

# Family Adherence on Children's Preventive Measures on the Protection of Children

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Received: December 25, 2018 Accepted: April 29, 2019 Published: June 27, 2019

doi:10.5296/ijld.v9i2.14990

URL: <https://doi.org/10.5296/ijld.v9i2.14990>

## Abstract

The aim of this study was to identify the impact of family adherence to preventive measures on protecting children aged 2 to 4 years from accidents inside and outside the home in the southern governorates of Jordan. The researcher was used descriptive approach design, as the sample of the study was 1200 mothers who have children aged 2-4 years in the southern governorates of Jordan (Karak, Tafilah, Ma'an and Aqaba). The study discussed the main accidents that a child may be exposed to including burning, suffocation, fall, poisoning, drowning, electrical, and other accidents such as road traffic accidents, glass-related accidents, sharp tools accidents, and strangulation including blind cords. The results revealed that most women were found to have poor knowledge regarding children accidents prevention. In addition, the result showed that there were a significant differences between the training course and the mother education on the protection of children aged 2 to 4 years from accidents in the southern governorates.

Moreover, the results showed that the age of mother has an impact difference were the younger mothers were more follow the prevention measures in the protection of children. The results revealed that "Other Accidents (road traffic, glass-related, sharp tools and strangulation including blind cords)" was high scour between the seven accidents among the mothers on the southern governorates of Jordan. The researcher recommended that the importance of educating mothers about the need to adhere to preventive measures to protect children from accidents that may occur inside and outside the home.

**Keywords:** Family adherence, preventive measures

## 1. Introduction

The human being in his life has many roles, functions, and responsibilities that entrusted to, but the most important roles and responsibilities carried out are borne by the upbringing of those under his care and responsibility, as this is a great responsibility and trust that bears its aftermath (Bröning et al., 2012). The impact of this positive and negative responsibility are reflected on all parties including both parents and groups, as they have a profound impact on shaping individuals behaviour, developing and refining their personality in an integrated manner (Hockenberry & Wilson, 2014). Thus highlighting the importance of the family and the greatness of secretariat it bears, the extent of its responsibility, and its role in the development and consolidation of social values such as cooperation, solidarity, synergy, compassion and other values that in turn raise and protect the individual (Cole, 2011).

The family is the first institution that affects children, which teaches them a number of customs, traditions, and values through the process of social origin, which first begins; it starts from the family (Eldosoky, 2012). The family is defined as a group consisting of husband, wife and children, as a single independent unit from the rest of the community. In addition, the family is a prominent nucleus in the advanced industrial societies because of its reliance on sexual attraction and friendship between the husband and wife, and between parents and children (Koutlakis-Barron & Hayden, 2016).

Since ancient times, the family is an important unit in the social system that emerged with God's creation of man and women on the ground (Afkar, 2013). The family from the beginning of its inception to the present time has undergone a number of major developments, including the level of its size and structure, the level of its relations between members, or between the family each other in terms of objectives, functions and roles (Lavery & Reay, 2016). Moreover, the family at all stages reflect the society in which it arises in terms of its faith, civilization and level of progress (Pant et al., 2015). Since its inception, family has played a role that no one can deny, whether this role in the field of education, economic or social development, the reduction of crime and delinquency, and prevention and protection (Akturk & Erci, 2016). Therefore, family has had a major impact on the child's welfare and protection of extremism and delinquency (Dingwall, Eekelaar, & Murray, 2014).

One of the most important functions of the family is the preventive role. This role is highlighted by the family's provision of a comprehensive and viable education and nurturing (Bánfai et al., 2015). The preventive role of the family is to detect imbalances that can affect

one of its children, as early as possible, and assist them in future treatment and prevention (Townsend & Choi, 2014). To be a preventive family, it must have direct contact with their children, maintain constant follow-up, and identify the circumstances surrounding them (Aggarwal, Singh, & Aditya, 2011). Furthermore, the family needs help a number of social institutions, so that it can play its preventive role to the fullest, since some of those social institutions contribute to define family preventive role, and what are the main precautions to be followed in order to be a family protective (Lin et al., 2012).

The importance of this research is that it deals with the preventive family with children between the ages of 2-4 years as well as the impact of the governmental social centres (Ministry of health, and maternity and childhood centres) in supporting preventive families. As this subject has not been addressed in any of the previous studies and research, in other words, this is the only study that has dealt with this subject. Moreover, the importance of this research stems from the fact that it will attempt to reveal the extent to which families in the southern governorates of Jordan play a preventive role in protecting the child as well as to determine the impact of demographic factors on family adherence to preventive measures to protect children aged 2-4 years from accidents. Moreover, the results of this research will reveal the impact of family adherence to preventive measures on the protection of children aged 2-4 years from stumbling and falls, suffocation, drowning, poisoning, burning, and electrical accidents in the southern governorates. Furthermore, it will be a useful addition in Arabic library and an important reference that researchers in this area can benefit from its results.

