Readiness of Omani Families to Prevent Accidental Injuries at Home in Children Younger Than Six-years

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Abstract

Objectives: To assess the attitude of Omani families toward accidental injuries among children (aged < 6 years) and to evaluate the safety measures and available preventive measures to reduce child injuries at homes.

Methods: a cross-sectional survey that examines the Omani parents self-reported attitude about accidental injuries (poisoning, falls, burns, and drowning) at home among children younger than 6 years and house safety measures. A total of 220 parents of children aged < 6 years admitted to a tertiary health care teaching hospital were invited to participate over a period of 6 months (May to November 2018). Analysis of 178 participant data was done using SPSS as 44 retrieved answered questionnaires had many missed data or the parents did not had a child younger than 6 years.

Results: Only 17% of the studied Omani families had history of a child injury in the last year prior to the study. Males were more injuried (61%) and 66% were younger than 3 years at the time of injury. A door to control stairs access was available for 53% of the families. In 42% and 16% of the houses, children can access electrical sockets and wires respectively. Fire alarm and extinguisher was not available in 91% and 82% of houses, respectively. Those with history of injuries are not storing medications and chemicals in safe places out of reach of children in 57% and 62%, respectively.

Conclusions: Many of the studied families are not providing adequate safe environment for children in their houses. Therefore, actions should be taken to increase awareness about accidental injuries prevention within homes and to implement actions so that safe home environment could be enjoyed by children.

Keywords: Children, Accidental Injuries, Supervision, Prevention, Oman.

Introduction

Accidental injuries are a growing global public health problem. It is becoming a significant concern affecting children older than 1 year.¹ Children physical and cognitive abilities, degrees of dependence, activities and risk behaviours all change substantially as they grow older. Their curiosity and wish to experiment as they develop, are not always matched by their capacity to understand or to respond to danger. Therefore, children are particularly more susceptible to injuries.^{2,3} WHO defines injury as 'the physical damage that occurs when the human body is suddenly subjected to amounts of energy that exceed the physiological threshold or is deprived of vital elements such as oxygen'. 'The energy can be mechanical, thermal, chemical or radiant'.³ When the sustained damage is permanent the child quality of life will be negatively affected and this will have major impact on the family, society and community in general. Globally, as reported by UNICEF more

than 1,600 children and adolescents below the age of 19-years die every day from preventable injuries.⁴ The main causes of unintentional injuries are road traffic injuries, drowning, poisoning, thermal injuries and falls and the most affected are the younger children.^{5,6} From 2010–2011 to 2018–2019, unintentional injury death rates decreased by 11%.¹ However, rates increased among some groups—including an increase in deaths due to suffocation among infants (20%) and increases in motor-vehicle traffic deaths among some ethnic groups children.^{1,4,7} The availability and efficacy of prevention programs that address specific type of accidents and certain age groups or communities could explain such variabilities in rates of accidents.

The deaths caused by injuries have an immeasurable impact on the families and communities affected, whose lives are often changed irrevocably by these tragedies.⁸ Falls are the commonest cause of hospitalization and visits to the emergency department due to unintentional injuries in children aged one.⁹⁻¹¹ Studies pointed to an association between the social class and the trend of severity of injuries in which children from deprived families had more frequent and serious accidents. It is of note that burns, scalds, and poisoning, were much more likely to be severe than the other types of accident.^{1,10}

In Oman, according to the MOH statistics of 2021, injuries and poisoning were one of the top leading causes of morbidity and mortality among non-communicable diseases. For example head injuries is the fifth reason of morbidity requiring admission among children 1-19 years old.¹² Studies indicates that severe accidents requiring hospital admission were more common among under 5 years of age and males. The high incidence of falls, home injuries and burns highlight the need for age targeted interventions and injury control programs.^{11,13} Another study found that the prevalence of traumatic monocular visual damage was 0.19%. Next to amblyopia, injury is the main reason for monocular loss of vision in childhood, however, both are preventable.¹⁴

Supervision of children is an essential factor in preventing injuries, reducing injury severity, its frequency and severity of the outcome. Studies points that the risk of injury was reduced by 57% among children supervised by their parents and lack of parental supervision for example increased the risk of injury to child pedestrians and cyclists.² Hence, identification of attitude of parents and readiness of families to implement actions for prevention of accidents is important to map the gaps in practices and bridge them. This will help in planning prevention programs that could address such gaps in attitude and home structures in relation to safety. The Objective of this study is to assess the attitude of Omani families toward accidental injuries among children (aged < 6 years) and to evaluate the safety measures and available preventive measures to reduce child injuries at homes.

