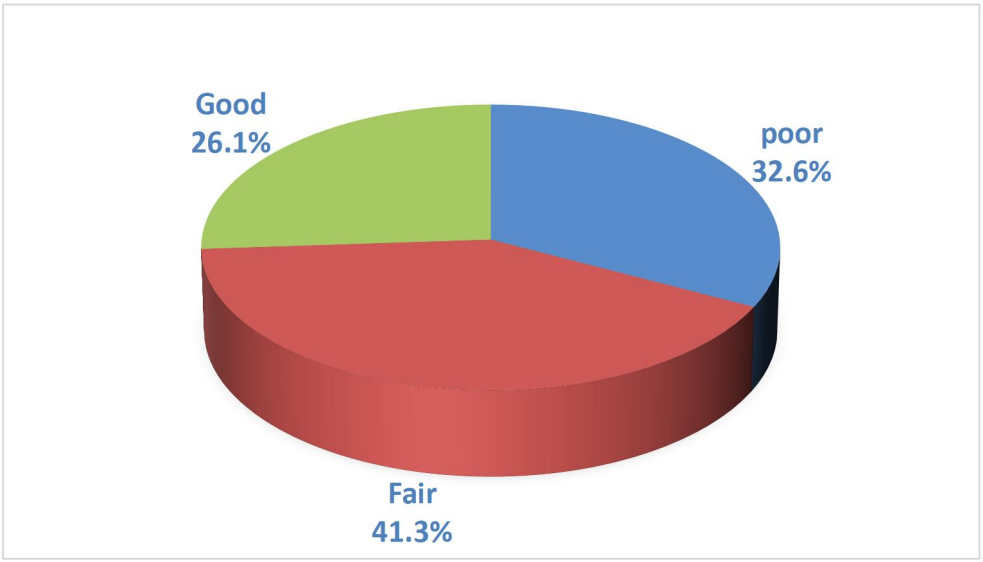

Figure (3): Total score of mothers' reported safety practices for prevention of domestic accidents (n.288)

Table 4 illustrated the relation between mothers' level of knowledge and their reported first aid and safety Practices for prevention of domestic accidents. The table showed that there was highly significance relation between mothers' level of knowledge and their first aid measures (P<0.001*). It was evident that more than two thirds (68.8%) of the mothers that had good first aid practices had good knowledge.

Similarly, there was highly significance relation between the mothers' level of knowledge and their safety practices at home (X2: 21.714 P: <0.001*). It was apparent that more than two fifths (44%) of the mothers had good safety practices that had good knowledge.

Table (4): Relation between mothers' level of knowledge and their reported first aid and safety practices for prevention of domestic accidents

Variables	Mother's knowledge								Test of significance
	Poor		Fair		Good		Total		
	No.	%	No.	%	No.	%	No.	%	
Mother's First aid practices at home									
Poor	55	36.9	68	45.6	26	17.4	149	51.7	FET:56.423 P:<0.001*
Fair	31	34.1	35	38.5	25	27.5	91	31.6	
Good	0	0.0	15	31.2	33	68.8	48	16.7	
Mother's safety practices at home									
Poor	39	41.5	39	41.5	16	17.0	94	32.6	X^2: 21.714 P:<0.001*
Fair	37	31.1	47	39.5	35	29.4	119	41.3	
Good	10	13.3	32	42.7	33	44.0	75	26.1	

X^2: chi square test FET: Fisher Exact Test
P: p value of test of significance *Significant at p ≤0.05

IV. Discussion

Young children are vulnerable to injuries due to their innate desire to explore the world. Hence putting them at risk so minor injuries are inevitable by providing a safe home environment and close supervision. Furthermore, appropriate first aid measures with minor injuries may be sufficient to avoid a medical consultation **(Al Rumhi et al., 2020)**.

In spit the importance of first aid especially among mothers having young children. The current study showed that approximately one third of the mothers didn't previously heard about first aid, this result goes in line with the study done in India by **Sonavane et al. (2016)** As well as, the same result was proven in Egypt by **Eldosoky (2012)** who found that 26.6% of the studied mothers hadn't heard about first aid. Otherwise the current study is contradicted with study done in Madinah City, Saudi Arabia by **Al-Johani et al. (2018)** who found that, majority of the parents(97.2%) have heard about first aid. This difference between studies could be attributed to the difference in socio demographic and socio economic characteristics of the studied samples.

