

Knowledge and Practice of Mothers Regarding First aids of Home Injuries Among Preschool Children

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Abstract

Background: Mother's knowledge and practice related to safety measures taken at home environment to prevent home injuries are important in reducing incidence of injuries as many adverse consequences of injuries can be averted if mothers know what actions to be taken.

Aim of the study: The aim of the present study was to assess knowledge and practice of mother's regarding home injuries among preschool children.

Subjects and method: **Research design:** A cross-sectional descriptive design was used to conduct the present study.

Study setting: The present study was conducted at two maternal and child health centers in Zagazig city.

Study subjects: Two hundred mothers attended at maternal and child health centers which were randomly selected from health Management available in Zagazig city.

Tools of data collections: An Interview questionnaire sheet which contain three parts. Part1: Socio- demographic data, part 2: Mother's knowledge about first aids of home injuries, and part 3: reported practice about actions taken in relation to different types of home accident.

Results: The study results revealed that 90.5% of mothers had unsatisfactory knowledge about home injuries. Regarding best fitting multiple linear regression models for the knowledge score, mother age, mother education and father education were statistically significant independent positive predictors of knowledge score.

Conversely, the previous injury was a statistically significant independent negative predictor of knowledge score. Also, 83.0 % of mothers had inadequate practice related to first aid of injuries among preschool children.

Furthermore, child age and knowledge score were statistically significant independent positive predictors of practice score. Conversely, mother housewife, father age and previous accident were statistically significant independent negative predictors of practice score.

Conclusion: The study concluded that positive correlation between mothers' knowledge and practice scores regarding home injuries among preschool children.

Recommendations: It is recommended that health education programs for mothers of preschool children about prevention and management of home injuries.

Key words: Home injuries, Mothers knowledge, Practice, and preschool children.

Introduction

Childhood injuries are very serious health problems that need immediate attention. These injuries are the major killer of children causing 950,000 deaths each year. Children are more prone to such unintentional injuries because of their developing bodies, yet not aware of themselves, poor safety measures of children and their unusual curiosity⁽¹⁾.

There are so many factors that had a direct or indirect effect on children injuries. These include child age, gender and behavior, maternal education, family socio-economic

status, number and home environment⁽²⁾.

There are different proven methods that could minimize the occurrence and the severity of childhood home injuries. Nearly 90% of cases could be prevented by public education and environmental modification. Therefore, it is important to improve mothers' knowledge and practice continuously to be cared of their children⁽³⁾.

Mother's knowledge and practice related to safety measures taken at home environment to prevent home

injuries are important in reducing incidence of injuries as many adverse consequences of injuries can be averted if mothers know what actions to be taken ⁽⁴⁾.

First aid is the initial care that someone gives to a child who is injured or suddenly become sick, it aimed to keep the child condition from becoming worse. The quick response and appropriate first aid approach in childhood emergencies can be life-saving and improves the child chance of a good outcome. Parents and caregivers are the first contacts to children in case of any injury or emergency. Therefore, it's crucial for all parents and caregivers to be trained proper first aid skills ⁽⁵⁾.

Consequently, community health nurse involvement in certain areas as homes is necessary to identify household risks, reduce environmental hazards, achieve public policies and apply community programs through a broad range of interventions as parental education ⁽⁶⁾.

Significance of the study:

The cost of childhood injuries is enormous, represents a large economic burden on society. Additionally, there is a large gap between lower- Middle income countries (LMIC) and high income countries (HIC) in the burden of injury ⁽⁷⁾. There are approximately 18000 injury-related deaths at home each year. Furthermore, there are an average of 21 million medical visits made each year due to home injuries ⁽⁸⁾. Accordingly, as child lacks of capability to protect himself/herself from accidents, it is responsibility of adults to provide safe environment, to take protective measure and to audit safety of living spaces of children. Parents' knowledge and practice about first aid measures is especially important in prevention of deaths due to home injuries and improving patient outcome in general ⁽⁹⁾.

Aim of the study:

The aim of the present study was to assess knowledge and practice of mother's regarding first aids of

home injuries among preschool children.