Methods

This is a prospective cross-sectional survey that examines the Omani parents self-reported attitude and practice about prevention of accidental injuries at home among children younger than 6 years (as this age group is the most vulnerable for accidental injuries worldwide). Data was collected through self-completed questionnaire. The study toll was developed by the researchers to fulfill the study objectives and based on literature review related to accidental injuries in children such the common types of home accidents, variables and risk of the accidents. The questionnaire was validated through four experts' opinions (one is methodologist & three pediatric consultants)who revied the tool and suggested modifications that were discussed by the research team and accommodated accordingly. The questionnaire was piloted on 10 parents and the comments that was raised by them were also considered and accordingly minor changes were done to the tool. The questionnaire which was self-reported by the participants contains three sections: the first part address participants demographic data. The second part evaluates the history of previous accidental injury among children in the family in the last year. The last section assesses the attitude of the care provider toward accidents and their readiness to implement preventive measures at home for different types of accidents. Ethical approval was obtained from Medical Research Ethics Committee (MREC) at the College of Medicine and Health Science, Sultan Qaboos University (SQU). Participants were parents of children aged < 6 years admitted to SQU hospital or visited the outpatient department with acute illness over a period of 6 months (as these patients are expected parents will be more ready to fill the questionnaire. Parents were invited to participate in the study during the study duration in different days of the week and different time of the day. Consent was verbally taken from the available care provider when participation is accepted. The questionnaire was explained briefly, then the participants filled it independently but their queries were addressed at the time of collection. Recruitment of participants continued from May to November 2018. The

targeted sample size was 200 which was decided by the statistician based on the estimated total number of children admitted in SQUH over the last 6months prior to the study. Simple descriptive statistical analysis using frequencies and percentages was used to assess the findings.

Results

A total of 220 parents accepted to participate in this study. Forty-two were excluded from the analysis as 20 responded to only few questions with many missed answers. The remaining 22 don't have children 6 years or younger, hence, they were excluded from data analysis. Analysis of total 178 participant data was done using SPSS version 23. Of the informants, 82% were mothers and 60% of the participants live in Muscat and Al Batinah regions. Majority of the families (88%) have at least three children below 6 years of age. Median maternal and paternal age are 30 and 3 years respectively. Around half of the families (46%) have medium income with 50% of parents have post-graduate educational status. Among them, 37% of the mothers and 96% of the fathers are working. In families with both parents are working, 46% are keeping their children with close relative, 35% with housemaid and 15% in nursery when they are at work (table 1).

Accidents and related factors: Only 6.8% of the families reported having swimming pool (SP) at home and there is fence surrounding it and a door to control access in 60% of the pools. Although, 91% of the parents stated that they supervise their children while swimming, only 33% of the children use floating devices while using the swimming pool. Some of the participants (21%) also reported the habit of keeping water in big containers in the house environment which also could be a risk for drowning. For factors related to accidental fall, only 54% of the parents reported availability of protective measures to control stairs access at homes. On the other hand, 87% reported having window's guards and 91% has safe balcony guards (table 2).

When asked about fires and electrical injuries protective measures the responses indicate that fire alarms and extinguishers were not available in 91 and 82% of houses respectively. Children also could access electrical sockets and wires in 42% and 16% of the houses, respectively. The cooker is accessible by children in 47%, and 6% of the participants reported that the gas cylinder is located inside the kitchen (tables 3).