### *1.1 The Jordanian Context*

Jordan is concerned with the deployment of the preventive family because of its importance and role in the protection of children from the problems and risks that may be exposed to (Al-Khateeb, 2010). In the current study, the four southern governorates (Karak, Tafilah, Ma'an, & Aqaba) were selected. Jordan is made up of 12 governorates; all four governorates are located within the territory of the North, Central or South. Therefore, Karak, Tafilah, Ma'an and Aqaba are located within the southern region, as each of these governorates is characterized by the other in many ways in terms of population, area, and population density Ahmad (2014). For example, the population of Karak is (316629) with an area (34947 km<sup>2</sup>). In addition Karak is characterized by an industrial and agricultural area at the same time, and the high rate of education (Nagata, 2014). While, Tafilah governorate is considered as one of the most distinguished governorates in the Kingdom due to its geographical diversity and economic activities. It has a population of 96291 and an area of 2209.5 km<sup>2</sup>. Tafilah is characterized by abundant natural and mineral resources, water availability and tourist sites (Ministry of Interior, 2017).

Moreover, Ma'an is the largest governorate in terms of area, with an area of about 32832 km<sup>2</sup>, that is, its area constitutes (37%) of the total area of the Kingdom. As the population of Ma'an Governorate is approximately 144082, and its population density was 4.4 people / km<sup>2</sup>. Ma'an is characterized by the availability of infrastructure services necessary for investment and strategic location due to its proximity to the port of Aqaba and located on the Saudi-Iraqi land line (Nagata, 2014). City of Aqaba, which is also within the southern region also is

characterized only as the sea port of Jordan, an area of (6904.7 km<sup>2</sup>), and the population of about (188160) (Ministry of Interior, 2017). These four governorates have health directorates and maternity and childhood centres, as they provide appropriate care and medical services. As they work to educate the family and specifically the mother in many things that lead to the protection of children from risks and problems.

### *1.2 Child and Motherhood Centres*

Governmental social centres are social institutions based on convincing citizens in the needs of their local communities to grow, develop and involve them in understanding their needs and problems, and provide care for citizens of all ages (Espitia-Hardeman et al., 2011). The mission of these centres is to preserve health by providing preventive and curative health services in a fair and high quality by using the best resources and techniques. As these centres work to find effective partnership with the relevant bodies and play the regulatory role on services related to the health of citizens (Debnath & Reang, 2014). In Jordan, the Ministry of Health has adopted the policy of providing health services to all citizens and its services are distributed to all regions of the Kingdom. The number of comprehensive health centres are 68, primary health centre 377, and secondary health centre 238. Jordan has made remarkable progress in the area of child health, as maternity and childhood centres rising from 435 in 2011 to 468 in 2016, which has contributed to reducing the number of injuries and accidents affecting children (Jordan Department of Statistics, 2014). Motherhood and childhood centres are among the most prominent social institutions at the ministry of health in Jordan. The role of these centres is to provide primary health care services, treat communicable diseases and accidents caused by children, and provide assistance and immunization against diseases for children (Debnath & Reang, 2014). Responsibility Centres also include providing the necessary care and education to the mother, so that mother can play her preventive role (Ministry of Health, 2017). Maternity and childhood centres are women's centres specializing in maternal and child affairs in the cognitive and family aspects, since it aims to ensure that every mother and child of the target audience receives their educational needs at a high level (Erkal, 2010). Moreover, these centres were set up to prepare and qualify mothers with an educational, psychological and health level with regard to their children (Tsai et al., 2011). In addition to defining the society with the necessary needs of the mother and child, and their problems to help them practice their lives in a suitable environment (Espitia-Hardeman et al., 2011). Furthermore, these centres work to provide awareness programs to contribute to the protection of children from accidents that exposed to (Debnath & Reang, 2014).

Health directorates and Maternity and childhood centres are spread throughout the Kingdom, especially in the southern governorates. Many health centres affiliated to the Ministry of Health have maternity and early childhood health services. For example, there are 16 health centres in Tafilah governorate. In the governorate of Karak, there are 44 centres, while the number of health centres providing maternity and childhood services in Ma'an governorate reached 22, and in Aqaba 8 centres, which provide various health services to the residents of these governorates. In addition, vaccination programs against diseases, and awareness plans and tips are provided to promote the principle of family protection (Ministry of Health, 2017).

### *1.3 Literature Review*

In both developed and developing countries, accidents are one of the most important causes of child mortality, but it is not considered a health problem in the community until it has occurred, leading to many deaths or serious injuries (Koutlakis-Barron & Hayden, 2016). Pre-school children are the most vulnerable to accidents, as they look to find out what's new as well as increased kinetic capacities than before (Debnath & Reang, 2014). Furthermore, age between 2 and 4 years is one of the most difficult stages of child development, as infertility, physical, emotional and social growth is increasing at this stage. The child also has many experiences through the home, which plays an important role in shaping the values and trends of the child Mohammed, Mohammed & Byoumi, (2013). Many accidents and injuries to children in their early years, although the home environment is safer for the child, but it may pose a significant risk in the event of lack of parents' attention or neglect to their children, as those risks increase as the child's ability to move (Koutlakis-Barron & Hayden, 2016). The previous studies discussed accidents that children exposed to from several angles, reflecting the researchers' interest in this subject with the presence of these accidents in all Arab countries. Akturk & Erci (2016) stressed that the mother who suffered from previous home accidents with her children is doing more behaviours to raise her children in a preventive way to prevent domestic accidents, as education is an important factor in preventing home accidents and promoting preventive education in children.

