CHILD SAFETY PRACTICES OF A GROUP OF IRAQI PATIENTS

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Abstract

Background: Accidents are the cause of death and disability for millions of children every year.

Objectives: To study safety practices in a group of Iraqi parents, and its association with some demographic factors.

Methods: A total of 360 parents of children aged 1-6 years were interviewed using a questionnaire form designed by the authors.

Results: Majority (80%) of families keep medications in unsafe places, in addition to that 52.3%, 6.2% and 76.6% of parents keep antiseptics, kerosene and match boxes in unsafe places respectively. There was a significant association between keeping antiseptics in safe places with educational level of both parents and type of home ($p<0.05$). Higher rates of road-traffic accidents were reported among families who allow their children to play with bicycle in the street (15.6%) or play unsupervised in the street (16%) than those families who don't (7.4% and 3.6% respectively). More road traffic-accidents were detected within families with more number of children. Poisoning histories were detected more within extended (17%) than nuclear families (6.5%), and more among children whom mothers don't work outside home than children with working mothers (12.3% vs. 2.9%).

Conclusion: Child safety mal practices are still common among our parents.

Key words: Child safety, Poisoning, Child injuries

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Introduction

Accidents are the cause of death and disability for millions of children every year in low income countries, and for both sexes[1-4]. Because communicable diseases and nutritional problems continue to rank higher as causes of child mortality and morbidity in most of developing world, injury is perceived as a less serious problem[1].

Injury is considered as one of the main causes of hospital admissions for children; motor vehicle traffic crashes and poisoning were major contributors for these injuries[5]. It is estimated that 53% of injuries occurs at home, 13.5% on the road, 13% at school, and 4.7% during sports[6]. Risk factors for injuries includes: low social class, parents who didn't graduate from high school, unemployment, psychological stress, unsafe environment, and child developmental disorders[4,7]. Also challenging living conditions, heavy traffic, a lack of safe play places combine to put children at high risk[1]. The study aims at:

* Studying the safety practices in a group of Iraqi parents.
* Studying some demographic factors and its association with unsafe behaviors.

Patients & Methods

A total of 360 mothers or fathers attending the pediatric out-patient clinic of Al-Kadhimiya Teaching Hospital were interviewed. A questionnaire form designed by the researchers was used for this purpose. Parents were interviewed by the doctors' in-charge in the out-patient clinic. Those doctors were instructed by the authors about the proper ways of gathering information. Only families with children aged 1-6 years of age were included in the study. In this cross-sectional study, socio-demographic data (parents age and education, family type, number of children, type of home, working mother outside home, residency, crowding index) was collected from parents, then they were asked about some safety practices, history of poisoning and road traffic accident. Crowding index was measured by dividing the number of people living in a house by the number of rooms except kitchen and bathroom. The EPI6 computer program was used for data entry and processing.

Results

Results showed that 223 out of 360 parents (65%) reside in Shula city, Rihmaniya, and other adjacent places; 22.5% live in Baghdad suburbs, and the rest (12.5%) live in different places of

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Baghdad. The mean mothers' age (±sd) was 30.1±6.6 years, and the mean fathers' age (±sd) was 35.4±7.3. Table 1 showed that around one quarter of mothers were both illiterate or just read and write, compared with 13.4% of fathers. Around half (50.3%) of father work during day time only, 4% work during night, while the rest work during day and night. Regarding the mothers, only 19.5% of them work outside home, with mean work-time of six hours. More than half (60.6%) of families live in separated houses, 21.3% live in apartments, while 18.1% live in room(s) within the house. The mean (±sd) of crowding index was 2.74±1.4. Results showed that 60.4% of families were nuclear while the rest were extended families.

Table 1: Distribution of mothers and fathers by educational level

Educational Level	Mothers		Fathers	
	Number	%	Number	%
Illiterate	34	9.4	11	3.1
Read & Write	54	15.0	37	10.3
Primary	87	24.2	70	19.6
Secondary	82	22.8	84	23.4
Institute	46	12.8	60	16.8
College & above	57	15.8	96	26.8
Total	360	100	358	100

$X^2 = 28.58$ P = 0.000028

Table 2 shows the distribution of children aged 1-6 years, where it is evident that most of families have one or two children between 1-6 years of age.