In relation to proper storage of medications and chemicals, only 40% of parents reported storing such items in special box in a place that is not accessible by their children. Nevertheless, only 9% are using water and juice bottles to store cleaning substances and chemicals. First Aid box is available in 67% of the participants houses. Although, playing room is not available in 40% of the houses, 95% of the participants reported selecting toys that are suitable for the child age (table 4).

Accidents history: Of the studied Omani families 17% reported a history of their child sustaining injury in the last year prior to the study (61% males). O the reported injured children 66% were younger than 3 years at the time of injury and only 22% are having medical diseases. Of the injured children 46% have parents with postgraduate certificates and 66% of their mothers are not working mothers. Majority (83%) are from low- and medium-income families. History of injury has statistically significant relation only with easy access to cooker (p 0.014). Those with history of injuries are more likely not to store medications and chemicals in safe places (out of reach of children) 57% and 62% respectively (Table 5). Interestingly 67% of the parents stated that they think that those injuries could have been prevented with protective measures.

The percentage of children who sustained accidental injuries was more among families that reported not having fire alarm and extinguisher at home compared with families keeping such preventive equipment at home (table 5).

Parents who had a child accidental injury during the last year reported having first aid box in (76%) compared with only 65.1% of those who did not had accidental injuries. from parents, special plying room in 70% & appropriate toys for age in 93% (table 5).

Table 1: The care-provider in absence of both parents (at work).

| Care-giver in absence of parents | Frequency | Percent |
|-------------------------------------|-----------|---------|
| Nursery | 10 | 5.6 |
| House-worker | 24 | 13.5 |
| Neighbor | 2 | 1.1 |
| Relative | 31 | 17.4 |
| Non-applicable (non-working parent) | 111 | 62.4 |
| Total | 178 | 100.0 |

Table 2: Safety in house in relation to falls and drowning.

| | Presenc e of SP (%) | Keeping water in containers (%) | Presence of stairs (%) | Door to control stair access (%) | All windows have guards (%) | Presence of balcony (%) | Balcony has guards (%) |
|---------|---------------------------|--|------------------------------|--|-----------------------------------|-------------------------------|------------------------------|
| Yes | 12 (7) | 35 (21) | 145 (85) | 78 (54) | 143(87) | 54 (32) | 49 (91) |
| No | 164 (93) | 134 (79) | 26 (15) | 67 (46) | 21 (13) | 113 (68) | 5 (8) |
| Total | 176 | 169 | 171 | 145 | 164 | 167 | 54 |
| Missing | 2 | 9 | 7 | 0 | 14 | 11 | 0 |
| Total | 178 | 178 | 178 | 145 | 178 | 178 | 54 |

| Table 5: Safety in nouse in relation to burns and electric |
|---|
|---|

| | Access to electrical sockets (%) | Electrical wires access (%) | Can access cooker (%) | Gas cylinder locked guard (%) | Presence of fire alarm (%) | Presence of fire extinguisher (%) |
|-------|-------------------------------------|--------------------------------|--------------------------|-------------------------------------|----------------------------------|--------------------------------------|
| Yes | 74 (42) | 28 (16) | 82 (47) | 69 (62) | 16 (9) | 31 (18) |
| No | 100 (57) | 147 (84) | 93 (53) | 43 (38) | 158 (91) | 142 (82) |
| Total | 174 | 175 | 175 | 112 | 174 | 173 |

Table 4: place of storing medications (M) & cleaning materials (CM), presence of other accident prevention factors.

| Variable | Percent |
|--|-------------|
| Store M in Special box not accessible by | 71 (39.9%) |
| children | /1 (3).)/0) |
| Store M in Hand bag | 2 (1.1%) |
| Store M in Fridge | 78 (43.8%) |
| Store M in Special drawer | 7 (3.9%) |
| Store M in Special box and fridge | 11 (6.2%) |
| Store M in both Hand bag and fridge | 2 (1.1%) |
| Store M in both Special drawer and fridge | 1 (0.6%) |
| Store CM in Special box not accessible by children | 70 (39.3%) |
| Store CM in the Roof | 69(38.8%) |
| Store CM in the Floor | 15(8.4&) |
| Store CM in Special drawer | 12(6.7%) |
| Store CM in Special box at the roof | 5(2.8%) |
| Store CM in special box at the roof or floor | 1(0.6%) |
| Store cleaning substance in water & juice | |
| bottles (%) | 15 (9%) |
| | |
| Presence of first aid box (%) | 118 (67%) |
| Presence of playing room (%) | 104 (59%) |
| Using Appropriate toys for child age (%) | 168 (95%) |
| | |

