

Screening of domestic abuse and its relationship with demographic variables among elderly individuals referred to primary healthcare centers of Shiraz in 2018

Maryam Mashayekh

Shiraz University of Medical Sciences

Maryam Hazrati (✉ hazratishirazy@gmail.com)

Shiraz University of Medical Sciences

Nasrin Sharifi

Shiraz University of Medical Sciences

Research article

Keywords: Elderly, Misbehavior, Screening

Posted Date: January 8th, 2020

DOI: <https://doi.org/10.21203/rs.2.20303/v1>

License: © ⓘ This work is licensed under a Creative Commons Attribution 4.0 International License. [Read Full License](#)

Version of Record: A version of this preprint was published on August 17th, 2020. See the published version at <https://doi.org/10.1186/s12877-020-01667-9>.

Abstract

Background

Considering the global growth in the number of elderly individuals, elder abuse has turned into an important health challenge with significant effects on reduction of this vulnerable group's health and security. The present screening study aimed to determine the prevalence of domestic abuse and its relationship with demographic characteristics among elderly people referred to primary healthcare centers of Shiraz in 2018.

Methods

This descriptive-analytical, cross-sectional study was conducted on 400 elderly people aged 60 years and above who had referred to 30 comprehensive health centers of Shiraz. The study data were collected using observation, face-to-face interview, and examination. After obtaining the participants' informed consents and making sure about their cognitive and mental health using mini-mental state examination, demographic information questionnaire, domestic abuse scale, Katz index, and observational elder neglect checklist were completed. Then, the individuals who were suspicious of abuse in the interview or observation were further evaluated through examinations and experiments.

Results

The results indicated that 52.5% of the participants were female and 51.8% aged 60-69 years. Additionally, 74% of the participants were married, 53.3% were illiterate, and 49.8% were homemaker. Moreover, 52.8% of the participants had pensions, 87.8% lived in their own houses, and 67% lived with their spouses. The frequency of misbehaviors was as follows: care negligence, 42.8%; psychological abuse, 41.3%; emotional negligence, 38.8%; financial abuse, 34.3%; authority deprivation, 29.5%; financial negligence, 28.8%; physical abuse, 5.3%; ostracism 4.3%.

The results showed a significant relationship among elder abuse and all abuse subscales. Education level was significantly related to financial negligence ($p=0.003$). Besides, having a pension was significantly associated with emotional negligence ($p=0.019$), care negligence ($p=0.014$), and financial negligence ($p<0.001$). A significant relationship was also observed among having a house and care negligence ($p=0.026$), authority deprivation ($p=0.004$), and ostracism ($p=0.025$). Additionally, living status was significantly associated with emotional negligence ($p=0.015$), care negligence ($p=0.008$), financial abuse ($p=0.034$), and physical abuse ($p=0.003$). Health status also showed a significant relationship with financial abuse ($p=0.040$) and authority deprivation ($p=0.020$). Indeed, insurance status was significantly associated with emotional negligence ($p=0.040$) and financial abuse ($p=0.039$). Finally, a significant relationship was observed among cognitive status and emotional negligence ($p=0.015$) and care negligence ($p=0.005$).

Conclusion

The results revealed a considerable rate of domestic abuse against elderly people, causing a serious risk for their health and security. Therefore, various dimensions of this phenomenon have to be identified in order to create appropriate strategies for its prevention.

Introduction

Population aging is a global phenomenon (1, 2) caused by improvement of healthcare, reduction of birth rate, and increase of life expectancy (3). To date, 650 million individuals aged 60 years and above live around the world, which has been estimated to reach two billions by 2050 (4). The population of elderly people is increasing in Iran, as well (5). According to the United Nations in 2002, based on the assumption of moderate growth rate, over 60 age groups would comprise nearly 25% of Iran's population by 2040-2050 (6). One of the consequences of population aging is elder abuse and negligence. In fact, technological advancements, developments, financial welfare, and changes in family structures have caused great harms to the relationships between elderly individuals and their family members (7). Elder abuse is a significant global phenomenon experienced by many individuals around the world (4). To date, no specific definition exists for elder abuse. Based on the World Health Organization (WHO), elder abuse has been defined as performance of a task, continuous performance of a task, or lack of appropriate performance in relationships with elderly people, which occurs together with expectation and trust, but leads to harm, pain, distress, and discomfort (9, 10). Such behaviors may include psychological, emotional, physical, financial, or sexual abuses, authority deprivation, ostracism, financial, emotional, and care negligence, and refraining from providing a healthy environment (11, 12, 13, 14).

