Research Article

Prevalence of Elder Abuse and Its Related Factors in Isfahan, Iran

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Abstract

Background: Elder abuse presents a significant public health concern with implications for overall well-being. As Iran undergoes demographic aging, there is a lack of data regarding the prevalence of elder abuse.

Objectives: This study aimed to provide insight into the prevalence of elder abuse in Isfahan, Iran.

Methods: A cross-sectional study was conducted in Isfahan in 2021, recruiting 424 individuals aged 60 and above from the "Comprehensive Health Services Centers" through simple random sampling. Demographic information and responses to the Elderly Abuse questionnaire were collected via interviews. Descriptive statistics, including mean and confidence intervals, were utilized, while analytical methods such as independent *t*-tests, chi-square tests, Spearman and Pearson correlation coefficients, and logistic regression were employed for data analysis.

Results: The study revealed a 36% prevalence of elder abuse across at least one category, with authority deprivation (19.6%) and emotional neglect (19.3%) being the most prevalent forms. This prevalence was higher among individuals aged 60 - 69 years (adjusted odds ratio (OR) = 2, CI (1.19 - 3.45), P = 0.01), females (adjusted OR = 2.61, CI (1.30 - 5.25), P = 0.007), retirees (adjusted OR = 4.15, CI (1.59 - 10.92), P = 0.004), and those with a history of chronic illness (adjusted OR = 2.11, CI (1.26 - 3.53), P = 0.004).

Conclusions: Elder abuse emerges as a significant public health issue in Isfahan. Given the ongoing aging process nationwide, there is a critical need for interventions aimed at preventing and mitigating this public health concern.

Keywords: Abuse, Elder, Elderly Abuse, Elder Neglect, Elder Mistreatment, Prevalence

1. Background

Elder abuse, as defined by the World Health Organization (WHO), encompasses any harm inflicted upon individuals aged 60 and above, with an estimated prevalence of approximately one in six, or 16%, of this demographic [1]. It manifests in various forms, including neglect, psychological, physical, financial, authority deprivation, abandonment, and emotional neglect [1].

The detrimental effects of elder abuse on health range from physical ailments to diverse mental and psychological issues, ultimately leading to a decline in quality of life and, in severe cases, premature death [2, 3]. Recognizing the significance of elderly wellbeing, the WHO has designated 2020 - 2030 as "The Decade of Healthy Aging", prioritizing the welfare of the elderly worldwide [4].

Prevalence rates of elder abuse vary globally depending on definitions and study settings, spanning from 0.8% to 79% [5]. For instance, Chang's 2020 study in the US reported a 21% prevalence of at least one form of elder abuse [6]. Meta-analyses conducted in Iran estimate overall elder abuse rates at 45.7% [7], 48.3% [8], and 55% [9], though none of these studies included data from Isfahan .

Recent articles from various regions in Iran indicate prevalence rates of elder abuse at 78% [10], 44.6% [11], 75.4% [12], and 55.2% [13]. Recognizing the importance of the elderly population and their significant impact on society, particularly as our population ages, prompted our study design to address the lack of data on elder abuse in Isfahan.

2. Objectives

Conducting a situational analysis serves as the initial step in community intervention. Therefore, we aimed to

determine the extent of elder abuse and its associated factors to facilitate the design of future studies tailored to address this public health concern in our country.

3. Methods

3.1. Participants

This cross-sectional study was carried out in Isfahan, Iran, in 2021. Isfahan, with a population of 2 861 260 in 2021, ranks as the third most populous city in Iran. The ethical approval code for this study is IR.MUI.NUREMA.REC.1400.058. Elderly individuals aged 60 and above, who were recipients of services from the "Comprehensive Health Services Centers" affiliated with Isfahan University of Medical Sciences, capable of responding to inquiries, without significant hearing impairments, and not diagnosed with confirmed mental illness or cognitive disorders as self-reported, were eligible for inclusion. Participants who expressed dissatisfaction at any stage of completing the questionnaire or left more than or equal to 20% of the questionnaire unanswered were excluded from the study. Elderly individuals were randomly selected from the list of those aged 60 and above. The sample size was determined to be 424 (α = 0.05, d = 0.05, P = 50%, and attrition = 10%).