Table 5: relation between history of accidental injury and Place of Storing medications (M) & cleaning materials (CM), presence of fire alarm, fireextinguisher, first aid box, special playing room & appropriate toys for child age.

| History of accidental injury in the last year | | | |
|--|---|--|--|
| Yes (%) | No (%) | | |
| 13 (43.3) | 58 (40.3) | | |
| 11 (37.9) | 59 (41.0) | | |
| 2 (6.7) | 14 (9.7) | | |
| 28 (93.3) | 130 (90.3) | | |
| 4 (13.3) | 27 (18.9) | | |
| 26 (86.7) | 142 (82.1) | | |
| 23 (76.7) | 95 (65.1) | | |
| 7 (23.3) | 51 (34.9) | | |
| 21 (70.0) | 83 (56.8) | | |
| 9 (30.0) | 63 (43.2) | | |
| 28 (93.3) | 140 (94.9) | | |
| 2 (6.7) | 7 (4.8) | | |
| | History of accide last Yes (%) 13 (43.3) 11 (37.9) 2 (6.7) 28 (93.3) 4 (13.3) 26 (86.7) 23 (76.7) 7 (23.3) 21 (70.0) 9 (30.0) 28 (93.3) 2 (6.7) | | |

Discussion

Of the 178 participants, most of them were young mothers (37% of the mothers are working). It is evident that looking after the children when parents are at work is mainly non institutional with only 15% taking the children to nurseries. Such factors could contribute to the risk of accidental injuries (AI) among children and should be further evaluated in Oman. As there are evidences that day care programs for children younger than 6 years could reduce the risk of drowning.¹⁵

Of the studied Omani families 17% reported a history of their child to sustain injury in the last year prior to the study. Around 2 third (61%) of the injured children were males and 66% younger than 3 years at the time of injury which is similar to other studies finding.^{6,13,16} History of injury has statistically significant relation only with easy access to cooker (p 0.014). Families with history of child injuries are more likely to not store medications and chemicals in safe places (out of reach of children) 57% and 62% respectively. Although there were clear correlations between history of injury and some of the injury risk factors but it did not reach statistical significance (p>0.05). Study's did find that parents' awareness of the prevention of an accident and the promotion of its safety was inadequate.¹⁷ The fact that 67% of the current study parents stated that they think that those injuries could have been prevented with protective measures points to the same inadequate safety performance.

Considering the injuries risk factors in Omani families' home environment, it was found that only 60% of the homes swimming pools are secured with fence and door to control its access and only 33% of the children use floating devices while using the swimming pool. Hence, around 40% of swimming pools are not secured. Nevertheless, only 9% of the parents reported that supervision while swimming is not practiced. Also 21% of the participants reported the habit of keeping water in big containers in the house environment which also could be a risk for drowning. Such findings indicate the need of reducing related AI by addressing such risk factors. CDC indicates that among infants under 1 year old, two thirds of all drownings occur in bathtubs while, most drownings happen in home swimming pools among children ages 1–4 years. It is evident that securing swimming pools with four-sided fence reduces a child's risk of drowning.^{18,19}

Doors to control stairs access to and hence prevent falls is reported by only half of the participants. However, more than two third of the families reported having window's guards and safe balcony guards. Preventive measures for fire accidents are less practiced by the families as only 9% and 18% have fire alarms and extinguishers at homes respectively. Good number of children could access electrical sockets, wires and cooker. Only 40% of parents store medications and chemicals in safe place that can't be accessed by children but the majority don't store liquid chemicals in water and juice bottles which is a safe practice. Considering that burns, falls and collisions with objects, and poisoning are the most common causes of injuries among children with home being the most common location of the accident require special attention from families for preventive measures.^{13,20}