Since elder abuse is an unknown issue in the field of geriatric health, its prevalence rate has not been reported accurately. Evidence has indicated that 3-4% of the elderly population suffer from elder abuse (15). Yon estimated the global prevalence of elder abuse to be 15.7% in human communities. Accordingly, one out of every six elderly people was involved in elder abuse (16).

Domestic abuse is one of the most common types of domestic violence, which is the manifestation of deprivation from human rights (7). Most cases of elder abuse are applied by the spouse (25%) and the older son of the family (50%) (17, 18, 19, 20). The risk factors of elder abuse include age, sex (female), physical, mental, and social problems, familial problems, loneliness, suffering from dementia, social isolation, drug abuse by elderly individuals or nurses, and family history of violence (3).

In Iran, a limited number of studies have been conducted on elder abuse (7, 9, 21, and 22). Khanlary (2004) carried out a research in the retirement center of Karaj, Iran and reported that all elderly participants had experienced at least one type of abuse and that 9.7% introduced their children as the abusers (21). Heravi Karimoie (2002) also reported that the prevalence of elder abuse was 9.5% among the elderly individuals in the retirement center of Tehran (7). Overall, the statistics provided for elder abuse in Iran and around the world show the necessity to perform further investigations in this area. The American Medical Association has also emphasized the necessity to screen the elderly population for elder abuse in order to diagnose and prevent various dimensions of this phenomenon (23).

In most studies conducted on domestic abuse in Iran, the required data were collected using questionnaires (7, 9, 21, 22, and 24). However, considering the nature of domestic elder abuse, it seems that the statistics could not present a precise picture of the elderly population's status. Hence, screening studies on domestic abuse may result in more accurate information about this social health issue. Therefore, the present screening study aims to determine the prevalence of elder abuse in the elderly individuals referred to the primary healthcare centers of Shiraz.

Methods

This descriptive-analytical, cross-sectional study was conducted in 2018 and aimed at screening elder abuse among the elderly individuals referred to the comprehensive health centers in Shiraz. The research population included 400 elderly people aged 60 years and above who had referred to the comprehensive health centers in Shiraz. Sampling was done from 30 comprehensive health centers covered by Shohaday-e-Enghelab and Shohaday-e-Valfajr health

centers. Based on a similar study performed by Morovati Sharifabadi et al. in Yazd in 2005, considering $p=0.63$ (the prevalence of abuse), $\alpha=0.5$, $d=0.05$, and loss rate = 0.10, and using the following formula, a 400-subject sample size was determined for the study

$$N = \frac{P(1-P)\left(Z_{1-\frac{\alpha}{2}}\right)^2}{d^2}$$

The inclusion criterion of the study was aging 60 years and higher. The exclusion criteria were unwillingness to take part in the study and suffering from known psychological disorders (schizophrenia) that prevented the participants from answering the questions.

After gaining the approval from the University's Ethics Committee and obtaining an introduction letter from the Vice-chancellor for Research Affairs, the required arrangements were made with the authorities of Shohaday-e-Enghelab and Shohaday-e-Valfajr health centers. Then, the researcher referred to the comprehensive health centers and started the research. At first, the study objectives were explained to the elderly people referred to the above-mentioned health centers and their written informed consents were gathered. Sampling was started from 21 April 2018 and lasted until September 2018. The study data were collected by a researcher's assistant who had B.Sc. in nursing and was trained for performing interviews and completing questionnaires. In order to encourage the participants to cooperate, their blood pressures were measured for free. Screening of domestic abuse was done through interview, observation, and examination.

Interview

The participants were interviewed using four questionnaires, namely demographic information form (gender, age, marital status, education level, etc.), mini-mental state examination used to identify elderly individuals with cognitive disorders who were prone to being abused (25), Katz index of independence aimed at determining the individuals' degree of dependence in performing their daily activities (26), and domestic abuse questionnaire designed and validated by Heravi in 2009 (22).

Observation

After the interviews, all participants were assessed regarding the signs of negligence and abuse using the observational elder neglect checklist. This checklist was designed and psychometricized by Heravi (2013) and has been employed in studies conducted on the prevalence of domestic abuse (27).