A simple random sampling method was employed, whereby elderly individuals served by all four comprehensive centers of educational health services under Isfahan University of Medical Sciences (Ibn Sina Center, Shahid Rostamian Center, Shahid Rezaian Center, and Kerdabad Center) were selected randomly from the existing lists. It's important to note that these four centers are situated in distinct regions with varying socio-economic statuses.

Upon obtaining informed consent from the elderly participants and verbally explaining the research objectives, interviews were conducted via telephone. However, if an elderly individual preferred an in-person interview, a private room was allocated to ensure confidentiality and adherence to COVID-19 health protocols. Participants were assured of the complete confidentiality of their personal information. The interview process involved completing a demographic information form and the Elderly Abuse in the Family questionnaire through discussions with the elderly.

As per the exclusion criteria, if the phone was answered by a caregiver or family member indicating that the elderly individual was unable to participate due to cognitive limitations, they were not included in the study, and another participant was randomly selected.

Although conducting interviews over the phone may not be ideal, it was deemed the safest method for data collection, particularly considering the ongoing COVID-19 pandemic, especially for this age group.

3.2. Tools

We utilized a demographic form and a questionnaire for our study. The demographic form included variables such as age, gender, marital status, education level, history of drug or alcohol abuse, and past illnesses of the elderly participants. The Abuse of the Elderly in the Family questionnaire comprised 49 items divided into 8 subscales: Care neglect (11 items), psychological abuse (8 items), physical abuse (4 items), financial abuse (6 items), authority deprival (10 items), abandonment (4 items), financial neglect (4 items), and emotional neglect (2 items). Each item required a "yes" or "no" response, with a "yes" indicating elder abuse in that specific area. This questionnaire assessed the lifelong prevalence of elder abuse, and the 8 subscales were determined through factor analysis. The psychometric properties of the tool, including face validity, content validity, construct validity, internal consistency, and test-retest reliability, were analyzed by Heravi Karimooi et al. in 2010. Approximately 80% of the variance was explained by these 8 factors. The Cronbach's alpha coefficient was calculated to be between 0.9 and 0.975, stability through a retest was 0.99, and the test-retest reliability over a 2-week interval was 0.98 (P < 0.001) (14).

3.3. Statistical Analysis

Following data collection, analysis was conducted using SPSS software version 16. Frequency distribution, standard deviation, and mean were utilized to measure the dimensions of elder abuse. To compare elder abuse dimensions based on demographic variables and explore relationships between variables, independent t-tests, chi-square tests, and Spearman and Pearson correlation coefficients were employed. Logistic regression analysis was performed to determine the contribution of each independent variable in explaining the frequency of elder abuse.

4. Results

In this study, there were 424 elderly participants aged between 60 and 97 years old. Among them, 65% fell within the age range of 60 to 70 years, with 48% being female, and approximately 80% currently married, while the remaining 20% were either divorced, widowed, or single. A minority, comprising 12.5%, were cigarette smokers, 5% reported addiction, 2% were alcohol users,

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and around 64% had a history of some form of illness (Table 1). The most common illnesses reported in the study population were diabetes mellitus and/or hypertension, accounting for about 50% of cases.

Table 1. Demographic Characteristics of the Participants (N = 424) [a]

Characteristics	Values
Age, year	
60 - 69	275 (64.9)
≥ 70	149 (35.1)
Gender	
Male	201 (47.9)
Female	219 (52.1)
Marital status	
Divorced, single or widow	85 (20.6)
Married	328 (79.4)
Education status	
Illiterate	95 (23.2)
Elementary & middle	191 (46.6)
Diploma & university	124 (30.2)
Occupation	
Employed or self-employed	55 (13.1)
Retired	168 (40)
Housekeeper or unemployed	197 (46.9)
Cigarette smoking	
No	308 (87.5)
Yes	44 (12.5)
Alcohol abuse	
No	346 (98.3)
Yes	6 (1.7)
Addiction	
No	335 (95.2)
Yes	17 (4.8)
Chronic illness	
No	137 (36.4)
Yes	239 (63.6)

[a] Values are expressed as No. (%).

