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Supportive Strategies Regarding Accidents Prevention for Mothers of Children Under Five Years Old

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Abstract

Accidental injuries are a major health problem in children. They are the most common cause of death in children under five years of age. Every year they leave many thousands permanently disabled or disfigured. Most of cases at risk from a home accident are the 0-4 year's age group. Most of these accidents are preventable through increased awareness, improvements in the home environment and greater product safety. A pre/post quasi experimental design was adopted in the current study. A convenient sample of 100 mothers was included in this study. The aim of the study was to evaluate the effect of supportive strategies regarding accident prevention on mothers' knowledge and practice of their children under five years old. The study was conducted in Cairo University Specialized Pediatric Hospital and Benha University Hospital from the pediatric out patients departments. Tools of data collection were socio-demographic data sheet for mothers and their children, history of accidents, questionnaire sheet regarding to mothers' knowledge about accidents as well as mothers' reported practices regarding accidents. The study's results revealed that more than half of the children (55%) were male. There were significant differences between pre and post supportive strategy in mothers' knowledge and reported practices. Mothers' knowledge and practices in prevention of falling and drowning, electrical shock, burn, and suffocation, was affected by their age and education, and child's age (P value is 0.00, **0. 05).** The study recommended that supportive strategies for accidents prevention should be applied in all pediatric care settings. Health promotion programs should be directed to prevent and control of accidents among children.

Key words: Accidents Prevention; Children under Five Years; Supportive Strategies

1. Introduction

Accidental injuries to infants and young children are often serious, but are largely preventable with appropriate information and safe practices. Young children are particularly vulnerable to accidents due to their innate desire to explore their world and the inability to perceive the dangers of their actions. As children learn through experience, minor injuries are inevitable but providing a safe environment can reduce the risks, coupled with close supervision and setting the limits of safety. Parents should remember that they need to maintain a constant balance between overprotecting the child on one hand and giving him freedom in his process of learning the hazards of his environment ***(Halperin, et al., 2008).***

All children are at risk for injury because of their normal curiosity, impulsiveness and desire to master new skills and children imitate adult behavior from an early age ***(Ashwill & Droske, 2010).*** Toddlers are quite active, curious and fearless explorers in their own right. At their tender age, they learn to use chairs and climb up to reach things that are kept supposedly out of their reach. The highly active toddlers would strive to open the bolted doors, drawers and closets. In the process, they might come across things that seem to attract them, but are hazardous for their health ***(Halperin, et al., 2008).***

According to the child accident prevention foundation of Australia private homes top the list of places where children are likely to experience injuries. In fact for children under the age of five, home injuries account for half of unintentional deaths three out of four non fatal injuries. Because children's airways are so small children can easily choke on food or other small objects they are inclined to put into their mouths common objects found around the house such as plastic shopping bags and other safe materials also pose a danger burns and scalds are for more serious in children than in adults because a child's sensitive skin burns more easily than an adults ***(Polit & Hungler, 2005).***

The types of injuries that children experience are closely linked with their age and stage of development which involves physical, psychological and behavioral characteristics. This needs to be taken into account when examining potential strategies and transferring them to new settings. The likelihood of a child being killed or injured is associated with a variety of factors including single parenthood, low education among mothers, very young mothers, poor housing, large family size and parental drug or alcohol abuse ***(Thein et al., 2005).***

The main causes of accidents in the home are falls, fires and burns, suffocation, choking, poisoning, cuts and lacerations. Accidents are one of the five leading causes of death in industrialized and developing countries. Injuries arising from home accidents are increasing community health problems. Also every year many children are injured or killed are as a result of accidental poisoning, alls, burns, and bits ***(Hossien, 2009).*** Sometimes these accidents are caused in the home. Also accident is the leading cause of death and is a major reason for hospital admission and long term of disability. Home accidents differ from country to another due to mny factors such as economical and cultural factors ***(Ibrahim, 2004).***

The common causes of home-injury deaths are fire and burns, suffocation, drowning, choking, falls, poisoning and firearms. According to the Centers for Disease Control and Prevention (CDC), most home accidents happen where there's water in the bathroom, kitchen, swimming pools, or hot tubs. Heat or flames: in the kitchen or at a barbecue grill. ***Shrestha (2006)*** indicated that Burn injury is a leading cause of unintentional injuries in children, the prevalence of burn injury under 5 years of age and female children were mostly affected. Toxic substances: under the kitchen sink, in the medicine cabinet, in the garage or garden shed, or even in a purse or other place where medications are stored. Potential for a fall: fall from bed, sofa or crib on stairs, slippery floors, from high windows, or from tipping furniture ***(Morrison & Stone, 2009).***

