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Determining the risk factors of home accidents in 0-6-year-old age group and the awareness levels of their mothers about home accidents in Sivas

Sivas ilinde 0-6 yaş grubu çocuğu olan annelerin ev kazaları hakkındaki farkındalık düzeyleri ve bu yaş grubunda ev kazalarını etkileyen faktörler

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SUMMARY

Objective: Accidents, the majority of which can be prevented, are a significant cause of morbidity and mortality in children. In the 0-6 years age group, in particular, the vast majority of accidents occur in the home or surroundings. Therefore, the knowledge and awareness of mothers are of great importance in the prevention of accidents.
The aim of this study was to investigate the frequency, type, and risk factors of home accidents in children aged 0-6 years, and to determine the precautions taken against home accidents by the mothers.
Method: This descriptive, questionnaire study was conducted on the mothers of children aged 0-6 years who presented at the Pediatrics Polyclinic of Cumhuriyet University Hospital, Sivas. Mothers completed the questionnaire, which was composed of four chapters and included the "Scale for Identification by Mothers of the Safety Measures Taken by Mothers to Prevent Home Accidents in Children in the 0-6 Age Group".
Results:
The study included 375 mothers. The rate of accidents requiring hospitalization in children was 38.9%. The most frequent accidents were falls and poisonings. The scale points of the mothers were mean 177.25±14.62. A significant relationship was determined between the scale points of the mother and maternal education level, number of children, a child aged <2 years in the home, maternal health status, place of residence, safety precautions are taken by the mother, the presence of a dependent cared for at home, the mother's perception of the child's character, the use of a baby walker and use of a car-child-seat ($p<0.05$). The risk of a home accident requiring hospitalization was determined to be increased 2.09-fold in a family with ≥2 children compared to those with one child, by 1.76-fold if the mother was caring for the child rather than another person, and by 1.58-fold if the mother had not completed high school or university.
Conclusions: Providing information to mothers about in a timely and manner of taking appropriate precautions against home accidents should be a part of routine child examinations.
Keywords: Home accidents, children in the 0-6 age group, awareness of mothers, safety measures, Sivas

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ÖZET

Amaç: Çoğunlukla önlenebilir olan kazalar çocuklarda önemli bir mortalite ve morbidite nedenidir. Özellikle 0-6 yaş grubu çocuklarda kazaların büyük kısmı ev ve çevresinde gerçekleşir. Bu nedenle, annelerin ev kazaları hakkındaki bilgi ve farkındalıkları kazalardan korunmada büyük önem taşır.
Bu çalışmadaki amacımız, 0-6 yaş arası çocuklarda gerçekleşen ev kazalarının sıklığını, tipini ve risk faktörlerini ortaya koymak ve annelerin ev kazalarına yönelik aldıkları güvenlik önlemlerini belirlemektir.
Yöntem: Çalışmamız Sivas Cumhuriyet Üniversitesi Hastanesi Pediatri polikliniğine başvuran ve 0-6 yaş arasında çocuğu olan annelerle yapılan tanımlayıcı tipte bir anket çalışmasıdır. Anneler 4 bölümden oluşan ve içinde "0–6 Yas Çocuklarda Annenin Ev Kazalarına Yönelik Güvenlik Önlemlerini Tanımlama Ölçegi" de bulunan anketi doldurmuşlardır.
Bulgular: Çalışmaya 375 anne katılmıştır. Çocuklarda hastaneye gitmeyi gerektiren ev kazası oranı %38,9'dir. En sık kazalar düşme ve zehirlenmedir. Annelerin ölçek puan ortalaması 177.25±14.62 dir. Annelerin ölçek puanı ile anne eğitimi, çocuk sayısı, evde <2 yaş çocuk olması, annenin sağlık durumu, yaşanan yer, annenin ev kazalarına karşı önlem alma durumu, evde bakıma muhtaç kişi varlığı, annenin çocuk karakteri algısı, yürüteç kullanımı ve arabada çocuk oto koltuğu varlığı arasında anlamlı ilişki saptanmıştır ($p<0,05$). Hastaneye gitmeyi gerektiren ev kazası gerçekleşme riski çocuk sayısı ≥2 olduğunda, tek çocuklu ailelere kıyasla 2,09 kat, bakım anne tarafından veriliyorsa bakıcının baktığı çocuklara kıyasla 1,76 kat ve anne lise ya da üniversite mezunu değilse 1,58 kat artmaktadır.
Sonuç: Ev kazalarına karşı gerekli tedbirlerin zamanında ve uygun şekilde alınması için annelere ev kazaları hakkında bilgi vermek, rutin çocuk muayenesinin bir parçası haline gelmelidir.
Anahtar sözcükler: Ev kazası, 0-6 yaş arası çocuklar, anne farkındalığı, güvenlik önlemleri, Sivas

