

IMPACT OF AN EDUCATIONAL TRAINING PROGRAM FOR MOTHERS OF PRESCHOOL AGE CHILDREN REGARDING CARE OF SOME HOME EMERGENCY SITUATION

Shereen Ramadan Sebaie ⁽¹⁾, Amal Mohammed El- Dakhakhny ⁽²⁾,
Bataa Mahmoud mohammed ⁽³⁾

⁽¹⁾ Manager at technical nursery school,

⁽²⁾ Professor of Pediatric Nursing, Faculty of Nursing, Zagazig University,

⁽³⁾ Lecturer of Pediatric Nursing, Faculty of Nursing, Zagazig University.

Abstract

Background: Child accidents was a serious health problem in most countries where accident was the greatest cause of death of children. First aid is the immediate care given to the child who had been injured and performed immediately. **The aim of the current study** was to identify the impact of an educational training program for mothers of preschool age children regarding care of some home emergency situation. A quasi experimental design was utilized. **The study was conducted at** nursery school at Kafr-Sakr city at Sharkia governorate, where there are 49 nursery schools. The subjects of the study composed of 280 mothers who attended four selected nursery schools & their children. Two tools were used; firstly, a structured interview questionnaire to assess mother's knowledge and safety home environment, and the second tool was a child assessment sheet. Education program was developed to educate mothers about home accidents, prevention and its first aid. **The study results indicated that,** the studied mother's knowledge and practice had been improved significantly after implementation of the educational program either immediately or two months later. Therefore, **it could be concluded that,** the educational program had improved the studied mother's knowledge and practices about care of some home emergency situation. The study recommended the provision of educational programs for parents about accident prevention and first aid at nursery school.

Key words: accident prevention, first aid, preschool children ,educational program

Introduction:

Preschoolers are often used to describe the child from 3 to 6 years of age. During this period the child's rate of growth slows down compared to growth rate during toddlerhood. The preschool child has an endless energy to explore the world, to test new skills which expose the child to the risk of injuries. Also, the inquisitive nature and expanding motor and developmental abilities increases the risk. So, parents should be alert about child safety and prevention of accidents (Bowden, 2010).

Bhuvanewari et al (2018) mentioned that child accidents are considered as a serious health problem in

most countries, as accidents were considered the greatest cause of death among children. Although accidents represent a danger, still it can be prevented. Keeping children safe is an important part of keeping them healthy.

Annually, 830,000 children die due to home accidents worldwide, corresponding to 2,000 child deaths per day. Again, millions of children were referred to hospital due to injuries caused by accidents, resulting in lifelong disabilities (World Health Organization , 2014). Accidents are the fourth leading cause of deaths in Europe, and worldwide. In USA, home accidents were considered

to be the third leading cause of emergency department visits (CDC , 2011). In UK, 40% of all accidents occur at home and 2,700,000 people were treated due to home accidents with 7,000 deaths annually (ROSPA , 2012)

A child's environment plays a critical role, both in the occurrence and the severity of an injury. Most injuries take place in or near a child's home In Turkey, home accidents with incidence of 25.0 is the second leading cause following traffic accidents. (Who Issue Brief Series , 2015).

Accidental injuries remained the leading cause of death among children aged 1 to 19 years and was the fifth leading cause of death among infants. Most injury related deaths occur in low and middle- income countries where knowledge is limited regarding injury prevention (Royal Society for the prevention of Accidents ,2012).

According to the National safe kids Campaign in the United states, 40% of death and 50% of non –fatal unintentional injuries occur in and around the home (National Safe Kids Campaign, 2012). A child's environmental plays a critical role, both in the occurrence and the severity of an injury. Most injuries take place in or near a child's home. The most common injuries included falls or fracture, fires or burns, poisoning, suffocation, and transported-related injuries. (WHO Issue Brief Series, 2015)

Lafta et al (2013) explained that, every year, millions of children are permanently disabled or disfigured because of accidents. In Iraq, one of the leading causes of death among children under five years was found to be domestic accidents.