Research Questions:

1. What are the types and frequency of home injures among preschool children?
2. What is the mother's knowledge and practice regarding first aids of home injuries among preschool children?

Subjects and method:

Research design:

Across sectional descriptive research design was used to accomplish the aim of this study.

Study setting:

The present study was conducted at two maternal and child health centers. These centers were Elnahal health office and Abo-Hussein health office, which were randomly selected from health Management centers available in Zagazig city. .

Study subjects:

Study sample involved 200 mothers attended maternal and child health centers. These were selected according the following criteria;

- Have preschool child.
- Agree to participate.
- Free from physical and mental illness.

Sample size calculation:

Assuming that total number of mothers attending health unit during 6 months are 6966 , percent of children got injures was 33.6%, at confidence level 95%, and power of test 80%, the sample was calculated to be 200 women. Calculated by Epi info version 6.02 (Mohammed et al.) ⁽⁹⁾

Tools of data collection:

Tool I:

An Interview questionnaire sheet was developed by the researcher in the light of the current related literature and composed of the following parts:

Part 1: Socio-demographic data involved two sections

Child data: Child's age, gender and child's rank.

Family data: Parents' age, educational level, occupation, family size, family income.

Part 2: Mother's knowledge about first aids of home injuries:

This section includes information about the meaning of first aid, first aid equipment's, source of information, support person, causes, prevention of home injuries, signs of fractures, Causes of asphyxia, signs of Poisoning and signs of asphyxia.

Scoring system:

Knowledge: For the knowledge items, a correct response was scored 1 and the incorrect zero. For each area of knowledge and for the total questionnaire the scores of the items were summed-up and the total divided by the number of the items, giving mean scores. These scores were converted into percent scores. Knowledge was considered satisfactory if the percent score was 50% or more and unsatisfactory if less than 50%.

Part 3: Mothers reported practice about actions taken in relation to different types of home accident:

Wound, epistaxis, foreign body in nose, foreign body in ears, eye injury, burn, poisoning, asphyxia, drowning, and animal bite.

Scoring system:

Practice: The items reported to be done correctly were scored "1" and the items not done or incorrectly done were scored "0". For each area, the scores of the items were summed-up and the total divided by the number of the items, giving a mean score for the part. These scores were converted into percent scores. The practice was considered adequate if the percent score was 60% or more, and inadequate if less than 60%.

Content validity & Reliability:

It ascertained by group of three experts in medical and nursing fields reviewed the content of the tool for clarity, relevance, comprehensiveness and understandability.

The reliability of this tool was tested through measuring its internal consistency. Cronbacks Alpha was 80.

Pilot study:

The pilot study was carried out on a sample of 20 mothers representing 10% of the calculated total sample size. The aim was to test clarity of the questions, the format of the questionnaire, comprehensiveness of the items and to estimate the exact time required for filling the questionnaire sheet. The mothers involved in the pilot study were excluded from the main study sample, since there was no modification in the tool of data collection.

Fieldwork

The researcher started by review of the literature to gain more in-depth information about the subject, and to be able to design appropriate data collection tool. Then, development of the tool was done based on the review of literature. The developed tool was reviewed by experts for validation.

When the tool was finalized after pilot testing, the actual field work started. After obtaining official permissions, the researcher prepared schedule for field visits to maternal child and health units in order to collect the data. The mothers were approached by the researcher who explained to them the aim of the study, and reassured them that the information obtained is strictly confidential, and would not be used for any purposes other than research. The questionnaire sheet was filled by the researcher.

The researcher visited the maternal child and health units two times per week for collection of data, from 9:00 AM to 1:00 PM. The days of week were selected according to the work schedule of the unit. The total period of field work was from first of October 2021 to the end of November 2022.

Administrative and ethical considerations:

The official permission was obtained from the Health Management

Directorate at zagazig city based on letters issued from the postgraduates department at Faculty of Nursing, Zagazig University explaining the aim and procedures of the study. Then, the directors of maternal and child health of two centers, the researcher gave the director of each maternal and child health copy of the tool and formal letters.

