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Public Health

**Factors that contribute of home accident among children
less than five years old in Old City of East Jerusalem**

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العوامل التي تؤدي إلى وقوع الحوادث البيئية بين الأطفال

من فئة الخمس سنوات من العمر أو أقل في القدس البلدة القديمة

ملخص

لقد عملت هذه الدراسة لتحديد مدى حصول الحوادث البيئية بين الأطفال من فئة الخمس سنوات من العمر أو أقل في مدينة القدس (البلدة القديمة) وقد ضمت عينتنا العشوائية في هذه الدراسة (534) بيتا من البلدة القديمة. أما هدف هذه الدراسة فهو لاستعمال نتائجها لتساعد على خفض ملموس في عددها بين الأطفال من فئة الخمس سنوات من العمر أو أقل وكذلك قوة تأثيرها عليهم. وهدفت الدراسة الى تمييز العوامل الرئيسية المؤدية إلى حدوث مثل هذه الحوادث بين هؤلاء الأطفال أولا. ومعرفة عدد وتكرر هذه الحوادث بين الأطفال من فئة الخمس سنوات من العمر او أقل في البلدة القديمة من مدينة القدس ثانيا. ثم حساب نسبة هذه الحوادث ثالثا. وقد تم تخطيط هذه الدراسة بطريقة عبر-الأجزاء. وقد احتوت عينة هذه الدراسة على (534) بيتا اختيرت عشوائيا من أحياء مدينة القدس البلدة القديمة باستثناء الحي اليهودي فيها الذي استثنى من الدراسة. وخلال فترة الدراسة التي استغرقت من الثالث من كانون الثاني سنة ثلاثة وألفين الى السادس من آذار من العام نفسه جمعت النتائج عن طريق زيارة هذه البيوت المختارة. وقد جمعت العينات تفصيلا بطريقتين مقابلة العائلات خاصة الأم في البيت وجها لوجه وكذلك عن طريق الاستبيانات المحتوية على الأسئلة المتعلقة بالعوامل المساعدة على حصول الحوادث البيئية الحادة بين الأطفال والموجهة الى الزوجة الام وكانت نسبة الردود (89%). وتشير نتائجنا في هذه الدراسة الى ان (444) عائلة من (534) عائلة التي زرناها ودرسناها لها أولاد من الفئة العمرية خمس سنوات او اقل معرضة إلى الإصابة في حوادث بيئية في البلدة القديمة من مدينة القدس. ووجدنا ان انتشار هذه الحوادث بين هؤلاء الأطفال في هذه الدراسة هو (22%) وكانت السيادة في هذا للأطفال الذكور على الإناث حيث كانت نسبة الذكور (13.5%) ونسبة الإناث (4.7%) على الترتيب. ووجدنا أيضا انه علاقة قوية بين زيادة نسبة الحوادث البيئية للأطفال كلما زاد عدد افراد العائلة وكذلك جنس الطفل حيث كان التحليل الإحصائي وكانت كاي سكوير (7.4) و (2.9) على الترتيب لكل عامل منهما والاحتمالية هي (0.025). وقد لعب عمر الزوجة دورا سلبيا في تعرض الأطفال للحوادث البيئية وكذلك الوقت الذي تقضيه الزوجة في العمل خارج البيت وكانت الاحتمالية (0.052). أما التغيرات في العناصر السلوكية وكلها متقاربة ولها تأثير على تعرض الأطفال من الفئة العمرية خمس سنوات أو أقل للحوادث البيئية حيث كانت (كاي سكوير 93.66)

والاحتمالية (0.000). وكان هناك علاقة قوية بين تعرض الأطفال للحوادث البيئية والعلاقة الزوجية بين الزوجين حيث كانت (كاي سكوير 9.8 والاحتمالية (0.007). أما بالنسبة للعوامل النفسية فكلها لهل علاقة لتعرض الأطفال إلى الحوادث البيئية باستثناء عامل واحد ألا وهو وضع الثقة بالآخرين. وبعد التوصل الى هذه النتائج من دراستنا ننصح الجهات المختصة بتنظيم حملات توعية عن طريق محاضرات موجهة الى ربان البيوت وخاصة صغيرات السن وحديثات الزواج والأمومة كجانب مهم من وقاية الأطفال من الحوادث البيئية. ونأمل أن تكون دراستنا حجر الزاوية في الدراسات والأبحاث الأخرى في هذا المجال في مناطق أخرى من فلسطين.