The present study revealed that for the mothers who had heard about first aid the mass media and relatives or neighbors were the main sources of their knowledge. This finding goes in line with the studies conducted by **Faqumala and Mukminin (2016)** and **Suguna (2015)** in India who reported that majority of the mothers learned about first aid for childhood accidents from mass media and the people close to them, such as a relative or neighbor. These results enforced the role of mass media in transferring information about first aid especially that the internet became accessible to the general population. Besides that, the norms and nature of the Egyptian mothers to ask relatives and neighbors for help and gain information.

The quick and appropriate first aid approach in childhood domestic accidents can be life-saving and improves the child chance of a good outcome. With respect to the total score of mothers knowledge, the current study showed that approximately two fifths (41%) of the mothers had fair knowledge furthermore, more than one quarter (29.2%) of them had good knowledge. On the other hand 29.9% of the mothers had poor knowledge .This result goes in line with the study conducted by **Suguna (2015)** in India who found that 48.7% of the studied mothers had average knowledge on first aid of domestic accidents. On the contrary, a study conducted by **Harere et al. (2017)** In Saudi Arabia to assess the parents and caregivers' knowledge toward first aid for common emergency conditions in children indicated that majority of studied sample had inadequate knowledge. The variance may be attributed to differences in socio-demographic characteristics of studied samples.

With respect to first aid practices for burns the present study showed that the highest frequencies of mothers action (54.5%) were incorrect as using honey, toothpaste, flour, salts, egg, butter, oil. These result were compatible with a various studies for example, a study conducted by **Chornopyshchuk et al. (2021)**, **Phuyal et al. (2020)**, as well as **Qtait et al. (2019)** who reported that most of participants using traditional practices for first aid. Otherwise, the current study contradicted with the study done by **Yilmaz and Andsoy (2020)** in Turkey which indicated that the majority of participants used modern practices. The variance may be attributed to the disparity in beliefs, traditions, values and culture of the societies.

Pertaining to first aid practices for electrical hazard the present study showed that, 38.4% of the mothers performed incorrect action such as pull the

child away from electricity without any disconnection. These findings were consistent with the study done by **Al-Bshri and Jahan (2021)** in Saudi Arabia. Otherwise this result disagreed with the study done by **Nour et al. (2018)** who found that mother knowledge and practices regarding electric injuries are generally lacking. This might be explained by inability of mothers to control the situation leading to electrical accidents due to circumstances beyond their control and the pressure of modern day society that dramatically cuts down time spent with children in an average household.

Accidental poisoning is one of the most serious health problems. Regarding to mothers reported first aid practices for chemical or drug poisoning the study cleared that the highest frequencies of mothers' actions were incorrect as inducing vomiting with salty water. This finding comes in line with the result of **Sonavane et al. (2016)** in India who found that approximately half of mothers didn't know what is the proper first aid for poisoning, furthermore 37.9% of them stated that vomiting was to be induced with salt water, for any case of poisoning. As well as these results were confirmed by **Mohammed et al. (2013)** in Egypt. From the researcher point of view these finding may be attributed to culture of the societies, values that have become an integral part of societies shape the attitudes, behaviours and beliefs which, in turn, may shape their health behaviours.

In relation to first aid practices for chocking the current study showed that more than half of the mothers performed in correct action as gave mouth breathing to child anterior fontanel and hang a chocking child upside down by the feet or smelling affected child perfume. These results were similarly to the finding of **Al-Turkistani (2014)** who reported that the most of participants were totally unaware of pediatric cardiopulmonary resuscitation (CPR).Besides, Concerning first aid practices for foreign body aspiration the current study showed that the majority of the mothers perform in correct action as gave child water to drink, gave child bread to eat in an attempt to push down foreign body or attempting manual removal of the object. These results were harmonious with the study done by **Habeeb and Alarfaj (2020)**. However, different picture was reported by the study done by **Midani et al. (2019)** in UAE who indicated that 80.6%of the participants knew how to deal with choking. This difference may be attributed to variation in educational back ground and attendance of first aid training courses.