Firstly, the research protocol was approved by the Research Ethics Committee (REC) in the Faculty of Nursing, Zagazig University. The agreement of participants was taken from mothers after full explanation of the aim of the study. Participants were given the opportunity to refuse participation and they were notified that they could withdraw at any time of the data collection interviews; also they were assured that the information would be confidential and used for the research purpose only. The researcher assures maintaining anonymity and confidentiality of the mother's data.

Statistical analysis:

Descriptive statistics were used to present data as frequencies and percentages for qualitative, and means, standard deviations and medians for quantitative variables. Multiple linear regression analysis was used to identify the independent predictors of mothers' scores of knowledge and practice. The level of statistical significance was set at p-value <0.05. All analyses were performed on SPSS 20.0 statistical package.

Results:

Table 1 the result reveals that 57.5% of children in the study sample were at age group 4 to less than 5 years, with mean \pm SD 4.3 ± 1.1 . As for gender, 60% of them were males. Regarding the birth order 37% of them were the first child.

Table 2 demonstrates that 56% of mothers of the study sample were at age group 30 to less than 40 years, with mean \pm SD 31.2 ± 5.1 . Regarding mothers' education 32% of them were

illiterate and at basic education. Half of them (50%) were workers and 89.5% were married. Additionally, 35.5 % of fathers were at age group <35 years. With mean \pm SD 35.8 ± 5.6 . Also, regarding father education, 36.5 % of them were illiterate and at basic education. About Two thirds of them (67.5%) were employees. As well, the family income was sufficient among 68% of them.

Table 3 reveals that types and frequency of exposure to injuries among children in the study sample. The table clarifies that 91.0% of children are exposed to accidents. Regarding types of accidents the highest accident was wound (30.8%), followed by burn (19.8%), then fractures (18.7%). Where the lowest types in descending order were as follows, falling (7.1%), animal bite (4.4%) and drowning (3.3%).

Table 4 illustrates that 90.5% of mothers had unsatisfactory knowledge about injuries. Additionally, 67.5 % and 57.5 % had correct knowledge regarding causes of injuries and preventive measures during injuries. While only 3.0 %, 4.5 % and 6.5 % of them had correct knowledge about poisoning, causes of asphyxia and support persons.

Table 5 shows that 83.0 % of mothers had inadequate practice related to first aid of injuries. Only 4.0%, 4.0%, 5.0%, 11.5% and 13.5% respectively had adequate practice regarding management of animal bite, asphyxia, burn, wound and fracture.

Table 6 demonstrates best fitting multiple linear regression models for the knowledge score. As shown in this table, mother age, mother education and father education were statistically significant independent positive predictors of knowledge score. Conversely, the previous accident was a statistically significant independent negative predictor of knowledge score. The model explains 0.33% of the

variation in this score as the value of r-square indicates.

Table 7 represents best fitting multiple linear regression models for the practice score. As shown in this table, child age and knowledge score were statistically significant independent positive predictors of practice score. Conversely, mother housewife, father age and previous accident were statistically significant independent negative predictors of practice score. The model explains 0.42% of the variation in this score as the value of r-square indicates.

Discussion:

Concerning answering of the research question regarding the types of home injuries among preschool children, the current study results revealed that the highest percentage of injuries were open wounds followed by burns, then fractures. These might be attributed to characteristics of preschool children which include curiosity and innate desire to explore their world. Additionally, home injuries might occurred due to leave sharp objects such as bottles in the reach of children, and leave hot cooking utensils accessible to children.

In the same vein, a study conducted by Mohammed et al. ⁽¹⁰⁾ in Egypt, indicated that the most common reported accidents were an open wound followed by fractures and burns.

On the contrary, El-Sabely et al. ⁽¹¹⁾ carried out a study in Sharkia Governorate and clarified that the highest percentage of home injuries were fall, animal bite then poisoning. This difference might be due to different setting and sample size.

Viewing the frequency of home injuries among preschool children, the current study results revealed that most of the study samples are exposed to home injuries. This might be due to poor safety measures at homes and lack of awareness. Similarly, Sebaie et al. ⁽¹²⁾ found that the majority of children (80.4%) exposed to home accidents.

