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Review Article

Analysis of the Home Accidents and Their Risk Factors in Iran: A Systematic Review and Meta-Analysis

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Abstract

Background: Home accident is among the most common type of trauma, in the second place after traffic accident. We aimed to determine the prevalence and factors affecting the occurrence of home accidents in Iran.

Methods: PubMed, Scopus, Web of Science, and national Persian databases including SID, MagIran, and Medical Articles Bank were searched for articles published until September 12, 2021. The pooled prevalence and factors affecting the occurrence of home accidents were calculated.

Results: Twenty articles were included in the meta-analysis. The pooled prevalence of home accident was 44% (95%CI: 32% to 56%). The pooled prevalence of foreign object/fall, stab or cut, suffocation, burn, poisoning and were 15% (95%CI: 10% to 20%), 24% (95%CI: 10% to 38%), 1% (95%CI:0.7% to 1.3%), 31% (95%CI:19% to 42.2%), and 6.8% (95%CI:4.2% to 429.4%), respectively.

Conclusion: The prevalence of home accidents in Iran is moderate but higher than in other countries. The findings of this review highlight the need for more attention to home accident in children and elderly in the South and Southeast regions of Iran.

Keywords: Home accident; Prevalence; Systematic review; Meta-analysis; Iran

Introduction

Accidents and trauma are among the leading causes of death and disability in most of the countries in the world (1). Unintentional injuries account for 12% of the disease burden and have the highest mortality rate in the world. Approximately 5 million people die in the world annually due to home trauma. Moreover, millions of people go to emergency medical centers due to such accidents (2). In addition to imposing staggering economic costs on individuals, families, and

communities, these traumas lead to temporary and permanent disabilities and loss of useful lives (3). One study showed each traumatic patient spends approximately $75,000 annually (4).

Home accident is among the most common type of trauma, in the second place after traffic crash (5). Home is a place where family, especially children, spend most of their time. Contrary to popular belief, home is not a scientific and professional place and people do not consider care and safety at their homes. Children and the elderly as vulnerable groups are at the higher risk of accidents and trauma at home (6). Seventy percent of accidents for children happened at home, so that 13 million children aged 1-4 years old are injured by home traumas every year and need intensive care (7). Home accidents are caused by interactions between people and their socio-physical environment. Therefore, there are natural synergies between social factors determining health, environmental health and injury prevention (8). However, the importance of this problem was neglected due to reasons such as a lack of knowledge and the public perception that accidents are accidental and unpreventable (9). Moreover, various factors contribute to the occurrence of home accidents, including age, gender, stress, seeking adventure and excitement, non-compliance with safety principles at home, lack of adherence to safety standards when constructing buildings and individuals' lack of awareness of safety principles of trauma prevention (10).

Home accidents may occur due to poisoning, being suffocated in water, falling under rubble, fire, electric shock, falls, cuts, tears, scratches and burns (7). Injuries caused by animal bites and sharp objects are other types of domestic trauma (11).

In Iran, in all age groups, accidents are the third cause of death (10). Cuts and burns were the most common types of home accidents. Moreover, the accidents were more prevalent among women and mostly occurred in the kitchen (12). Home accidents mostly occurred in the living room, kitchen and yard and these injuries were mainly due to falling from heights and using sharp objects (13). Falls, poisoning, sharp objects and burns were the most frequent home accidents, respectively and wounds, cuts and burns were the most common types of injuries (10). Cuts, burns and falling from height were the most common causes of home accidents (14). Furthermore, bruises, open wounds, fractures, sprains and superficial injuries were the most common causes of home accidents (15).

High frequency of casualties occurred by home accidents has led different countries to study demographic characteristics in order to identify injuries and develop a preventive program. Since the accidents and trauma are an international health goal and require a consensus from organizations, and different scientific disciplines, so obtaining accurate and correct information about the causes of traumas is the most important method for preventing accidents and traumas (16, 17). The second step is to plan and design appropriate solutions for preventing such accidents or reducing their potential consequences. Therefore, the objectives included:

1. Estimating the total prevalence of home accident and types of them based on age groups, and geographical area
2. Determining of factors affecting the occurrence of home accidents in Iran

Methods

Search strategy

This review explored online databases, including PubMed, SID, Magiran, Scopus, Web of Science and Iran Medical Articles Bank using the keywords (Period Prevalence or Point Prevalence or Prevalence), (Housing or House or Houses or Household or Residential or Residence or Home or Homes or Dwelling or Accommodation or Abode or Habitation or Garden or Backyard or "Back Yard"), (Accident or Hazard or Trauma or Event), (Predictor or Risk Factor or Causal or Risk Score or Prognostic or "Population at Risk") and (Iran or Persia or Persian or name of provinces) until September 12, 2021. The Medline was searched via PubMed. We also examined

the summary of conferences and congresses on SID and Scopus.