El-sabely, Yassin & Zaher (2014) examined the role of the educated mother in the prevention of household accidents of children in the eastern region of Egypt. As they found that there was a statistically significant relationship between the educational level of the mother and preventive education to prevent domestic accidents and promote preventive education in children. On the other hand, Lin et al. (2012) revealed the role of the family in the delivery of preventive services to children through Taiwan's national health insurance system, as they stressed that the family plays an important role in providing preventive protection for children through free vaccines provided through Taiwan's health insurance services. In order to further promote the health and well-being of children, the Government of Taiwan must cover national health insurance for child vaccines as well as non-free vaccines should be provided free of charge to families who could not afford them.

In addition to that, children's vulnerability to household hazards is due to the lack of awareness and lack of experience of mothers in ways of protecting their children against domestic hazards. There is no relationship between the work of mothers and the quantity and quality of household hazards to children, whether male or female, including burns, electric shocks, wounds, cuts, fractures, bruises, as males are more likely to have domestic injuries than females (Dingwall et al., 2014). Debnath & Reang (2014) showed the role of women's level of knowledge in reducing child accidents and safety measures. They concluded that knowledge level of mothers is relied mainly on sex of the children. On the other hand, the study found that there were factors that did not play a vital role in reducing the incidence of children such as occupation, family type, and the literacy.

Moreover, Eldosoky (2012) was to recognize mothers' knowledge, practices and attitudes as

well as to measure the incidence and types of domestic accidents influencing rural children in Qalubeya governorate, Egypt. In addition, the study found that the most common incidents are falls, burning, poisoning and cut wounds. The study concluded that the lower the age of women, the less likely it will be to reduce children's accidents. This is due to women's fear of their children, especially if they are the first. Furthermore, the study stressed that knowledge of first-aid mothers plays an important role in reducing such incidents. Moreover, Arulogun, Ikolo & Oluwasanu (2013) identified the needs of mothers to protect children from accidents and first aid at the time of such incidents in Ibadan Southwest Local Government Area, Nigeria. The results revealed that planning and implementing a health promotion education program helped to prevent pre-school children from accidents. In addition, improving the social status of women was a key factor to reduce the incidence of children in early life.

#### *1.4 Research Problem*

Household accidents are the main cause of many deaths, and permanent and serious injuries, as children suffer more than others. These are accidental and unintended occurrences, or as a result of personal negligence. So, prevention and sensitization of people, especially parents, are tasks that should be the focus of public health authorities. The present study was designed to examine the issue of preventive family for children between the ages of 2-4 years as well as the impact of government social programs in supporting the preventive family. The preventive family is of great importance to protect children from many problems that may face, as the responsibility to protect children from a lot of risks at this age falls squarely on mother's shoulders, because mothers spend more time with the children at this age, as mothers are most able to protect them from many risks that may surround the child, especially with regard to household accidents.

This study also came to examine whether the governmental social centres, especially the mother and childhood centres in the southern governorates, have a role in supporting the protective family. These centres are located in the southern governorates, and they play an important role in awareness and counselling. In addition, this study came to examine whether these centres provide support to the preventive family, help them to protect the children, and provide the necessary protection against the risks that may surround them.

#### *1.5 Research Objectives*

The present study aimed to achieve a number of objectives, the most important of which were:

1. To identify the impact of family adherence to preventive measures (mothers' knowledge) on the protection of children aged 2 to 4 years from accidents in the southern governorates.
2. To identify the impact of training courses on the protection of children aged 2-4 years from accidents in the southern governorates.
3. To identify the impact of mother education on the protection of children aged 2-4 years from accidents in the southern governorates.
4. To identify the impact of mother age on the protection of children aged 2-4 years from accidents in the southern governorates.

## Research Hypotheses

1. There is an impact of family adherence to preventive measures on the protection of children aged 2-4 years from accidents in the southern governorates.
2. There are any impact of training courses on the protection of children aged 2-4 years from accidents in the southern governorates.
3. There are any impact of mother education on the protection of children aged 2-4 years from accidents in the southern governorates.
4. There are any impact of mother's age on the protection of children aged 2-4 years from accidents in the southern governorates.