INTRODUCTION

An accident is defined as an unplanned, unexpected event that occurs suddenly and results in injury or damage, and the majority of accidents can be prevented[1,2]. Accidents are a significant cause of morbidity and mortality, especially in children[3]. Although the home is thought of as the safest place for children, the vast majority of injuries in childhood occur in the home[4]. The younger the child, the higher the rate of home accidents, with 90% of accidents in the 0-4 years age range occurring in the home and around[3,5].

In Turkey, 45.4% of home accidents have been reported to occur in the 0-6 years, age group[6]. Children in this age group spend most of their time at home, and as they are discovering their surroundings, have learning curiosity, and are continuously active but do not have the developmental skills to protect themselves against accidents, they constitute a high-risk group for accidents in the home[7,8]. Approximately 4 million pre-school age children per year are exposed to various home accidents, primarily, falls, poisoning and burns[9]. Even if home accidents do not result in death, they may cause psychological trauma to the family and child but also create a social and economic burden for society.

The adult caring for a child is responsible for the appropriate and safe organization of the living environment of the child, especially in the pre-school period. This adult with whom the child spends the most time is usually the mother[10,11]. Various studies have shown that with an increase in maternal knowledge and awareness of home accidents, there is a significant decrease in home accident rates of children[12-14]. In a World Health Organisation (WHO) report on the prevention of pediatric injuries, it was emphasized that the living areas of children must be made safe as the primary preventative measure[3].

The aim of this study was to investigate the frequency of home accidents in children aged 0-6 years, the type of accident and how it occurred, to reveal the risk factors for home accidents and to determine the precautions taken against home accidents by the mothers of children aged 0-6 years.

MATERIAL AND METHODS

This descriptive study was conducted with the mothers of children aged ≤6 years who presented for any reason at the General Pediatric Polyclinic of Sivas Cumhuriyet University Medical Faculty Hospital between 01.11.2018 and 01.04.2019. Mothers were excluded if they did not understand Turkish, did not wish to participate in the study, or if their child had any mental or motor retardation, or any disease that restricted movement. Verbal and written informed consent was obtained from all the mothers included in the study. Approval for the study was granted by the Non-Interventional Clinical Research Ethics Committee of Sivas Cumhuriyet University.

The mothers were requested to complete a 4-section questionnaire prepared by the researchers in respect of home accidents. The first section of the questionnaire was designed to gather information about the sociodemographic characteristics of the parents and the children. The second section comprised a "Perception of the Child's Character Form," which required the mother to complete it in respect to her thoughts about the child. This form was designed by Mueller in 1986, based on social attitude principles to evaluate the perceptions of the mother about the character of the child. The mother is required to mark 9 definitions to evaluate the character of the child. The definitions are in a range of polite-rude, weak- strong, relaxed-fussy, quick-slow, careful-careless, enterprising- cautious, active-passive, easy to care for – difficult to care for, funky- brave. The total points can range from 9 to 63. Low points indicate a positive perception of the child and that the child can be more easily managed, and high points indicate a difficult and negative perception of the child. The internal consistency of the scale has been previously studied, and the Cronbach alpha was reported to be 0.80[15].