Majority of participants take care in selecting toys that are suitable for the child age and more than a half have a suitable place/playing room for the children to play in. Around two third of the families have first aid kit at home. This is a positive practice that ideally should have positive impact on reducing accidents frequency, severity and outcome. Nevertheless, a study results showed that more than 58% of the mothers had an appropriate level of home-injury prevention attitude. However, the performance of mothers was not at an acceptable level.²¹ Another study reported that only 20.2% of injured children received care at the scene of injury, and cared family/relatives (56.5%) most commonly provided initial care or first aid and only 3.4% children received on-scene care by trained prehospital personnel.¹¹

An effective plan for prevention of accidents to children would likely try to reduce the severity of the injuries as well to reduce their frequency. Key strategies for preventing accidental injuries are a combination of environmental and behaviour modification, that can be achieved through engineering, enforcement and education. Consequently, for this kind of strategies, it is important to evaluate the effectiveness of both the intervention itself, and the way the intervention is advised to parents and caretakers so that there is good compliance of the recommendation. Preventive strategies for injuries in childhood are mainly based on surveillance data and the identification of risk factors.^{22,23}

Limitations: As the study is survey based, it is prone for inaccuracy in parent answers and misunderstanding of some points, and recall bias. Generalizability of the findings is not possible as the study is not community based and the regions representation was not appropriate.

Conclusions

Many of the studied Omani families are not providing safe home environment for children as they can access risky areas, and houses are not equipped with some safety measures such as fire alarms or fire extinguisher. It is recommended to increase awareness about accidental injuries and safety measures at homes. It is also of paramount to implement actions in modifying municipality rules for new houses so that homes will be safer. More studies should be encouraged and required to evaluate risk factors for home injuries among children. We hope that this study will lead to greater awareness around the country and a much-increased political will for actions at all levels to combat the scourge of accidental injuries among children.

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References

- West BA, Rudd RA, Sauber-Schatz EK, Ballesteros MF. Unintentional injury deaths in children and youth, 2010-2019. J Safety Res 2021 Sep;78:322-330. https://www.sciencedirect.com/science/article/abs/pii/S0022437521000918. Accessed 4th Apr 2023.
- WHO. UNICEF, 2008. World report on child injury prevention. Accessed on 26 April 2023, available at: https://www.ncbi.nlm.nih.gov/books/NBK310641/pdf/Bookshelf_NBK310641.pdf
- 3. WHO. 2021. Injuries and violence. Accessed on 3 April 2023, available at: <u>https://www.who.int/news-room/fact-sheets/detail/injuries-and-violence</u>
- 4. UNICEF. Child and adolescent injuries. Accessed on 4 April 2023, available on. https://www.unicef.org/health/injuries.
- World Health Organization Regional Office for Europe. European report on child injury prevention 2008. [accessed on 4 April 2023]. Available from: https://www.euro.who.int/en/publications/abstracts/european-report-on-child-injury-prevention
- 6. Ghailan K, Almalki MJ, Jabour AM, Al-Najjar H, Khormi A, Magfori H, Dhayhi N, Alshabi A. Children Domestic Accidents Profile in Jazan Region, a call for new policies to improve safety of home environment. Saudi J Biol Sci. 2021 Feb;28(2):1380-1382. doi: 10.1016/j.sjbs.2020 Dec.11.074. Epub 2020 Dec 1. PMID: 33613067; PMCID: PMC7878686.

