Mothers' Preventive Measures for Preschool Children Home Accidents

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Abstract

Background: Home accidents are becoming more widely acknowledged as a public health concern that can be prevented with more knowledge, safe behaviors, and home environment enhancements**. Aim:** to assess the mothers' preventive measures for preschool children home accidents. **Design:** A descriptive study. **Setting**: The study was carried out in the pediatric outpatient clinic at Fayoum General Hospital. **Sample:** A Convenience sample of 150 mothers who have children aged from 3-6 years. **Tool:** Two tools were used for data collection, **1st tool** was an interviewing questionnaire. consists of **3 parts: part 1,** mothers' demographic data, **part 2,** mothers' knowledge about home accidents and its prevention, **part 3,** mothers' practice about home accidents and its prevention. **2nd tool:** Likert scale (1932) to assess mothers' attitudes about home accidents and its prevention. **Results:** The findings revealed that (32%) of all studied samples reported satisfactory knowledge regarding home accidents prevention, (39.3%) of all studied samples had acceptable practice regarding home accidents prevention, while (34.7%) of mothers hold a positive attitude towards home accidents prevention. **Conclusion:** A significant positive correlation is observed between knowledge and practice scores, and a strong positive correlation is found between attitude and practice scores. **Recommendation:** Enhancing mothers' awareness about safety measures and first aid to ensure a safe home environment**.**

Keywords: Home accidents, Preschool children, Preventive measures.

Introduction

Accidents are a global public health concern that can be caused by a variety of risk factors, including the socioeconomic status of the parents, age, education, immigration status, and sociodemographic traits, all of which have been associated with a higher risk of unintentional injuries, their severity, and accidents at home. Since children spend the majority of their time at home, many of these injuries take place there (**Alkhamis & Abdulkader 2020).**

Accidents are among the top five leading causes of death in developing countries each year. In both developed and developing nations, the World Health Organization estimates that home accidents affect the lives of 830,000 children worldwide each year. risks are not limited to roads but are also prevalent within the home environment. Mortality due to home-related injuries often exceeds that caused by other diseases, as these accidents typically occur unexpectedly and without prior planning, often resulting in serious harm or death **(Brahaman.,etal 2020).**

Home accidents account for 12% of deaths globally, About ten million children worldwide suffer injuries from home accidents each year, with a 10% mortality rate, the prevalence of home accidents in Iran is 44%; the prevalence among children is estimated to be 25%; among the children who survive these accidents, some may need permanent care; and disabilities resulting from accidents not only endanger the child's health but also impact their education and other aspects of life, placing a significant financial burden on the healthcare system **(Jalilian, Shahbazi, Chenary, Mirzaei & Kakaei, 2024)**

The types of home accidents most commonly affecting preschool children at home include falls, burns, poisoning, choking, suffocation, wounds, and drowning. These incidents often occur in seemingly safe and familiar spaces, such as the kitchen, bathroom, and living room. Falls, for example, are the most frequent type of injury, and they account for a large portion of emergency room visits among young children. Despite the commonness of these incidents, many parents do not have an adequate understanding of the risks or fail to implement preventative measures effectively. This gap between awareness and action contributes significantly to the persistent nature of the problem **(Aysu, Kadan, Aral &Gürsoy, 2023).**

The preschool stage (ages 3-6) is characterized by slower physical growth and accelerated psychosocial and cognitive development. Children

become more curious and improve their communication skills, often asking "why" to support their learning. They begin to expand their environment through play, which helps them learn and build relationships. This stage also involves emotional exploration, with children alternating between stubbornness and playfulness, while developing independence and social interaction skills **(Mansur& Farlina, 2023).**

Mothers, especially those with limited resources or education, may struggle to implement preventive measures. In many cases, mothers might not have access to information or resources that would help them childproof their homes adequately. Socioeconomic factors such as low income can limit the ability to purchase safety products like childproof locks, gates, and other safety devices. Additionally, cultural attitudes and norms may influence mothers' perceptions of what constitutes a safe home environment, which could lead to underestimating the dangers posed by certain household items or practices **(Altundağ & Körükçü, 2023).**