Unintentional injuries are a serious public health problem and a leading cause of death in children; they are also a cause of long term or permanent disability. The World Health Organization states that by 2020 injury will be the largest single reason for loss of healthy human life years ***Charles, B. Wang Community Health Center, (2010***. Unintentional injury can affect all age groups but children are a particularly vulnerable and at risk. Children of parents in the UK have never worked are 13 times more likely to die than those of parents who have professional occupations and 37 times more likely to die as a result of smoke fire and flames ***(Fostering a culture of health and wellness for Head Start children, families and staff, 2012).***

Many developing countries are now facing a tremendous increase in accidents in the young. A sound epidemiological knowledge of accidents is a prerequisite for any preventive program; it is based on hospital or community surveys, in which the epidemiological approach seems more meaningful than the clinical one. The role of pediatricians either individually or through their professional associations, is emphasized ***(MANCIAUX, 2008).***

The largest number of accidents happens in the living room; (***Saad, 2004). Niekerka, et al., (2005)*** concluded that the occurrence of child burn injury is highly influenced by various features of the local environment. These features may be essential targets for sustainable childhood burn injury control and prevention programs ***(Saad, et al., 2005).*** One framework for reducing childhood injuries is based on the public health model – a model that is used for preventing many other diseases. The public health approach includes identifying the magnitude of the problem through surveillance and data collection, identifying risk and protective factors, and, on the basis of this information, developing, implementing, and evaluating interventions, and promoting widespread adoption of evidence-based practices and policies ***(National Action Plan for Child Injury Prevention, 2012).***

Although there are educational programs and public campaigns designed to prevent children's acute poisoning, it continues to be a common medical emergency in the pediatric population ***(Walton, 2010).*** Despite advances such as childproof caps on medications, childproof packaging, increased educational efforts, and increased awareness of commonly ingested substances, deaths due to unintentional poisonings still occur ***(Marchelet & Leiller, 2009).*** First aid requires an observer first aid to evaluate the injured or ill person, and then to intervene, using a small amount of supplies. First aid is provided to a person immediately following an accidents or onset of illness to reduce complications and offer emotional and physical comfort. It is performed to decrease the individual's pain and suffering ***(Bronstein et al., 2010).***

Between the ages of 1 and 5 years, children learn to walk, run, and climb. They become more active and love to play and
explore. Still, young children do not always know the possible dangers of their actions. This can often lead to accidents.
As a supportive care for parents, it's important to equip protect the child. Mother can help prevent many accidents if she take the proper safety measures and keep a watchful eye. Learn how to keep the child safe from accidents like: When talking about child injury prevention and safety promotion, children and their parents/caregivers are the primary target groups of interventions. Although a specific intervention might involve advocating for policy change with decision makers, the main focus for child injury prevention and safety promotion is the children themselves and the adults who are their main caregivers ***(WHO, 2005).***

Supportive care has been defined as a benefit to children and their families by encouraging individuals to live as well as possible, so it included information practices, emotional, and psychosocial and also spiritual need to ensure optimal quality of care to children and their families ***(Mohammed, 2009).*** Coordinated, multifaceted approaches using engineering and environmental changes, educational and publicity measures,

enforcement of legislation, and empowerment of communities and workers are required to optimize success. Existing policy opportunities should be used whenever possible to provide a framework for injury prevention. All current prevention activity should be reviewed on a regular basis in light of evidence and best practice. Preventive measures have to strike a balance between children's need to be active and to explore and develop with the need to keep them free from death and serious injury ***(Stone & Pearson, 2009).***

2. **Significance of the study:**

Accidental injuries to infants and young children are often serious, but are largely preventable with appropriate information and safe practices. Young children are particularly vulnerable to accidents due to their innate desire to explore their world and the inability to perceive the dangers of their actions. ***Giashuddin et al (2009)*** indicated that after the infancy, the leading cause of child death is injury. It is now a public health issue in both the developed and developing world. The World Health Organization reported almost 6 million deaths due to injury. It is also a major cause of disabilities and deaths of children. The problems of road traffic accident, drowning, fall, and burn have been an unnoticed public health disaster. It is expected that injury will be the rival of communicable disease as a cause of ill health and death by the first decade of the new millennium. Non-fatal injuries are the frequent cause of hospital admission and disabilities center admissions, and half of the hospital surgical beds are occupied by injury children. Hopefully; the authors will dissimilate all means of supportive strategy as to prevent childhood accidents.