In fact accidents are much more likely to occur in a home environment as children look for stimulation in appropriate equipment. A stimulating and exciting environment where children are

active and challenged to use new skills, will promote safety if it is well designed, maintained and well supervised (Wang et al ,2012).

Poorolajal et al (2012) pointed out; that accidental injuries in childhood are common. Sadly, we accept it as an inevitable and unavoidable part of growing up. There is much precautions that can be done to prevent more serious injuries if mothers were aware of the links between accidental injury and a child 's physical, intellectual and emotional development , ignorance and negligence, as they are the fundamental causes of accidents. It is important to improve the mother's knowledge, attitude and practice to prevent home accidents. Education is an important nursing role and was the primary intervention strategy chosen to address and prevent childhood home injuries. The nurse will try to ensure that people know how to prevent accidents and injuries in their communities, at homes, schools and work places (Wang et al , 2012).

First aid is defined as the immediate care given to the person who has been injured. It has to be performed immediately and in some cases action should be taken in less than a minute to safe life. Providing first aid includes identifying knowledge and skills needed to maintain life and well-being until help arrives or reaching medical service (Blaint , 2014).

Guilfoyle et al (2012) stated that most childhood mortality and hospitalization is related to injuries. Therefore, it is important for the pediatric nurse to integrate injury prevention strategies and provide health teaching for parents to ensure safety for children because they are constantly challenged to maintain safe environment as the child grows older, reaching more advanced developmental levels, exposed to a widening world outside the family and has less supervision (Alonge , 2014).

The pediatric nurse had the responsibility to ensure that mothers know how to prevent accidents, use safety measures and what to do when an accident occurs. Mothers and fathers will be informed of their responsibility to make their home a safe place and to teach their children how to live safely in the environment (Wang , 2011).

Significance of the study:

Accidents are one of the most serious public health problems; they constitute the leading causes for health problems. Moreover they constitute the leading causes for death and disability in children, as about 45% of the death among 1 to 4 years old children was accident. Studies revealed that on average a child will have eight or more accidents per year .Injuries are costly in the society from human suffering and economic loss.

In Egypt , injuries are considered the important cause of disabilities and morbidity, where it is found to be the fifth cause of hospitalization .It represents the fourth cause of outpatient visits and one of every five children died due to the different types of accidents .

Aim of the study:

The present study aimed to identify the impact of an educational training program for mothers of preschool age children regarding care of some home emergency situation.

Research Hypothesis:

Mother's knowledge about practice will be improved after application of an educational training program about care of some home emergency situation.

Subjects and methods:

Research design:

A quasi-experimental design was conducted to achieve the aim of the study.

Study setting:

The present study was conducted at nursery school at kafr -sagr city at sharkia governorate, where there are 49 nursery schools. four nursery schools will be

chosen according to the highest rates of mothers attending it. These nursery schools were El-Emam Ali and Ahmed-Oraby, Gamal abdel -Nasser and Elsadat nursery school.

Study subjects:

Study subjects of this study included a convenience sample of 280 mothers who attended the selected four nursery schools& their children.

Tools of data collection:

Tool I: A questionnaire interview sheet

A questionnaire interview sheet was developed by the researcher, designed in Arabic language. It was concerned with personal data of the study it consists of two parts to collect the following data :

part A: Personal characteristics

The first part of the questionnaire was concerned with personal data of the study subjects as , characteristics of mothers and their children as (age, education, occupation, marital status, family income, child age, child sex, child rank).

Part B : included data about knowledge of mother's regarding care for some major home accident such as poisoning, burn. each correct answer scored 1 point and zero for wrong answers. The scoring system for mother's knowledge related to care for some major home accident such as poisoning, and burn was classified as follows:

Satisfactory >60%

Unsatisfactory< 60%

Tool II: Child assessment sheet

Child assessment sheet. It includes age, sex, any previous exposure to home accident as well as any complication was found.