Even though child safety is becoming more and more important, many mothers may still find it difficult to reconcile keeping their kids safe and creating an atmosphere that lets them explore and learn. A child's growth can also be hampered by overprotection, which limits their autonomy, while improper safety precautions can lead to preventable mishaps. The likelihood of mishaps is further increased by the fact that some mothers may not realize how simple it is for preschoolers to obtain hazardous materials or items, such as cleaning supplies, prescription drugs, or sharp cooking implements. In this sense, helping mothers to practice efficient preventative measures requires both education and helpful advice (**Nsaif & Al-Joborae, 2022).**

The Community health nurses play a key role in preventing and managing home accidents in children through the three levels of prevention. At the primary level, they work to reduce risk factors by educating families about common household hazards and promoting safer home environments, such as poor housing infrastructure, the absence of safety barriers in cooking or washing areas, the use of paraffin stoves, and unsafe storage of hazardous substances. The secondary level involves early detection and prompt intervention, where nurses provide first aid training and support caregivers during home visits. At the tertiary level, they assist in rehabilitation efforts, guide families through the recovery process, and coordinate healthcare services, particularly when the child suffers from long-term

consequences or disability (**Shaban, Sharaa & Nashwan, 2023).**

Significance of the study

Home accidents have become a significant public health issue worldwide, contributing to both morbidity and mortality. In Egypt, home accidents, particularly among children under the age of six, have emerged as a leading public health concern, with disabilities in this age group being the primary consequence While accidents can occur in various environments, studies show that approximately 40% of fatalities and half of all accidents happen within or around the home, with a higher incidence among boys**. (Mahmoud & Hassan, 2021).**

Accidents are a global community health concern because they result in morbidity and mortality. Although they can occur in a variety of contexts, 40% of deaths and 50% of injuries occur in and around the house, especially among boys. One of the most important objectives for advancing children's health and wellness is preventing injuries at home. preschoolers are especially vulnerable to accidents due to their natural interest in their surroundings and their inability to comprehend the dangers of their actions,. Establishing safety limits, getting First Aid training, keeping a tight eye on things, and creating a safe environment can all help reduce risks **(Al Anazi, Mureh, Al Sulimani, Al Arfaj, Habeeb, & Kofi, 2022).**

Aim of the study:

This study aims to assess mothers' preventive measures for preschool children home accidents through:

- Assessing mothers' level of knowledge regarding preventive measures for home accidents.
- Assessing mothers' level of practices regarding preventive measures for home accidents.
- Assessing mothers' level of attitude regarding preventive measures for home accidents.

Research Questions:

1- What is the level of mothers' knowledge regarding preventive measures for home accidents?

2- What is the level of mothers' practice regarding preventive measures for home accidents?

3 - What is the level of mothers' attitude regarding preventive measures for home accidents?

4- Is there a relation between mothers' knowledge and socio-demographic characteristics?

5- Is there a relation between mothers' practice and socio-demographic characteristics?

6- Is there a relation between mothers' attitude and socio-demographic characteristics?

Subjects and Method

The subjects and methods for this study were portrayed under the following four main items:

I- Technical design.
II- Operational design**.**
III- Administrative design**.**
IV- Statistical design.

I- Technical design:

It includes research design, setting of the study, subjects of the study, and tools for data collection.

Research design: A descriptive research design was utilized in this study.

Setting: The research study was conducted in the pediatric outpatient clinic at Fayoum General Hospital, in Fayoum governorate, Egypt, which is affiliated with the Ministry of Health. The setting was selected due to the high prevalence of clients.

Subjects of the study:

Sampling

A Convenience sample of 150 mothers in the pediatric outpatient clinic at Fayoum General Hospital.

Sample size:

The sample was composed of about 150 mothers. According to this power analysis equation, the sample size was calculated using **(Steven K. 2012)**

$$n=\frac{N\times p(1-p)}{\left[\left[N-1\times\left(d^2\div z^2\right)\right]+p(1-p)\right]}$$

n: sample

z: The standard score corresponding to the significance level 0.95 is equal to 1.96

d: The error rate is equal to 0.05

p: Property availability and neutral ratio = 0.50

$$\mathbf{n}=\frac{248\times0.50(1-0.50)}{(248-1\times(0.05)^2\div(1.96)^2)+0.50(1-0.50)}=150$$

Type of sampling:

A Conventional sampling technique was used in the study.

Inclusion criteria:

Mothers who have children experienced home accidents aged between 3-6 years.

Exclusive criteria:

Mothers will be excluded from the study if they have children less than 3 years or more than 6 years.