Table 2: Distribution of children aged 1-6 years old among 360 families

No. of Children	Number	%
1	163	45.3
2	153	42.5
3	39	10.8
4	5	1.4
Total	360	100

Table 3 showed the places where families keep medications, antiseptics, kerosene, and match boxes. Only 20% of parents keep medications on high places or locked cabinet, while the majority put them in unsafe places (including refrigerator) that are within reach of children. More than half (52.3%) of parents keep antiseptics on the floor while the rest put them in safe places. Regarding kerosene, 3.4% of parents keep it in empty soft drink or food containers and 2.8% of them keep it in unlocked container. More than half (51.7%) of parents put match boxes on table or counter and 24.9% put them in drawers, both are unsafe places. Results showed that keeping medications in unsafe places had no relation to any of the following factors (family type, children number, type of home, educational level of father and mother and their ages, family residency, and home rented or not. While statistical analysis showed a significant association between keeping antiseptics in safe places with the educational level of mother (P=0.02), educational level of father (P=0.018), and type of home (P=0.016). On the other hand keeping kerosene in safe places had no significant relation with any of the previous factors. Results showed that families living in room(s) within a house keep match boxes in safe place more than families living in separated homes or apartments (P=0.002). Results showed that 45.4% (163/359) of parents allow their children to play in the street and 25.7% (90/350) allow their children to play with bicycle in the street. Results showed that 9.2% (33/358) of children had history of road traffic accident (RTA) and 10.6% (38/359) of parents had history of poisoning as stated by parents.

Table 3: Distribution of parents according to places of keeping medications, antiseptics, kerosene, and match boxes

Places for Medication	Number	%
Refrigerator	226	63.7
High place*	47	13.2
Drawer	30	8.5
Table of counter	28	7.9
Locked cabinet*	24	6.8
Total	355	100
Places for antiseptics		
Floor of Bathroom	183	52.3
High place*	109	31.1
Locked cabinet*	57	16.3
Counter	1	0.3
Total	350	100
Places for kerosene		
Barrel with tap*	199	55.9
Locked container*	135	37.9
Empty soft drink or food container	12	3.4
Unlocked container	10	2.8
Total	356	100
Places for match boxes		
Table or counter	185	51.7
Drawer	89	24.9
High places*	75	20.9
Locked cabinet*	9	2.5
Total	358	100

* safe place

Table 4 showed that 15.6% of children whom parents allow them to play with bicycle in the street had history of RTA compared with 7.4% for children whom parents don't allow them to play with bicycle in the street (P=0.022). Also higher rates of RTAs were found among children

whom parents allow them to play unsupervised in the street. More RTAs were detected among families with more number of children. Other factors found not to be related to history of RTAs were mother and father's education, residency, working mother outside home, crowding index, family type whether nuclear or extended, and type of home (separated, apartment, or room(s) within a house).

Table 4: Factors associated with history of road traffic accident

The factor	History of RTA				Total	
Allowances to play with bicycle in the street	Present		Absent			
	No.	%	No.	%	No.	%
Yes	14	15.6	76	84.4	90	100
No	19	7.4	239	92.6	258	100
$X^2 = 5.22$ P = 0.022						
Allowances to play in the street						
Yes	26	16	137	84	163	100
No	7	3.6	187	96.4	194	100
$X^2 = 16.08$ P = 0.00006						
No. of children						
1	17	10.6	144	89.4	161	100
2	8	5.2	145	94.8	153	100
3-4	8	18.2	36	81.8	44	100
$X^2 = 7.48$ P = 0.023						

Table 5 showed that more poisoning histories were found among children of extended families and among children of mothers who are not working outside home (P<0.05). Other factors studied and found not to be related to development of poisoning were residency, educational levels of mother and father, type of home, crowding index, and number of children.