Abstract

This study was conducted to investigate the magnitude of home accidents to children five years old or less in the Old City of Jerusalem including a random sample of 534 households. The purpose of this study is to use to promote significant reduction in the number and severity of home accidents among children five years old or less. The study aimed at first identifying the major risk factors for home accidents among children five years old or less in the Old City of Jerusalem. Second finding the frequency of accidents among children five years old or less in the Old City of Jerusalem. Third calculating the prevalence of accidents among children five years old or less in the Old City of Jerusalem. The design of the study was cross-sectional. The study sample consisted of a randomly selected 534 households from the Old City of Jerusalem, with the exception of the households in Jewish quarter. During the study periods from January 3,2003 to March 6,2003 we visited 534 households to collect data. Data were collected through face-to-face interviews and by means of a questionnaire directed to the housewives, with a response rate of 89%. Our result indicated that 444 families out of 534 households had children five years old or less who were considered to be at risk of home accidents. The prevalence of home accidents among these children in the Old City of Jerusalem was 22%, with male predominance over female, 13.5% and 4.7% respectively. The family size and the child sex were statistically related to the morbidity of home accidents with Chi square 7.4 and 2.9 respectively ($P= 0.025$). The household wife age played a role in children exposure to home accidents as will as the time that she spend at work was slightly significant to the children exposure to home accidents ($P=0.052$). The variables of behavioural elements are all statistically related with significance to home accidents that children will likely be exposed

to ($\chi^2 = 93.66$ and $P=0.000$). It was also clear from the Chi square of 9.8 and P value 0.007 that the relationship between the husband and his wife had a strong effect on the exposure of children to home accidents. All the psychological aspect elements are statistically related to the exposure of children to home accidents with the exception of the elements that has much to do with trust in any one else. Bearing in mind the above-mentioned results we recommend organizing awareness campaigns by means of lectures to be directed to housewives especially to the young ones as an important and integrate part of precautionary measures. It is our hope that our study will be a milestone for future researching of the same field directed to other parts in Palestine.

CHAPTER ONE

1. Introduction

Accidents are the most common cause of injury and death among children. Children's homes and streets are considered the most dangerous places especially for children less than five years of age. More children are seriously injured or killed from accidents each year than from cancer, infectious disease and birth defects. Data from the American Medical Centre prove that many of these accidents occur in the household. The most common injuries involve scalds, poisoning, drowning, burns, falls and suffocation/choking (American Medical Centre 2001). The poorer the family the higher are the risks for the accidental child injuries. Even the youngest infants are at continuous risk of home accidents, which could be fatal. An example a young infant may manage to roll over or fall down from a table or other places if left unwatched. Also untended young children who are left in or near bathtubs or other high places can be vulnerable to injuries. Sharp objects can be another source of injuries to toddlers and young children especially when they are not kept away from them.

Electric outlets should be well covered and in general, children especially those under five years of age should never be left at home without a responsible adult (WHO, 1999). Summertime is deemed to be a real danger to children. According to a new study released by the National Safe Kids Campaign in USA nearly half of the injuries related to home accidents take place in the period from May to August while the month of July being the deadliest month. Boys have been found more commonly affected when compared to girls.