Tools of Data Collection:

The data collection tools used to achieve the study were two tools: -

Tool 1: A questionnaire

It was written in plain Arabic, adjusted by the researcher, and adapted from **Afefey (2015).** It involved three parts:

Part I: Socio-demographic data:

To assess socio-demographic data for mothers, it included data about mothers' age, marital status, educational level, working conditions, economic status, etc.

Part II: Assessment of mothers' knowledge about home accidents and its prevention.

It was composed of **20 questions**, including (4 questions) about the characteristics of the child's motor development, child, child's physical development, and child's mental development at pre-school age, and (16 questions) about the meaning, causes, types, and prevention of home accidents.

Scoring system:

For knowledge using (Correct response was scored =1 and incorrect response =0), the total score of knowledge was 20 points. A score of less than 60% (<12) was unsatisfactory, and a score equal to or more than 60% (12- 20) was satisfactory.

Part III: Assessment of mothers' practice about home accidents and its prevention.

It was composed of **120 questions**, Includes (55 questions) about mothers' preventive measures for medication, Insecticides, rat poison, fertilizer, Household cleaners and Food poisoning, (8 questions) about preventive measures for wound, (22 questions) about preventive measures for burn, (21 questions) about preventive measures for falls and (14 questions) about preventive measures For small objects and suffocation.

Scoring system:

For practice using (done =1, not done =0), the total score of reported practice was 120 points. Score of less than 60% (<72) was not done, and scores equal to or more than 60% (72-120) were done.

Tool 2: An attitude rating scale was constructed. It was composed of **28 questions** Includes (6 questions) about mothers' attitude toward children's Risk of home Accidents, (5 questions) about falls, (3 questions) about burns, (3 questions) about suffocation, (2 questions) about choking, (2 questions) about drowning, and (7 questions) about poisoning.

Scoring system:

For attitude using (2 agree, Sometimes=1, I do not agree=0), the total score of attitude was 54 points. Scores of less than 60% (<34) were negative, and scores equal to or more than 60% (34-56) were positive.

II-Operational design:

Includes preparatory phase, Content validity and reliability, Pilot study, and Field work.

A) The preparatory Phase:

It includes reading relevant literature and learning about the study's different facets theoretically through books, papers, scientific journals, and the internet in order to gain an extensive knowledge of the study.

b) Pilot study:

A pilot study was conducted on 10% (15 mothers) to test the tools' viability, applicability, and clarity. The study sample included a number of pilot studies.

c) Content validity:

Five experts from Fayoum University's faculty of nursing reviewed the data collection tool and tested its validity: two from pediatric nursing and three from community health nursing, and the required adjustments took place.

d) Content reliability:

The tools' reliability was examined to ascertain how the questionnaire items connected to one another.

Items	Alpha Cronbach	f	P-value
knowledge	0.751	35.179	<0.001*
Practice	0.826	28.230	<0.001*
Attitude	0.874	21.411	<0.001*

Alpha Cronbach Reliability Analysis of the Used Tool

This table shows reliability in knowledge, practices, and attitude when alpha Cronbach was >0.5. The reliability was scaled as follows: <0-0.25 weak reliability, 0.25-0.75 moderate reliability, 0.75-< 1 strong reliability, and 1 is optimum. The reliability for the total questionnaire was 0.82.

Field work:

- Verbal approval was obtained to conduct the study after explaining the aim of the study.
- Collection of data started from the beginning of October 2023 and ended in January 2024.
- The researcher visited the selected setting in the morning shifts 2 days per week on Sunday and Wednesday, from 9 Am to 12 pm.
- Interviews were conducted with 150 mothers in an outpatient clinic who had children aged three to six.
- The time needed from each mother to complete the interview sheet was 30-35 minutes.
- It took longer to complete the structured interviewing questionnaire sheet for participants who were illiterate.

III. Administrative Design:

Permission from the dean of the Faculty of Nursing, Fayoum University, A written letter was acquired from the director of Fayoum General Hospital to conduct the study.

Ethical considerations:

The research approval was obtained from Fayoum University Supreme Committee for Scientific Research, ethical before starting the study. The researcher gained the trust and confidence of the mothers who were part of the study by explaining the purpose of the study to them. The researcher guaranteed the confidentiality and anonymity of the subjects' information. It was explained to the mothers that they can opt out of the study at any moment and that they could choose not to participate.