The third section of the questionnaire is related to a home accident that has occurred. In this section, if the child has suffered a home accident, questions are asked about the type of accident (fall, poisoning, burn, cut, swallowing a foreign body, electric shock, and others), the need to go to the hospital, and the presence of permanent damage. In addition, if the child who is the subject of the questionnaire has experienced a home accident within the previous 3 months, questions are asked related to the type of accident, where the accident occurred, the injured body region of the child, and if they went to hospital, whether they were treated as an outpatient or inpatient. There are also questions in this section related to whether the mother has been given information about home accidents by any healthcare personnel, whether a baby walker is used and if home accidents have occurred associated with this.

The final section of the questionnaire comprised the "Scale for Identification by Mothers of the Safety Measures Taken by Mothers to Prevent Home Accidents in Children in the 0-6 Age Group". This scale evaluates the safety measures taken by the mother to protect their children from accidents in the home. The scale was developed by Çinar and Görak and comprised a total of 40 items as 34 positive and 6 negative statements. Each item is scored from 1-5 as 5-point Likert-type responses. The positive statements are scored as 5=always, 4=usually, 3= sometimes, 4=rarely, 1= never. The negative statements (item no: 6, 9, 23, 26, 30, 40) are scored in reverse. The total points range from 40 to 200. The highest points indicate that the mother has taken precautions against home accidents at the highest level. The reliability and validity of the scale for Turkey have been previously studied, and the Cronbach alpha was reported to be 0.82[16].

Statistical Analysis

Data obtained in the study were analyzed statistically using SPSS 22 software. Results were stated as mean±standard deviation (SD) values or number (n) and percentage (%). Conformity of the data to normal distribution was assessed using the Kolmogorov-Smirnov test. In evaluations of categorical data, the Chi-square test was applied, or Fisher's Exact test where appropriate. The Independent Samples t-test was used to determine the difference between two groups showing normal distribution, and the Mann Whitney U-test was used for those not showing normal distribution. Multiple linear regression analysis was applied to identify the child-family determinants of the score. A value of $p<0.05$ was accepted as statistically significant.

RESULTS

A total of 375 mothers were included in the study. The mean age of the mothers was 30.33±5.58 years, 28.5% were university graduates, and 74.1% were housewives. A nuclear family structure was reported by 75.2% of participants, 72.8% lived in the city, and 74.1% lived in an apartment block. The mean number of people living in the home was 4.66±1.68, and there were reported to be 2 children in 34.1% of cases and a single child in 33.6%. The children evaluated in the questionnaires comprised 56.5% males and 43.5% females with a mean age of 31.62±20.27 months. The sociodemographic data of the families in the study are shown in Table1.

Table 1: Sociodemographic characteristics of families in the study

Mother age (year)§	30.33±5.58 (19-50)	
Number of people living at home§	4.66±1.68 (2-13)	
Child age (month)§	31.62±20.27 (2-72)	
Parental education level, n(%)	**Mother**	**Father**
Primary school or lower	100 (26.6)	71 (18.9)
Secondary school	100 (26.7)	62 (16.5)
High school	68 (18.1)	115 (30.7)
University	107 (28.5)	127 (33.9)
Number of children, n(%)		
1	126 (33.6)	
2	128 (34.1)	
3	87 (23.2)	
≥ 4	34 (9.1)	
Child sex, n(%)		
Girl	163 (43.5)	
Boy	212 (56.5)	
Mother's occupation, n(%)		
Housewife	278 (74.1)	
Working	97 (25.1)	
Caregiver, n(%)		
Mother	292 (77.9)	
Others (nurse, relative, nursery)	83 (22.1)	
Income, n(%)		
Low	123 (32.8)	
Middle	186 (49.6)	
High	66 (17.6)	
Place of residence, n(%)		
City center	273 (72.8)	
County	55 (14.7)	
Village	47 (12.5)	
House type, n(%)		
Apartment	278 (74.1)	
Single house	97 (25.9)	
Asset, n(%)	**House, owner**	**Car owner**
Yes	201 (53.6)	234 (62.4)
No	174 (46.4)	141 (37.6)
Type of family, n(%)		
Core	282 (75.2)	
Widespread	93 (24.8)	
Chronic disease in the parent, n(%)	**Mother**	**Father¶**
Yes	53 (14.1)	33 (8.9)
No	322 (85.9)	340 (90.3)
Person in need of care at home, n(%)		
Yes	30 (8.0)	
No	345 (92.0)	