Validity and Reliability

It was established by a panel of five expertise in nursing and medical staff including: two professor of pediatrics Nursing and lecturer of pediatric Nursing who reviewed the instruments, and designed booklet for clarity, relevance comprehensive, understanding,

applicability, and easiness for administration. Minor modifications were required. The reliability of the tool was established by Alpha Cronbach test, which used to measure the internal consistency of the used tool ($r=0.797$).

Pilot study:

A pilot study was conducted on 10% of mothers to evaluate the content of the tools, their clarity as well as to estimate the time needed for filling the sheets with the collected data. Subjects who shared in the pilot study were later included in the main study sample as no radical modifications were needed on the study tools.

Field work:

After An official permission was obtained from the dean of the Faculty of Nursing at Zagazig University and from Managers of previously mentioned setting to carry out the study. The agreement for participation of subjects was obtained after the explanation the aim of the study to mothers included in the study. They were given opportunity to refuse to participate. They were notified that they could withdraw at any stage of the research. They were met by the researcher at their available time. As regards the nurse's practices, they were observed individually during their actual work in previously mentioned setting.

The educational program was developed through four phases as follows:

a- Assessment phase:

The educational program was constructed for the assessment of mother's knowledge. The assessment was performed before the implementation of educational program by interviewing 5-10 mothers to assess their knowledge and practice (pretest) by using tool I and tool II after explaining the aim of the study and had their approval to participate in the study .after explaining the aim of the study and had their approval to participate in the study.

b- Planning phase:

Based on the results obtained from the interview sheet, the pilot study and assessment phase as well as reviewing the related literature the educational program was developed by the researcher, detected needs, requirements and deficiencies were translated into the aim and objectives of the educational program which were selected on the basis of identified needs. Teaching methods were selected to suit teaching in small groups in the form of lectures, group discussion, demonstration and re- demonstration. Teaching materials were prepared as power-point and handouts that covered theoretical and practical information.

c- Implementation phase:

The educational program of this study was implemented through four sessions in which mothers were divided into small groups to facilitate the learning process. The length of each session differed according to the content and mother's responses. It was ranged 30-45 minutes.

The first session was about dangerous of home accidents, second session about causes and types of home accidents, third session about prevention and first aid for burn, fourth session Prevention and first aid for poisoning . Each session started with a summary of the previous session and the objectives of the new one taking were explained in Arabic language and simple English terms that suits the level of mothers' education. Motivation and reinforcement during a session were used in order to enhance mothers' learning.

c- Evaluation phase

- In this In this phase, every 5-10 of mothers of the studied sample were interviewed immediately after implementation of the educational program to assess their knowledge (post-test)
- Also, two months later the mothers of the studied sample were reassessed for

their knowledge (follow up phase) using tool I and tool II.

- This study lasted 12 months during the period; June 2016 to May 2017.

Statistical analysis:

- Data was analyzed using SPSS (Statistical Package for Social Sciences) version 15. Qualitative data was represented as numbers and percent. Comparison between groups was done by chi-Square test. Quantitative data was represented as mean + SD, ANOVA test, correlation coefficient and paired t test) were used .P<0.05 was considered to be statistically significant

Results:

Table (1): Illustrated that 48.9 % of The Studied mothers in the age group 30-40 years with mean age years.Regarding educational level ,52.9% of mothers had completed their university education and 18.2% of Them just read and write.Concerning occupational status ,it was found that 56.1% of mothers was working and 80.7% of them was married.The same table also reported that 50.4% of the families had sufficient income were sufficient and 42.1% was not sufficient. It was found also that 77.5% had crowding index grade from 1-2..

Table (2): mentioned that 37.1% of children in the age group 5 years with mean age of 32.9 ±7.5 years . According to sex,51.1% of children were female and 48.9% were male.The same table also showed that 80.4% of children exposed to various types of home accidents that represented as follow,32.5% was burn ,23.9% was electrical shock, 26.1% was poisoning and 19.6% was fracture.Regarding number of family ,48.7% of children their families include ≥5 member .It was found that , 34.6% of children was the second older .