IV. Statistical Design:

The statistical presentation and analysis of the current study was carried out using the mean, standard deviation, chi-square test to compare between groups in qualitative data, and linear correlation coefficient to detect correlation between two quantitative variables in one group by (IBM SPSS Statistics for Windows, Version 20.0. Armonk, NY: IBM Corp.).

Significant level:

>0.05 Non significant, <0.05* significant and <0.001* High significant.

Results:

Table (1) : illustrates the highest percentages observed in the age group of 31-40 years, 46.7%, those with high school education, 40.0%, an equal split between housewives and employed mothers, 50.0% each, married social status of 90.7%. Concerning the residence of mothers come from urban areas 64.0% while 36.0% come from rural areas. sufficient family income 65.3%, a nuclear family type 64.0%, and households with a crowding rate of 1 to 2 individuals per room 66.0%.

Table (2): shows that the highest percentages are in children aged from 5 to 6 years, 50.7%, male gender, 57.3%, and having 1 to 2 brothers, 56.0%.

Figure (1): Indicated that only 32% of the studied sample reported satisfactory knowledge about child safety measures.

Figure (2) shows that 39.3% of mothers have implemented safety practices, while 60.7% have not, indicating a significant portion of caregivers may need further education or support in implementing child safety measures.

Figure (3) indicates that 34.7% of mothers hold a positive attitude towards child safety measures, while 65.3% have a negative attitude, suggesting a significant portion may require additional education or support to promote a proactive approach to child safety.

Table (3): presents the distribution of total knowledge among mothers based on various socio-demographic characteristics. findings include a significant association between mothers' age and knowledge level ($\chi 2 = 19.178$, $p < 0.001$*), with mothers aged 20-30 years having the highest satisfactory knowledge percentage, 56.8%. Moreover, there is a substantial association between education and knowledge level ($\chi 2 = 46.691$, $p < 0.001$*), with university-educated mothers showing the highest percentage of satisfactory knowledge, 68.0%. Additionally, there is a significant association between mothers' occupation and knowledge level ($\chi 2 = 17.647$, $p < 0.001$*), with

working mothers having a higher percentage of satisfactory knowledge, 48.0%, compared to housewives, 16.0%. Furthermore, a notable association is observed between residence and knowledge level ($\chi 2$ = 31.047, p < 0.001*), with urban mothers having a higher percentage of satisfactory knowledge, 47.9%, compared to rural mothers, 3.7%.

Table (4): showed that there was a statistically significant relation between mothers' practice level and socio-demographic characteristics (p= p < 0.001). Key findings include a significant association between mothers' age and practice level ($\chi 2$ = 15.474, p < 0.001*), with mothers aged 20-30 years showing the highest percentage of completed practices, 63.6%. Additionally, a substantial association is observed between education and practice level ($\chi 2$ = 37.912, p < 0.001*), with university-educated mothers having the highest percentage of completed practices, 72.0%. The table reveals a significant association between mothers' occupation and practice level ($\chi 2$ = 20.367, p < 0.001*), where working mothers have a higher percentage of completed practices, 57.3%, compared to housewives, 21.3%. Furthermore, a notable association is found between residence and practice level ($\chi 2$ = 24.589, p < 0.001*), with urban mothers having a higher percentage of completed practices, 54.2%, compared to rural mothers, 13.0%. No significant associations are observed between social status, family income, and practice level.

Table (5): indicated that there was a significant relation between mothers' attitude and their socio-demographic characteristics(p < 0.001*). Notable findings include a significant association between mothers' age and attitude ($\chi 2$ = 21.924, p < 0.001*), with mothers aged less than 20 years having the highest percentage of positive attitudes, 66.7%. A significant association is also observed between education and attitude ($\chi 2$ = 38.972, p < 0.001*), with university-educated mothers having the highest percentage of positive attitudes, 68.0%. The table reveals a significant association between mothers' occupation and attitude ($\chi 2$ = 16.954, p < 0.001*), where working mothers have a higher percentage of positive attitudes, 50.7% compared to housewives, 18.7%. Furthermore, a significant association is found between residence and attitude ($\chi 2$ = 24.048, p < 0.001*), with urban mothers having a higher percentage of positive attitudes, 49.0%, compared to rural mothers, 9.3%. But no significant associations are observed between social status, family income, and attitude (p= 0.776, 0.774).