1. Aim of the study:

- To identified the level of mothers' knowledge and reported practices regarding accidents prevention among children under five years old.

- To evaluate the impact of supportive strategies regarding accidents prevention for mothers of children under five years old.

2. Hypothesis:

H_1: There will be significant difference between pre- and post- supportive strategies of mothers' knowledge and reported practices scores on child's safety.

H_2: There will be a significant association between mothers' knowledge and reported practices and demographic variables of the studied mothers.

3. Subjects

In this study, a convenient sample of 100 mothers and their children aged less than five years was recruited to test the effect of supportive strategies for accident prevention, 50 mothers were from Cairo University Specialized Hospital and 50 mothers were from Benha University Hospital. The two groups were from the pediatric out patients departments

Inclusion criteria:

- Mothers of children aged under 5 years
- Children from both sexes.
- Those who were available at the time of data collection.

Exclusion criteria:

- Mothers of hospitalized children with acute or chronic conditions

4. Material and Methods

6-1. Design: Quasi-experimental research design was adopted for this study.

6-2. Setting: The study was conducted in Cairo University Specialized Hospital and Benha University Hospital in the pediatric out patients departments.

6-3. Tools of data collection:

Structured interview sheets were developed by the researchers after reviewing of related literatures they included the following parts;

Part I

a. Socio-demographic characteristics about family include; mothers' age, level of education, working state, family type, place of residence, family income, source of mothers' knowledge about child's safety, previous experience with accident and accident management by the mothers.
b. Socio-demographic characteristics of children include: age, sex, and ranking in family.

Part II

a. Mothers' knowledge about accident prevention, which include: definition of accident and accident prevention, causes, risk factors of accidents, type of accident, meaning of first aid and measures that should given to the child at home.

It was containing 10 questions with total score of 20 for mothers' knowledge. A score 0-8 was considered unsatisfactory, while score 10-14 were considered good and scores 16-20 were considered very good.

b. Mothers' reported practice regarding accident prevention, which include checklist about measurers used in term of the first aid in case of limb fracture, poisoning, burn and suffocation. Each first aids contain 5 items which mothers should know to prevent complication of accident may happen after injures the answers of items were in form of yes and no. The scoring system of check list was 20 marks, scores ranged from 0-9 were considered unsatisfactory and scores ranged 10-20 were considered satisfactory.

Part III

Supportive strategies for accidents prevention

This is the last part which included a guide booklet for mothers to prevent 0-5 year children from accident. This booklet had been developed by the researchers after reviewing the related literature; it included knowledge about the potential accidents to be faced by children such as falling, electrical dangerous, suffocation, poisoning, drowning and burns. It included also the measures that the mothers could take to prevent and deal with accidents. The booklet included colored pictures about types of accidents.

6-4. Tool validity and Reliability

- Tools were revised by experts in the different fields of nursing for content and face validity.
- Reliability test was done using Cronbach's α test was done to be accepted reliability on ≥ .60

6-5. Data Collection Procedures

An official permission was obtained from the Faculty of Nursing, Cairo and Benha University to conduct the study and collect the necessary data. Each mother and her child were interviewed individually after explaining the purpose and method of the study. The interview took approximately 15-20 minutes to complete filling in the study tool, depending upon the understanding and response of the mothers. Data were collected during the period from beginning of March to the end of July 2012. Instructional handouts were developed by the researchers in simple Arabic language to explain the meaning of accident and accident prevention, factors affecting occurrence of accident among young children and the different measures that should be taken to protect the child from accident. Booklets were designed by the researchers, and then distributed to the participants. The researchers met the mothers in the out patients another time to evaluate the post supportive strategy test.

6-6. Pilot Study

A pilot study was carried out on 10% of mothers from the previously mentioned settings to test clarity and applicability of the tool. Appropriate modifications were done prior to data collection for the actual study.