Table (3) shows mother's knowledge about practices regarding first aid of poisoning throughout the program phases.

The results showed that 50.7% of mothers reported that they gave the child cold milk as a first aid for poisoning in case of swallowing chemical and household detergents before implementation. This results improved to 94.6% after implementation of the educational program as well as 96.4% during the follow up phase (P value was <0.001).Concerning to mother's knowledge about inhaling or touching the skin with cleansed and sterilized substance as Dettol and formalin, 71.4% of mothers mentioned washing hands and face well before implementation of the educational program. This percentage increased to 96.8% after implementation of the educational program, and decreased to 88.6% during follow up phase (P value was <0.001).

When mothers were asked about poisoning due to gas or toxic vapors, 82.5% mentioned that transferring the casualty out of place for a clean air as prevention of poisoning before implementation of the educational program. The previous percentage changed to 97.9% after implementation of the educational program, then decreased to 90.0 % during follow up phase (P value= <0.001).

Table (4) illustrated mother's knowledge about practices regarding first aid of skin, eye and food poisoning. It was found that before implementation of the educational program, 78.6% of mothers reported taking off the injured clothes to prevent skin poisoning. The previous percentage increased to 95.7% after implementation of the educational program, then decreased to 93.9% during follow up phase. As regard to the eye when injured, 57.5 % of mothers reported washing the eye with flowing water before implementation of the educational program. This percentage increased to 93.2% after implementation of the educational program, then decreased to 90.7 % during follow up phase.It was found also that 74.6% of mothers stated

that they should transfer the injured child to the hospital when food poisoning occurred before implementation of the educational program. Compared to 98.9% after implementation of the educational program, then decreased to 92.1 % during follow up phase.

Table (5) portrayed mother's knowledge about practices regarding first aid for burn-first degree. It was found that 64.6% and 31.1% of mothers mentioned that asking for help immediately if burns were severe and extended for large areas as well as relieving pain by giving the patient vifadol or paracetamol before implementation of the educational program. These percentages increased to 97.9% and 87.1% respectively after implementation of the educational program, then decreased to 87.9% and 85.0% respectively during follow up phase (P value was <0.001). Concerning to second degree of burn, 67.9% of mothers reported immersing the area with cold water to reduce the pain before implementation of the educational program, the previous percentage increased to 84.6% after implementation of the program, then slightly decreased to 83.6% in follow up phase (P value was <0.001).

Table (6) represents the relationship between some maternal characteristics of mothers and total knowledge and practice score regarding home accident and accident prevention for their preschool children .It was found that there is general improvement in mother's knowledge and practice related to age, occupation and education .there is highly statistical significant differences at (p value was <0.001).

Table (7) represented relation between total mother's knowledge and practice score and family income regarding accident prevention throughout program phases. It was found that there was no statistical significant relation between total knowledge and practice and family income

throughout the three phases of the program between marital status and family income (p value= 0.19 and 0.006).

Discussion:

Preschool years are considered a critical period of life where the child learns to investigate and react with his surrounding and they move curiously too much. Preschool children accidents are an important cause of injuries, long life disabilities and deaths. So, accidents are an important serious health problem that need active reduction intervention (**Hatamabadi et al, 2014**)

The present study revealed that more than half of mothers were working. This finding agrees with **Hussein, (2009)** who conducted his study about effect of mother's education in relation to home accident prevention among preschool children in rural area at EL-Minia governorate, and found that more than half of mothers were working .On the other hand, **El-Sebely et al, (2014)** who conducted her study about mother's education and her knowledge about home accident prevention among Preschool children in rural area in Sharkia Governorate, found that the majority of mothers were workers and the home accidents rate was high among their children. This may be related to deficit of care of children as mothers were busy at their working as well as preschoolers are the critical ages regarding accidents.