Epstien has reported that during the year 2001, one out of five children in the United States got injured at home, and needed to visit a hospital emergency room. Further more he pointed out that childhood home accidents can be considered, as an incurable as is to say that there are no vaccine or antibodies for this killer, but they can be prevented (Epstien 2002). Also, as indicated in the Palestinian Annual Health accidents in general are the largest single cause of death after the age of one year (PAHR, 1999). Also as the WHO data indicated accidents are one of the most serious health problems facing the world today (WHO, 1996). Globally accidents are responsible for a half million deaths annually, which equals 7% of the world mortality, with more than two million accidents occurring in developing countries (WHO,2000). At the Palestinian population level, in Palestinian children under five years of age 73 deaths are reported due to accidents with age specific mortality rate 12.1/100,000. (The Health Status of Palestine, MOH, 2002).

Home accidents among children strike randomly, suddenly, and usually without warning. In addition to mortality and morbidity that result from home accidents, childhood home injures is the leading cause of serious childhood disability and the loss of more life productive years than heart disease, cancer or stroke. Yet most of these home accidents are preventable. For example, enforcement and involvement can contribute a great deal in solving the problem by promoting safer behaviour and encouraging the use of safe equipment can minimize home accidents. Finally adults can play the most important role in minimizing risks surrounding their children environment by paying more attention to minimizing predisposing factors (WHO , 2000).

1.1 Statement of the problem

Home accidents among children less than 5 years old pose an urgent problem. They have potentially serious consequences in terms of mortality and disability. Accidents injures are worrying because of their mortality consequence to children from the age of one day up to 5 years old. Moreover home accidents are the leading causes of death in all the industrialized countries and in a growing number of developing countries (WHO,2000). There for the significance of the problem becomes clear in terms of the total number of increasing deaths among children. However, this indicator can be made positive by converting it into number of positive years of life gained as a result of preventive activities and in terms of the expected life with disabilities that could be avoided. Data from the (1999) Palestinian statistical report showed that the majority of child mortality occur among children in the age group (0-5) years old and almost 82% of the deaths cases occur in this age group in 1997 (Statistical Report, Palestine, 1999). Also available data for 1996 showed that the majority of accidents among children (0-5) years old occur at home and these accidents included burns, poisoning injures and fractures. This implies the need for more public health education about how to prevent home accidents to be distributed among all level in order to decrease the number of these accidents.

Another view of the problem lies in the fact that home accidents among children under five are very important in terms of morbidity for many reasons that include lack of experience, immaturity and the childhood behaviour itself. In the world, each year one child out of ten suffer form home accident for which it is necessary to call upon the health services at some level (Manciaux and Romer, 1991). There are many factors that contribute to home accidents among children less than five years and since it is quite difficult to

master all these aspects, home accident is still a neglected area in child health programs.

Our study will be conducted on Palestinian households in the old city of Jerusalem to investigate the childhood accidents that occur at home and the factors related to those accidents.

1.2. Significance of the Study

Children of all age groups and particularly the group less than 5 years old are all vulnerable to home accidents and with the decline in infectious diseases they are the most common cause of mortality and morbidity among children of all age groups.

Our study is significant for the following reasons.

- 1- To the best of our knowledge no study has been conducted to investigate the magnitude of this problem among Palestinian children in Jerusalem.
- 2- A part from physical injuries that children sustain as a result of accidents, the sudden occurrence and the subsequent dire need for medical treatment can cause a great deal of emotional distress to the child and his/her parents. So this study is needed to find the frequency and distribution of such accidents among children less than five years of age to be able to address the family fallout of the child home accident.
- 3- Also this will explore home – related accidents and reasons behind their occurrence in order to create health education programs to reduce the severity of injures and their effects

on the family as a unit.

Finally our study is significant because it will shed some light on the fact that home accidents are avoidable, so prevention methods can be made available for reducing any possible child home environmental hazards.

1.3. Goal

Encourage awareness campaigns especially those directed to household wives through promotion and highlight the importance of reducing elementary risks associated with home accidents. .

1.4. Objective

- 1- Identify the major factors that contribute to home accident among children less than five years old in the Palestinian household in the old city of Jerusalem.
- 2- To estimate the prevalence of accident among Palestinian children less than five years old in the old city of Jerusalem.
- 3- To estimate the frequency of each type of these accidents.