### *1.6 Interpretation of the Selection of Children Aged 2-4 Years*

When children reach the age (4) years old, the in intentional injuries become the most danger threatening them to remain a live About (830,000) child died annually as a result of in intentional injuries. This means that there are more than (2000) family their life changes drastically because of the terrible injuries of one of its children as a result of those injuries (WHO, 2011). In addition, More than (95%) of the children deaths occurs as a result of the injuries in the remote places from the centers, or in the vital regions, such as in the capitals. In some countries the percentage of deaths resulting from injuries among children age between (2-4) years old is considered very high for these countries to interest in this problem, the children injuries and to reduce the rate of children death.

In addition, the costs of the health systems and the economic loser are very high as a result of children injuries leading to death, or to severe disability constraining the efforts aiming at reaching the developmental goals of the millennium (WHO, 2011).

Moreover, Because the children at this age are subject to injuries resulting from accidents, which are considered the main reason for death cases between the children. Because children between (2-4) years old acquire new skills, they feel independent, which push them to experiment and acting in a way that might and to harm and injuries. Despite the child's growth, but he still needs the close monitoring and observation, also to guidance by the parents and by those who are around him, to protect the safety of the child physically, which is a continuous non stopping responsibility.

### *1.7 Common Childhood Accidents*

Family members, especially children, are exposed to many accidents and risks that cause them harm and injury (Lavery & Reay, 2016). The reason for such risks and accidents may be due to ignorance, lack of family protection for their children, or not giving them the care they need, as family must be a protective, so that they can protect their children from danger (Lin et al., 2012). Childhood is one of the most important problems in the world. Childhood is one of the stages of human development (Arulogun et al., 2013). The age range between two to four years is an important stage for the family to pay attention to, since families try to teach the child a lot of aspects that protect him from many risks and accidents, as the child at this age in response to receive a lot of knowledge that fits with his age. In addition, children are aware of what is going

on around them, so teaching them some protective things that protect them from certain accidents and problems is appropriate at this age and may contribute to their quick response (Cole, 2011). In order to prevent accidents and problems with children, it is necessary to identify the causes that stand behind those accidents, so that the family can protect their children from those accidents that may cause them serious damage. In addition, these accidents can cause disability, malformations and psychological trauma, according to General Directorate of Civil Defence (2012), the most prominent incidents that may occur and cause the child a number of problems are burning accidents, suffocation accidents, fall accidents, poisoning accidents, drowning accidents, electrical accidents, road traffic accidents, glass-related accidents, sharp tools accidents, and strangulation accidents including blind cords.

Children may be exposed to burning accidents, whether they are first, second or third degree burns, as a result of being exposed to fire from fireplaces, matches and lighters. One of the most prominent burns that a child may experience is the gas stove, as the kitchen is one of the most dangerous places for children, as the child may be exposed to several types of accidents of multiple burns when tampering with the stove, it may open burner valves and lead to gas leak and flare. Moreover, fire accidents in the kitchen can result in the mother neglecting her children and leaving them alone in the kitchen, which may cause them fire. The fire also includes incendiary chemicals and the child is exposed to iron and burns from hot liquids (Mohammed et al., 2013; Hatamabadi et al., 2014).

In addition, suffocation accidents come as a result of swallowing small things like chewing gum, nuts or cutting small toys. In order to reduce the risk of these accidents of these accidents, the mother must keep the area where the child plays free of small games, and be careful to feed him after food is divided into small pieces. Learn the principles of first aid for a person who is suffocated by swallowing a foreign body, because the first aid for an adult is different from first aid to the child. The examples are not exhaustive but it is useful to review the most common among them such as suffocation while eating, cases of suffocation as a results of vomiting of the child after eating, cases of suffocation due to heating in the winter, cases of strangulation and external distress during the child's protection, accidents of suffocation sensations by inhalation of toxic substances (Sidebotham et al., 2014).

Moreover, fall accidents is one of the most common incidents among children between ages one to six years, as it is possible for the child at this age to fall from high places such as bed, chair or table (General Directorate of Civil Defence, 2012). Furthermore, the child may also fall from stairs or the top of the tree, as the fall accidents leave a great impact on the child, and causes him many problems, so it is necessary to prevent incidence of falls through taking the necessary measures, and creating awareness of the need to follow specific procedures to ensure the prevention of such incidents (General Directorate of Civil Defence, 2012).

Furthermore, poisoning accidents is one of the most common accidents, which may affect the child at an early age, as children usually put everything in their mouth, which can take drugs, chemicals or household preparations as a result of parents' neglect and lack of attention to them. Therefore, in order for the family to be a protective, it is imperative to save cleaning



preparations, medicines, cosmetics, and other chemicals in tightly closed wall cabinets, and always check the validity of foods before ingestion; to avoid poisoning. Also, it must protect its children from poisoning by placing medicines in places far from their reach and educating them about the seriousness of taking these drugs (Towner, Dowswell & Jarvis, 2001).