§Mean±standart deviation, ¶ 2 fathers are dead

At least one accident requiring a hospital visit was reported by 38.9% of the mothers of the children aged 0-6 years. These accidents were most frequently falls, poisoning, and burns. Of the children who had suffered an accident, permanent scars, or a problem requiring long-term medical follow-up was determined in 37.7%, and 1 child had lost a finger following an accident at home. Of the children aged 0-6 years evaluated in the questionnaire, 29.3% had experienced a home

accident within the previous 3 months, and 61.8% of the children who had experienced accidents were male. The 3 most common types of accident were poisoning, falls, and foreign body aspiration, respectively. The rate of hospital presentation because of an accident in the last 3 months was 82%, and of those children taken to hospital, 59% were admitted as inpatients. The use of a baby walker was reported by 68.5% of the mothers, and 18.3% of those using a walker had experienced an accident associated with the device, primarily falls. Of 234 families with a car, there was only a child car seat in 100 (42.7%), and only 55 (55%) of these mothers stated that they always used the child car seat. Information about accidents in the home had been provided by healthcare staff to 44 (11.7%) mothers. The characteristics of home accidents are shown in Table 2.

Table 2: Characteristics of home accidents

Characteristics		**n**	**%**
Home accident requiring hospitalization(n=375)			
No		**229**	**61.1**
Yes		**146**	**38.9**
	Falls-brunt	66	45.3
	Poisoning	39	26.7
	Burns	17	11.6
	Foreign body aspiration	6	4.1
	Injury of cutting tool	5	3.4
	Foreign body ingestion	4	2.7
	Foreign body in the nose	3	2.1
	Other	6	4.1
Permanent problem due to home accident (n=146)			
No		**91**	**62.3**
Yes		**55**	**37.7**
	Permanent scars	34	61.8
	Long term medical follow-up	20	36.3
	Loss of limb (finger)	1	1.8
Home accident in the previous 3 months (n=375)			
No		**265**	**70.7**
Yes		**110**	**29.3**
Type of accident§	Poisoning	43	39.1
	Falls-brunt	40	36.3
	Foreign body aspiration	10	9.1
	Burns	6	5.5
	Injury of cutting tool	4	3.6
	Other	7	6.4
Place of accident§	Living room	38	34.5
	Kitchen	22	20
	Bedroom	17	15.5
	Guest home	12	10.9
	Garden	11	10
	Hallway-stairs	5	4.5
	Children's room	3	2.7
	Bathroom	2	1.8
Damaged body part§	General	48	43.6
	Head	34	30.9
	Hand-arm-leg	19	17.3
	Other	9	7.6
Go to the hospital§	**Yes/No**	82/28	74.5/25.5
Hospitalization¶	**Yes/No**	59/23	72.0/28.0
Home accident due to walker use (n=257)			
No		**210**	**81.7**
Yes		**47**	**18.3**
	Falls-brunt	46	97.9
	Foreign body ingestion	1	2.1

§The number of children who have had home accidents in the last 3 months (n=110) was calculated
¶The number of children who went to the hospital (n=82) was calculated.