Lafta et al , (2013) who conducted his study about mother's knowledge of domestic accident prevention involving children at Baghdad city, stated that nearly less than half of mothers were in age group >30. This finding was in agreement with the present study, which revealed that less than half of mothers were in age group of 30-40 years. As well as, this finding was in the same line with Hussein (2009) who found that nearly less than half of mothers were in age group of > 29 years. On the other hand, **Baaker, (2017)** who

studied risk factors for childhood poisoning, a case control study in Baghdad, reported that the most accidental poisoning cases belonged to mothers who aged 25-35 years.

The present study revealed that more than half of mothers had completed their university education and this finding contradicted with Hussein (2009) who found in his study that more than half of mothers were illiterate. This finding agreed with **El- Sabely et al , (2014)** who mentioned that more than two fifth of studied sample had completed their university education. This result contraindicated with **Mohammed et al (2013)**, who studied about supportive strategies regarding accidents prevention for mothers of children under five years old at Cairo university, and found in his study that less than half of mothers had secondary educational level. The researcher believe that mother's level of education and work could be factors that affect the health related behavior of the mothers with their children.

The current study revealed that more than one third of studied children ranged 5 years and more. Recent and old studies and theories in the field of pediatric and psychology studies agreed that preschoolers are the critical ages regarding accidents. The highest percent of the mothers were experienced among their children. This study was similar to the finding of **Mohammed et al, (2013)** who stated that the highest percentage of injured children aged 5 years. This may be due to that, the younger the child, the higher the frequency of household injuries, which might be due to their curiosity to discover everything and do not realize the dangerous surrounding. This finding contradicted with **Eldosoky, (2012)** who conducted his study about home-related injuries among children: knowledge, attitudes and practice about first aid among

rural mothers and revealed that half of injured children aged 9 –12 years. Regarding sex, it was found that slightly more than half of the injured children were boys. This result agreed with **Eldosoky, (2012)** who found nearly the same result in his study and also agreed with **Mahalakshmy et al (2011)**, who conducted his study about epidemiology of childhood injuries in rural Pondicherry, at South India, and found that the prevalence of injury was higher among male children. Differences in regional and sample characteristics may affect the statistical significance of the impact of gender in injuries. This result indicated that males were more impulsive and destructive than female.

According to mother's knowledge about practice of first aid for poisoning, the present study showed that the majority of mothers reported not trying to make the child vomit in case of chemical and household detergents, after implementation of the educational program. This was consistent with **Mohammed et al , (2013)** who revealed that the majority of mothers were told not to force the child to vomit. In case of poisoning by inhaling or touching the skin with cleansed and sterilized substance as Dettol and formalin, the majority of mothers reported that inhalation with clean warm water and ventilate the place well. Moreover, when poisoning was due to gas or toxic vapors, the majority of mothers said that they transfer the child out of place for clean air. These results were supported by the present study. This may be due to the success of the educational program to improve mothers' knowledge regarding home accidents.

Lafta et al , (2013) revealed that analysis of the association of mother's knowledge with some demographic variables showed that their knowledge improve as they get older or have more children. This could be explained by mothers gaining more

experience and information with age and when having more children. The results of the present study revealed that there was a statistical relation between mother's knowledge and practice regarding home accidents and their age. This may be due to knowledge of mothers also improves whenever there were previous accidents involving their children which results in them learning from their past experience.

Sobhy , (2008) mentioned that there was general improvement in total mother's knowledge and practice with the increase of family income, with statistical significant differences. The researcher believed that increased family income help mothers to gain more knowledge through mass media and internet and enables her to apply safety measures at home. This finding disagreed with the present results which reported that there was no statistical significant difference between the mother's knowledge, practice and family income.