The child also may be exposed to accidents of drowning as a result of leaving alone in the swimming pool without supervision and attention from parents or without the presence of rafts and balloons that help the child to swim (General Directorate of Civil Defence, 2012). It leads to the occurrence of such incidents that will cause many problems and risks for children. So it was necessary that family places a sturdy fence around the pool at an appropriate length so that the children do not climb, keep the door of the fence closed tightly, do not leave children in the pool without constant supervision, teach them the basics of proper swimming, remove the toys from the pool and not leave the child playing alone, especially the plastic games that float; it can explode and cover the child's face and suffocate, and install an alarm for the pool to see if it has occurred, it is necessary to start looking for the child if lost or missed for a while in the pool (Hockenberry & Wilson, 2014).

Additionally, electrical accidents is one of the most common household accidents affecting children, since power sockets are at the level of children's hands (General Directorate of Civil Defence, 2012). In order to prevent children from electric shock, they must choose sockets that have hard cover that is difficult to open, separate devices when not in use, always make sure that there are no bare wires, and always keep the children out of the power outlets, especially if their hands are wet (Lafta, Al-Shatari, & Abass, 2014).

Finally, other accidents such as road traffic, glass-related, sharp tools and strangulation including blind cords are likely that children exposed to. Traffic accidents are usually caused by ignorance and lack of knowledge of traffic rules, such as crossing from pedestrian areas, as the need to pay attention to cars traveling on the street, so the role of the family in performing the preventive role to protect children from traffic accidents comes through the definition of the importance of attention to cars, transiting of designated spaces, and teaching the child to cut off the street when it free of cars (General Directorate of Civil Defence, 2012). In addition, sharp tool accidents are usually caused by children entering the kitchen and tampering with sharp kitchen utensils, which can lead to serious injuries. To protect children from sharps, it should put sharp utensils used in the kitchen out of the reach of children, do not give children sharp or breakable food items, keep coins and coins out of the reach of children and prevent children from playing in pursuit of furniture Lafta et al., 2014).

## **2. Method**

The current study followed the descriptive approach to achieve the research objectives, as questionnaire was used as a research instrument. The researchers identified the study population, which was restricted to all mothers in the southern governorates of Jordan (Karak, Tafilah, Ma'an, and Aqaba), which have children aged 2-4 years. The study was subjected to a sample of (1200) mothers with one or more children, A SPSS was used to perform and analyse data, including the alpha-cronbach coefficient to measure the stability of the questionnaire, the use of the t-test, and the extraction of arithmetic mean and standard deviations to validate

hypotheses (Sekaran & Bougie, 2016).

### 3. Results' Analysis

The Table 1 shows that the value of Cronbach's Alpha test for internal consistency is approximately 0.9968. This indicates that the questionnaire has high reliability and high stability. This is an excellent indicator that will positively affect the results of this study.

Table 1. Cronbach's Alpha for The Questionnaires

Variable	Statement	Cronbach's Alpha
Stumbling and falls	16	0.980
Suffocation accidents	14	0.962
Drowning accidents	11	0.962
Poisoning accidents	10	0.894
Burning accidents	20	0.981
Electrical accidents	10	0.977
Other accidents	24	0.989
<b>Total</b>	<b>105</b>	<b>0.996</b>

### *Mothers' Demographic Variables*

A random sample of 1200 mothers with one or more children in the southern governorates of Jordan (Karak, Tafilah, Ma'an, and Aqaba) was selected. Table below tables show the demographic characteristics of the mothers. The table (2) shows that the secondary education of mothers participating in this study obtained the percentage in terms of the educational level, which reached 57.8%.

Table 2. Mother's Educational Level

Educational level	Ratio	Ratio
Secondary	57.8	694
Universal	42.2	506

Table (3), show the age between 20 and 29 was 42.8% that indicates that most of the participants in this study were aged between 20-29 years.

Table 3. Mother's Age

Age	Frequency	Percent
below 20	174	14.5
20-29	513	42.8
30-39	340	28.3
40 and above	173	14.4
Total	1200	100.0

The results of Table (4) revealed that the participants from Karak governorate reached the highest percentage of 420 participants, that is, 35.0% followed by Aqaba Governorate, Ma'an and finally Tafilah, which affects to make family protective.

Table 4. Family accommodation

Governorate	Ratio	Frequency
Karak	35.0	420
Aqaba	28.9	347
Ma'an	21.7	260
Tafilah	14.4	173

### *Descriptive Analysis*

In this section, the descriptive analysis for all variables was adopted for identifying the impact of family adherence to preventive measures on protecting children aged 2 to 4 years from accidents.