The mean points obtained in the Scale for Identification by Mothers of the Safety Measures Taken by Mothers to Prevent Home Accidents in Children in the 0-6 Age Group were determined as 177.25±14.62 (range, 121-200). No significant correlation was determined between the scale points and maternal age, paternal educational level, maternal employment status, presence of paternal chronic disease, at least 1 accident requiring hospital presentation and a home accident experienced within the previous 3 months ($p>0.05$). Significantly higher points were determined to have been obtained by mothers who had attended high school or university, with a single child, with a child aged <2 years, with no chronic disease, who lived in the city and stated that they took precautions against home accidents ($p<0.05$). The scale points were determined to be significantly low for mothers who were caring for a dependent at home, who had a chronic disease, whose child had experienced an accident at home associated with a baby walker, and for those who had a car without a child car seat ($p<0.05$). The scale points of mothers with a negative perception of their child were also found to be significantly lower ($p<0.05$) (Table 3).

Table 3: Distribution of the mothers with 0-6 age group children according to their scale scores

Characteristics		**n**	**Mean±SD**	**p**
Mother age	<35	291	177.70±14.14	0.353
	≥35	84	175.70±16.18	
Mother education	<High school	200	175.66±14.76	**0.011***
	High school-university	175	179.07±14.29	
Father education	<High school	133	176.36±14.58	0.283
	High school-university	242	177.74±14.65	
Child sex	Girl	163	176.83±15.56	0,921
	Boy	212	177.58±13.89	
Mother's occupation	Housewife	278	176.56±15.06	0.165
	Working	97	179.24±13.17	
Number of children	1	126	179.82±13.74	**0.011***
	≥ 2	249	175.96±14.91	
Age of the small child in the house	≤ 24 months	227	178.65±14.41	**0.010***
	> 24 months	148	175.11±14.73	
Place of residance	City center	273	178.87±13.64	**0.011***
	County-village	102	172.92±16.26	
The person in need of care at home	Yes	30	171.57±13.89	**0.008***
	No	345	177.75±14.60	
Chronic disease in mother	Yes	53	174.19±14.22	**0.034***
	No	322	177.76±14.65	
Chronic disease in father	Yes	33	177.03±14.75	0.846
	No	342	177.29±14.66	
Precaution against home accidents	Yes	318	178.45±14.33	**<0.001***
	No	57	170.60±14.56	
Home accident requiring hospitalization	Yes	146	176.28±15.30	0.429
	No	229	177.87±14.17	
Home accident in the previous 3 months	Yes	110	177.14±14.40	0.767
	No	265	175.02±17.11	
Home accident due to walker use	Yes	47	172.57±14.85	**0.003***
	No	210	179.03±14.28	
Mother's 'child character perception' scale score	< 30	256	178.68±14.24	**0.003***
	≥ 30	119	174.18±15.01	
Child car seat in the car[§]	Yes	100	181.14±13.44	**<0.001***
	No	134	173.99±15.79	
TOTAL		**375**	**177.25±14.62 (121-200)**	

[§] Car owners are evaluated.

* $p<0.05$

Multiple linear regression analysis was applied to evaluate the relationships of the points of the mothers in the Scale for Identification by Mothers of the Safety Measures Taken by Mothers to Prevent Home Accidents in Children in the 0-6 Age Group and the characteristics of the child (number, age, gender) and the family (maternal, age, education and employment, place of residence, child character perception scale points, family type, monthly income level, a dependent requiring care at home, having had an accident requiring a hospital visit, having had a home accident within the last 3 months, maternal chronic disease). The results of the analysis showed that living outside the city, a greater number of children, negative maternal perception of the child and older age of the child were independent factors that significantly reduced the scale points (Table 4).

Table 4: The association between scores and child-parent parameters.