On investigating the relationship between total mother's knowledge and practice with their occupation, the present study revealed that there was an improvement in mother's knowledge and practice in case of working mother's than housewives with highly statistical significant difference during the post and follow up program implementation. In the same line, **Yousef, (2004)** reported that working mothers can affect positively on their children care and safety. This finding was different with the study done by **Mohammed et al , (2013)** who found that most injuries occurred in working mother's families, as they were busier and had no time for their children. Also **Nadeeya et al , (2016)** found that there was a negative association between maternal employment and care of their children. This may be related to that is not a basic condition that working mothers are not interested in their children.

This study illustrated that mother's practice of first aid and

prevention regarding poisoning, , burn, points to obvious improvement in all tested areas after program implementation and there was a highly statistical significant differences. this results goes in line with **Mohammed et al , (2013)** who conducted a study about supportive strategies regarding accident prevention for mothers of children under five years old at Egypt, who found that prior to the application of the health promotion program, mother's knowledge scores about accidents and its control were inadequate, while after program implementation, mean scores of all knowledge items about accidents significantly improved. The same result was also proved by **El-Sabely et al , (2014)** who found that pediatric first aid knowledge was sufficient among people. Also, this result was in the same line with **Abd El Aty and Moftah, (2005)** who found that mother's practices toward home accident among children under six years were deficient and there was a need for educational program for parents especially mothers with young children about home accidents and how to manage them if occurred.

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This study showed that there was improvement in mother's knowledge and practices after implementation of the educational program, where there was a highly statistically significant difference regarding home accident and accident prevention throughout program phases. This finding reflects the importance of educational programs to improve the level of practices of mothers and this led to decrease in children accidents. This finding was supported by **Ozturk et al , (2010)** who clarified that accidents all over the world are one of the leading health problems, therefore, various programs had been developed to prevent accidents and the most important way to protect against accident in the primary prevention is to educate society especially parents and teachers about prevention of accidents and first aid. This would reduce children accidents.

Finally, the results of the current study showed that effectiveness of applying an

educational program about home accident and prevention of it among mothers attended at nursery school

Conclusion:

In the light of current study findings, it might be concluded that mothers' educational program improved their knowledge and practice regarding home accidents, accidents prevention and first aid, as there was a highly statistically significant difference throughout the three phases of the study.

Recommendations:

Based upon the findings of the present study, the following recommendations are suggested:

- + Provision of educational programs for parents especially new parents about accident prevention and first aids as a routine service at nursery school.
- + Provide motivation for mothers to attend educational program in the form of free courses, free first aid kits, posters, and booklets.

Mass media should have a role in providing information to mothers about prevention of home accidents should have a role in providing information to mothers

Table (1): Characteristics of Studied Mothers (280 mothers)

Table(I) : Characteristics Of The Studied Mothers

Characteristics	N=(280)	%
Age\ year		
• < 20	8	2.9
• 20	77	27.5
• 30-40	137	48.9
• > 40	58	20.7
Mean ±SD	32.9 ±7.5	
Educational level		
• Illiterate	12	4.3
• Read and write	51	18.2
• Secondary	69	24.6
• University	148	52.9
Occupational status		
• House wife	123	43.9
• Worker	157	56.1
Marital status		
• Married	226	80.7
• Divorced	24	8.6
• Widow	30	10.7
Family income		
• Not sufficient	118	42.1
• Sufficient	141	50.4
• Sufficient and save	21	7.5
Crowding index grade		
• <1	35	12.5
• 1 – 2	217	77.5
• >2	28	10.0

Table (2): Characteristics Of The Studied Children

Characteristics e	N	%
Age\years		
• 3-	97	34.6
• 4-	79	28.2
• 5 years and More	104	37.1
Sex		
• Female	143	51.1
• Male	137	48.9
The child is exposed to any type of home accidents	225	80.4
• Burn	91	32.5
• Electric shock	67	23.9
• Poisoning	73	26.1
• Fracture	55	19.6
Number of family		
• 3	69	24.9
• 4	73	26.4
• ≥5	135	48.7
Child order		
• First	73	26.1
• Second	97	34.6
• Third	72	25.7
• Forth	38	13.6

e More Than One Answer

Table (3): Mother's Knowledge About Practices Regarding First Aid For Poisoning Throughout Program Phases