With respect to first aid practices for drowning it was observed that all mothers that their children exposed to drowning performed in correct actions such as applying pressure on the child's abdomen .These results agreeable with a study conducted by **Habeeb and Alarfaj (2020)** in Saudi Arabia. In the researcher view, this result attributed to that the mothers didn't have adequate self-efficiency to deal with emergency incidence.

In relation to first aid practices for fracture it was found that more than two thirds of the mothers performed in correct actions as going to bone fixer. Similar findings were reported by **Al-Tameemi and Khudair (2016)**, **Mohammed et al. (2013)** in Egypt and **Sargın et al. (2013)** in Turkey who elaborated that 90.6% of the participants preferred to visit bone-fixers at first. Regarding practices of mothers in case of falling the present study cleared that that highest frequencies of mothers' actions were in correct as carrying child quickly without avoiding neck and back movement. These finding were consistent with the study done in Iraq (2016) [(29)] which indicated that the participants had poor practices regarding immobilization of child. Otherwise these results are disagree with **Ganfure et al. (2018)** who found that almost all respondents avoided head and neck movement and kept child body straight. The variance may be attributed to differences in socio demographic characteristics, the effect of tradition, beliefs and previous attending of first aid training courses.

Pertaining to first aid practices when child hitting by object at home the current study cleared that half of mothers perform incorrect actions as rubbing contusion area with warm water or pressed and rubbing with a coin. This result was compatible with the study done by **Yilmaz and Andsoy (2020)Y** in Turkey Who found that in closed wounds and contusions, the participants of the study used not only the modern first aid practices of visiting a health care provider, cold application, but also traditional remedies, including rubbing with warm water, soap and using pressed olive seed.

As regards first aid practices among studied mothers for cuts/wounds the present study showed that nearly half of the mothers performed in correct action as using coffee powder or tea powder to stop bleeding. These results are agreement of the study conducted by **Kamel et al. (2014)** who found that the mothers used traditional remedies in addition to the modern methods. However, different picture was reported in the study done by **Yilmaz and Andsoy (2020)** in Turkey as 93.3% of the participants used the modern first aid applications, including visiting a health center, using a tampon or washing and bandaging. The differences may be attributed to the variation in culture of the societies.

Child safety remains an important concern of parents nowadays **(Mohammed et al., 2019)**. The present study showed that studied children had exposed to at least1-4 times domestic accidents at the previous year despite approximately two

fifths(41.3%) of the mothers claiming to have taken moderate safety Precautions in addition slightly more than one quarter of them claiming to have taken sufficient safety precautions to reduce the risk of the domestic accidents. This result is in agreement with the study conducted by **Alkhamis and Abdulkader (2020)** in Riyadh, Saudi Arabia who reported that however most of mothers reported taken safety precautions at home for prevention of child injuries, more than half of studied children exposed to domestic accidents. The finding of the current study indicated that the injury prevention strategies used at home were grossly inadequate and therefore could not protect these children from repeated unintentional domestic accidents regardless of mothers' knowledge and attitude as these injuries occur if mothers take incorrect precautions or overestimate their ability to take adequate precautions.

There are different proven methods that could minimize the occurrence and the severity of childhood home injuries and nearly 90% of cases could be prevented by public education and environmental modification. Therefore, it is important to improve mother's knowledge and practice continuously to be cared of their children. Consequently, community health nurse involvement in certain areas as homes is necessary to identify household risks, reduce environmental hazards, achieve public policies and apply program through abroad range of intervention as parental education **(Whelan, 2015)**.

Conclusion

- Based on the findings of the present study, it could be concluded that the reported first aid practices among studied mothers weren't satisfactory particularly regarding drowning, foreign body aspiration. However, they had fair knowledge regarding first aid measures.

Recommendations:-

- Continuous health education programs and training courses at Primary Health Care Centres regarding domestic safety for children and first aid measures for the mothers to improve their awareness and practices.

- Incorporation of first‐aid issues in the school curriculum

References

Abbassinia, M., Barati, M., & Afshari, M. (2019): Effectiveness of interventions in the prevention of home injuries among children under 5 years of age: A systematic review. Archives of Trauma Research, 8(4), 190-197.