6-7. Ethical Considerations:

For ethical considerations, mothers' oral approval was obtained, to participate in the study and they were assured about confidentiality, as well they informed that they can withdraw at any time from the study. Mothers were promised to take extra booklet when they come to attend the post test.

6-8. Statistical analysis of data:

After data were collected, **they** were coded and transferred into specially design format to be suitable for computer feeding. The Statistical Package for Social Science (SPSS), version 11 was utilized for data analysis and tabulation. All the entered data were manually verified for the errors. Mean, standard deviation, Chi-square and Fisher exact test (if expected value of Chi square test was less than 5) was used. The P- value < 0.05 was used as the cut of value for statistical significance.

7. Results

Table (1) shows that the mean age of the studied mothers was 32.33± 27.59 years, more than forty percent (42%) of the mothers had secondary education level. Higher education was represented by 22%. As regard working state more than half (59%) of the mothers were working. Three quarters of the mothers' (34% & 41%) source of knowledge was from relatives and mass media (T V& radio).

- More than half of the studied mothers (59%) were from small family and live in rural areas, while 41% of them were large family and live in urban areas.
- Regarding family income, more than half (53%) of the families had hardly enough income, while more than one third had insufficient income.

- More than half (59%) of the studied mothers were from small families and more than half of the families (53%) have hardly enough income.
- Regarding to socio-demographic characteristics of children, the present study's results revealed that more than two thirds (68%) of the studied children were from 3-5 years old. The mean age was 3.32 ± 1.181 years. More than half (55%) of them were males. The children rank was the first, second, third and more (40%, 33%, 20%, and 7%, respectively).

It is clear from figure (1) that the highest percent (72%) of the studied mothers were experienced falling accidents among their children; meanwhile more than one quarter (28%) of them experienced cut wounds.

Figure (2) showed that, more than two thirds (68%) of the studied mothers can manage their children's accidents at home.

- It was evident from table (2) that there was significant differences between pre and post supportive strategy in mothers' knowledge in relation to definition, causes, risk factors and common types of accidents (P value= 0.03, χ^2= 0.12).

Table (3) documented that There was significant differences between pre and post supportive strategy in mothers' knowledge in relation to mothers' scores (P values 0.000, t test= -4.5).

Table (4) illustrates that there was statistical significant differences between pre and post supportive strategy in relation to mothers' practices regarding care used in case of limb fracture (χ^2 = 0.12 P value = 0.03*) and positioning (χ^2 = 0.98 P value = 0.03*)

There was statistical significant differences between pre and post supportive strategy in relation to mothers' practices regarding care used in case of cut wound (χ^2 = 0.12, P value = 0.03*) and epistaxis (χ^2 = 0.98, P value = 0.03*).

Table (5) shows that there was statistical significant differences between pre and post supportive strategy in relation to mothers' practices regarding care used in case of case of burns (χ^2 = 0.9 P value = 0.02*) and suffocation (χ^2 = 0.98 P value = 0.03

Table (6) shows that there were highly statistical significant correlations were found between mothers' age and education, child's age and mothers' knowledge in prevention of falling and drowning ,electrical shock , burn, and suffocation (P value=0.00, 0.50).

Regarding mothers reported practices there were statistical significant correlations between mothers' age and education, child's age and their practices in caring of the child with limb fractures, poisoning, cut wounds, suffocation and burns (P value =0.00, 0.50).

Table (1): Percentage Distribution of Socio-demographic Characteristics of the Studied Mothers (n= 100)

Items	Socio-demographic characteristics	
	no.	%
Age		
< 20 year	4	4.0
20 < 25 year	23	23.0
25 < 30 year	29	29.0
30 < 35 year	27	27.0
35 < 40 year	17	17.0
Mean ± SD	32.33± 27.59	
Level of education		
Illiterate	18	18.0
Read and write	10	10.0
Primary education	3	3.0
Preparatory education	5	5.0
Secondary education	42	42.0
High education	22	22.0
Working state		
House wife	41	41.0
Working	59	59.0
Source of mothers' knowledge:		
Relatives	34	34.0
TV & radio	41	41.0
Private clinics	9	9.0
Hospital	16	16.0

Figure (1)