**First Hypotheses:** Within the framework of ascertaining the first hypothesis, which indicates that *“There is an impact of family adherence to preventive measures on the protection of children aged 2-4 years from accidents in the southern governorates”*. The research reached the following results:

Table 5. The Impact of Family Adherence to Preventive Measures on The Protection of Children Aged 2-4 in The Southern Governorates of Jordan

Variable	Statement	Mean	Standard Deviation	Rank	df	t	Sig. (2-tailed)
<b>Stumbling and falls</b>	16	2.26	0.72	2	62	4.347	0.00
<b>Suffocation accidents</b>	14	2.08	0.67	7	63	4.125	0.00
<b>Drowning accidents</b>	11	2.24	0.65	5	56	4.529	0.00
<b>Poisoning accidents</b>	10	2.13	0.56	6	54	5.158	0.00
<b>Burning accidents</b>	20	2.24	0.72	4	70	5.012	0.00
<b>Electrical accidents</b>	10	2.25	0.73	3	56	4.789	0.00
<b>Other accidents</b>	24	2.34	0.74	1	62	5.658	0.00

The above table showed that the general mean of mothers' knowledge of children accidents prevention was (2.22) and standard deviation (0.68), which is lower than the standard mean of 3, which represents a weak result. In addition, the highest mean is (2.34) for other accidents, which means that other accidents (road traffic, glass-related, sharp tools and strangulation including blind cords) was the most common and spreads among children aged 2-4 in the southern governorates of Jordan, followed by stumbling and falls accidents with mean (2.26). On the other hand, the lowest mean was (2.08) for suffocation accidents. In general, the results revealed that most women were found to have poor knowledge regarding children accidents prevention. In addition it is clear that the value of Sigma for all the paragraphs related to accidents occurring inside and outside the house reached 0.00, it is less than 0.05, this indicates acceptance of the first main hypothesis. Similar results were found in Erkal (2010) and Yildirim & Kubilay (2012).

In addition, from the previous table it can conclude that the value of Sigma for stumbling and falls accidents is 0.00, which indicates the acceptance of the first sub-hypothesis, because the Sigma value was less than 0.05. These results are in good agreement with results obtained by Karatepe & Akis (2013) and Strukcinskiene (2005). Regarding the suffocation accidents, it is clear from the previous table that the sigma value of suffocation accidents was 0.00, which is less than 0.05 that means acceptance of this hypothesis indicating that there is a statistically significant effect of family adherence to preventative measures on protecting children aged 2-4 years from suffocation. Thus the results of this study are consistent with results obtained by Sidebotham et al. (2014) and Debnath & Reang (2014). Through the results of the previous table, Sigma's value for drowning incidents was 0.00. These results are in good agreement with results obtained by Hockenberry & Wilson (2014) and Aksakal et al. (2012).

Through the results of the previous table, Sigma's value for poisoning incidents was 0.00. Thus, this fourth hypothesis is accepted. Thus the results of this study are consistent with results obtained by Qadri, Mir & Ahmed (2013) and Towner et al. (2001). With regard to the fifth items the value of Sigma for burning accidents is 0.00, which indicates the acceptance of the first sub-hypothesis, because the Sigma value was less than 0.05. These results are in good

agreement with results obtained by Mohammed et al. (2013) and Hatamabadi et al. (2014). Regarding the sixth items it is clear from the previous table that the sigma value of electrical accidents was 0.00, which is less than 0.05 that means acceptance of this hypothesis indicating that there is a statistically significant effect of family adherence to preventative measures on protecting children aged 2-4 years from electricity. Thus the results of this study are consistent with results obtained by Lafta et al. (2014) and Strukcinskiene (2005). Finally, Sigma's value for other incidents, which reached 0.00, was found to be acceptable to the seventh items, These results are in good agreement with results obtained by Lafta et al. (2014) and Coleman (2014).

### *Testing Second Hypotheses*

With regard to the second main hypothesis, this indicates that “There is an impact of training courses on the protection of children aged 2-4 years from accidents in the southern governorates”. The researcher reached a number of results through the following table:

Table 6. t-test of Training Courses on The Protection of Children Aged 2-4 in The Southern Governorates of Jordan.