Al-Bshri, S. A., & Jahan, S. (2021): Prevalence of home related injuries among children under 5 years old and practice of mothers toward first aid in Buraidah, Qassim. Journal of family medicine and primary care, 10(3), 1234-1240.

Al-Johani, A. A. S., Sabor, S., & Aldubai, S. A. R. (2018): Knowledge and practice of first aid among parents attending Primary Health Care Centers in Madinah City, Saudi Arabia, A Cross Sectional Study. Journal of family medicine and primary care, 7(2), 380-388.

Al-Tameemi, H. M., & Khudair, F. W. (2016): Knowledge and attitudes of primary school teachers toward first aid in Al-Najaf Al-Ashraf City. International Journal of Current Research and Academic, 4(12), 64-79.

Al-Turkistani, H. K. (2014): Awareness and knowledge of pediatric cardio- pulmonary resuscitation in the community of Al-Khobar city. Journal of family & community medicine, 21(2), 125-129.

Al Rumhi, A., Al Awisi, H., Al Buwaiqi, M., & Al Rabaani, S. (2020): Home Accidents among Children: A Retrospective Study at a Tertiary Care Center in Oman. Oman medical journal, 35(1), e85.

Alkhamis, K. N., & Abdulkader, R. S. (2020): Assessment of unintentional childhood injuries and associated factors in the pediatric clinics of a tertiary care hospital in Riyadh, Saudi Arabia. Journal of family & community medicine, 27(3), 168-177.

Altundağ, S., & Körükçü, Ö. (2022): Risk Reduction Education to Prevent Preschool Children's Home Accidents: A Pilot Study. Disaster Medicine and Public Health Preparedness, 1-7.

Auerbach, P. S. (2015): *Medicine for the Outdoors E-Book: The Essential Guide to First Aid and Medical Emergencies*. Philadelphia: Elsevier Health Sciences.

Chornopyshchuk, R., Nagaichuk, V., Nazarchuk, O., Sidorenko, S., & Urvan, O. (2021): Common mistakes in the choice of topical agents for emergency care of burns: Experimental study. Acta facultatis medicae Naissensis, 38(4), 334-342.

El-Zanaty, F., & Way, A. (2015): *Egypt Demographic and Health Survey 2014*. Cairo, Egypt: Ministry of Health and Population and ICF International.

Eldosoky, R. S. (2012): Home-related injuries among children: knowledge, attitudes and practice about first aid among rural mothers.

Eastern Mediterranean Health Journal, 18, 1021-1027.

Faqumala, A. D., & Mukminin, A. (2016): Parentsâ€™ Understanding About First Aid In Early Childhood In Terms Of The Level Of Parentsâ€™ Education In Kelurahan Piyanggang, Kecamatan Sumowono, Kabupaten Semarang. BELIA: Early Childhood Education Papers, 5(2), 60-65.

Ganfure, G., Ameya, G., Tamirat, A., Lencha, B., & Bikila, D. (2018): First aid knowledge, attitude, practice, and associated factors among kindergarten teachers of Lideta sub-city Addis Ababa, Ethiopia. PloS one, 13(3), e0194263.

Habeeb, K. A., & Alarfaj, G. (2020): Saudi parents awareness regarding burn, choking, and drowning first aid in children. Journal of family medicine and primary care, 9(3), 1370-1375.

Harere, R., Makhdoom, Y., Sonbul, H., & Habadi, M. (2017): Knowledge regarding first aid of childhood emergency conditions among caregivers attending primary health care centers. Imperial Journal of Interdisciplinary Research, 3(11), 616-626.

Jassem, A. F., Al-Doori, N., & Abd-Redha, A. (2019): Mothers' Knowledge Towards Prevention of Early Childhood Home-Injuries at Babylon Province, Iraq. Indian Journal of Public Health Research & Development, 10(2), 834-842.

Kamel, E. G., Emam, S. A., & Mohammed, E. S. (2014): Knowledge, attitude and practice among rural mothers about Home-related injuries in a rural area in El-Minia Governorate, Egypt. Science Journal of Public Health, 2(6), 653-659.