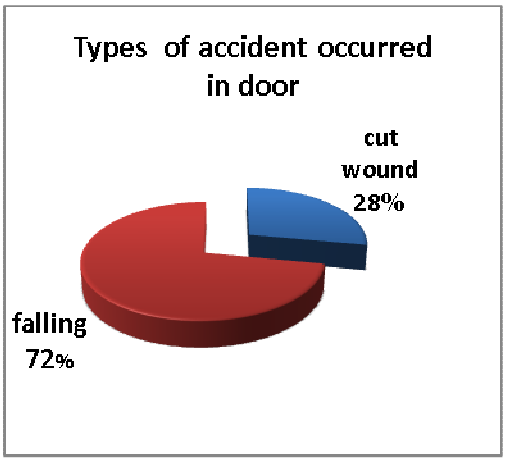

Figure (2)

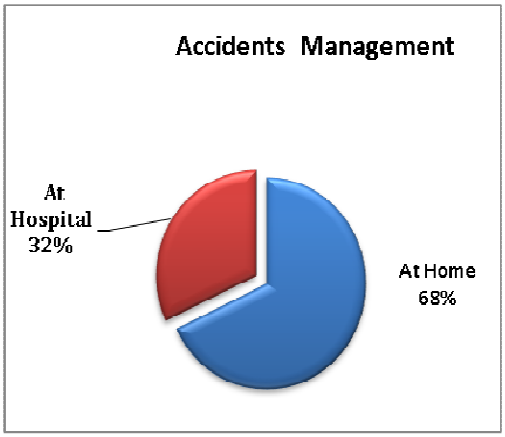

Table (2): Frequency Distribution of Mothers' Knowledge Regarding Accident among Children Under 5 years; Before and After Supportive Strategy Regarding Accidents (n= 100)

Items	Before supportive strategy regarding accidents				After supportive strategy regarding accidents			
	Yes		No		Yes		No	
	no.	%	no.	%	no.	%	no.	%
Accident definition	16	16.0	84	84.0	94	94.0	6	6.0
Causes of accident	15	15.0	85	85.0	91	91.0	9	9.0
Risk Factors of accidents	6	6.0	94	94.0	90	90.0	10	10.0
Types of accident	22	22.0	78	78.0	90	90.0	10	10.0
χ^2 = 0.12			P value = 0.03					

Table (3): Frequency Distribution of Mothers' Scores Regarding Accident Definition, Types, Causes and Risk Factors Before and After Supportive Strategy Regarding Accidents (n= 100)

Items	Mothers' scores			
	Before supportive strategy		After supportive strategy	
	no.	%	no.	%
Unsatisfactory	89	89.0	5	5.0
Good	7	7.0	5	5.0
Very good	4	4.0	90	90.0
Test	T= --4.5, p-value=0.000*			

Table (4): Frequency Distribution of Mothers' Practices Regarding Limb Fracture and Poisoning Before and After Supportive Strategy Regarding Accidents (n= 100)

Items	Before supportive strategy regarding accidents				After supportive strategy regarding accidents			
	yes	no	yes	no	yes	no	yes	no
	no.	%	no.	%	no.	%	no.	%
• **Practices used in case of limb fracture**								
Don't move child's limb	90	90.0	10	10.0	100	100.0	0	0.0
Remove all clothes from child's limb	15	5.0	85	85.0	90	90.0	10	10.0
Put child limb in supported splint	30	30.0	70	70.0	90	90.0	10	10.0
Cover all wound by sterile dressing	20	20.0	80	80.0	90	90.0	10	10.0
More than one approach	15	5.0	85	85.0	84	84.0	16	16.0
χ^2 = 0.12	P value = 0.03*							
• **Practices used in case of poisoning**								
Sure that child has pulse breathing	15	5.0	85	85.0	84	84.0	16	16.0
Don't force child to vomit	30	30.0	70	70.0	82	82.0	18	18.0
Don't give any milk or water	30	30.0	70	70.0	90	90.0	10	10.0
Go to the nearest hospital or poison center	30	30.0	70	70.0	90	90.0	10	10.0
More than one approach	15	15.0	85	85.0	84	84.0	16	16.0
χ^2 = 0.98	P value = 0.03*							

Table (5): Frequency Distribution of Mothers' Reported Practices Regarding Burn and Suffocation Before and After Supportive Strategy Regarding Accidents (n= 100)

