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ASSESSMENT OF HOME ENVIRONMENTAL RISK FACTORS REGARDING ACCIDENTS AMONG PRESCHOOL CHILDREN

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ABSTRACT :

Living conditions in rural areas has been identified as potent risk factors for home accidents in preschool children. The aim of this study was to assess the home environmental risk factors and their relation to accidents among preschool children in Tanta and Assiut govern orates. A sample of 620 mothers (312& 308 mothers from Tanta & Assiut respectively) who brought their children under six years of age for physical check up to Health Center were chosen. Each mother was interviewed individually in the Health Center, and then visited at home. Two tools were used for collection of data, namely (1) an interview questionnaire sheet designed to collect the sociodemographic data and mother's awareness about home accidents, (2) an observation check list was used to observe home for potential environmental hazards for accidents. The results showed that 893 preschool children were affected by home accidents (432& 461 from Tanta & Assiut Respectively). Wound injury was the highest percentage and represented by (44.23%), followed by fall (41.88%), followed by animal bites (26.99%), and burn (21.16%) in Tanta and Assiut homes respectively. Nearly all homes had at least two potential environmental hazards leading causes of home accidents. The total score of inadequate knowledge among mothers in both homes were79.03% and safety considerations at home was not available by 87.10%. Individual predisposing factors were seemed to be significantly influenced by mothers' age and education.

INTRODUCTION :

Accidents are one of the five leading causes of death in industrialized and developing countries[1]. Injuries arising from home accidents are an increasing community health problems[2]. Although, it is difficult to get accurate estimates of home injuries in children, the few available epidemiological data indicated that 10% of children over the world wide suffer an accidents for which it is necessary to contact the health services[3] .

Children constitute about 40% of the population in developing countries. While growing up, children learn by exploring the world around them. They touch and play with things, which might injure them. Furthermore, children also try to imitate adult's behavior [4]. Every year, many children are injured or killed as a result of accidental poisoning, falls, burns, scalds, and bites. Sometimes, these accidents are caused in the home, sometimes in the street[5&,6].

In Egypt in 1998, the over all prevalence of

injuries in indoor home environment were 72.5% among children below 5 years old. Falling and wound were responsible for approximately 36.2% and 69.1% of all childhood injuries respectively in a rural community[7]. However the consequence of accidents are often more serious because of more dangerous environmental conditions. Even within the same country, home accidents in urban areas are likely to be difficult from those in rural areas. Living conditions in rural areas has been identified as potent risk factors for home accidents in children such as poor housing sanitation, economic pressure, rodent and insect infestation, poisoning from household chemicals, sick building syndrome, unsafe safety measures, as well as family's unawareness of risk factors and prevention related to risk factors and injuries [3,8&9].

Community health nurses are in key position in educating families about how to promote home safety, eliminating hazard before exposures occur, and screening for environmental hazards that may threaten the health [2,10&,11]. Thus, the aim of this study was to assess home environmental risk factors and their relation to accidents among preschool children in Tanta and Assiut Governorates.

SUBJECTS AND METHODS :

Settings :

The study was carried out at (1) four different Medical Health Centers, affiliated to the Ministry of Health, and offering health services in Tanta and Assiut Governorates (2 Centers from each city). (2) The physical environment of mother's houses.

Sample:

A random sample of a total of 620 families (312 & 308 mothers from Tanta and Assiut cities respectively) were chosen. With criteria that those who brought their children under six years of age for physical check up in the previous Health Centers. The criteria of selection was based on the child who had history of home accidents within the last 6 months before collection of data. Mothers of the preschool children were interviewed in the Health Centers and arrangement for home visiting were done to assess the physical home environmental risks for accidents. Each family was visited once and the house observed room by room for potential environmental hazards for accidents.

Tools:

Two tools were designed in order to obtain the necessary data:

1-An interview questionnaire: This was designed and used to collect the relevant data:

a-The sociodemographic characteristics of the families as: parental age, level of education and occupations, family size and income. The age and sex of preschool children, and past history of injuries within the last six months and its causes .

b-Mother's awareness regarding home risk factors and safety measures. It Includes 20 sub-items.

2-An observation check list: this was derived from review of literature related to home assessment[12,13&14] .It was used to assess home environmental risk hazards for accidents. It consisted of 42 sub-items organized into six categories, namely: neighborhood, housing physical structure, housing conditions " water, sewage, food, light, insects, rearing animal/ poultry and refuse collection", bath room and kitchen, recreational facilities, and safety considerations at home.