Concerning answering of the research question regarding first aids of the knowledge of mothers about home injuries, the current study results revealed that majority of mothers had unsatisfactory knowledge about home injuries. This might be due to the main source of information was from neighbor/friends and social media.

On the same way, study done by Al-Hajj et al. ⁽¹³⁾ in Lebanon indicating that mothers had poor knowledge about different aspects of home accidents.

In relation to mother's knowledge about prevention of home injuries, study results revealed that more than one half of mothers had satisfactory knowledge about the preventive measures of common types of home injuries. The explanation of this phenomenon might be due to mothers significantly maintaining the safety precautions at home and putting dangerous things out of reach of children.

Moreover, Hatamabadi et al. ⁽¹⁴⁾ executed a study in Iran found that 75% of participants had good knowledge on preventive measures.

On the other hand, a study operated by Lafta et al. ⁽¹⁵⁾ in Baghdad city showed that mothers' knowledge about prevention of the home accidents studied was clearly deficient.

Considering best fitting multiple linear regression models for knowledge score, study results revealed that mother age was statistically significant independent positive predictor of knowledge score. From the researcher point of view this might be due to increasing age of mothers correlated with life experience and awareness regarding home injuries.

Similarly, Anwar et al. ⁽¹⁶⁾ carried out study in Beni-Suef showing that mother age was significant predictor of knowledge score. On the contrary, Al-Johani et al. ⁽¹³⁾ done study in EL-Madinah City revealed that parent's ages were not significantly associated with their knowledge.

On the same way, mothers' and fathers' education were statistically significant positive predictors of knowledge score. These results might be attributed to education level plays an important role in improving knowledge about home injuries. The higher the level of education the higher the level of knowledge. This finding was on the same way with Olutayo⁽¹⁸⁾ in Nigeria also found positive association between mother's education and knowledge.

Amazingly, the history of previous accident was a statistically significant independent negative predictor of knowledge score regarding home accident. This might be due to the history of previous accident increase the level of anxiety among mothers which reflected on their level of knowledge.

On the other hand, a study conducted by Lafta et al.⁽¹⁵⁾ showed that mothers whose children had previously been involved in a domestic accident were more knowledgeable than mothers whose children had not suffered from any accidents.

In relation to mothers reported practice about first aid and remedy of accidents, study results pointed that the majority of mothers had inadequate practice. This might be due to close relation between knowledge and practice. Because mothers knowledge was unsatisfactory the level of practice was inadequate.

Similarly, Al-Hajj et al.⁽¹³⁾ found more than half of mothers had poor practice about home accidents. On the other hand, a study conducted by Nor and Sutan⁽¹⁹⁾ in Malaysia declared the majority of mothers practiced good in practice of home injuries. This might be due to socioeconomic level and cultural aspects of the study setting.

Regarding predictors of practice score, study results revealed that child age was a statistically significant positive predictor of practice score. This might be due to by the time, the mothers get more experiences in home injuries first aid.

Additionally, mothers' knowledge was positive predictor of practice score. This might be due to more knowledge is reflected in proper and adequate practice.

In the same context, Thenmozhi et al.⁽²⁰⁾ done a study in India found that a statistically significant positive correlation between level of knowledge and level of practice of domestic accidents. This finding was in agreement with Sebaie et al.⁽¹²⁾ in Helwan District indicated that positive relation between knowledge score and reported practice. As well, these results are in agreement with those of Silva et al.⁽²¹⁾ conducted a study in Brazil which showed highly statistically significant positive relation between knowledge and practice.

Inversely, Wang et al.⁽²²⁾ done study in China, found that parent Knowledge did not correlate with practice of unintentional home injuries among preschoolers.

Mother house wife was statistically significant independent negative predictor of reported practice regarding home accidents. This might be due to mothers had less experiences in controlling and first aid of home accidents. On the other hand, study conducted by Al-Bshri & Jahan⁽²³⁾ in Qassim found that no statistically significant relation between mother house wives and reported practice.