Participants were further categorized based on their educational background, with 23% being illiterate, 47% having attended elementary or middle school, and 30% possessing a diploma or university degree. In terms of occupation, 13% were employed, while 47% were housekeepers or unemployed, and 40% were retired.

Around 36% of the participants reported a history of elder abuse in at least one form (Figure 1). The least prevalent forms of abuse were abandonment (0%), physical abuse (3.3%), financial neglect (4.5%), and care neglect (5.4%), while authority deprivation (19.6%) was the most common, followed by emotional neglect

(19.3%), psychological abuse (12.5%), and financial abuse (9.7%).

Statistical analysis using the chi-square test revealed significant associations between elder abuse prevalence and factors such as age, gender, occupation, and history of chronic illness, but not with education, marital status, cigarette smoking, or alcohol use (Table 2). Specifically, elder abuse was significantly more prevalent among those aged 60 - 69 years (40.4%), females (43.4%), retirees (40.5%), and individuals with a history of chronic illness (35.9%).

Table 2. Association of Factors with Overall Abuse (At Least One Type of Abuse) (N = 424) [a]

Characteristics	Any Type of Abuse		P-Value
	No	Yes	
Total	271 (63.92)	153 (36.08)	
Age, year			0.012
60 - 69	164 (59.6)	111 (40.4)	
≥ 70	106 (71.1)	43 (28.9)	
Gender			0.001
Male	145 (72.1)	56 (27.9)	
Female	124 (56.6)	95 (43.4)	
Marital status			0.80
Divorced, single or widow	56 (65.8)	29 (34.2)	
Married	210 (64.1)	118 (35.9)	
Education status			0.447
Illiterate	66 (69.4)	29 (30.6)	
Elementary & middle	122 (63.9)	69 (36.1)	
Diploma & university	76 (61.3)	48 (38.7)	
Occupation			0.001
Employed or self-employed	49 (89.1)	6 (10.9)	
Retired	100 (59.5)	68 (40.5)	
Housekeeper or unemployed	118 (59.9)	79 (40.1)	
Cigarette smoking			0.11
No	221 (71.7)	87 (28.3)	
Yes	26 (59.1)	18 (40.9)	
Alcohol abuse			0.67
No	242 (69.9)	104 (30.1)	
Yes	5 (83.3)	1 (16.7)	
Addiction			0.59
No	236 (70.4)	99 (29.6)	
Yes	11 (64.7)	6 (35.3)	
Chronic illness			0.021
No	104 (75.9)	33 (24.1)	
Yes	153 (64.1)	86 (35.9)	

[a] Values are expressed as No. (%).