Table (6): displays correlation coefficients and p-values for the relationships between knowledge, practice, and attitude scores. **A significant positive correlation is observed between knowledge and practice scores** ($r = 0.427$, $p < 0.001^*$), indicating that individuals with higher knowledge scores tend to exhibit better practices related to the studied subject. Similarly, **a strong positive correlation is found between attitude and practice scores** ($r = 0.425$, $p < 0.001^*$), suggesting that individuals with positive attitudes are more likely to adopt better practices. These findings emphasize the interconnectedness of knowledge, attitude, and practice in the context of the studied subject and underscore the importance of considering all three aspects when designing interventions or educational programs.

Table (1): Socio-demographic characteristics of Mothers Participating in the Study (N=150)

Items	N	%
Mother's age		
Less than 20 years	6	4.0
From 20 – 30 years	44	29.3
From 31-40 years	70	46.7
More than 40 years	30	20.0
Mean ±SD	32.47±5.62	
Level of education		
Illiteracy	12	8.0
Read and write	12	8.0
High school	60	40.0
University	50	33.3
Basic education	16	10.7
Mother's occupation		
Housewife	75	50.0
Works	75	50.0
Social status		
Married	136	90.7
Divorced	10	6.7
Widow	4	2.7
Residence		
Rural	54	36.0
Urban	96	64.0
Family income		
Insufficient	34	22.7
Sufficient	98	65.3
Sufficient and can be saved	18	12.0
Family type		
the nucleus of the husband, wife, and children	96	64.0
Extended "family home"	50	33.3
A family with only one parent	4	2.7
number of family members		

2 to 3	32	21.3
3 to 5	82	54.7
5 to 7	26	17.3
More than 7	10	6.7
Number of rooms in the house		
One room	4	2.7
Two rooms	32	21.3
Three rooms	70	46.7
Four rooms	44	29.3
Crowding rate		
From 1 to 2	99	66.0
From 2 to 4	46	30.7
More than 5	5	3.3

Table (2): Demographic Characteristics of Children in the Study Population (N=150)

Items	N	%
Child's age		
From 3 to 4 years	74	49.3
From 5 to 6 years	76	50.7
Mean±SD	4.42±1.5	
Child's gender		
Male	86	57.3
Female	64	42.7
Number of brothers		
From 1 to 2	84	56.0
From 3 to 4	58	38.7
5 and more	8	5.3

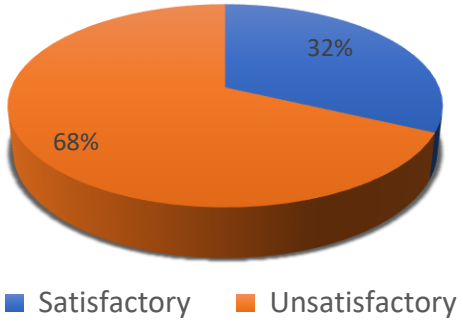

Figure (1): Knowledge of Study Sample About Child Safety Measures Among Mothers (N=150)

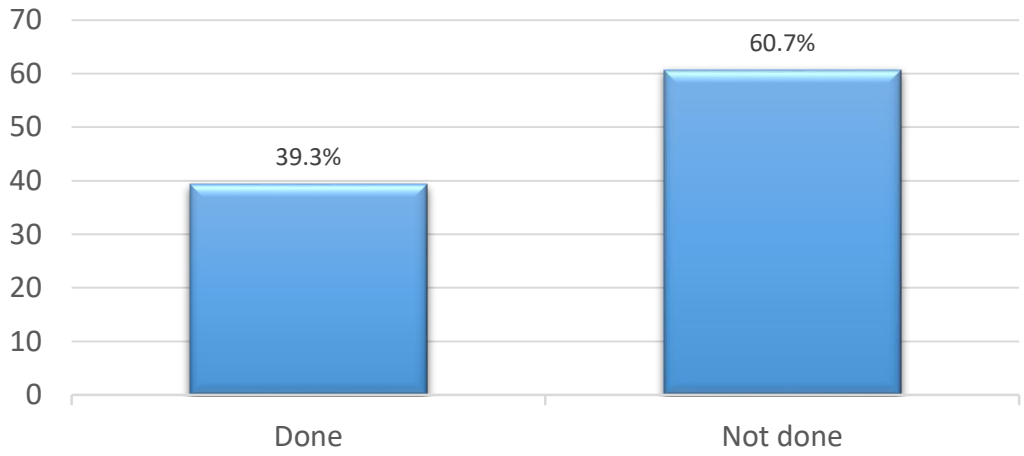

Figure (2): Mothers' Practice in Child Safety Measures(N=150)