Items	Training	N	Mean	Std. Deviation	t	df	Sig. (2-tailed)																																																																																
Stumbling and falls	No	860	2.02	.702	-23.189	1198	.000																																																																																
	Yes	340	2.91	.129				Suffocation accidents	No	860	1.81	.600	-28.730	1198	.000	Yes	340	2.76	.184	Drowning accidents	No	860	2.01	.619	-24.475	1198	.000	Yes	340	2.84	.134	Poisoning accidents	No	860	1.95	.535	-22.315	1198	.000	Yes	340	2.62	.246	Burning accidents	No	860	2.01	.714	-21.455	1198	.000	Yes	340	2.85	.177	Electrical accidents	No	860	1.99	.708	-24.208	1198	.000	Yes	340	2.92	.083	Other accidents	No	860	2.11	.757	-19.834	1198	.000	Yes	340	2.93	.054	All Quest	No	860	2.00	.666	-23.334	1198	.000
Suffocation accidents	No	860	1.81	.600	-28.730	1198	.000																																																																																
	Yes	340	2.76	.184				Drowning accidents	No	860	2.01	.619	-24.475	1198	.000	Yes	340	2.84	.134	Poisoning accidents	No	860	1.95	.535	-22.315	1198	.000	Yes	340	2.62	.246	Burning accidents	No	860	2.01	.714	-21.455	1198	.000	Yes	340	2.85	.177	Electrical accidents	No	860	1.99	.708	-24.208	1198	.000	Yes	340	2.92	.083	Other accidents	No	860	2.11	.757	-19.834	1198	.000	Yes	340	2.93	.054	All Quest	No	860	2.00	.666	-23.334	1198	.000	Yes	340	2.85	.122								
Drowning accidents	No	860	2.01	.619	-24.475	1198	.000																																																																																
	Yes	340	2.84	.134				Poisoning accidents	No	860	1.95	.535	-22.315	1198	.000	Yes	340	2.62	.246	Burning accidents	No	860	2.01	.714	-21.455	1198	.000	Yes	340	2.85	.177	Electrical accidents	No	860	1.99	.708	-24.208	1198	.000	Yes	340	2.92	.083	Other accidents	No	860	2.11	.757	-19.834	1198	.000	Yes	340	2.93	.054	All Quest	No	860	2.00	.666	-23.334	1198	.000	Yes	340	2.85	.122																				
Poisoning accidents	No	860	1.95	.535	-22.315	1198	.000																																																																																
	Yes	340	2.62	.246				Burning accidents	No	860	2.01	.714	-21.455	1198	.000	Yes	340	2.85	.177	Electrical accidents	No	860	1.99	.708	-24.208	1198	.000	Yes	340	2.92	.083	Other accidents	No	860	2.11	.757	-19.834	1198	.000	Yes	340	2.93	.054	All Quest	No	860	2.00	.666	-23.334	1198	.000	Yes	340	2.85	.122																																
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	Yes	340	2.85	.177				Electrical accidents	No	860	1.99	.708	-24.208	1198	.000	Yes	340	2.92	.083	Other accidents	No	860	2.11	.757	-19.834	1198	.000	Yes	340	2.93	.054	All Quest	No	860	2.00	.666	-23.334	1198	.000	Yes	340	2.85	.122																																												
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All Quest	No	860	2.00	.666	-23.334	1198	.000																																																																																
	Yes	340	2.85	.122																																																																																			

The table 6 showed that the average percentage of women who have subjected to training courses to prevent their children from accidents was 17.74%, which reflects low percentage.

The results revealed that only 24.05% (289/1200) of women, which was highest percentage, have taken training courses in burning accidents, followed by drowning accidents 20.50% (246/1200). As the lowest percentage was 12.75% (153/1200) for stumbling and falls accidents. It is obvious, the value of Sigma for all variables was 0.00, which indicates the acceptance of the second main hypothesis, because the Sigma value was less than 0.05. In other words, there was statistically significant differences impact ( $\alpha=0.05$ ) of training courses on the protection of children aged 2-4 years from accidents in the southern governorates". These results are in good agreement with results obtained by Karatepe & Akis (2013).

### *Testing Third Hypotheses*

With regard to the second main hypothesis, this indicates that "There is an impact of mother education on the protection of children aged 2-4 years from accidents in the southern governorates". The researcher reached a number of results through the following table:

Table 7. t-test of mother education on The Protection of Children Aged 2-4 in The Southern Governorates of Jordan

	mother education	N	Mean	Std. Deviation	T	df	Sig. (2-tailed)
Stumbling and falls	secondary school	694	1.83	.652	-35.768	1198	.000
	Academic	506	2.87	.102			
Suffocation accidents	secondary school	694	1.66	.557	-37.704	1198	.000
	Academic	506	2.66	.253			
Drowning accidents	secondary school	694	1.83	.549	-39.509	1198	.000
	Academic	506	2.81	.138			
Poisoning accidents	secondary school	694	1.84	.539	-27.867	1198	.000
	Academic	506	2.55	.233			
Burning accidents	secondary school	694	1.81	.659	-34.455	1198	.000
	Academic	506	2.84	.152			
Electrical accidents	secondary school	694	1.80	.649	-36.808	1198	.000
	Academic	506	2.88	.147			
Other accidents	secondary school	694	1.94	.747	-28.720	1198	.000
	Academic	506	2.90	.047			
ALLQUEST	secondary school	694	1.83	.629	-34.728	1198	.000
	Academic	506	2.81	.111			

To find out whether there are statistical significant differences ( $\alpha=0.05$ ) ,t-test analysis was conducted and the results are shown there are statistically significant differences at ( $\alpha=0.05$ ) in

responses due to mother education in favor of academic.