Mother's Knowledge	Pre		Post		Follow up		Chi square test	
	N	%	N	%	N	%	X ²	P
First aid for poisoning in case of swallowing chemical and household detergents € <ul style="list-style-type: none"> • Give him cold milk • Don't try to make the child vomit • Give him water with salt 	142	50.7	265	94.6	270	96.4	240.070	<0.001*
	104	37.1	265	94.6	263	93.9	327.205	<0.001*
	123	43.9	3	1.1	6	2.1	252.550	<0.001*
When inhaling or touching the skin with cleansed and sterilized substance as Dettol and formalin € <ul style="list-style-type: none"> • Wash hands and face well • Inhalation with clean warm water • Ventilate the place well • In case of contamination of the skin is washed with water only 	200	71.4	271	96.8	248	88.6	76.026	<0.001*
	125	44.6	256	91.	257	91.8	225.428	<0.001*
	170	60.7	28	95.7	255	91.1	140.161	<0.001*
	88	31.4	18	6.4	18	6.4	92.719	<0.001*
When poisoning due to gas or toxic vapors € <ul style="list-style-type: none"> • Transfer the casualty out of place for a clean air • Unscrew the compression clothes to the neck and face • It is not necessary to perform artificial respiration if there is a decrease in breathing • Heating the patient if he has signs of cold or chills 	231	82.5	74	97.9	252	90.0	37.086	<0.001*
	208	74.3	274	97.9	245	87.5	67.138	<0.001*
	52	18.6	11	3.9	22	7.9	35.367	<0.001*
	130	46.4	260	92.9	244	87.1	193.927	<0.001*

Table (4): Mother's Knowledge About Practices Regarding First Aid of Skin, Eye And Food poisoning Throughout Program Phases

Mothers' Practice	Pre		Post		Follow up		Chi square test	
	N	%	N	%	N	%	X2	P
skin poisoning c Do not wash the skin with a stream of flowing water Take off the injured clothes Do not put soap or any chemical substances	77	27.5	23	8.2	21	7.5	58.472	<0.001*
	220	78.6	268	95.7	263	93.9	52.507	<0.001*
	120	42.9	254	90.7	249	88.9	215.121	<0.001*
Eye injury Wash the eye with flowing water Do not use any medical drop until you reach the hospital	161	57.5	261	93.2	254	90.7	141.672	<0.001*
	149	53.2	267	95.4	257	91.8	191.990	<0.001*
food poisoning c Provide little fluids, especially water to compensate for lost fluids and salts Provide hypothermia Transfer the injured to the hospital	137	48.9	21	7.5	24	8.6	184.012	<0.001*
	110	39.3	268	95.7	264	94.3	321.790	<0.001*
	209	74.6	277	98.9	258	92.1	86.865	<0.001*
Total score Insufficient Sufficient Mean ±SD	177	63.2	28	10.0	38	13.6	241.003	<0.001*
	103	36.8	252	90.0	242	86.4	123.328	<0.001*
	4.2 ±1.8		5.9 ±0.8		5.7 ±1.3			

c More Than One Answer

W wrong Answer

* P value significant at P<0.05

Table (5): Mother's Knowledge About Practices Regarding First Aid For Burn Throughout Program Phases.(n=280)