This study was approved by the Ethics Committee of Sabzevar University of Medical Sciences (approval code: IR.MEDSAB.REC. 1400, 081.). The need for consent was waived by the ethics committee.

Eligibility Criteria

The inclusion criteria were as follows: studies conducted in the geographical area of Iran, studies published in prestigious scientific journals and conferences, published studies in Persian and English languages. Review articles and studies with insufficient data, and studies published in languages other than Persian and English, were excluded from the present study. Occurring at least one of accidents such as fall/ foreign object, stab/cut, suffocation, burning, and poisoning was considered as home accident.

Data Extraction

We evaluated articles and removed duplicates by reviewing bibliographic data using EndNote. If repeated, we included the most complete or latest article. We reviewed the titles and abstracts of the articles at the first stage and the full text at the second stage to remove irrelevant articles. The reference lists from extracted articles were screened in order to find other relevant papers that can cover the above cases. We collected the following data from each articles: author name, publication year, target population, place of study, study design, age, sex, and type of home accident, data sources, risk factors, outcomes, and the place at home where the trauma happened.

Quality assessment

The Hoy checklist used to quality assessment of included articles. It is a tool consists of 10 items addressing four domains of bias plus a summary risk of bias assessment (18). Items 1 to 4 assess the selection and nonresponse bias, items 5 to 10 assess the measurement bias, and item 10 assesses bias related to the analysis. The included studies were categorized according to the obtained scores from the overall risk of study bias were as follows:

- Low risk of bias: 8 or more "yes" answers
- Moderate risk of bias: 6 to 7 "yes" answers
- High risk of bias: 5 or fewer "yes" answers

The quality assessment was done by two reviewers (LA, AR, MMBB, HRSH and MF), and disagreements were addressed through consultation, and if there was a lack of agreement, a third independent researcher was asked to reach a consensus

Statistical analysis

The heterogeneity among prevalence estimates was assessed using the I^2 and the Q-test, in which a *P*-value <0.05 was considered as statistically significant. Based on the degree of heterogeneity among studies, a random-effects (DerSimonian and Laird) method was used to estimate the pooled prevalence of home accident among population in Iran. Metaprop, a statistical procedure in the Stata package, was applied to combine the prevalence estimates and related 95% confidence intervals (CIs). Subgroup analysis was done according to target population (children (< 10 years old), general population, older people), publication year (before 2010, 2011 to 2015 and after 2015), geographical area of study, sample size (categorized as above or below the median sample size: n = 2010) and quality score (low, moderate, high). The Stata software, version15 was used for data analysis.

Results

Totally, 169 articles were identified and 20 articles that met inclusion criteria were included in this review (Fig. 1). The results of quality assessment revealed that 4 studies had high quality, 12 of them had moderate quality, and 4 were of low quality. Articles were published between 2000 and 2019 in different area of Iran. All retrieved studies were cross-sectional, except for one case-control study (19). Almost 55% of entire studies

were conducted among general population and 30% of them were among children.

The percentage of injuries that occurred for the victims of home accidents in Iran were reported as 49%, 43%, 25% and 8% in the chest, limbs, face & head and, pelvic, spinal cord & abdomen, respectively. The most common places of home injuries occurrence were kitchen, yard, and indoor environment, respectively. The outcome of the patients in the studies had different classifications.