Additionally, father age was statistically significant independent negative predictor of practice score. This might be due to father busy, had tasks out of home and ignore the first aid of home injuries. On the other hand, Nour et al.⁽⁴⁾ conducted a study in Makkah that revealed no statistically significant between fathers age and practice scores regarding home accidents.

The existing study results demonstrated that Previous accident was statistically significant independent negative predictor of

practice score. This might be due lack of information about accident prevention reflected on reported practice. On the contrary, a study conducted by Nour et al. ⁽⁴⁾ found mothers who had a history of child injury at home had significant good knowledge and proper practice.

In conclusion, parents' knowledge and practice about first aid of home injuries are especially important, as many adverse consequences of injuries can be averted if parents know what actions to take.

Conclusion:

According to the findings of the present study, the following concluded:

The study showed that majority of mothers had unsatisfactory knowledge about first aids of home injuries. Additionally, most of mothers had inadequate practice regarding controlling and management of home

injuries. As well, knowledge score was statistically significant independent positive predictor of practice score.

Recommendations:

On the basis of the current study findings the following recommendations are suggested:

- Health education programs for mothers of preschool children about prevention and management of home injuries.
- Training program for mothers of preschool children about first aid of home injuries.
- Further researches should be developed to confirm study results.
- Replicate the study on a larger scale to permit for generalization of results.

Table 1: Demographic characteristics of children in the study sample (n=200)

Demographic characteristics of children	Frequency	Percent
Age:		
4-<5	115	57.5
5-<6	85	42.5
Range	2.0-6.0	
Mean \pm SD	4.3 \pm 1.1	
Median	4.00	
Gender:		
Male	120	60.0
Female	80	40.0
Birth order:		
1	74	37.0
2	58	29.0
3	68	34.0
Firstborn:		
No	126	63.0
Yes	74	37.0

Table 2: Demographic characteristics of mothers and fathers in the study sample (n=200)

Demographic characteristics	Frequency	Percent
Mother age:		
<30	72	36.0
30-<40	112	56.0
40+<45	16	8.0
Range	21.0-45.0	
Mean \pm SD	31.2 \pm 5.1	
Median	30.00	
Mother education:		
None and at basic education	64	32
Secondary	67	33.5
University	69	34.5
Mother job:		
Working	100	50.0
Housewife	100	50.0
Marital status:		
Married	179	89.5
Divorced/widow	21	10.5
Father age:		
<35	71	35.5
35-<40	64	32.0
40+<50	65	32.5
Range	22.0-55.0	
Mean \pm SD	35.8 \pm 5.6	
Median	35.00	
Father education:		
None and at basic education	73	36.5
Secondary	53	26.5
University	74	37.0
Father job:		
Employee	135	67.5
Manual worker	59	29.5
Retired	6	3.0
Income:		
Insufficient	41	20.5
Sufficient	136	68.0
Saving	23	11.5

Table 3: Types and frequency of exposure to accidents among children in the study sample (n=200)

Types and frequency of exposure to injuries	Frequency	Percent
Child had accident:		
No	18	9.0
Yes	182	91.0
Types (n=182):@		
wound	56	30.8
Fracture	34	18.7
Burn	36	19.8
Poisoning	23	12.6
Asphyxia	22	12.1
Animal bite	8	4.4
Drowning	6	3.3
falling	13	7.1

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Not mutually exclusive**Table 4:** Knowledge of first aids regarding injuries among mothers of children in the study sample (n=200)

Correct knowledge of injuries	Frequency	Percent
meaning	165	82.5
First aid equipment	19	9.5
Causes of injuries	135	67.5
Support persons	13	6.5
Prevention	115	57.5
Symptoms/signs of fractures	26	13.0
Poisoning	6	3.0
Causes of asphyxia	9	4.5
Symptoms/signs of asphyxia	69	34.5
Total knowledge:		
Satisfactory (50%+)	19	9.5
Unsatisfactory (<50%)	181	90.5

Table 5: Practices related to first aid measures and remedy of injuries as reported by mothers of children in the study sample (n=200)