Multiple linear regression analysis (Stepwise)	B	SE	ß	t	p
Seat (city center vs. district/village)	-4.06	1.69	-0.12	-2.41	0.016
Number of children	-1.49	0.72	-0.11	-2.07	0.039
Child Character Perception Scale score	-0.32	0.09	-0.18	-3.68	<0.001
The age of the small child (months)	-0.08	0.04	-0.10	-2.02	0.044

Adjusted R Square=0.80, F=9.12, p<0.001, B; unstardardized beta, ß; standardized beta, SE; standart error

Of the items in the Scale for Identification by Mothers of the Safety Measures Taken by Mothers to Prevent Home Accidents in Children in the 0-6 Age Group, item 7 had the lowest points, with 26.4% of mothers reporting that they never kept at home substances such as oxygenated water or tincture of iodine for use in case of home accidents. Item 15 had the highest points, with 94.9% of mothers reporting that they considered bare or torn electric cables to be dangerous for children. The 3 items on the scale with the highest and lowest points are shown in Table 5.

Table 5: The 3 items with the highest and lowest points in the "Scale for Identification by Mothers of the Safety Measures Taken by Mothers to Prevent Home Accidents in Children in the 0-6 Age Group".

Item no	**Item content**	**Never (1 point) n(%)**	**Always (5 points) n(%)**	**Mean ±SD**
15	I think bare or torn electric cables constitute a danger for children	3 (0.8)	356 (94.9)	4.91±0.44
17	I close medicine bottles tightly so that my child cannot open them	3 (0.8)	348 (92.8)	4.88±0.47
20	I keep sharp objects (knives, razor blades, scissors, etc) in a place where my child cannot reach them	3 (0.8)	340 (90.7)	4.85±0.57
7	I have materials such as oxygenated water or tincture of iodine that can be used in the event of an emergency accident at home	99 (26.4)	113 (30.1)	3.00±1.60
26[§]	I do not allow my child to wander around the kitchen when I am cooking	89 (23.7)	46 (12.3)	3.24±1.32
29	I use an appropriately-sized toilet seat so that my child does not fall into the toilet.	95 (25.3)	172 (45.9)	3.44±1.69

[§]reverse scoring

The risk of a home accident requiring hospital presentation was determined to be increased 2.09-fold in a family with ≥2 children compared to those with one child (OR:2.09, 95 CL 1.31-3.32). The risk of home accident requiring hospital presentation was determined to be increased 1.76-fold when the mother was caring for the child compared to when a person other than the mother was caring for the child (OR:1.76, 95 CL 1.04-2.99) and by 1.58-fold if the mother had not completed high school or university (OR:1.58, 95 CL 1.04-2.41).

DISCUSSION

Home accidents are an important social problem that threatens the health and life of children throughout the world[3]. The rates of home accidents in the 0-6 years age group have been reported as 15% -65% in various regions of Turkey and as 9%-77% in different countries worldwide[17-26]. The rate of 38.9% determined in the same age group in the current study shows a similarity to both national and international data.

Accidents in the form of falls are the leading type of home accident of children all over the world and are a significant cause of morbidity and mortality. In various studies in Turkey, falls have been reported to be the most common home accident at rates of 36%-67% in pre-school age children (17-20). Younesian et al.[26] reported falls at the rate of 63% in children experiencing home accidents, while Tripathi et al[24] reported that 89% of the injuries of children aged ≤6 years presenting at the Emergency Department were due to falls (24). In the current study, falls were the most common home accident at the rate of 45.3%, which was consistent with findings in national and international literature[17-20,27,28].

According to WHO data, burns and poisonings are the next most common home accidents in children after falls[3]. Most studies in Turkey have reported burns to be the second most common home accident in children and cuts from sharp objects to be the third[17-19,27,28]. In the current study, poisonings were the second most common home accident and burned the third. A study in Iran also showed poisonings to be the second most common home accident[26]. Of the home accidents occurring in the previous 3 months, poisonings overtook falls as the most common accident, and the third most common was foreign body aspiration. This noticeable difference in the type of accidents in the current study was thought to be due to our hospital being a tertiary level hospital with a pediatric intensive care unit, and therefore, children with poisoning or foreign body aspiration were referred to our clinic as they required long-term follow-up.