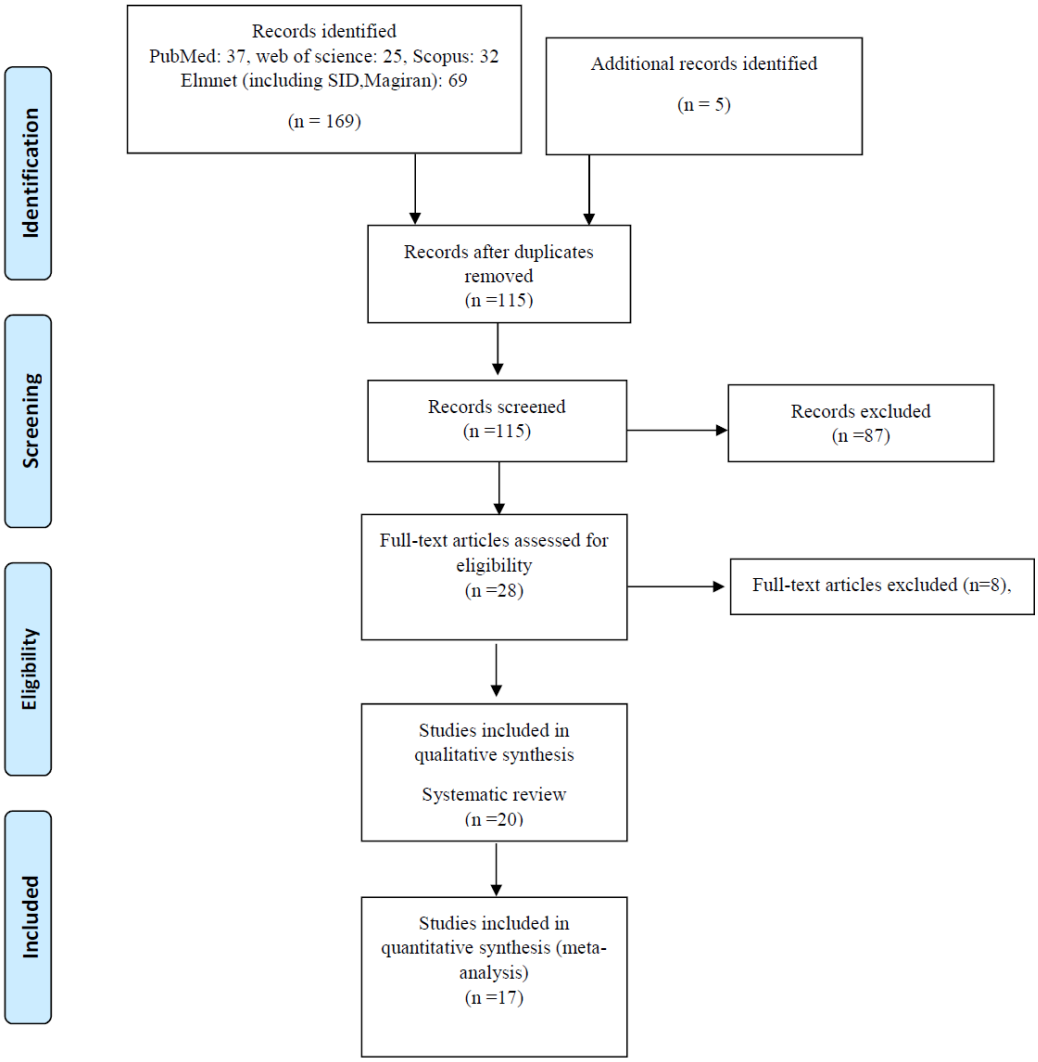

Fig. 1: Flow diagram of search strategy

For instance, percentage of need for outpatient treatment were between 6.3% -59%. Hospitalization rate of patients was between 4.3%-99%. Patients' disability was reported in five studies. The reported patient mortality rate was between 0.03%-1.3%.

There was a significant relationship between access to incendiary devices such as matches and lighters and risk of burns in children (19). Falls among elderly were associated with female gender (20, 21), education level (illiteracy compared to having literacy) (21, 22), unmarried elderly

(22), monthly income (> 1 million tomans (about 300 dollars) in comparison to < 1 million tomans) (22), and worries about living expenses (21), place of residence, chronic disease (22), over 75 years old, history of disease, balance disorders, and taking sleeping pills (20).

There was a significant correlation (P<0.05) between age (10, 24-25), gender (25, 10), season and place of residence (10, 24-25) and the occurrence of home accidents. The traumas were more prevalent among individuals aged 0-14 and 24-24 years old (10,25). Contact with hot liquids and burns were more prevalent among women; however, falls, cuts, wounds, crushes and fractures were more prevalent among men. There was a significant correlation (P<0.05) between hitting by sharp objects, cuts, wounds and scratches and living in urban areas as well as hot liquids, burns and poisoning and living in rural areas (25). Children aged 1-2 years old were at greater risk for home traumas than other age groups. In more than 60% of cases, home traumas occurred in villages (24). Inanimate mechanical was the most common type of accident in spring and summer, while poisoning was the most common type in autumn and winter (10).

The pooled prevalence of home accident was 44% (95%CI: 32% to 56%, N studies=18) (Fig. 2). Low-quality studies reported a higher prevalence of home accident compared to medium and high-quality studies (Table 1).

Prevalence of foreign object and fall accidents

The pooled prevalence of fall/foreign object accident was 15% (95%CI: 10% to 20%, N studies=10) (Fig. 2). The pooled of fall/foreign object accidents were higher in studies with lower sample sizes. The low -quality studies reported a highest prevalence of foreign object accident (Table 1).