#### The Fourth main Hypothesis:

With regard to the fourth main hypothesis, this indicates that “There is an impact of mother age on the protection of children aged 2-4 years from accidents in the southern governorates”. The researcher reached a number of results through the following table:

Table 8. Correlations based on the mother age

Dimension	Pearson Correlation	AGE
Drop Off	Pearson Correlation	-.323(**)
	Sig. (2-tailed)	.000
	N	1200
Suffocation	Pearson Correlation	-.235(**)
	Sig. (2-tailed)	.000
	N	1200
Drowning	Pearson Correlation	-.222(**)
	Sig. (2-tailed)	.000
	N	1200
Poisoning	Pearson Correlation	-.333(**)
	Sig. (2-tailed)	.000
	N	1200
Burns	Pearson Correlation	-.346(**)
	Sig. (2-tailed)	.000
	N	1200
Electric	Pearson Correlation	-.347(**)
	Sig. (2-tailed)	.000
	N	1200
Different	Pearson Correlation	-.314(**)
	Sig. (2-tailed)	.000
	N	1200
ALL Questions	Pearson Correlation	-.313(**)
	Sig. (2-tailed)	.000
	N	1200

Based on the result of the above table, it was found that there was statistically significant differences impact ( $\alpha= 0.05$ ) of mother age on the protection of children aged 2-4 years from accidents in the southern governorates". These results are in good agreement with results obtained by Karatepe & Akis (2013).

#### 4. Discussion

The first question of this research was used to identify the impact of family adherence to preventive measures on protecting children aged 2 to 4 years from accidents inside and outside the home in the southern governorates of Jordan. A reliability analysis across the seven dimensions was conducted. The data revealed that the "Other accident" have the highest level of the scour, this is an indication the seven main accidents facing children aged 2-4 that are stumbling and falls, suffocation, drowning, poisoning, burning, electrical, and other accidents (road traffic, glass-related, sharp tools and strangulation including blind cords). The results revealed that most women were found to have poor knowledge regarding children accidents prevention. The possible reason to explain the lower score is related to the mothers have the general knowledge about the accidents that repeat during the presence of the child inside the house, but they do not have the accurate and specialized knowledge about the accidents that might occur suddenly, and they do not have the knowledge and wisdom to deal with them since some mothers are not aware of the different and diverse home accidents that might cause harms to the children (Directorate of Civil Defence, 2014). Education experts confirm that providing the mother with the required knowledge should starts before the birth of the child (Arulogun et al., 2013; Karatepe & Akis, 2013).

The findings of the second question indicate that there is a significant difference ( $\alpha= 0.05$ ) between the training course and the family adherence to preventive measures on protecting children aged 2 to 4 years from accidents inside and outside the home in the southern governorates of Jordan. In addition, the study showed that the provision of training programs for mothers and fathers, especially new ones, about domestic accidents, how to prevent child accidents, and the first aid needed, contributed significantly to reducing these incidents (Akturk & Erci, 2016). Furthermore, in this study, mothers who have subjected to health education programs on home safety precautions through maternity and childhood centres have been more experienced in dealing with various accidents affecting their children. Since the vast majority of mothers' homes selected in the study do not have adequate household safety precautions to prevent child accidents (Yildirim & Kubilay, 2012).

In addition, the result of the third question revealed that there is a significant difference between the mother education and the family adherence to preventive measures on protecting children aged 2 to 4 years from accidents inside and outside the home in the southern governorates of Jordan. The analysis indicates that the level of knowledge and performance of mothers are linked to their education and economic status, as the higher the educational and economic level of the family, the more family are able to deal with children and prevent injuries (Aksakal et al., 2012). In addition, the level of knowledge and performance is also associated with the work of the mother as the working mother has more information and skills than non-working (Karatepe & Akis, 2013).



Finally, the fourth question shows that there is an impact of mother age on the protection of children aged 2-4 years from accidents in the southern governorates. The reason behind this result related to the mothers in her early family life have a high degree of care to preserve her children and protect them from any accidents, because she enjoys great activity and vigour, since this is her first experiment and she will seek to be able to hold this responsibility and to have successful experiment (Balibey et al., 2011).

The age of the child plays a role in increasing the incidence of accidents. In the first three years, the children are often exposed to burning, fall, electric, and poisoning accidents because they are in the process of exploration and identification. Suffocation incidents often affect the child in his first year of life. In the second and third years, the risk of poisoning and drowning increases, while stumbling and falls accidents remains a constant in all stages of childhood (Alasya, 2012).

### **Conclusion**

In light of the results reached in this research, the researcher recommends that:

1. The need to pay attention to the concept of preventive education and teaching in schools and universities, the importance of educating mothers about the need to follow preventive measures that protect children aged 2-4 years of accidents inside and outside the home, and the need to conduct more studies and research that concern family adherence to preventive measures.
2. Activating the role of the public and private sectors which they have the role and they should play it. It is necessary for determining the programs and the policies that should be implemented by the motherhood and childhood centers, and by Directorate of Civil Defense to reduce the rate of injuries among the children, and to work on parents awareness about the children's protection procedures.
3. Supporting the special scientific research's about the reasons and consequences, costs and prevention from children injuries. Also, the awareness about the issue protecting the children from the injuries, and directing the financial investment to it.
4. Training and raising the parents awareness about the prevention methods from accidents, and taking the required procedures inside the house to avoid the risks through training them to hold the responsibility, by showing them the causes of the accident and their risks on their life and health.

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