Data analysis:

Socio-economic standard and crowding index scale for families, developed by Fahmy & El-Sherbini (1983), was used[15]. The scale consisted of 7 items, namely: parents education and occupations, family Income/month, crowding index, and sanitation. The total score of this model summed 30, which classified into 3 levels as follows: high social standards (Scores from 25 to 30 points), middle social standards (scores from 20 to 25 points), and low social standards(scores are below 20 points). crowding index was calculated and classified as follows: very crowded > 3 persons/ room, crowded 1.5 to 3 persons/room, and uncrowned 1.5 or less persons/ room.

Scoring relating to mother's knowledge was agreed to be given a score of one or zero based on the answer whether it was right or wrong respectively. Then, the total scores was calculated and classified as follows: good (more than 75%), fair (from 50% to 75%), and poor(less than 50%).

Scoring of observation was decided to be given a score of one or zero based on whether the items were good or bad respectively. Risk assessment scales for housing sanitation, availability of recreational facilities and safety considerations were calculated and classified as follows: good (more than 75%), fair (from 50% to75%), and poor (less than 0%).

Data were collected over a period of six months starting September 2001. Statistical analysis was done using SPSS 9.0. The investigations included using frequency tables, percentages, mean and standard deviation. P test was used as a significant test at 5% level of the obtained results by using Chi-square test.

RESULT :

Table (1) shows the distribution of mothers according to socio-demographic characteristics in Tanta and Assiut samples. The study sample comprised of six hundred and twenty families who were affected by indoor home accidents (312 &308 families in Tanta and Assiut respectively). The findings of the study results revealed that the mean age of mothers in Tanta was 29.8±8.73 years compared to 25.6±9.36 years of mothers in Assiut. Statistically significant difference was found between the two groups (p=0.001). The same table also shows that among the studied sample in both groups about two thirds (62.57%) were illiterate or just read and write. The majority (93.23%) were housewives. Only 15.0% have small family size (ranging from one to three members). Higher percentages (59.83%) were living in rural areas. Statistically significant difference was not found in relation to education, occupation, family size and type of resident.

Table (2) illustrates the distribution of the studied preschool children according to sex and age in relation to their settings. The study samples comprised of 893 preschoolers were affected by home accidents (432 & 461 children) in Tanta & Assiut respectively. Males constituted 61.93%, while females were 38.07% of the studied sample in both groups. Statistically significant difference was not found.

Table (3) reveals the distribution of preschool children according to the past history of home accidents "types & causes" in both groups. The results showed that in both groups, there was no statistical significant difference in types of home accidents (wound, fall, burn, choking, and poisoning) . Statistically significant difference was found in animal bites in Assiut (p=0.042). As regard to the past history of the leading causes of home accidents in both groups, the same table also showed that, significant differences was not found in the leading causes of fall, burn, and poisoning. Statistically

significant difference was found in the leading causes of wound (p=0.0362), animal bites (p= 0.021) and choking (p=0.03).

Table (4) shows different environmental hazards present in the studied homes (Tanta & Assiut) and the leading causes of home accidents. The study showed that the significant environmental hazards in both homes were unsafe stairs (p=0.01) were unsafe stairs (p=0.01), use of wood stove (p= 0.061), rearing of animals/poultry (p=0.031), presence of insects (p=0.021), and unsafe storage of cleaning household products; medications; & insecticides (p= 0.02, 0.013, 0.032 respectively) .

Table(5) illustrates education of the mothers towards individual predisposing factors leading to home accidents. Results indicated that education of the mothers was correlated and significant with mother knowledge (0.01), housing sanitation (p=0.02), recreational facilities (p=0.02), safety considerations at home (p=0.001), socio-demographic standard (p= 0.003), and crowding index (p=0.0041).

Table (6) reveals mother's age toward individual predisposing factors leading to home accidents. The results showed that mother's age was correlated and significant difference was found in relation to mothers knowledge, housing sanitation, recreational facilities, safety considerations at home, socio-demographic standard, and crowding index. The value of P-values were (0.03, 0.041, 0.023, 0.036, 0.026 and 0.012) respectively.

Table (1): Sociodemographic characteristics of mother's in Tanta and Assiut cities studied samples.