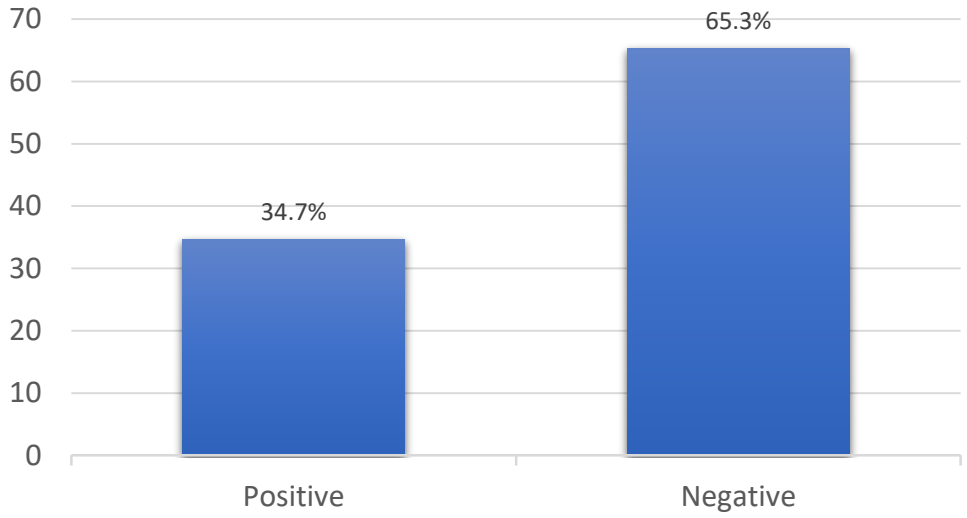

Figure (3): Mothers' Attitude Towards Child Safety Measures(N=150)

Table (3): Relation Between Mothers' Knowledge Based on Socio-Demographic Characteristics (N=150)

Items	Total knowledge					
	Satisfactory		Unsatisfactory		Chi-square	
	N	%	N	%	X^2	P-value
Mother's age						
Less than 20 years	2	33.3	4	66.7	19.178	<0.001*
From 20 - 30 years	25	56.8	19	43.2		
From 31-40 years	17	24.3	53	75.7		
More than 40 years	4	13.3	26	86.7		
Level of education						
Illiteracy	0	0.0	12	100.0	46.691	<0.001*
Read and write	2	16.7	10	83.3		
Basic education	4	25.0	12	75.0		
High school	8	13.3	52	86.7		
University	34	68.0	16	32.0		
Mother's occupation						
housewife	12	16.0	63	84.0	17.647	<0.001*
works	36	48.0	39	52.0		
Social status						
Married	43	31.6	93	68.4	0.623	0.732
divorced	3	30.0	7	70.0		
Widow	2	50.0	2	50.0		

Residence						
Rural	2	3.7	52	96.3	31.047	<0.001*
Urban	46	47.9	50	52.1		
Family income						
Insufficient	11	32.4	23	67.6	0.481	0.786
Sufficient	30	30.6	68	69.4		
Sufficient and can be saved	7	38.9	11	61.1		

Table (4): **Relation of Total Practice Based on Socio-Demographic Characteristics (N=150)**

Items	Total practice					
	Done		Not done		Chi-square	
	N	%	N	%	X^2	P-value
Mother's age						
Less than 20 years	2	33.3	4	66.7	15.474	<0.001*
From 20 - 30 years	28	63.6	16	36.4		
From 31-40 years	20	28.6	50	71.4		
More than 40 years	9	30.0	21	70.0		
Level of education						
Illiteracy	0	0.0	12	100.0	37.912	<0.001*
Read and write	2	16.7	10	83.3		
Basic education	6	37.5	10	62.5		
High school	15	25.0	45	75.0		
University	36	72.0	14	28.0		
Mother's occupation						
Housewife	16	21.3	59	78.7	20.367	<0.001*
Works	43	57.3	32	42.7		
Social status						
Married	54	39.7	82	60.3	0.564	0.754
Divorced	3	30.0	7	70.0		
Widow	2	50.0	2	50.0		
Residence						
Rural	7	13.0	47	87.0	24.589	<0.001*
Urban	52	54.2	44	45.8		
Family income						
Insufficient	12	35.3	22	64.7	0.438	0.803
Sufficient	39	39.8	59	60.2		
Sufficient and can be saved	8	44.4	10	55.6		