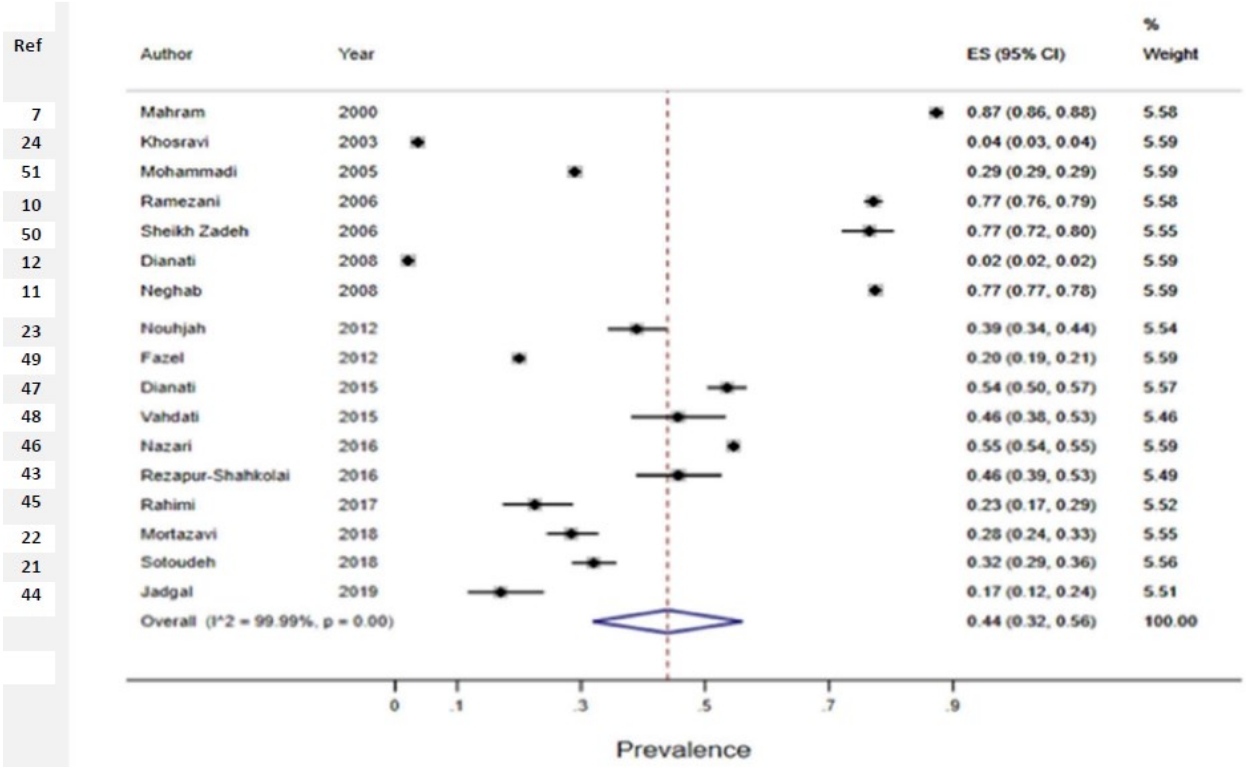

Fig. 2: Estimates of the prevalence of home accident among Iranian's population

Prevalence of stab/cut accident

The pooled prevalence of stab or cut accident was 24% (95%CI: 10% to 38%, N studies=8) (Fig. 2). High-quality studies reported a higher prevalence of stab accident compared to medium and low-quality studies (Table 1).

Table 1: Meta-analysis of the prevalence of home accident in Iran

Variables	*N studies*	*Total Pr %(95% CI)*	*I2 index*	*P-Value*	*Type of home accident*									
					Foreign object and fall		Stab/cut		Suffocation		Burn		Poisoning	
					N studies	Pr% (95% CI)	N studies	Pr% (95% CI)	N studies	Pr% (95% CI)	N studies	Pr% (95% CI)	N studies	Pr% (95% CI)
Total	18	44 (32-56)	99.9	0.001	10	15 (10-20)	8	24(10-38)	4	1(0.7-1.3)	14	31(19-42.2)	9	6.8(4.2-9.4)
Target population		Total:18												
Children	5	25 (6-45)	99.9	0.001	4	14 (2-26)	4	13(2-24)	3	1(0. 1-2)	5	24.4(13.2-35.6)	4	7.2(2-12.5)
General population	11	55(37-72)	99.9	0.001	5	13 (6-19)	4	35(14-55)	1	1(0.7-2)	9	33.7(19.4-48)	5	6.8(3.5-10.1)
Older people	2	30(28-33)	-	-	1	28 (24-33)	-	-	-	-	-	-	-	-
Geographical area		Total:18												
Central*	6	37(23-50)	99.9	0.001	1	25 (20-31)	2	41(38-44)	1	0.9(0.2-3)	3	32 (6.9-77.5)	-	-
South& Southeast	2	77(76-77)	-	-	2	3(3-3.1)	1	11(5-23)	1	2(0.4-11)	2	66.5(66-67.3)	2	4.7(4.4-5)
East &Northeast	4	51(32-70)	99.6	0.001	4	14 (5-23)	3	30(10-49)	-	-	3	7.7(7.1-8.4)	3	8.7(0.9-16.5)
North & Northwest	3	63(37-89)	-	-	1	22 (21-23)	1	9(8-10)	1	1(0.7-2)	2	29(27.5-31)	1	4.2(3.5-4.9)
West &South west	3	29 (0.1-59)	-	-	2	13 (11-14)	1	8(5-13)	1	1(0.3-4)	3	27.1(17.3-37)	3	5.4(0.1-11)
Study sample size**		Total:18												
<median	9	40(28-52)	98.4	0.001	4	15 (1-29)	4	17(5-38)	2	1(0.2-3)	7	34.3(12.6-56)	4	7.2(2-12.5)
>median	9	48(31-65)	99.9	0.001	6	14 (8-21)	4	31(10-52)	2	1(0.7-1.3)	7	27.5(11.3-43.6)	5	6.8(3.5-10.1)
Quality score		Total:18												
Low	4	61(9-1.13)	99.9	0.001	4	17 (5-30)	3	27(2-53)	2	1(0.7-1.3)	4	31(4.1-65.4)	3	5.4(3.9-7)
Moderate	11	40(26-54)	99.9	0.001	5	12 (7-18)	3	18(10-46)	1	1(0.3-3.6)	8	31(19.9-42)	5	7.2(0.7-15)
High	3	36(18-54)	-	-	1	15 (8-28)	2	40(37-43)	1	2.2(0.4-11.3)	2	10(8.5-12.2)	1	17.4(9.1-31)