Soicodemographic characteristics	Tanta (n=312)		Assiut (n=308)		Total (n=620)		P-value by X^2- test
	No	%	No	%	No	%	
Age :							
20-	54	17.31	173	56.17	227	36.61	
30-	210	67.30	97	31.49	307	49.52	
40-	48	15.39	38	12.34	86	13.87	0.001*
X& S.D	(29.8±8.73)		(25.6±9.36)				
Educational level:							
Illiterate	162	51.93	146	47.40	308	49.67	
read &write	33	10.58	47	15.27	80	12.90	
moderately education	50	16.03	76	24.67	126	20.33	0.136 NS
highly education	67	21.46	39	12.66	106	17.10	
Occupation:							
Housewife	288	92.31	290	94.16	578	93.23	0.31 NS
Working	24	7.69	18	5.84	42	6.77	
Family size:							
1-3	44	14.11	49	15.90	93	15.00	
4&5	154	49.36	92	29.87	246	39.76	0.081 NS
6& more	114	36.53	167	54.22	281	45.32	
Type of resident:							
Rural	183	58.66	188	61.04	371	59.83	
Urban	36	11.54	29	9.42	65	10.48	0.412 NS
Suburban	93	29.80	91	29.54	184	29.69	

* = significant NS= not significant

Table (2): Distribution of the studied preschool children according to sex and age in relation to settings.

Sex/Aage	Tanta (n=432)		Assiut (n=461)		Total (n=893)		P-value by X^2- test
	No	%	No	%	No	%	
Boys:							
>2 years	188	69.63	179	63.25	367	41.09	
2-6 years	82	30.37	104	36.75	186	20.84	0.431 NS
Total	270	48.82	283	51.18	553	61.93	
Girls:							
>2 years	100	61.73	103	57.86	203	22.73	
2-6 years	62	38.27	75	42.14	137	15.34	0.083 NS
Total	162	47.65	178	52.35	340	38.07	
Total sample	432	48.38	461	51.62	893	100	

NS= not significant

Table (3): Distribution of the preschool children according to the past history of home accidents (types & causes) in both groups.

Items	Tanta (n=432)		Assiut (n=461)		Total (n=893)		P-value by X^2- test
	No	%	No	%	No	%	
Wound accidents:							
Present #	195	45.14	200	43.38	395	44.23	0.236 NS
Factors:							
Sharp objects	57	29.23	34	17.00	91	23.04	
Broken glass	83	42.26	77	38.5	160	40.51	
Unsafe toys	55	28.21	89	44.5	144	36.45	0.0362*
Fall accidents:							
Present #	189	43.75	185	40.14	374	41.88	0.138 NS
Factors:							
Slippery floors	101	53.44	73	39.46	174	46.52	
Improper furniture	23	12.17	31	16.76	54	14.44	
Inadequate lighting	25	13.23	22	11.89	47	12.57	
Unsafe stairs	22	11.64	32	17.30	54	14.44	0.103 NS
Loose rugs	18	9.52	27	14.59	45	12.03	
Animal bites:							
Present #	102	23.61	139	30.15	241	26.99	0.042*
Factors:							
Rodents	12	11.76	5	3.60	17	7.05	
Snakes	2	1.96	8	5.75	10	4.16	
Insects	39	38.24	73	52.52	112	46.47	
Animals/ poultry	49	48.04	53	38.13	102	42.32	0.021*
Burn injuries:							
Present #	93	21.53	96	20.22	189	21.16	0.413 NS
Factors:							
Boiling water	28	30.11	33	34.37	61	32.28	
Matches &cigarette	17	18.28	24	25.00	41	21.69	
Gas stove	4	4.30	8	8.33	12	6.35	
Kerosene stove	19	20.43	9	9.38	28	14.81	
Wood stove	11	11.83	13	13.54	24	12.70	0.136 NS
Unsafe electricity	14	15.05	9	9.38	23	12.17	
Choking accidents :							
Present #	75	17.36	88	19.09	163	18.25	0.201 NS
Factors:							
Unsafe toys	57	76.00	46	52.27	103	63.19	0.03*
Small objects	18	24.00	42	47.73	60	36.81	
Poisoning accidents :							
Present #	39	9.03	45	9.76	84	9.41	0.42 NS
Factors:							
Medications	21	53.85	20	44.44	41	48.81	
Kerosene	6	15.38	7	15.56	13	15.48	
Cleaning fluids	8	20.51	10	22.22	18	21.43	0.136 NS
Insecticides	4	10.26	8	17.78	12	14.28	

*= significant NS= not significant

Rest of samples were not affected by home accidents. Therefore percentage of factors were accounted from total number of present only.

Table (4): Distribution of the studied homes according to observed present environmental hazards conducive to home accidents in both groups.