Items	Before supportive strategy regarding accidents				After supportive strategy regarding accidents			
	yes		no		yes		no	
	no.	%	no.	%	no.	%	no.	%
• **Practices used in case of burn**								
Don't remove any thing on burn surface just remove child's clothes	90	90.0	10	10.0	100	100.0	0	0
Don't put any ointment, or oil or cotton on burn	15	5.0	85	85.0	90	90.0	10	10.0
Apply ice or cold water compressor for 10 min.	30	30.0	70	70.0	90	90.0	10	10.0
Put clean or sterile dressing on site of wound	20	20.0	80	80.0	90	90.0	10	10.0
Go to the nearest hospital or poison center	30	30.0	70	70.0	90	90.0	10	10.0
More than one approach	15	5.0	85	85.0	84	84.0	16	16.0
χ^2 = 0.9	P value = 0.02*							
• **Practices used in case of suffocation**								
Close gas tube	15	5.0	85	85.0	84	84.0	16	16.0
Sure that child has pulse& breathing	15	5.0	85	85.0	84	84.0	16	16.0
Increase ventilation	30	30.0	70	70.0	90	90.0	10	10.0
Go to the nearest hospital or poison center	30	30.0	70	70.0	90	90.0	10	10.0
More than one approach	15	5.0	85	85.0	84	84.0	16	16.0
χ^2 = 0.98	P value = 0.03*							

Table (6): Factors significantly correlated with mother's age, education and child age

Items	Mother's age		Mother's education		Child's age	
	r	p	r	p	r	p
• **Mothers reported practices in case of**						
1) Limb fracture	0.56	0.00	0.43	0.00	0.87	0.00
2) Poisoning	0.87	0.00	0.55	0.05	0.56	0.00
3) Cut wound & epistaxis	0.43	0.00	0.25	0.01	0.55	0.05
4) Suffocation	0.55	0.05	0.87	0.00	0.30	0.03
5) Burn	0.55	0.05	0.43	0.00	0.87	0.00

8. Discussion

The overwhelming importance of accidental injuries, deaths and disabilities in children is no longer a "privilege" of the industrialized world: both developing and developed countries are now facing a tremendous increase in accidents in young children ***(MANCIAUX, 2008).*** Accidents are the main cause of injury and even death in children. People only relate accidents to traffic accident or accidents in outdoor activities. However, as a matter of fact, the place where people regard as the safest place–home–hides many "hazards" ***(Towner & Towner, 2009).***

So the role of pediatricians and pediatric nurses, either individually or through their professional associations, is very important in utilizing supportive strategies essential for accidents prevention among children. The aim of the study was to evaluate the effect of supportive strategies regarding accident prevention on mothers of children under five years old.

This part discusses the results of the current study, comparing it with other related studies, recent literature, as well as representing the researchers' interpretations of some results.

The study's results revealed that the mean age of the studied mothers was 32.33± 27.59. This finding was supported by ***Ahmed et al., (2007)*** who found that a total of 53 mothers their mean age and standard deviation were 33±7 years, in the same field ***Saad et al., (2005)*** found that less than half of mother's age was ranged between (25-34) years old. In the same context ***Baaker, (2010)*** found that most accidental poisoning cases was belong to mothers aged 25-35 years.

Regarding mothers' level of education, more than forty percent of the mothers had secondary education while higher education represented by more than twenty percent, less than twenty percent of the mothers was illiterate. In contrast ***Saad et al., (2005)*** found that more than half of the mothers were illiterate, while only two percent of them had university education. Less than sixty percent of the mothers were working, while ***Hossein, (2009)*** and ***Saad et al., (2005)*** indicated that the vast majority of the mothers were not working. The researchers' belief that mothers' level of education and work could be factors that affect the health related behavior of the mothers with their children.

According to source of mothers' information about child' safety, the study showed that more than three quarters of them obtained their information from relatives, TV and radio. This was agreed with ***Morrison & Stone, (2009)*** who found that television and family members were considered the primary source of parents' information by 31% about their child safety measures. While only 3% of them depends on internet to obtain information. In addition, ***Joanne et al., (2005)*** revealed that the most frequently cited sources of parents' information on their child's safety were family and TV, followed by friends/parents. Meanwhile ***Tsoumakas et al., (2009)*** revealed that the parents' main sources of information about the measures that should be applied for the prevention of the home injuries were pediatricians (48.6%), the media (39.9%) and booklets (36.3%).