Kassebaum, N., Kyu, H. H., Zoeckler, L., Olsen, H. E., Thomas, K., Pinho, C. . . . & Ghiwot, T. T. (2017): Child and adolescent health from 1990 to 2015: findings from the global burden of diseases, injuries, and risk factors 2015 study. JAMA pediatrics, 171(6), 573-592.

Midani, O., Tillawi, T., Saqer, A., Hammami, M. B., Taifour, H., & Mohammad, H. (2019): Knowledge and attitude toward first aid: A cross-sectional study in the United Arab Emirates. Avicenna journal of medicine, 9(01), 1-7.

Mohammed, A. R., Mohammed, N., & Byoumi, M. (2013): Supportive strategies regarding accidents prevention for mothers of children under five years old. Journal of Biology, Agriculture and Healthcare, 3, 1-11.

Mohammed, H. O., Wassif, G. O., Hakim, S. A., & Moustafa, M. E. (2019): Frequency of unintentional home injuries in children under five years and its relation with environmental risk factors, Cairo, Egypt. The Egyptian Journal of Community Medicine, 37(3), 93-102.

Nour, M., Alharbi, W., Alawneh, S., Al Ansari, A., Al–Luqmani, A. D., Alharbi, A. F. . . . & Al–Malki, A. H. (2018): Knowledge, attitude and practices of mothers towards home accident among children, Makkah, KSA. European Journal of Phamaceuticalans Medical Research, 5(2), 139-147.

Peden, M., Oyegbite, K., Ozanne-Smith, J., Rivara, F., & Bartolomeos, K. (2008): *World Report on Child Injury Prevention*. Geneva: WHO.

Pellegrino, J. L., Charlton, N. P., Carlson, J. N., Flores, G. E., Goolsby, C. A., Hoover, A. V. . . . & Swain, J. M. (2020): 2020 American Heart Association and American Red Cross Focused Update for First Aid. Circulation, 142(17), e287-e303.

Phelan, K. J., Khoury, J., Xu, Y., Liddy, S., Hornung, R., & Lanphear, B. P. (2011): A Randomized Controlled Trial of Home Injury Hazard Reduction: The HOME Injury Study. Archives of Pediatrics & Adolescent Medicine, 165(4), 339-345.

Phuyal, K., Ogada, E. A., Bendell, R., Price, P. E., & Potokar, T. (2020): Burns in Nepal: a participatory, community survey of burn cases and knowledge, attitudes and practices to burn care and prevention in three rural municipalities. BMJ Open, 10(2), e033071.

Qtait, M., Alekel, K., & Asfour, A. (2019): First aid: level of knowledge of relatives in emergencies in burn. International Journal of Biomedical and Clinical Sciences, 4(1), 24-28.

Sargın, S., Aslan, A., Konya, M., Atik, A., & Meriç, G. (2013): Bonesetter choice of Turkish society in musculoskeletal injuries and the affecting factors. Journal of Clinical and Experimental Investigations, 4(4), 477-482.

Sonavane, R. S., Kasthuri, A., & Kiran, D. (2016): A study to evaluate the effectiveness of first aid training on mothers among under 15 years children in a rural area of South India. International Journal of Community Medicine and Public Health, 3(3), 603-606.

Suguna, T. (2015): Womens awareness about domestic accidents among toddlers.

International Journal of Development Research, 5(3), 3729-3733.

Üçüncü, M., Üçüncü, M. Z., & Toprak, D. (2019): The knowledge, attitude and behavior of mothers with children aged 0-6 years on home accidents and preventive measures. Journal of Istanbul Faculty of Medicine-Istanbul Tip Fakultesi Dergisi, 82(4), 219-228.

Whelan, A. (2015): The health visitor's role in reducing unintentional injury in the under-5s. Journal of Health Visiting, 3(5), 276-279.

World Health Organization [WHO]. (2015): *World Health Statistics*. Geneva: WHO.

World Health Organization [WHO]. (2017): *Enhancing the role of community health nursing for universal health coverage*. Geneva: WHO.

Yilmaz, E., & Andsoy, I. I. (2020): Traditional and modern practices in wounds and burn injuries in a population of North Western Turkey. Burns, 46(6), 1436-1443.