* Central included Tehran & Kashan regions.
**Median study sample size was n = 2010
Pr: prevalence

Prevalence of suffocation accident

The pooled prevalence of suffocation accident was 1% (95%CI: 0.7% to 1.3%, N studies=4) (Fig. 2). High-quality studies reported a higher prevalence of stab accident compared to medium and low-quality studies (Table 1).

Prevalence of burn accident

The pooled prevalence of burn accident was 31% (95%CI: 19% to 42.2%, N studies=14) (Fig. 2). The low and medium-quality studies reported a higher prevalence of stab accident compared to high-quality studies (Table 1).

Prevalence of poisoning accident

The pooled prevalence of poisoning accident was 6.8% (95%CI: 4.2% to 429.4%, N studies=9) (Fig. 2). The pooled of poisoning accident was higher in studies with lower sample sizes (Table 1).

Discussion

The pooled prevalence of home accidents was 44%. The prevalence of home accidents was 30% among the elderly and 25% among children. Burns and stab/cuts were the most common accident reported among Iranian. But the prevalence of foreign object/fall accidents was notably higher among the elderly. South and Southeast regions of Iran had a higher prevalence of home accidents.

The prevalence of home accidents was 44% in Iran. In the United States, 28% (25) and 63.5% (8) of households reported home accidents. Another study in India reported that the prevalence of home accidents was 10.2% (26). The higher values in the Iranian population could be attributed to the dearth of knowledge regarding household safety measures and the lack of intervention programs for the reduction of home accidents in households.

The most studies have been conducted in different types of home accidents and different age groups .The results showed that burns, stab/cut, and fall/ foreign object accidents were the most common accident reported among Iranian, which is somewhat different from the results of previous studies (27-30). Poisonings, falls (falls also cause the largest proportion of nonfatal home injuries) are first and second and burns are the third highest cause of fatal home injuries, whereas nonfatal home accidents are more likely due to being struck by/against, cut/pierce, or overexertion (8). In India, fall, foreign object, and burns were the most common accidents (26). It can be assumed that the pattern of household injuries can be different in low- and middle-income countries than in high-income countries.

There is a significant relationship between the incidence of home accident with age, sex, season and place of residence. Prevalence of fall accident was notably higher among the elderly population. Falls are a leading cause of morbidity and mortality for older adults. Moreover, falls are the leading contributor to loss of independence in elderly (30). Fears of falling and loss of independence contribute to a decrease in mobility, personal care and home activities among older adults (30, 8).

Fall risks in older adults were associated with female gender, education level, unmarried elderly, chronic disease, over 75 years old, history of disease, balance disorders, and taking sleeping pills which is consistent with former studies (26-30). Tripping hazards within the home, lack of grab bars in the bathroom, use of medications that can cause dizziness or hypotension, living alone, depressive symptoms, diminished eyesight and physical strength are among the most common type of fall risk. The interaction of these risk factors is thought to contribute to an older adult's risk of falling (27-30). As well, one study found that the incidence of home injury was higher in children and older adults (31).

The prevalence of home accidents was 25% in children and accidents such as poisoning, burn and cut were more prevalent among them. Moreover, most home accidents occurred between the ages of 0-14 and 15-24. Seventeen percent of accidents for children happened at home (17). The prevalence of home accidents was 78%, 13% and 7.7% in Indian children under 10 years old (32), Sudan children under 5 years old (33) and all children who visited the ED in Oman (34), respectively. These results are in contrast to this study result. Such differences can be attributed to socio-cultural differences, study contexts and different age groups of children. A systematic review showed that the most common home ac-

cidents occurred in the age group 2.5±1.5 years (41% at age of four) and children and young people are the most vulnerable age groups exposed to accidents (17).