The results of logistic regression analysis, presented in Table 3, indicated that the odds of experiencing elder abuse were higher among those aged 60 - 69 years
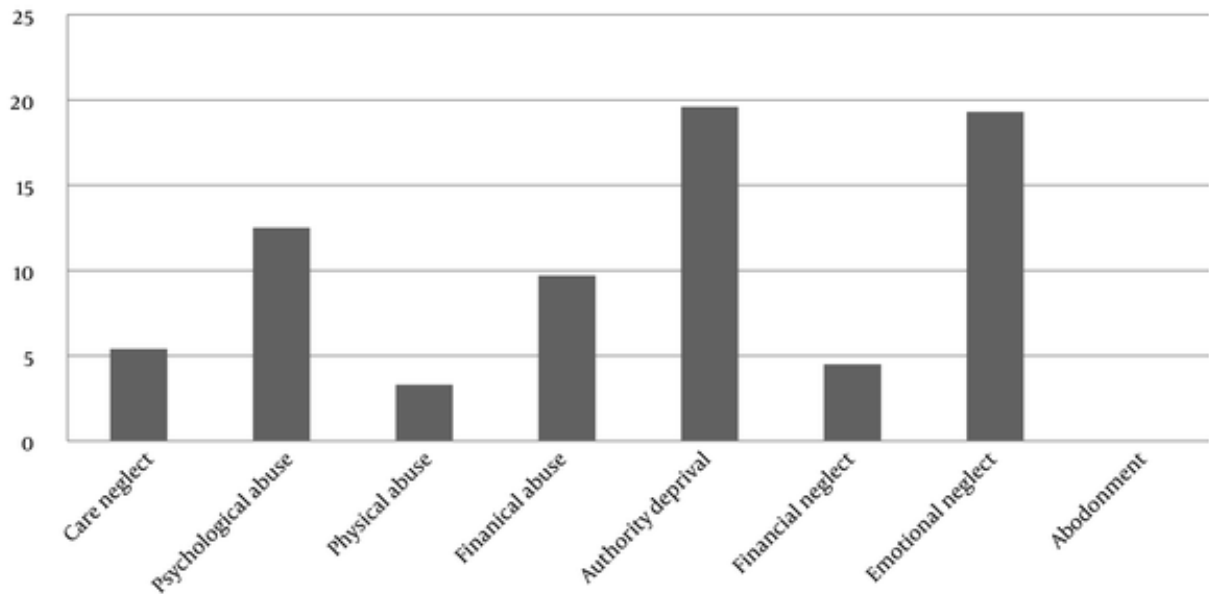
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Figure 1. Prevalence of elder abuse subgroups.

Table 3. Binary Logistic Regression for Factors Associated with Elder Abuse (N = 424)

Characteristics	OR (95% CI) Unadjusted	P-Value	OR (95% CI) Adjusted	P-Value
Age, year				
≥ 70	Reference	-	Reference	-
60 - 69	1.69 (1.09 - 2.56)	0.019	2 (1.19 - 3.45)	0.010
Gender				
Male	Reference	-	Reference	-
Female	1.98 (1.31 - 2.98)	0.001	2.61 (1.30 - 5.25)	0.007
Occupation				
Employed or self-employed	Reference		Reference	
Housekeeper or unemployed	5.47 (2.37 - 13.72)	0.0001	2.15 (0.74 - 6.24)	0.16
Retired	5.55 (2.25 - 13.69)	0.0001	4.15 (1.59 - 10.92)	0.004
Chronic illness				
No	Reference	-	Reference	
Yes	1.77 (1.10 - 2.84)	0.018	2.11 (1.26 - 3.53)	0.004

compared to those aged 70 or older (adjusted odds ratio [OR] = 2, CI [1.19 - 3.45], P = 0.01), females compared to males (adjusted OR = 2.61, CI [1.30 - 5.25], P = 0.007), retirees compared to those employed or self-employed (adjusted OR = 4.15, CI [1.59 - 10.92], P = 0.004), and individuals with a history of chronic illness compared to those without (adjusted OR = 2.11, CI [1.26 - 3.53], P = 0.004).

Other significant findings not depicted in tables or figures include the following: A significant association was observed between occupation and emotional neglect (chi-square test, P = 0.013), as well as between occupation and authority deprivation (chi-square test, P = 0.002). Additionally, significant relationships were found between gender and emotional neglect (chi-square test, P = 0.013), gender and care neglect (chi-square test, P = 0.034), and gender and authority deprivation (chi-square test, P = 0.035). Moreover, there were significant associations between a history of chronic illness and care neglect (chi-square test, P = 0.015), as well as between chronic illness and financial abuse (chi-square test, P = 0.05).

5. Discussion

The primary objective of this study was to assess the prevalence of elder abuse in Isfahan. Our findings revealed a 36% prevalence of elder abuse in at least one form. This prevalence was higher among individuals aged 60 - 69 years, females, retirees or housekeepers, and those with a history of chronic illness.