Table (5): Relation of Total attitude Based on Socio-Demographic Characteristics(N=150)

Items	Total attitude					
	Positive		Negative		Chi-square	
	N	%	N	%	X^2	P-value
Mother's age						
Less than 20 years	4	66.7	2	33.3	21.924	<0.001*
From 20 - 30 years	26	59.1	18	40.9		
From 31-40 years	17	24.3	53	75.7		
More than 40 years	5	16.7	25	83.3		
Level of education						
Illiteracy	0	0.0	12	100.0	38.972	<0.001*
Read and write	2	16.7	10	83.3		
Basic education	4	25.0	12	75.0		
High school	12	20.0	48	80.0		
University	34	68.0	16	32.0		
Mother's occupation						
Housewife	14	18.7	61	81.3	16.954	<0.001*
Works	38	50.7	37	49.3		
Social status						
Married	47	34.6	89	65.4	0.512	0.774
Divorced	3	30.0	7	70.0		
Widow	2	50.0	2	50.0		
Residence						
Rural	5	9.3	49	90.7	24.048	<0.001*
Urban	47	49.0	49	51.0		
Family income						
Insufficient	13	38.2	21	61.8	0.508	0.776
Sufficient	32	32.7	66	67.3		
Sufficient and can be saved	7	38.9	11	61.1		

Table (6): Correlation Analysis between Knowledge, Practice, and Attitude Scores

	Knowledge score		Practice score	
	r	P-value	r	P-value
Practice score	0.427	<0.001*		
Attitude score	0.784	<0.001*	0.425	<0.001*

Discussion

Part I:Assessment of Mothers' Socio-demographic Characteristics

As regards Mothers' socio- demographic characteristics the present study shows that the mean age of the studied mothers was 32.47±5.62 **(Table 1)**. This finding agreed with**(Çetintaş, Akgün, Kostak , Cumur, 2022)** who studied The safety measures against home accidents of mothers of 0-6 age group children and related factors found that the mean age of the mothers included in the study was 30.13 ± 5.60 years.

Regards educational level, above two quarters of the study sample received a high school education **(Table 1)**. This finding agreed with **(Doğan & Öztürk 2021)** who studied the prevention of non-traumatic home accidents among children aged 0-6 year. They found that two quarters of the study sample had received a high school education.

Regarding the mother's occupation, half of the study sample had an equal split between housewives and employed mothers **(Table 1)**. This result agreed with **(Gouda, Sorour, & Abdelaziz, 2022),** who studied knowledge and practice of mothers regarding first aid of home injuries among preschool children, reporting that half of the study sample were working.

Regarding types of families, the current study found that about two-thirds of the study sample live in nuclear families **(Table 1)**. This result disagreed with **(Nageh, El-Raouf, Samar, El-Mouty Samia., 2020)** who studied mothers 'knowledge and subjective practice toward most common domestic injuries among under-five children. Nearly less than two quarter of the studied sample had lived in a nuclear family. From the researcher's point of view, it may be due to the sociocultural characteristics of the region where the research was conducted.

Regarding the child's age, this study shows that the mean age of the children was 4.42 ± 1.5, with more than half in boys **(Table 2)**. This result agrees with**(**

Heidari, Naseri Akhavan, Rafiee, ., Rajaei& Pouyanfar 2022) who study the epidemiological pattern of childhood injuries and accidents among Iranian children and report that the mean age is 2.5 ± 1.5 years, with a higher rate more than half observed in boys. From the researcher's point of view, this may be due to boys being more physically active, curious, and liking hard games, and taking more risks than girls.

According to question (1), As regards to Knowledge of Study Sample About Child preventive Measures Among Mothers this study found that about one third of the study sample had satisfactory knowledge regarding accident prevention **(figure 1)** this result disagreed with (**Divya Deepa, Malagi, & Yatoo 2024)** who studied Child Safety and Accident Prevention: A Study on Mothers' Knowledge and Practices in Bengaluru Communities report that majority of mothers have a satisfactory understanding of child safety and accident prevention. From the researcher's point of view, 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.