The home accidents in the current study were determined to have occurred most often in the living room, followed by the kitchen and the bedroom. Other studies have also reported that home accidents occurred most often in the living room and the kitchen[26,28]. As these are the rooms where the children and family spend the most time, these results are natural. Parweswaran et al.[29] reported that the kitchen, bathroom, and living room were the rooms in the house with the highest risk in respect of accidents. It was noticeable in the current study that 10.9% of the home accidents occurred in another house where they had gone as guests. This could be associated with the curiosity of the child in discovering a new environment or with reduced control of the parents over the child.

It was observed in the current study that as the maternal education level decreased, the risk of home accidents for the children increased (OR:1.59), and mothers who had completed high school or university had higher scale points in respect of taking precautions against home accidents. A previous study reported a 1.5-fold higher risk of an accident resulting in injury for the children of mothers with a primary school level of education compared to those who had graduated from university[30]. Similar to the findings of the current study, previous studies have found a correlation between maternal education level and precautions taken against home accidents[10,20,21,26,28,31-33]. It is not surprising that there is a relationship between the maternal level of education, knowledge, and level of awareness[34].

Various studies have produced different results with respect to a relationship between maternal age and precautions taken against home accidents. Some studies have reported that as the mother's age increased, so the precautions taken against home accidents decreased[21,26] whereas others have shown the reverse with better precautions taken by older mothers[17,19,35]. Moreover, various previous studies have shown similar results to those of the current study in that no relationship was determined between maternal age and precautions are taken against home accidents[10,28,36].

The majority of previous studies have reported a decrease in precautions taken against home accidents as the number of children and the number of people in the home increased[19,21,26,37]. The most important reason for this is thought to

be that with a greater number of children, the mother has less control and spends less time with each child. In the current study, there was found to be a 2.09-fold higher risk of home accidents if there were ≥2 children, and the mothers of ≥2 children were determined to have significantly lower scale points than the mothers with a single child. In the multiple linear regression analysis, the number of children was found to be an independent factor with a negative effect on the scale points of the mother. One study showed a 5.7-fold higher risk of accident-related injury in children born as the third or later child in the family[31]. Another study determined that parents spent more money on safety devices to protect the firstborn children from accidents[32]. These results show that greater attention is paid to the firstborn by less experienced parents and that they are more sensitive to protecting the child from accidents.

The results of the current study showed that mothers were more sensitive to home accidents when the child is aged <2 years. As the child grows, the increasing experience of the parents and the developmental characteristics of the child can cause the mother to weaken safety precautions[38,39]. In the multiple linear regression analysis of the current study, young age of the child at home was found to be an independent factor with a negative effect on the scale points obtained by the mother in respect of taking safety measures against home accidents. A previous study reported that fewer safety measures were taken against accidents as the child became older[10]. Other studies have reported that more precautions are taken against home accidents by the mothers of children aged ≤ 1 year and by the parents of children aged ≤ 2.5 years[40,41].

The results of the current study showed that when the mother had a chronic disease or there was a dependent in need of care at home, precautions taken against home accidents were reduced. This is not a very surprising result and can be attributed to the mother having to divide her time and energy. In contrast, Karatepe et al[20] reported that there was no correlation between home accidents and the presence in the home of a dependent requiring care.

Mothers living in the city center were found to have higher scale points than those living in a town or village. In the multiple linear regression analysis, the place of residence emerged as an independent factor affecting the scale points. This could be attributed to city-dwelling mothers having a higher level of education or a higher level of family income. No significant correlation was determined between the level of family income and the scale points of the mother in respect of taking precautions against home accidents. Aktaş et al.[42] determined the same result, but various other studies have reported that as income level increased, so the precautions are taken against home accidents also increased[21,26,28,35].