Recent research indicates that Iran is facing the challenge of an aging population, and studies have highlighted elder abuse as a significant public health concern. Reports from various countries, including Iran, demonstrate geographical variations and differences across different settings (15). For instance, in Molaei et al.'s systematic study conducted in Iran, elder abuse rates ranged from as high as 87% in Tehran to 17% in Shahrekord (16). This wide disparity may be attributed to diverse factors such as the presence of different risk factors, social determinants of health, and cultural differences. For instance, Shahrekord, being a smaller city with a traditional culture, often entails families living together or providing extensive support to their elders, whereas Tehran's modernization has led to changes in family dynamics and support structures.

In a bibliometric analysis conducted in 2017, physical abuse emerged as the most prevalent issue, followed by psychological and financial abuse as the primary forms of abuse (17). Additionally, Greene's article highlighted financial abuse as the most underreported form of abuse among the elderly in the US population, attributing part of this phenomenon to the influence of new technologies and the internet (18). A recent study in Tabriz, Iran, identified emotional neglect and financial abuse as the predominant forms of abuse (19). Similarly, Rohani et al.'s study in Tehran, Iran, found care neglect to be the most prevalent form of abuse, with sexual abuse being the least reported (10).

In our community, authority deprivation (19.6%), emotional neglect (19.3%), and psychological abuse (12.5%) emerged as the most prevalent forms of elder abuse, warranting attention from policymakers and public health practitioners. While some studies suggest that socio-demographic factors such as aging, employment status, lower education levels, and gender influence the risk of elder abuse, there are conflicting findings (20). Contrary to expectations, our study revealed an inverse relationship between age and elder abuse, with individuals aged 60 - 69 experiencing more abuse compared to those aged 70 and above.

In a study by Piri et al. in Tehran, elder abuse prevalence was estimated at approximately 90% among women (21). While some studies indicate higher rates of abuse among males, others report higher prevalence among females (22-24). Our study found that overall elder abuse, as well as subgroup analyses, showed higher rates among women than men (P < 0.05). Addressing this gender disparity is crucial, as it is a component of social determinants of health (SDH), and interventions should be tailored to mitigate this inequity.

It is estimated that 80% of individuals in Tehran have at least one underlying medical condition, with 10% experiencing a disability (25). Having a medical condition is identified as a risk factor for elder abuse, alongside marital status (1). In our study, a statistically significant association was found between having a medical condition and elder abuse, although no such relationship was observed for marital status.

A study conducted in 2021 highlighted education level and health status as additional risk factors for elder abuse (22). Both education level and health status are components of SDH, believed by public health experts to significantly impact people's lives. However, in our study, while education level was not correlated with elder abuse, a history of illness was significantly associated with instances of care neglect and financial abuse.

We attribute differences in the prevalence of risk factors to cultural variations, variations in the definition of elder abuse, and the use of diverse tools and questionnaires across different studies. In 2022, the World Health Organization (WHO) prioritized addressing elder abuse, emphasizing the need for high-quality data on its prevalence and risk factors (4).

Given that our study was conducted during the COVID-19 pandemic, there were limitations related to this unprecedented situation. Contact was primarily made via telephone interviews, which may not have been as effective as face-to-face interviews. Furthermore, the pandemic's specific circumstances could have influenced the study findings. We excluded individuals with mental health issues and those with hearing difficulties or Alzheimer's disease, potentially limiting the study's scope, as these individuals may be at higher risk of abuse. Additionally, as the study was conducted in Isfahan, the findings may not be generalizable to the entire country due to the diverse cultures within Iran. Moreover, there may be other unidentified factors related to elder abuse that could emerge as scientific knowledge advances.

However, our study possesses several strengths, including the significant number of participants involved and the comprehensive nature of the

questionnaire used, which examined all dimensions of elder abuse.

Considering the limited availability of public health resources, the growing elderly population, and the prevalence of elder abuse in our community, our study highlights that authority deprival, emotional neglect, and psychological abuse are the most prevalent forms of elder abuse. Therefore, we recommend prioritizing community-based interventions targeting these specific forms of abuse.

5.2. Conclusions

In conclusion, elder abuse represents a pressing public health concern that requires prioritization in planning efforts. Understanding the prevalence and distribution of this issue within our community is crucial. Our study revealed a 36% prevalence of various forms of elder abuse in Isfahan. We advocate for the development of intervention studies aimed at preventing and reducing elder abuse.