CHAPTER FIVE

5. Discussion

This study, carried out on a population of 534 households in the old City of Jerusalem, aims at identifying and defining the individual, family, and child care, social support and psychological characteristics are more likely to be associated with the occurrence of accidental home injuries to 0-5 year-old children. The results of the study show certain characteristics of the families in the Old City of Jerusalem that from 534 households the majority (64.6% + 15.5%) are considered large families of more than 5, while small families. Likewise the findings of this study indicates that about 13.3% of all the households are owned by the Islamic Waqf, 11.8% by the church 25.1% are owned by the family, while the majority (49.8%).

This study also show that the majority of the households 66.9% are small with an area less than 50 square meter 26% ranged between (50-100) square meter and only 7.1% which is layer than 100 square meter. The majority said that they had balconies with a system of protection. The subjects were also asked about the presence of stairs inside the rooms or inside the house divisions. A small percent (19.3%) of the total households said that there are stairs inside their house division (totalling 103 hours). Most of them (90 houses) were of good conditions, while only 13 were of bad conditions.

The prevalence of home accidents among children less than 5 years old in the Old City of Jerusalem were approximately 22%, with males predominant on females 13.5 % and 4.7% respectively .The prevalence of these accidents was distributed according to the type of accident as follows: (9.9%) falls, (4.9%) burns and (1.5%) suffocation and airway obstruction. The prevalence of accidents was found to be similar to (Higar, 1992) in his

study (21.5%) on the children less than 5 years of age in Mexico with the predominance of males.

In addition the results of the study show that 4.9% of the families whose children are exposed to home accidents sustain burns. That is 26 out of 97. The children majority of burns are due to hot water or liquids, hot oil and hot food) distributed as follows 80% hot liquids (80%, hot oil (15%) and hot food (5% These above agents for burns accidents are contrary to (Schubert, 1990) study where he examined the incidence aetiology, of burns. The majority of burn cases were due to hot oil or grease. On the other hand, the aetiology of burns in this study was similar to (Bany, 1997) study carried out in Kuwait where he found that the hot water from pots in the kitchen was the common etiologic factor in 229 burns cases (59%) followed by tea/coffee 20.7%, soup 9%, hot oil 6.7% and milk 4.6% of the patients

Thus in this study the most common etiologic factor for burn accidents was the hot liquids and the most common circumstance for such cases was the child upsetting the pan of hot fluid in the kitchen or the sitting room especially in the winter where the usage of heaters are common. 3.9% of the burn accidents to exposed children were cured with certain effect like scars in case of burn only, one child died from burns in this study due to burn shock which is similar to (Bary, 1997) study were from children died from accidents and only one due to burn shock while two due to septicaemia and one due to multigrain failure. In terms of etiological factors of burn accidents, this study emphasizes the need public awareness by means of public education, which may lead, to the prevention of significant number of such accidents. Similarly, (Archinbong, 1997) demonstrated in his study at the University of Calabar teaching hospital (UCTH), that the main causes of burns

Recommendation

- 1- To propose general legal obligations on parents or guardians by the authority not to expose children to unacceptable risks to home accidents, this obligation can be reinforced by powers given to the appropriate authorities to take child into care when the danger is judged to be unacceptable.
- 2- Local accident prevention committees should be set up to teach social workers in schools their tasks and to monitor the frequency, cause, type and location as well as the age of the victim at the time of the accident to provide continuous base of data for the Palestine community at all its levels.
- 3- Public education campaigning for parents should emphasize the link between the risk factor such as certain housing characteristics and painted responsibility for the surveillance of children particularly the ones less than five years old.
- 4- Encouraging the prospective studies and the follow up surveys that is needed to document the problem of long term and permanent disabilities and mortality rates resulting from accidental injuries. This is very important and should be taken into consideration in any attempt to estimate the socio economic cost of accidents.