Adequate practice regarding management of:	Frequency	Percent
wound	23	11.5
Epistaxis	81	40.5
Foreign body in nose	48	24.0
Foreign body in ear	105	52.5
Eye injury	131	65.5
Fractures	27	13.5
Burns	10	5.0
Poisoning	81	40.5
Drowning	72	36.0
Asphyxia	8	4.0
Animal bite	8	4.0
Scorpion sting	91	45.5
Total practice:		
Adequate (60%+)	34	17.0
Inadequate (<60%)	166	83.0

Table 6: Best fitting multiple linear regression model for the knowledge score

Items	Unstandardized		Standardize d	t-test	p-value	95% Confidence	
	Coefficients					Coefficients	Interval for B
	B	Std. Error	Lower	Upper			
Constant	-6.24	7.53		-0.829	0.408	-21.09	8.61
Mother age	0.60	0.17	0.21	3.456	0.001	0.26	0.95
Mother education	3.87	1.01	0.33	3.846	<0.001	1.88	5.85
Father education	2.62	0.95	0.24	2.752	0.006	0.74	4.50
Previous accident	-6.41	3.16	-0.12	2.031	0.044	-12.64	-0.19

r-square=0.33

Model ANOVA: F=24.30, p<0.001

Variables entered and excluded: child age, gender, birth order, father age, mother job, marital status, income, number of sources of information

Table 7: Best fitting multiple linear regression model for the practice score

Items	Unstandardized Coefficients		Standardized Coefficients	t-test	p-value	95% Confidence Interval for B	
	B	Std. Error				Lower	Upper
Constant	32.83	8.22		3.995	<0.001	16.62	49.03
Child age	1.59	0.96	0.10	1.659	0.099	-0.30	3.48
Mother housewife	-4.81	2.17	-0.13	2.220	0.028	-9.08	-0.54
Father age	-0.43	0.20	-0.13	2.214	0.028	-0.82	-0.05
Previous accident	-6.95	3.69	-0.11	1.883	0.061	-14.22	0.33
Knowledge score	0.65	0.07	0.53	8.957	<0.001	0.51	0.79

r-square=0.42

Model ANOVA: F=28.31, p<0.001

Variables entered and excluded: child gender, birth order, parents' education, marital status, income, number of sources of information

References:

- 1-Asif, R., Azam, N., Raza, F. A., Riaz, M., Zulfiqar, S., & Razzaq, M. : Knowledge, attitude and practices regarding first aid against domestic injuries in mothers of children less than 5 Years of age attending Fauji foundation hospital Islam Abad; *Pak J Public Health*, 2021; 11(3).
- 2-Nageh, H. M., EL. Abd El-Raouf , S., & Abd El-Mouty, S. M. : Mothers knowledge and subjective practice toward most common domestic injuries among under-five children; *Mansoura Nursing Journal (MNJ)*, 2020; 7 (1).
- 3- Whelan, A.: The health visitor's role in reducing unintentional injury in the under-5s; *Journal of Health Visiting*. 2015; 3(5): 276-279.
- 4-Nour, M. O., Alharbi, W. D., Alawneh, S. M., Al Ansari, A. Z., Al-Luqmani, A. D., Alharbi, A. F., Sonari, M. A., Al-Hassani, H. K., & Al-Malki, A. H.: Knowledge, attitude and practices of mothers towards home accidents among children, Makah, KSA; *European Journal of Pharmaceutical and Medical Research*. 2018; 5(2): 139-147.
- 5-Harere, R., Makhdoom, Y., Sonbul, H., & Habadi, M.: Knowledge regarding first aid of childhood emergency conditions among caregivers attending primary health care centers; *Imperial Journal of Interdisciplinary Research*, 2017; 3(11).
- 6- Kamel, E. G., Emam, S. A., & Mohammed, E.S. : 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*. 2014; 2(6): 653-659.
- 7- Lao, Z., Gifford, M., & Dalal, K.: Economic cost of childhood unintentional injuries; *International Journal of Preventive Medicine*. 2012; 3(5).
- 8- Mack, K. A., & Liller, K. D. : Home injuries: Potential for prevention; *American journal of lifestyle medicine*. 2010; 4(1).
- 9- Mohammed, H. O., Wassif, G. O., Hakim, S, A., & Moustafa, M. E.: 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*. 2019; 37 (3).
- 10-Mohammed, Z., Aledhaim, A., AbdelSalam, E. M., El-Setouhy, M., EL-Shinawi, M., & Hirshon, J. M. : Factors associated with injuries among preschool children in Egypt: Demographic and health survey results, 2014; *BMC Public Health*.2020; 20 (1).