Footnotes

Authors' Contribution: S.S. conceived and designed the evaluation and drafted the manuscript, collected the data N.M. participated in designing the evaluation, performed parts of the statistical analysis and helped to draft the manuscript. All authors read and approved the final manuscript.

Conflict of Interests: There are no conflicts of interest.

Data Availability: The dataset presented in the study is available on request from the corresponding author during submission or after publication. The data are not publicly available due to ethical consideration.

Ethical Approval: IR.MUI.NUREMA.REC.1400.058 .

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Informed Consent: Written informed consent was obtained from the elderly participants and verbally explaining the research objectives, interviews were conducted via telephone.

References

1. World Health Organization. *Abuse of older people*. Geneva, Switzerland: World Health Organization; 2022, [cited 2023]. Available from: https://www.who.int/news-room/fact-sheets/detail/elder-abuse.

2. Yunus RM, Hairi NN, Choo WY. Consequences of Elder Abuse and Neglect: A Systematic Review of Observational Studies. *Trauma Violence Abuse*. 2019;**20**(2):197-213. [PubMed ID: 29333999]. https://doi.org/10.1177/1524838017692798.

3. Mohebbi L, Zahednejad S, Javadi Pour S, Saki A. [Domestic elder abuse in rural area of Dezful, Iran and its relation with their quality of life]. *Iran J Ageing*. 2016;**10**(4):50-9. Persian.

4. Michel JP, Leonardi M, Martin M, Prina M. WHO's report for the decade of healthy ageing 2021-30 sets the stage for globally comparable data on healthy ageing. *Lancet Healthy Longev*. 2021;**2**(3):e121-2. [PubMed ID: 36098109]. https://doi.org/10.1016/S2666-7568(21)00002-7.

5. Brijoux T, Neise M, Zank S. Elder abuse in the oldest old: prevalence, risk factors and consequences. *Z Gerontol Geriatr*. 2021;**54**(Suppl 2):132-7. [PubMed ID: 34331085]. [PubMed Central ID: PMC8551100]. https://doi.org/10.1007/s00391-021-01945-0.

6. Chang ES, Levy BR. High Prevalence of Elder Abuse During the COVID-19 Pandemic: Risk and Resilience Factors. *Am J Geriatr Psychiatry*. 2021;**29**(11):1152-9. [PubMed ID: 33518464]. [PubMed Central ID: PMC8286979]. https://doi.org/10.1016/j.jagp.2021.01.007.

7. Arab-Zozani M, Mostafazadeh N, Arab-Zozani Z, Ghoddoosi-Nejad D, Hassanipour S, Soares JJF. The prevalence of elder abuse and neglect in Iran: a systematic review and meta-analysis. *J Elder Abuse Negl*. 2018;**30**(5):408-23. [PubMed ID: 30285554]. https://doi.org/10.1080/08946566.2018.1523765.

8. Abdi A, Tarjoman A, Borji M. Prevalence of elder abuse in Iran: a Systematic review and meta-analysis. *Asian J Psychiatr*. 2019;**39**:120-7. [PubMed ID: 30616159]. https://doi.org/10.1016/j.ajp.2018.12.005.

9. Delpasand T, Behbood A, Faghihi A. Elder Abuse Prevalence in Iran: A Systematic Review and Meta-Analysis. *J Adv Biomed Sci*. 2023;**13**(1). https://doi.org/10.18502/jabs.v13i1.12072.

10. Rohani M, Dehdari T, Hosseinyrad M, Alaei M. [The Frequency of domestic elder abuse in Tehran city, Iran, in 2018]. *Iran J Ageing*. 2019;**14**(3):368-79. Persian.

11. Hosseini Moghaddam F, Nikkhah Beydokhti E, Noori R, Sajjadi M, Khajavian N, Kameli F, et al. [Prevalence of Elder Abuse by Family Members and its Related Factors in Gonabad, Iran]. *Iran J Ageing*. 2022;**17**(3):338-51. Persian. https://doi.org/10.32598/sija.2022.2850.3.