Environmental hazards	Tanta (n=312)		Assiut (n=308)		Total (n=620)		P-value by X^2- test
	No	%	No	%	No	%	
Improper building	75	24.03	97	31.49	172	27.74	0.09 NS
Unsafe stairs	78	25.00	170	55.19	248	40.00	0.01*
Use of wood stove	114	36.53	134	43.50	248	40.00	0.061
Presence of animals	123	39.42	166	53.89	289	46.6	0.031*
Unsafe electrical cords	57	18.26	43	13.9	100	16.12	0.21 NS
Unsafe furniture	96	30.76	89	28.89	185	29.83	0.302 NS
Loose rugs	162	51.92	131	42.53	293	47.25	0.13 NS
Presence of insects	37	11.85	72	23.37	109	17.58	0.021*
Presence of slippery floor	87	27.88	64	20.77	151	24.35	0.08 NS
Use of kerosene stove	114	36.53	117	37.98	231	37.25	0.483 NS
Unsafe storage of sharp objects	84	26.92	77	25.00	161	25.96	0.41 NS
Unsafe storage of cleaning fluids	99	31.73	126	40.9	225	36.29	0.02*
Unsafe storage of medications	120	38.46	139	45.12	259	41.77	0.013*
Unsafe toys	138	44.23	153	49.68	291	46.94	0.21 NS
Unsafe storage of insecticides	114	36.53	166	53.89	280	45.16	0.032
Storage of crops	207	66.34	216	70.13	423	68.23	0.163 NS

*= significant NS= not significant

Table (5): Education of the mothers' toward individual predisposing factors leading causes of home accidents.

Predisposing factors	Educational level of mothers								Total (n=620)		P-value by X^2- test
	Illiterate (n=308)		read/write (n=80)		Moderately (n=126)		Highly (n=106)				
	No	%	No	%	No	%	No	%	No	%	
Mothers' knowledge :											
Good	3	2.31	15	11.54	61	46.92	51	39.23	130	20.97	
Fair	155	55.96	35	12.64	50	18.05	37	13.35	277	44.68	0.01*
Poor	150	70.43	30	14.08	15	7.04	18	8.45	213	34.35	
Housing sanitation											
Good	11	8.87	16	12.90	48	38.71	49	39.52	124	20.00	
Fair	195	60.37	45	13.93	57	17.65	26	8.05	323	52.10	0.02*
Poor	102	58.96	19	10.98	21	12.14	31	17.92	173	27.90	
Recreational facilities:											
Good	20	14.39	37	26.62	23	16.55	59	42.45	139	22.42	
Fair	40	19.05	20	9.52	103	49.05	47	22.38	210	33.87	0.02*
Poor	248	91.51	23	8.49	-	-	-	-	271	43.71	
Safety considerations at home:											
Good	-	-	-	-	34	42.5	46	57.5	80	12.90	
Fair	107	34.74	55	17.86	90	29.22	56	18.18	308	49.68	0.001*
Poor	201	86.64	25	10.78	2	0.86	4	1.72	232	37.42	
Socioeconomic standards:											
High	-	-	-	-	35	40.23	52	59.73	87	14.03	
Moderate	28	13.33	37	17.62	91	43.33	54	25.71	210	33.87	0.003*
Low	280	86.69	43	13.31	-	-	-	-	323	52.10	
Crowding index:											
Uncrowded	20	14.93	14	10.45	41	30.60	59	44.02	134	21.61	
Crowded	143	46.58	36	11.73	81	26.38	47	15.31	307	49.52	0.0041*
Very crowded	145	81.01	30	16.76	4	2.23	-	-	179	28.87	

* = significant

Table (6): Mothers' age towards individual predisposing factors leading causes of home accidents.