The common causes of home accidents among children are burns, fall and stab/cut. In other studies, falls (32-34), burns (32-34), cuts and injuries (32), and poisoning (32, 34) are common in children, but with a different trend in terms of prevalence. There is a study conducted with a sample of children aged <11 years living in developing countries, showing that falls are the main reason causing injuries in children (35). Occurrence of falls was found to be associated with age and overcrowding. In 2010, 127 children in the United States died from a fall-related accidents (8). These differences can be attributed to differences in home environment settings and culture. Children's accidents are preventable, but in most regions of the world this point has been neglected and policy-makers, and healthcare service providers pay little attention to them (36). Injury and accident prevention should be an integral part of children's lives, and parents. In addition, parents and care providers should follow its principles for preventing accidents and injuries in children.

The best ways to know why accidents happen and how we can prevent them from recurrence is to use the accident causation model and the accident analysis method. Causal models provide a conceptual representation of accident causation while analytical methods provide tools to apply this theory (37). The organizations responsible for building homes should pay attention to the causes of home accidents in promoting the safe design of homes (38). There was a significant relationship between access to incendiary devices such as matches, lighters and risk of burns in children. So, for prevention and reduction of accessibility in children, there is a need to teach parents and children (39, 40).

Contact with hot liquids and burns are more common among women, but falls, cuts, wounds, and crushes and fractures are more common among men. Burns increase in women during adolescence due to contact with cooking utensils, but with increasing age, burns increase again in men (28, 41-42). For women in some regions, the risk of burning is related to the use of open stoves or unsafe stoves, but for men, the risk of burning is related to the workplace (28).

Home accidents mostly happened in the summer and spring. It seems that in the summer, mothers have to work on lands and spend less time staying at home; so, they do not give enough attention to their children (43). Moreover, the summer and spring seasons provide ample time for children to play outside of house. Therefore, the negligence of mothers and caregivers, leaving children alone at home or with other children, and improper monitoring of their activities during play should be considered to prevent these injuries.

The home accident was common in the Southern and Southeast regions of Iran. A reason for the higher number of home accidents in the regions is due to increased reporting, more accurate recording of injuries and increased coverage of the study population (11). However, the reasons for the high prevalence should be the object of future studies.

The study was the first meta-analysis conducted in the general population in Iran, however, it also had some limitations. First, the prevalence of home accidents was not reported separately for men and women in some studies. Since the prevalence may be different in two genders, it is recommended to report this prevalence in each gender separately in the future studies. Second, the studies were insufficient to compare the results between the different districts of the country for certain types of home accidents

Conclusion

The prevalence of home accident in Iran is moderate but higher than in other countries. Therefore, with the increase of reported incidents, there is a definite need for frequent health education such as first aid training to parents about home accident management and awareness cam-

paigns through the mass media about the importance of family safety measures, and their implementation among the general public. Health care providers should target and identify homes that are overcrowded. Further economic evaluation studies are needed to decide on the frequency of home screening for internal hazards and implementation of its data in national programs. Larger cohort studies are needed to examine the temporal relationship and compatibility of risk factors with domestic accidents.

Journalism Ethics considerations

Ethical issues (Including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

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Conflict of interest

There is no conflict of interest to disclose.