12. Khalili Z, Ghanbari-Afra L, Gholipour F, Nemati R. The Prevalence of Abuse and risk factors associated with elder abuse. *Research Square*. 2022;**Preprint**. https://doi.org/10.21203/rs.3.rs-1863036/v1.

13. Papi S, Akbari S, Foroughan M, Zanjari N, Moghadasi AM, Zandieh Z. Prevalence of Elder Abuse and its Related Factors among Elderly Referring to Social Security Outpatient Clinic in Yasouj, Iran. *Elderl Health J*. 2023;**8**(2):82-97. https://doi.org/10.18502/ehj.v8i2.11548.

14. Heravi Karimooi M, Anoosheh M, Foroughan M, Sheykhi MT, Hajizadeh E. [Designing and determining psychometric properties of the Domestic Elder Abuse Questionnaire]. *Iran J Ageing*. 2010;**5**(1):0. Persian.

15. Oveissi S, Fadayevatan R, Ghanbari Boroujeni M, Hatamabadi H. [Prevalence of Abuse and Neglect in Iranian Elderly Population]. *J Safety Promot Inj Prev*. 2021;**8**(4). Persian.

16. Molaei M, Etemad K, Taheri Tanjani P. [Prevalence of elder abuse in Iran: a systematic review and meta analysis]. *Iran J Ageing*. 2017;**12**(2):242-53. Persian. https://doi.org/10.21859/sija-1202242.

17. Sweileh WM. Global Research Activity on Elder Abuse: A Bibliometric Analysis (1950-2017). *J Immigr Minor Health*. 2021;**23**(1):79-87. [PubMed ID: 32488667]. https://doi.org/10.1007/s10903-020-01034-1.

18. Greene AJ. Elder Financial Abuse and Electronic Financial Instruments: Present and Future Considerations for Financial Capacity Assessments. *Am J Geriatr Psychiatry*. 2022;**30**(1):90-106. [PubMed ID: 33781661]. https://doi.org/10.1016/j.jagp.2021.02.045.

19. Seutodan Hagh H, Rezaeipandari H, Mousavi S, Allahverdipour H. [Prevalence and Gender Differences of Elder Abuse among

Community-dwelling Older Adults in Tabriz, Iran]. *Iran J Ageing*. 2021;**15**(4):458-71. Persian. https://doi.org/10.32598/sija.15.4.1124.1.

20. Santos FDS, de Lima Saintrain MV, de Souza Vieira LJE, Gomes Marques Sampaio E. Characterization and Prevalence of Elder Abuse in Brazil. *J Interpers Violence*. 2021;**36**(7-8):NP3803-19. [PubMed ID: 29911483]. https://doi.org/10.1177/0886260518781806.

21. Piri N, Tanjani PT, Khodkarim S, Etemad K. Domestic elder abuse and associated factors in elderly women in Tehran, Iran. *Epidemiol Health*. 2018;**40**. e2018055. [PubMed ID: 30428642]. [PubMed Central ID: PMC6343047]. https://doi.org/10.4178/epih.e2018055.

22. Du P, Chen Y. Prevalence of elder abuse and victim-related risk factors during the COVID-19 pandemic in China. *BMC Public Health*. 2021;**21**(1):1096. [PubMed ID: 34103014]. [PubMed Central ID: PMC8185499]. https://doi.org/10.1186/s12889-021-11175-z.

23. Chen M, Chan KL. Elder abuse and neglect in China: prevalence, co-occurrence, and intergenerational risk factors. *J Interpers Violence*. 2022;**37**(11-12):NP9839-62.

24. Esmat Saatlou M, Hossaini F, Sakeni Z. [Assessment of elder abuse in adult day care centers]. *J Geriatr Nurs*. 2015;**2**(1):91-103. Persian.

25. Doshmangir L, Khabiri R, Gordeev VS. Policies to address the impact of an ageing population in Iran. *Lancet*. 2023;**401**(10382):1078. [PubMed ID: 37003695]. https://doi.org/10.1016/S0140-6736(23)00179-4.

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