To protect children against home accidents, the mother must be knowledgeable about this subject and be able to foresee accidents that could happen. In the current study, mothers who stated that they took precautions against home accidents obtained higher scale points. Although it can be expected that the precautions taken by mothers who have experienced an accident will be increased, there was no significant difference in the current study between the scale points of those who had experienced an accident that required a hospital visit and those who had experienced a home accident within the previous 3 months. Other studies have reported that mothers whose children have never experienced an accident at home were more sensitive to and aware of accidents[10,21,43]. These results support the view that home accidents can be prevented with appropriate and correct precautions.

An interesting result determined in the current study was that children cared for by the mother were at higher risk of a home accident requiring a hospital visit (OR:1.76). This can be explained by the fact that a carer other than the mother gives all their attention to the child as their sole task is to care for the child. Mothers may prioritize housework with less supervision of the child. A previous study reported that working mothers took a high level of precautions against home accidents, whereas another study stated that the mother employed outside the home and not being present for a period of longer than 8 hours was a risk factor for home accidents[10,26].

In Turkey, baby walkers are used at an extremely high rate, although they are known to increase the risk of accidents and injuries. While 68.5% of the mothers in the present study reported the use of a baby walker for the child, this rate has been reported as 57.5% in a study in Istanbul, 75.4% in Ankara, and 90% in Middle Eastern countries[44-46]. Home accidents related to the use of a baby walker were determined at the rate of 18.3% in the current study, which was higher than the rates of 7.8% and 13.5% reported in previous studies[44,45]. The disadvantages of using a baby walker, and if used, the necessity for close supervision of the child, should be explained to parents. In the

current study, the scale points of the mothers who stated that an accident had occurred while using a baby walker were lower than those of the mothers who had not experienced an accident associated with a baby walker. This is a good example that accidents can be prevented when the appropriate safety precautions are taken.

The temperament of the child is just as important as the attitude of the parent in respect of home accidents. Stubborn, lively, and difficult-to-control children are at greater risk of accident-related injuries, and it has been reported that parents are forced to control these children[47]. In the current study, mothers with a negative perception of their child (perception of the child's character scale points >30) were determined to have low scale points related to taking precautions against home accidents. This could be related to the mother having insufficient control of a child perceived as difficult and acceptance of this situation.

Another interesting finding of this study was related to the use of car seats for children. Although it is a legal requirement in Turkey, only 42.7% of the mothers stated that there was a child seat in the family car. Another study in Turkey reported this rate as 22.9%[10]. The scale points related to taking precautions against home accidents were observed to be higher for the mothers who stated that there was a child seat in the car compared to those who had a car and no child car seat. This finding demonstrates the entirety of taking safety precautions to protect the child from all kinds of accidents. Mothers who are sensitive to traffic accidents naturally take a higher level of precautions against home accidents.

The scale points of the mothers in the current study were determined as mean 177.25+14.62, while in previous studies in Turkey, these points have been found to be 76.92±12.45, 162.13±22.39, 158.98±14.48, and 158.12±1.14[6,17,21,48]. Therefore, it can be said that the mothers in the current study were more sensitive to and aware of home accidents compared to mothers in the past. This progression over time is pleasing. However, only 11% of the mothers stated that they had received any information about home accidents from healthcare staff. Another study reported this rate as 3%[10]. Thus, there is an opportunity to increase the awareness of mothers of this subject during routine health check-ups of children.

When the questionnaires were being completed, it was observed that the mothers thought falls and collisions were normal for children and did not even consider them as accidents. The most important limitation of this study was that the data were based on the statements of the mothers, and therefore, there could be deficiencies in the results.

CONCLUSION

In conclusion, for the protection of children against accidents in the home, the education level of the mother and increasing awareness of this subject are very important. Taking the necessary precautions against home accidents in a timely and appropriate manner is a fundamental principle of pediatric healthcare. Providing information about home accidents to all mothers should become a part of routine pediatric examinations.

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