7. CDC. 2019. Injuries Among Children and Teens. https://www.cdc.gov/injury/features/child-injury/index.html

- WHO. 2010. Injuries & Violence, The facts (WHO 2010). Available on https://apps.who.int/iris/bitstream/handle/10665/44288/9789241599375_eng.pdf?sequence=1. accessed on 20th April 2023
- Khambalia A, Joshi P, Brussoni M, Raina P, Morrongiello B, Macarthur C. Risk factors for unintentional injuries due to falls in children aged 0-6 years: a systematic review. Inj Prev 2006 Dec;12(6):378-381.
- 10. Alwash R, McCarthy M. Measuring severity of injuries to children from home accidents. Arch Dis Child 1988 Jun;63(6):635-638.
- 11. Mehmood A, Agrawal P, Allen KA, Al-Kashmiri A, Al-Busaidi A, Hyder AA. Childhood injuries in Oman: retrospective review of a multicentre trauma registry data. BMJ Paediatr Open 2018 Nov;2(1):e000310.
- Ministry
 of
 Health.
 2021.
 Annual
 health
 report
 2021.

 https://www.moh.gov.om/documents/274609/274947/%D8% A7% D9%84%D8% AA%D9%82%D8%B1%D9%8A%D8%B1+
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- Al Rumhi A, Al Awisi H, Al Buwaiqi M, Al Rabaani S. Home Accidents among Children: A Retrospective Study at a Tertiary Care Center in Oman. Oman Med J 2020 Jan;35(1):e85.
- Lithander J, Al Kindi H, Tönjum AM. Loss of visual acuity due to eye injuries among 6292 school children in the Sultanate of Oman. Acta Ophthalmol Scand 1999 Dec;77(6):697-699.
- 15. De Buck E, Vanhove AC, O D, Veys K, Lang E, Vandekerckhove P. Day care as a strategy for drowning prevention in children under 6 years of age in low- and middle-income countries. Cochrane Database Syst Rev 2021 Apr;4(4):CD014955.
- Albedewi H, Al-Saud N, Kashkary A, Al-Qunaibet A, AlBalawi SM, Alghnam S. Epidemiology of childhood injuries in Saudi Arabia: a scoping review. BMC Pediatr 2021 Sep;21(1):424.
- 17. Wang X, Chen N, Shi Z, Zhao Z. An investigation on knowledge-attitude-practice about injury and the related factors among school children's parents in Jinan, China. Int J Inj Contr Saf Promot 2012;19(3):267-271.
- Centers for Disease Ccontrol and Prevention. Drowning prevention, Drowning Facts. Accessed on 26 April 2023, available on: https://www.cdc.gov/drowning/facts/index.html
- Centers for Disease Control and Prevention, National Center for Health Statistics. Wide-ranging Online Data for Epidemiologic Research (WONDER). Accessed 26 April 2023.
- Mirahmadizadeh A, Hemmati A, Zahmatkesh S, Saffari M, Bagheri P. Incidence of accidents and injuries in children under 6 years old in southern Iran: a population-based study. J Inj Violence Res 2020 May;12(2):135-144. doi:10.5249/jivr.vo112i2.1280.
- Saadati M, Tabrizi JS, Rezapour R, Alaei Kalajahi R. Home injury prevention attitude and performance: a community-based study in a designated safe community. J Inj Violence Res 2020 Jun;12(2):145-152. doi:10.5249/jivr.vo112i2.1506.
- 22. Jullien S. Prevention of unintentional injuries in children under five years. BMC Pediatr 2021 Sep;21(Suppl 1):311...
- 23. WHO. 2021. Falls, Key facts. https://www.who.int/news-room/fact-sheets/detail/falls Violence and injuries in Europe: burden, prevention and priorities for action (who.int). Violence and injuries in Europe: burden, prevention and priorities for action (who.int)

Appendix 1: questionnaire

Non-intentional injuries in children <6yrs among Omani families Study Overview:

Child injuries are growing global public health problem & among the leading causes of morbidity & mortality.

Prevention is very important. Parents' attitude & readiness to implement actions play major role in prevention.

Therefore, we aim to assess the attitude of Omani families toward unintentional injuries among children (aged <6 years). This is important to adopt preventive measures to reduce injuries among those children.

Kindly, fill this simple questionnaire to help us to reach our aim. All information you will give us here will be used for research purpose only. It will be kept confidential (No names will appear in any publication).

Thank you.