Mothers' Practice	Pre		Post		Follow up		Chi square test	
	No	%	No	%	No	%	X ²	P
First aid for burn- first degree ϵ Put the affected part under cold water for at least 10 minutes or more	170	60.7	262	93.6	258	92.1	131.673	<0.001*
Gently remove any rings, watches or any tight clothing from the affected area	156	55.7	268	95.7	246	87.9	155.817	<0.001*
Cover the area with sterile clean clothes	107	38.2	271	96.8	246	87.9	291.928	<0.001*
To relieve pain, give the patient Vifadol ,Paracetamol	87	31.1	244	87.1	238	85.0	258.680	<0.001*
Ask for help immediately if the burns are severe and extended for large areas	181	64.6	274	97.9	246	87.9	117.743	<0.001*
Put cream or butter	97	34.6	27	9.6	34	12.1	69.519	<0.001*
Do not use ice to cover the place of burning	113	40.4	214	76.4	211	75.4	102.438	<0.001*
Second degree of burn ϵ Immerse the area with cold water to reduce the pain	190	67.9	237	84.6	234	83.6	29.491	<0.001*
Gently remove any rings or tight clothing from the affected area	168	60.0	245	87.5	228	81.4	64.653	<0.001*
Cover the burn with dry, sterile and non-stick adhesive towels	102	36.4	228	81.4	223	79.6	161.648	<0.001*
Make the patient drink as much water as possible without feeling nausea	94	33.6	242	86.4	227	81.1	214.472	<0.001*
Ask for Medical help immediately	170	60.7	251	89.6	231	82.5	73.203	<0.001*
Open the closed warts and not covered by pimples	82	29.3	40	14.3	37	13.2	29.464	<0.001*
Total score								
Unsatisfactory	217	77.5	37	13.2	60	21.4		
Satisfactory	63	22.5	243	86.8	220	78.6	292.833	<0.001*
Mean \pm SD	6.1 \pm 2.6		10.0 \pm 1.8		9.5 \pm 2.8		207.379	<0.001*

ϵ More Than One Answer
P<0.05

W wrong Answer

* P value significant at

Table (6): Relation between some maternal Characteristics of mothers and practice score throughout program phases

Mother's characteristics	Practice Score		
	Pre Mean±SD	Post Mean±SD	Follow-up Mean±SD
Age\years			
< 20	15.1±1.2	33.0±3.7	27.9±10.9
20	26.0±10.1	36.2±4.0	33.5±9.3
30-40	22.7±8.8	35.3±3.8	33.6±7.9
> 40	22.6±8.2	36.8±2.9	37.4±2.3
ANOVA test			
F	4.749	4.115	5.723
P	0.003	0.007	<0.001*
Education			
Illiterate	20.8±7.2	36.0±2.1	31.3±11.23
Readandwrite	19.6±9.6	33.0±3.9	29.53±10.3
Secondary	23.5±9.3	35.9±3.8	34.73±5.93
University	24.8±8.7	36.7±3.3	35.8±6.7
ANOVA test			
F	4.732	13.811	9.533
P	0.003	<0.001	<0.001*
Occupation			
Housewife	20.7±7.9	34.7±3.8	31.7±8.9
Working	25.5±9.5	36.6±3.5	36.1±6.4
Test			
T	4.568	4.356	4.835
P	<0.001	<0.001	<0.001*

Table (7): Relation between total practice score and family income and marital status regarding accident prevention throughout program phases

Family income	Practice Score		
	Pre Mean±SD	Post Mean±SD	Follow-up Mean±SD
Not sufficient	21.9±8.0	35.6±3.5	34.5±7.6
Sufficient	24.7±10.4	35.7±4.0	33.3±8.4
Sufficient and save	22.9±3.2	37.6±2.0	38.4±7.7
ANOVA test			
F	3.115	2.631	4.035
P	.046	.074	.019
Marital status			
Married	23.7±9.8	35.6±3.9	
Divorced	22.4±7.7	36.0±3.7	
Widow	21.9±2.8	36.9±4.9	
ANOVA test			
F	0.665	1.228	5.169
P	0.515	0.294	0.006
Crowding index	Practice Score		
	Pre Mean±SD	Post Mean±SD	Follow-up Mean±SD
<1	24.1±8.5	34.8±3.4	31.5±9.6
1-2	23.5 ±8.7	36.0±3.5	35.3±6.3
>2	20.6±12.6	36.8±5.3	34.1±10.2

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