Predisposing factors	Age of mothers						Total (n=620)		P-value by X^2- test
	20- (n=227)		30- (n=307)		40- (n=86)				
	No	%	No	%	No	%	No	%	
Mothers' knowledge :									
Good	24	18.46	64	49.23	42	32.31	130	20.97	
Fair	122	44.04	121	43.68	34	12.27	277	44.68	0.03*
Poor	81	38.03	122	57.28	10	4.69	213	34.35	
Housing sanitation :									
Good	22	17.74	76	61.29	26	20.97	124	20.00	
Fair	123	38.08	175	54.78	25	7.74	323	52.10	0.041*
Poor	82	47.40	56	32.37	35	20.23	173	27.90	
Recreational facilities :									
Good	20	14.39	87	62.59	32	23.02	139	22.42	
Fair	60	28.57	120	57.14	30	14. 29	210	33.87	0.023*
Poor	147	54.24	100	36.90	24	8.86	271	43.71	
Safety considerations at home :									
Good	4	5.00	44	55.00	32	40.00	80	12.90	
Fair	105	34.09	172	55.84	31	10.07	308	49.68	0.036*
Poor	118	50.86	91	39.22	23	9.92	232	37.42	
Socioeconomic standards:									
High	25	28.74	34	39.08	28	32.18	87	140.3	
Moderate	63	30.00	119	56.67	28	13.33	210	33.87	0.026*
Low	139	43.03	154	47.69	30	9.28	323	52.10	
Crowding index:									
Uncrowded	47	35.08	56	41.79	31	23.13	134	21.61	
Crowded	93	30.29	191	62.22	23	7.49	307	49.52	0.012*
Very crowded	87	48.60	60	33.52	32	17.88	179	28.87	

* = significant

DISCUSSION :

Many home accidents can be avoided by using a little care and foresight to identify home environmental risk factors. Many accidents could be less serious if parents with children knew what to do as soon as they occur[16]. Recent studies documented that the prevention of home accidents and injuries in children can be successfully achieved. Nurses can implement health and safety classes at primary health care centers or at homes to promote health and prevent injuries and illness. Although, health education is not enough unless it is supported by safety regulations and approaches, changing the physical environment seems to be more promising than changing human behavior [17&18].

The present study was done with the objective of assessing home environmental risk factors conducive to accidents among preschool children in Tanta and Assiut homes, and to what extent the individual factors playing a role in reducing this hazards. The findings of the present study in both studied homes (Tanta & Assiut) revealed that many prevalent risk factors whether individual or environmental are the main leading causes of home accidents among children.

First, with respect to environmental hazards conductive to accidents among preschool children in both homes, findings of the present study during home visits observed that, the majority of mothers' homes were unsafe.

Nearly all homes had at least two potential hazards listed in Table (4). The most prevalence hazards were storage of crops, unsafe toys, rearing of animal/ poultry, loose rugs, unsafe storage of insecticides and medicine or drugs, use of wood stove, and unsafe stairs. Similar results were reported by Mohamed (2000)[19], Amine et al., (1998)[7], and Ahmed (1989)[20]. They found that living condition in rural areas attributed to environmental factors such as cooking over open fires, lead to burns and scalds. Badly built houses and poor maintenance such as stairs without railings, might cause falls. Accidental drinking of kerosene stored in soft drinks bottles lead to poisoning of children. Other causes related to electricity or sharp instruments such as electric shock, and cuts and wound which are very common , home accidents [7,19&20]. Therefore, families should be encouraged to use community resources and need assistance in identifying hazards that may threaten children's health and are absent at homes. The responsibilities of community health nurse in relation to environmental hazards include monitoring, assessing, educating, advocating, and role modeling [21,22].

Findings of the present study showed that the previous history of home accidents among preschool children in Tanta and Assiut homes were wound (44.23%), fall (41.88%), animal bites (26.99%), burn (21.16%), choking (18.25%) and poisoning (9.41%). Similar results were obtained by others studies [7, 19, 20&23].

Secondly, with respect to individual factors related to home accidents among preschool children. Findings of the present study revealed that, many prevalent misunderstanding and very poor knowledge among the mothers related to risk factors, care during injuries and its prevention. The total score of inadequate knowledge among mothers in both groups were 79.03%. This could be explained by the fact that the majority of mothers were illiterate or just read and write. As indicated by Preston et al., (2000)[24], education is the only mean by which human beings rise from baseness to dignity and honor. If women were taught, their minds would be more willing to accept sound views and leaves superstitions behind. Their knowledge and behavior toward their children becomes more better.

Regarding indoor housing sanitation that may play a role in the occurrence of home injuries, it was revealed from the present results that, the majority of mothers in both homes were fair to maintain sanitary conditions. It could be attributed to the negligence and careless maintenance of these homes. Poor housing conditions were reported in many studies as the leading causes in two thirds of home injuries among young children. It is attributed primarily to environmental factors such as slippery surfaces, improper stairs, improper furniture, loose throw rugs, broken glass, poor cleanliness, rearing animals/poultry, and unsafe storage of boiling water; toys; and medications[7,19,20,23]. Many hazards (mentioned above) related to poor housing conditions were prevalent in the present study in both homes. In most homes (Egyptian rural house), the housewife carries the main responsibility for maintaining the household, maintaining sanitation and determining various physical hazards encountered inside the home. Therefore, strengthening mothers role in promoting and maintaining homes safety for young children is a must. They need the necessary knowledge to modifying home's environment to prevent or minimize accidents and developing the concept of safety within the entire household[20,25].