A. Demographic data

| A.1 Informant: | \Box mother | □ father | □ others | | | |
|---|---|------------------------------|---------------------------------|--------------|--|--|
| (specify): | | | | | | |
| A.2 Place of resi | dency: | | | | | |
| - Region: | willay | vat: | | | | |
| A.3 Type of fam | ily: □ nu | clear | □extended | | | |
| A.4 Income: | <500 O.R | □ (501-1000) O.I | R $\square > 1000 \text{ O.R}$ | | | |
| A.5 Number of c | children <6yrs l | iving with the fa | amily: | •• | | |
| A.6 Mother Data: age, > Educational level: □ not educated □ primary □ secondary □ high school □ diploma □ bachelor □ master □ doctorate > Working: □yes □no, #hours out of home/day: | | | | | | |
| A.7 Father data ≻ Educati □diplon | age onal level: □ no na □bachelor | t educated □ p □master □d | orimary □secondary loctorate | □high school | | |

➤ working: □yes □no, #hours out of home/day:.....

A.8 Care-giver if both parents are working: \Box nursery \Box housemaid \Box neighbor \Box others (specify:)

B. history of accidental injuries:

B.1 Do you have child who had non intentional injury in last year: \Box yes \Box no

B.2 Age of the child at the time of injury:

B.3 Sex: \Box male \Box female

B.4 Does he/she have chronic medical illness: \Box yes \Box no

if yes, what illness:

C. Environmental factors that could be linked to injury:

C.1 type of residency: \Box Apartment \Box Villa \Box Farm

C.2 How many floors in your building? $\Box 1 \quad \Box 2 \quad \Box 3 \quad \Box$ more:

C.3 your family lives in floor number:

| D. The following statements are related to your house. Select for each statement the |
|--|
| appropriate option to reflect your house situation |

| | Statement | yes | no | Note |
|-----|---|--------------|-----------|------|
| 1.a | There is swimming pool in the house (<i>if no go to question 2.a</i>) | | | |
| 1.b | There is a fence in all 4 directions | | | |
| 1.c | There Is a door to control access to the swimming pool | | | |
| 1.d | Children always are supervised by adult when in the pool | | | |
| 1.e | Children use floating device while swimming | | | |
| | | | | |
| 2.a | There is stairs in the house | | | |
| 2.b | There is a door or gate for the stairs to control children access | | | |
| 2.c | Windows have lock | | | |
| 2.d | There is balcony at home | | | |
| 2.e | The balcony has lock | | | |
| | | | | |
| 3.a | Children have access to electrical sockets | | | |
| 3.b | Electrical wires are reachable by children | | | |
| 3.c | Children have free access to cooker | | | |
| 3.d | Site of gas cylinder | □ kitchen | □ outside | |
| 3.e | The gas cylinder has lock | | | |
| 3.f | There is water cooler at home with hot & cold-water dispenser | | | |
| 3.g | Children have access to the water cooler | | | |
| 3.h | There is fire extinguisher at home | | | |
| 3.i | There is smoke alarm at home | | | |
| | | | | |
| 4.a | Children have access to sharps (knives, fork, cutter) | | | |

| 4.b | There is collection of water in containers in the house | | |
|-----|---|--|--|
| 4.c | There is well at home | | |
| 4.c | The well is secured and access is restricted to adults | | |

| | 5. Medications & chemical injuries: | | | | | | |
|-----|---|--|---------|------|----------|-------------|--|
| 5.a | Site of keeping medications | □ special box (children cannot accessed) | □ hand | bags | □ fridge | □ others | |
| 5.b | Site of keeping cleaning substances & hydrocarbons | special box (children cannot accessed) | □ shelf | | □ floor | □ others | |
| 5.c | Do you use water/ juice bottles to keep cleaning substances? | \Box yes \Box no | | | | | |
| 6 | . Others: | | yes | no | Note | | |
| 6.a | There is first aid box at home | | | | | | |
| 6.b | There is a play room for children | | | | | | |
| 6.c | Toys at home are appropriate for | the children age | | | | | |

E. Do you have any other ideas related to child injuries (causes & preventive strategies)?

Thank you for your participation in this study