- 11-El-Sabely, A. A., Yassin, A. I., & Zaher, S. A.: Mother's education and her knowledge about home accident Prevention among Preschool children in rural area in Sharkia Governorate; *IOSR Journal of Nursing and Health Science*. 2014; 3(1).
- 12-Sebaie, S. R., El- Dakhakhny, A. M., & mohammed, B. M.: Impact of an educational training program for mothers of preschool age children regarding care of some home emergency situation; *Mansoura Nursing Journal (MNJ)*. 2019; 6(1).
- 13- Al-Hajj, S., El Haj, R., Chaaya, M., Sharara- Chami, R., & Mehmood, A.: Child injuries in Lebanon: Assessing mothers injury prevention knowledge attitude and practices: Across-sectional study; *Research Square*. 2020; <https://doi.org/10.21203/rs.3.rs-107087/v1>.
- 14-Hatamabadi, H. R., Mahfoozpour, S., Alimohammadi, H., & Younesian, S.: Evaluation of factors influencing knowledge and attitudes of mothers with preschool children regarding their adoption of preventive measures for home injuries referred to academic emergency centers, Tehran, Iran; *International Journal of Injury Control and Safety Promotion*. 2014; 21 (3).
- 15- Lafta, R. K., Al-Shatari, S. A., & Abass, S.: Mothers' knowledge of domestic accident prevention involving children in Baghdad City; *Qatar Medical Journal*. 2013; (2): 50–56.
- 16-Anwar, M. M., Mostafa, Z. M., & Elareed, H. R.: Maternal knowledge and attitude about home-related injuries in children under the age of five years; *Egyptian Family Medicine Journal (EFMJ)*. 2021; 5(2).
- 17- Al-Johani, A. A. S., Sabor, S., & Aldubai, S. A. R.: 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* . 2018; 7 (2).
- 18-Olutayo, O. G.: Mother's education, age and knowledge about home accidents prevention among preschool children in Ilesa Metropolitan city: A relational approach; *Journal of Education and Preactice*. 2013; 4 (11).
- 19- Nor, N. A. U. M., & Sutan, R. : The impact of mother's roles towards preventing home injury in preschool children in Kuala Lumpur, Malaysia; *Annals of Tropical Medicine & Public Health S467*. 2020; 23 (3): 95–106.
- 20- Thenmozhi, P., Sabeetha, S., and Nandhini, R.: Knowledge and practice on prevention of domestic accident among mothers of under five children: Descriptive study; *Asian Journal of Research in Nursing and Health*. 2020; 3(4): 65-70.
- 21-Silva, E. C. S., Fernandes, M. N. F., Sá, M.C. N., Souza, L. M., Gordon, A. S. A., Costa, A. C. P. J., Araújo, T. S., Carvalho, Q, G. S., Maia, C. C., Machado, A. L. G., Gubert, F. A., Silva, L. A., & Vieira, N. F. C. :The effect of educational intervention regarding the knowledge of mothers on prevention of accidents in childhood; *The Open Nursing Journal*. 2016; 10: 113-121.
- 22- Wang, Z., Klunklin, P., & Jintrawet, U. : Knowledge, attitude, and practices of unintentional home injury prevention among parents of preschoolers in the People's republic of China; *Nursing Journal CMU*.2021; 48 (4).
- 23-Al-Bshri, S. A.,& Jahan, S.: 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 & primary care*.2021; 10(3): 1234–1240.