Socioeconomic conditions were related to the quality of housing in many ways.

Furthermore, crowding always tends to be greater among the poor families than among the rich. This increase risks of emotional stress that probably contributes to home accidents[26] .The findings of the present study in both homes revealed that half percent of families were low socioeconomic, very crowded and had limited recreational materials.

Concerning the availability of safety considerations at home, the findings of the present study showed that the majority of mother's homes in both groups lack first-aid equipments, with unsafe storage of dangerous objects such as medications and household cleaning, as well as lack of child supervision during playing. Similar results were reported by other studies[7,19,20&23]. This could be attributed to lack of information of those mothers about safety precaution. Some authors[27,28,29] stressed the availability of first-aid kit, and applying safety precautions to keep dangerous supplies in locked cabinet

The mothers' individual factors seemed to be influenced by their age in the present study. Mothers aged 30 years to less than 40 years had a higher scores of knowledge, maintaining home sanitations and applying safety considerations (Table 6). This could be due to their increased awareness and experience through life in child rearing.

As regard the education of the mothers and their individual factors, the present study revealed that illiterate mothers failed to obtain knowledge, maintain home sanitations and apply safety considerations (Table 5). Mass media should take an active role in health education concerning safer home environment for the children.

CONCLUSION AND RECOMMENDATIONS:

It can be concluded that environmental hazards were common in the studied homes (Tanta & Assiut). Nearly all homes had at least two potential environmental hazards leading to of accidents among preschool children.

However, individual factors appear to be more considered as risk factors for accidents in children. The following recommendations could be drawn:

1-Mass media and all primary health care centers should contributes significantly in increasing the level of awareness of the parents about safety of home environment for children.

2-In-services education program for nurses working in primary care settings related to home accidents prevention and control should be emphasized.

3-Encourage home visits by the trained sanitarian / community health nurses to assess home environments and improving the housing conditions.

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تقييم بيئة المنزل للعوامل الخطرة للحوادث بين الأطفال فى سن ما قبل المدرسة

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من أجل تقييم البيئة داخل المنزل لمعرفة العوامل الخطرة المسببة للحوادث بين الأطفال (سن ما قبل المدرسة) أجريت دراسة على عينة شملت ٦٢٠ سيدة (٣١٢ من محافظة طنطا ، ٣٠٨ من محافظة أسيوط) ، ولمدة ٦ شهور ابتداءً من سبتمبر عام ٢٠٠٠ ، ووجد من التاريخ السابق للحوادث أن ٨٩٣ طفل تعرضوا للحوادث ، تمثل أكثرها فى الجروح ٤٤,٢٣% ، والسقوط ٤١,٨٨% ، وعض الحيوانات والطيور ولدغ الحشرات ٢٦,٩٩%، والحروق ٢١,١٦%، وعند مراقبة البيئة داخل المنزل تبين أن معظم البيوت يوجد بها ما لا يقل عن عاملين خطرين مسببين لوقوع الحوادث من العوامل مثل : (تخزين المحصول ولعب الأطفال الغير آمنة تربية الطيور والحيوانات وعدم تثبيت سجاد الأرض، وتخزين المبيدات الحشرية بطريقة غير آمنة) .

وكانت معلومات الأمهات غير كافية (٦٩,٠٣%) بالنسبة للعوامل المسببة والوقاية منها ، وعدم توفير وسائل الآمان فى المنازل (٨٧,١٠%) ، وكذلك سن الأم ومستواها التعليمى مرتبطان بالعوامل التى تلعب دوراً فى حدوث الحوادث المنزلية .

لذلك توصى الدراسة بتوعية الأمهات بمراقبة بيئة المنزل لاستكشاف العوامل المساعدة لوقوع الحوادث والعمل على توفير وسائل الامان داخل المنازل ، كما توصى بأهمية وسائل الإعلام لنشر الوعى عن السلامة المنزلية وتدريب الممرضات فى مراكز الرعاية الأولية عن منع الحوادث بالمنزل.

وكذلك لابد أن يؤخذ فى الاعتبار السلامة فى المنزل، وأيضاً من خلال الزيارات المنزلية التى يقوم بها العاملون الصحيون بالمراكز الصحية .