According to question (2), Regarding Mothers' reported practice Towards Child preventive Measures the study found that above half of the study sample don't have good practice towards child preventive measures **(Figure 2).** This result disagreed with (**Kadke**, **Chunduri& Kudpi 2020)** who studied A study on home safety practices to prevent childhood injuries among mothers, reporting that the majority of the study sample had a good level of practice in injury prevention. From the researcher's point of view, this may be due to a lack of access to proper education and training.

According to question (3), Regarding mothers' attitude toward child Safety Measures, the study found that nearly two-quarters of the study sample have a positive attitude toward child preventive measures **(Figure 3).** This result agreed with (**Al-Hajj, El Haj, Chaaya, Sharara Chami& Mehmood, 2023)** who studied Child injuries in Lebanon: assessing mothers' injury prevention knowledge attitude and practices. report that two quarters of the study sample have a good attitude toward the prevention of home accidents. From the researcher's point of view, this could be a sign of a lack of understanding or a poor internalization of the concepts of preventing accidents at home among certain mothers.

Statistical relations according to research questions regarding to Relation between Mothers' Knowledge Based on Socio-Demographic Characteristics (Research question 4).

According to question (4), Regarding the relationship between mothers' socio-demographic data and their knowledge, a statistically significant relationship was found between the mother's knowledge and her age, education, occupation, and place of residence; however, there was no statistically significant relationship between family income and social status. These findings were in line with those of **(John, 2021)** who study Knowledge, attitude and practices of mothers towards home accident among children, and discovered a statistically significant relationship between the mother's knowledge and her age, education, occupation, and place of residence, but not between family income. From the researcher's point of view, the findings imply that factors other than employment status may be linked to accidents; working mothers leave their children under the supervision of others, and caregivers' skills and attentiveness may be a more important issue.

As regards the Relation of Total Practice Based on socio-demographic characteristics (Research question no 5).

According to question (5), Regarding the relationship between mother's socio demographic data and their practice, a statistically significant relationship was found between the mother's practice and her age, education, occupation, and place of residence while no statistically relation between family income this finding agreed with(**Jaber Qasim Jaber, & Hashem, 2021)** who study Knowledge, Attitude And Practices Of Mothers Towards Home Accidents Among Children In Holy Kerbala City. Reported a statistically significant relationship between the mother's practice and her age, education, occupation, and place of residence while disagreed to relation between practice and family income. From the researcher's point of view, this may be due to other factors, such as educational level, which have a greater impact on practices than income, as the degree of knowledge increases with higher education.

As regards to Relation of Total attitude based on Socio-Demographic Characteristics (Research question no 6).

According to question (6), Regarding the relation between mother's socio demographic data and their attitude, a statistically significant relation was found between the mother's attitude and her age, education, occupation and place of residence this study agreed with **(Anwar, Mostafa, & Elareed 2021)**who studied Maternal knowledge and attitude about home related injuries in children under five years reported that there is a positive relation between mother's attitude and her age, education, occupation, and place of residence while

disagreed in relation between attitude and family income. From the researcher's point of view, mothers' attitudes regarding home accident prevention are significantly influenced by sociodemographic characteristics like age, education, and occupation. On the other hand, variables like marital status and family income may not have the expected direct impact on mothers' attitudes.

Regards to Correlation Analysis between Knowledge, Practice, and Attitude Scores

this study found that A significant positive correlation is observed between knowledge and practice scores disagreed with **(Wang, Klunklin & Jintrawet 2021)** who studied Knowledge, attitude, and practices of unintentional home injury prevention among parents of preschoolers in the People's Republic of China report that no relationship between parent's knowledge and practice on unintentional home injury prevention among preschoolers while there is a strong positive correlation is found between attitude and practice scores agreed with (**Wang,etal.,2021)** who report that there is positive correlation between parent's attitude and practice on unintentional home injury prevention among preschoolers this may be due to the level of knowledge leading to higher level of practice.

Conclusion:

Based on the current study's findings and responses to the research questions, it was determined that nearly above one quarter of the study sample had satisfactory knowledge regarding home accidents prevention, less than two quarter of the study sample practiced acceptable child safety measures, and that nearly two quarter of the study sample had positive attitude toward home accident prevention.

Recommendation:

The study recommended the following:

1. Health education initiatives to enhance mothers' awareness, behavior, and mindset on accident prevention, first aid, and home accidents.
2. Educating mothers on first aid and safety precautions to provide a secure home environment.
3. Additional research is necessary to evaluate the impact of implementing training programs on parents and children in order to lower the frequency and seriousness of home accidents.

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