References

1. Fraga AM, Bustorff-Silva JM, Fernandez TM, et al (2013). Children and adolescents deaths from trauma-related causes in a Brazilian City. *World J Emerg Surg*, 8 (1): 52.
2. Jagnoor J, Suraweera W, Keay L, et al (2012). Unintentional injury mortality in India, 2005: nationally representative mortality survey of 1.1 million homes. *BMC Public Health*, 12: 487.
3. Schneiderman, JU, Leslie LK, Hurlburt MS, et al (2012). Caregiver reports of serious injuries in children who remain at home after a child protective services investigation. *Matern Child Health J*, 16 (2): 328-35.
4. Weir S, Salkever DS, Rivara FP, et al (2010). One-year treatment costs of trauma care in the USA. *Expert Rev Pharmacoecon Outcomes Res*, 10(2): 187-97.
5. Hsia RY, Ozgediz D, Mutto M, et al (2010). Epidemiology of injuries presenting to the national hospital in Kampala, Uganda: implications for research and policy. *Int J Emerg Med*, 3 (3): 165-72.
6. Paes CE, Gaspar VL (2005). Unintentional injuries in the home environment: home safety. *J Pediatr (Rio J)*, 81:146-54.
7. Mahram M, Derakhshandeh J, Jamshidi M, Yektaparast M (2000). Study Of Emergency & Domestic Accidents Cases In The Patients Which Refered To The Centers Of Health Services In The Province Of Zanjan In 1999. *J Adv Med Biomed Res*, 8 (33): 41-6.
8. Gielen AC, McDonald EM, Shields W (2015). Unintentional home injuries across the life span: problems and solutions. *Annu Rev Public Health*, 36: 231-53.
9. Peden M, Oyegbite K, Ozanne-Smith J, et al (2009). World report on child injury prevention. Geneva: World Health Organization; 2008. *Inj Prev*, 14 (1): 69.
10. Ramezani AA, Ezad Khah MH. Qoli nejad B, Amirabadi zadeh H (2011). Epidemiologic study and relationship factors of home injuries in clienteles to Birjand hospital in 2004. *Q J Rostamine*, 3: 72-8.
11. Neghab M, Rajaei Fard A, Habibi M, Choobineh A (2006). Home accidents in rural and urban areas of Shiraz, 2000-02. *East Mediterr Health J*, 12 (6): 824-833.
12. Dianati M, Akbari H (2009). Epidemiology of home injuries in Kashan during 2005. *KAUMS J (FEYZ)*, 12 (5): 27-32.
13. Dianati M, Lotfi MS (2015). Study of the home-related traumas in patients referred to the emergency treatment centers of Kashan, 2010-2012. *Iran J Epidemiol*, 11(2): 37-45.
14. Mannocci A, Waure CD, Gualano MR, et al (2013). Epidemiology of home injuries: a large observational study among adult mothers in Italy. *Ann Ist Super Sanita*, 49 (4): 376-82.
15. Guasticchi G, Paolo GR, Borgia P, et al (2004). Analysis of home injuries through an emergency Based surveillance system. *Epidemiol*, 15 (4): S155.

16. Gielen AC, Sleet D (2003). Application of behavior-change theories and methods to injury prevention. *Epidemiol Rev*, 25: 65-76.
17. Heidari SM, Naseri M, Akhavan H, et al (2022). The Epidemiological Pattern of Childhood Injuries and Accidents among Iranian Children: A Systematic Review. *Health Providers*, 1 (3): 119-29.
18. Hoy D, Brooks P, Woolf A, et al (2012). Assessing risk of bias in prevalence studies: modification of an existing tool and evidence of interrater agreement. *J Clin Epidemiol*, 65 (9): 934-9.
19. Biria Sh, Arshi Sh, Sadeghi H, Malek Poor N, (2008). Effective Factors on Burn Incidence inChildren under 6 yrs in rural areas of Ardabil 2003. *J Ardabil Uni Med Sci*, 8 (1): 14-19.
20. Jafarian Amiri SR, Zabihi A, Aziznejad Roshan P, et al (2013). Fall at home and its related factors among the elderly in Babol city Iran. *J Babol Univ Med Sci*, 15 (5): 95-101.
21. Sotoudeh GR, Mohammadi R, Mosallanezhad Z, et al (2018). The prevalence, circumstances and consequences of unintentional falls among elderly Iranians: A population study. *Arch Gerontol Geriatr*, 79: 123-30.
22. Mortazavi H, Tabatabaeichehr M, Taherpour M, Masoumi M (2018). Relationship between home safety and prevalence of falls and fear of falling among elderly people: a cross-sectional study. *Mater Sociomed*, 30 (2): 103-107.
23. Nouhjah S, Ghanavatizadeh A, Eskandri N, Daghlavi M (2012). Prevalence of non-fatal home injuries and its related factors among children attending health centers in Ahvaz: a pilot study. *Hakim Res J*, 15 (3): 238-42.
24. Khosravi Sh, Ghaffari M (2003). Epidemiological study of home accidents in the population covered by urban and rural health centers in Shahrekord, 1999. *J Shahrekord Uni Med Sci*, 5 (2): 54-64.
25. Gielen AC, Bachman G, Badaki-Makun O, et al (2020). National survey of home injuries during the time of COVID-19: who is at risk?. *Inj Epidemiol*, 7 (1): 63.
26. Rehman T, Sulgante S, Sekhar SK (2020). Prevalence and pattern of domestic accidents in the field practice area of Jawaharlal Institute of Urban Health Centre, Puducherry: a cross-sectional analytical study. *J Inj Violence Res*, 12 (1): 1-10.
27. Gillespie LD, Robertson MC, Gillespie WJ, et al (2012). Interventions for preventing falls in older people living in the community. *Cochrane Database Syst Rev*, 2012(9):CD007146.
28. Almeida LM, Meucci RD, Dumith SC (2019). Prevalence of falls in elderly people: a population based study. *Rev Assoc Med Bras*, 65 (11): 1397-1403.
29. Tsai YJ, Yang PY, Yang YC, et al (2020). Prevalence and risk factors of falls among community-dwelling older people: results from three consecutive waves of the national health interview survey in Taiwan. *BMC Geriatr*, 20 (1): 529.
30. Liu M, Hou T, Li Y, et al (2021). Fear of falling is as important as multiple previous falls in terms of limiting daily activities: a longitudinal study. *BMC Geriatr*, 21 (1): 350.
31. Farchi S, Rossi PG, Chini F, et al (2006). Unintentional home injuries reported by an emergency-based surveillance system: incidence, hospitalisation rate and mortality. *Accid Anal Prev*, 38 (5): 843-53.
32. Kaur M, Deol R, Kaur J (2016). A descriptive study to assess the prevalence of home accidents in children less than ten years of age in a selected rural area. *Int J Health Sci Res*, 6 (3): 202-205.
33. Ahmed WA (2016). Home accidents and associated factors among children less than five years old in Sudan: A descriptive study. *Gulf Med J*, 5(1): 10-15.
34. Al Rumhi A, Al Awisi H, Al Buwaiqi M, Al Rabaani S (2020). Home accidents among children: a retrospective study at a tertiary care center in Oman. *Oman Med J*, 35 (1): e85.
35. Hyder AA, Sugerman DE, Puvanachandra P, et al (2009). Global childhood unintentional injury surveillance in four cities in developing countries: a pilot study. *Bull World Health Organ*, 87 (5): 345-52.
36. CDC. Injuries among children and teens. 2019 [Available from: https: //www.cdc.gov/injury/features/child-injury/index.html].
37. Underwood P, Waterson P (2013). Accident analysis models and methods: guidance for safety professionals. *Loughborough University: Loughborough, UK*. 2013 May: 28.