Table 5: Factors associated with history of poisoning

Family Type	History of Poisoning				Total	
	Present		Absent			
	No.	%	No.	%	No.	%
Nuclear	14	6.5	200	93.5	214	100
Extended	24	17	117	83	141	100
X2 = 9.77 P = 0.0017						
Working mother						
Working	2	2.9	67	97.1	69	100
Not working	35	12.3	249	87.7	284	100
X2 = 5.26 P = 0.021						

Discussion

Most of our families keep medications in unsafe places; refrigerator was regarded as unsafe because children beyond infancy especially preschool children can reach the door of it and open it and gain access to the medications inside especially when put in the lowest part. This is in contrast to a study from Saudi Arabia which showed that 74% of families had medications cabinets; however in both studies there was no association between keeping medications in safe places and all the socio-demographic factors studied[8]. Al-Nouri *et al* study reported that the medications were kept in possibly safe places in only 20 out of 105 cases of poisoning[9].

More than half of our families kept antiseptic solutions and powders on the floor of bathroom or kitchen, this unsafe practice would make it easy for the young child to handle these products and put it in his mouth within very short time. Interestingly (in our study) this unsafe practice was noticed among families living in separated homes more than those living in limited rooms whom kitchen and bathrooms may be shared with other families living in the same house, so logically they will not keep their antiseptics on the floor of kitchen and bathrooms. In our study, keeping medications on the floor was associated with low educational levels of both mothers and fathers. Illiterate parents or with low level of education will pay less attention to safe practices, and even can not read the instructions written on the antiseptics containers.

In a study from Saudi Arabia, 89% of families keep detergents in high places or locked cabinets and this practice was not related to socio-demographic factors[8]. The majority of parents in our study keep kerosene in safe locked containers or barrels with locked tap; still kerosene poisoning is a common pediatric problem in our society as most families use kerosene for heating and cooking. Al-Nouri (1970) reported that 55% of families keep kerosene in unsafe places like barrels without tap, soft drink or milk bottles or other containers[9]. In our study, this increment in percentage of families using safe places for kerosene keeping may be related to better knowledge and attention of parents for kerosene poisoning as a common problem in our society regardless of any socio-demographic factor studied.

Abu-Ekteish in his study from Jordan to evaluate children with kerosene poisoning on 4 years period reported that the main containers used were soft drink bottles, water Jugs, and glasses[11]. More than half of our families keep matchboxes in unsafe places like table or unlocked container. This may lead young children to play with them especially if unsupervised by mother or other caretaker and may lead to burns. Ying *et al* in his study on 50-burned children reported that

playing with fire wax and fire works were recognized as the two major causes for burn in these 50 children[12]. High percentage of our families allow their children to play unsupervised in the street; this unsafe phenomenon is a risk factor for road traffic accidents for young children especially in crowded streets or narrow streets.

Lower percentage of allowance for children to play in the streets came from the study done by Jan *et al* in Saudi Arabia[8]. This difference may be related to differences in types of homes between the two countries; in the Saudi Arabia study, 73% of families lived in apartments compared to only 21.3% of Iraqi families in our study. Living in apartments makes it more difficult for the child to go and play unsupervised in the street. A considerable proportion of parents in our study allow their children to play with bicycle. This is another unsafe behavior which may lead to crashes and accidental injury to the child. A study from Kenya about road traffic accident fatalities reported that pedestrians comprised 42%, passengers 38%, drivers 12%, and cyclists 8% of fatalities[13].

In a recent study from USA, they found that despite the existence of laws in all fifty states requiring the use of safety practices for children, more children are still killed as passengers or by car crashes than from any other type of injury[14]. In our study 9.2% of families had RTA history and found to have significant association with allowing their children to play in the street, play with bicycle in the street, and with more number of children. Mohammed Jan found that parents with three or more children were more likely to allow their children to play unsupervised in the street three time than families with less number of children 8. In a recent study from France, a significant relationship had been observed between injury recurrence and problems related to education[15]. Another study from Sweden reported that children with more than two siblings had a slightly increased risk of all injuries[16].

In Jan *et al* study from Saudi Arabia, none of the parents had a previous poisoning accident; while in our study 10.6% of families reported previous poisoning which was found more in extended families, and when mothers do not work outside home. Extended families usually involve large number of children, so less chance to look after each child.

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