The current study results revealed that more than half of the studied mothers were from small family and more than forty percent of them were from large family and live in urban areas versus rural areas, this results goes with the studied mothers place of residence and also ***Hossein, (2009)*** indicated that more than forty percent of the mothers were from large family size. Regarding family income more than half of the families had hardly enough income, while more than one thirds have insufficient income; these results is supported by ***Niekerka et al., (2005)*** who concluded that housing conditions and socio-economic barriers increased odds for increased levels of exposure to accidents.

Regarding children characteristics, more than two thirds of the studied children were from 3-5 years old the mean age was 3.32 ± 1.181. Recent and old studies and theories in the field of pediatric and psychosocial studies agreed that toddlers and preschoolers are the critical ages regarding accidents. The highest percent of the mothers were experienced accidents among their children. In addition ***Lasi et al., (2010)*** found that most of childhood accidents occur during play. According to ***Hossein, (2009)*** and ***Saad et al (2005)*** more than fifty percent of the mothers reported that they experienced accidents among their children. Our study revealed that more than two thirds managed these accidents at home and about one third managed in the hospitals, this result

might reflect that the mothers can respond positively for supportive strategy for accident prevention. More than half of the children were male, this result indicated that male are more impulsive and destructive than female, and this result goes in the same direction with ***Eldosoky, (2012).***

The highest percent of the mothers reported that falling is the experienced accident among their children; followed by cut wounds; these might be related to the need of mothers to have knowledge and safety practices regarding the child's developmental problems as regard accidents. On the other hand, ***Ibrahim, (2004)*** added that, wounds represented more than forty percent of the studied children' accidents.

The study's results revealed that there was significant differences between pre and post supportive strategy in mothers' knowledge in relation to definition, causes and common types of accidents (P values are 0.02, 0.03, and 0.03,) while there was highly statistical significant in relation to mothers' knowledge about measures used to prevent falling (P value = 0.000) as well as in relation to mothers' knowledge about measures used to prevent drowning (P value = 0.03). These results go parallel with the study's hypothesis and supported with ***Rodolfo & Mrach, (2005)*** who showed that mothers' knowledge about injury prevention for their children was positively associated with mothers' home safety practices. On the same line ***Alazab, (2012) and Eldosoky, (2012)*** concluded that mothers had deficit knowledge in the pretest regarding children's accidents.

There was statistical significant differences between pre and post supportive strategy in relation to mothers' knowledge about measures used to prevent electricity shock & burn (χ^2 = 0.9 , P value = 0. 02) and suffocation (χ^2 = 0.98, P value = 0.03*). Highly statistical relations were detected between mothers' age and their reported practices in case of limb fracture, poisoning, cut wound and epistaxis, (P value = 0.00) suffocation and burn. These results can be related to the effect of supportive strategies and can be varied according to other factors, such as mothers' past experience and educational background, as well as the presence of supportive family members.

9. Conclusion

Based on the study's results it was concluded that more than two thirds (68%) of the studied children were from 3-5 years old, their mean age was 3.32 ± 1.181 years. More than half of children were males. Seventy two percent of the studied mothers were experienced accidents among their children. There were highly statistical significant correlations were found between mothers' age and education, child's age and mothers' knowledge in prevention of falling and drowning ,electrical shock , burn, and suffocation (P value=0.00, 0.50).
There were significant changes in both mothers' knowledge and reported practices regarding accidents prevention among children less than five years after exposure to supportive strategies regarding accidents prevention. Mothers' reported practices were significantly correlated to their age, level of education and child's age in caring of the child with limb fractures, poisoning, cut wounds, suffocation and burns (P value =0.00, 0.50).

10. Recommendations

The study results recommended that

- Health promotion programs about accidents prevention; should be directed to mothers and children' care givers in all health care sittings.
- Supportive strategies for families should be directed toward r children less than five years.
- Mass media has a vast responsibility in health awareness for accidents prevention among children.
- Community awareness about accidents prevention and how to provide first aid for children in emergency situations.
- Female illiteracy problem must be eradicated because it is associated to every children's health problems especially accidents.

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