38. Zou K, Wynn PM, Miller P, et al (2015). Preventing childhood scalds within the home: overview of systematic reviews and a systematic review of primary studies. *Burns*, 41 (5): 907-24.
39. Kawalec A, Pawlas K (2020). Home environment and burns in children. *Burns Open*, 4 (4): 167-75.
40. Brito JG, de Godoy Martins CB (2016). Queimaduras domésticas na população infantojuvenil: atendimentos de urgência e emergência. *Revista Eletrônica de Enfermagem*, 18.
41. Golshan A, Patel C, Hyder AA (2013). A systematic review of the epidemiology of unintentional burn injuries in South Asia. *J Public Health (Oxf)*, 35 (3): 384-96.
42. Martin C, Neyraud E (2021). Impact of very hot drink consumption habits, age, and sex, on taste sensitivity. *Foods*, 10 (5): 1139.
43. Rezapur-Shahkolai F, Afshari M, Moghimbeigi A, Hazavehei SM (2016). Home-related injuries among under-five-year children and mothers' care regarding injury prevention in rural areas. *Int J Inj Contr Saf Promot*, 24 (3): 354-362.
44. Jadgal MS, Vahedian-SHahroodi M, Lale-Monfared E, et al (2019). The study of domestic accidents prevention behaviors based on protection motivation theory among mothers with children less than 6 years covered by health centers in Torbat-Heydariyeh City. *J Saf Promot Inj Prev*, 7 (3): 159-65.
45. Rahimi T, Faryabi R, Javadi A (2017). Attitudes of women from jiroft city about prevention of home injuries in children under 5 years using protection motivation theory in 2015. *J Rafsanjan Uni Med Sci*, 16 (1): 17-30.
46. Nazari J, Hasirchi N (2016). Falling As a Hidden Health Problem: Trends and Prevalence of Falling Accidents at Home and Its Associated Factors in Tabriz, Iran, during 2006-2010. *J Health Syst Res*, 12 (2) : 152-159.
47. Dianati M, Lotfi MS (2015). Study of the home-related traumas in patients referred to the emergency treatment centers of Kashan, 2010-2012. *Iran J Epidemiol*, 11 (2): 37-45.
48. Vahdati SS, Karzar BH, Momen N (2015). Independent predictive factors of hospitalization in a North-West Burn Center of Iran; an Epidemiologic Study. *Emerg (Tehran)*, 3 (1):40-4.
49. Fazel MR, Fakharian E, Mahdian M, et al (2012). Demographic profiles of adult trauma during a 5 year period (2007-2011) in Kashan, IR Iran. *Arch Trauma Res*, 1(2): 63-6.
50. Sheikh Azadi A, Qara Daghi J, Qadiani MH (2006). Epidemiological investigation of burns leading to death in Tehran during 2004. *Iran J Forensic Med*, 12(3): 151-7.
51. Mohammadi R, Ekman R, Svanström L, Gooya MM (2005). Unintentional home-related injuries in the Islamic Republic of Iran: findings from the first year of a national programme. *Public Health*, 119 (10): 919-24.