Examination

The participants who had the signs of physical injury (bruise on the face, ecchymosis on the body, wounds, and scratches) with no logical reasons were referred to physicians at the comprehensive health centers for further skin, head, neck, eye, ear, nose, abdomen, and pelvic examinations. In case the physicians ordered further follow-ups, blood test, urinalysis, radiology, and sonography were carried out.

After all, the study data were entered into the SPSS statistical software, version 22 and were analyzed using descriptive statistics (frequency, percentage, mean, and standard deviation) and linear regression analysis.

Considering ethical issues, the research was begun after gaining permission from the Ethics Committee of the University and the authorities of the health centers under investigation. Indeed, the participants were provided with information about the study objectives and their written informed consents were obtained. The participants were

reassured that the data would only be used for research purposes and would be given to no one out of the research team. They were also ascertained that they could withdraw from the study at any stage. Finally, they were made sure about the confidentiality of their information as well as the possibility of provision of the results to them and the health centers upon request.

Results

This study was conducted on 400 elderly individuals, including 210 females (52.5%) and 189 males (47.3%). The highest frequency was related to the 60-69 age group (51.8%). Most of the participants were married (n=296, 74%), had 4-7 children (n=197, 49.3%), were illiterate (53.3%), and had pensions (n=211, 52.8%). Additionally, 351 participants (87.8%) lived in their own houses and 268 ones (67%) lived with their spouses. Besides, 221 participants (55.3%) suffered from non-communicable chronic diseases and 382 ones (95.5%) were covered by insurance.

The results indicated that 84 participants (21%) were abused by their own children. Moreover, 46.3% of the participants obtained 7-10 scores in the mini-mental state examination indicating a good cognitive status, 37% gained 4-6 scores representing a moderate cognitive status, and 16.8% obtained 1-3 scores indicating a bad cognitive status. Furthermore, the majority of the participants were independent in doing their daily activities.

Based on the results, the highest and lowest frequencies of domestic abuse were related to care negligence (42.8%) and ostracism (4.3%), respectively. The frequency distribution and percentage of the domestic abuse subscales have been presented in Table 1.

The results of the observational elder neglect checklist indicated that 159 participants (39.8%) suffered from at least one type of negligence. In this regard, the highest frequency was related to the motion limitations (25%) followed by the dental problems (23.8%) (Table 2).

The relationship between demographic characteristics and various types of domestic abuse was explored in this study. The results revealed significant relationships between different types of domestic abuse and all demographic features, except for gender, age, marital status, number of children, and occupation. The relationships between demographic characteristics and various types of domestic abuse have been depicted in Table 3.

Discussion

In this study, the most frequent misbehaviors were care negligence (42.8%), psychological abuse (41.3%), emotional negligence (38.8%), and financial abuse (34.3%). Similar results were also obtained by Karimi and Elahi in 2008 (5, 28, 29) and Mohebbi et al. in 2013 (30). Nasiri et al. also conducted a study in 2014 and estimated the prevalence of psychological abuse and care negligence to be 53.3% and 59.8%, respectively (9). Additionally, Heravi Karimoei performed a research in 2014 and reported that the prevalence of care negligence was 74.45%, while that of psychological abuse was 62.22% (29). These results were in contrast to those of the present investigation. In the study carried out by Kissal in Turkey in 2011, the prevalence rates of psychological abuse, negligence, and financial abuse were 9.4%, 8.2%, and 2.1%, respectively (10). The discrepancies observed among the results might be attributed to the trend of industrialization, economic challenges, and increased inflation rate in the recent years, which have declined children's supportive capabilities. On the other hand, the incidence of psychological abuse is more probable under economic pressures (31).

The statistics obtained in the present study and other studies performed in Iran were higher than those reported in the studies conducted in other countries (31, 32). In this study, the highest frequency was related to care negligence. Similarly, Keyghobadi et al. (2014) conducted a study in Sabzevar and reported that the highest frequency was related to emotional negligence (69%) and care negligence (52%). Chalise also carried out a research in Nepal and stated that the highest frequency was related to negligence (35.4%) (33). Considering these results, it can be concluded that negligence is the most common type of misbehavior in most countries irrespective of their cultures and traditions. Negligence can be manifested through intentional or unintentional failure in providing elderly individuals with physical and psychological care or refraining from giving them food, water, or medications (9). In the current study, domestic negligence towards the elderly individuals included inattention, lack of personal or telephone contacts, and refraining from supplying their needs, doing their cleaning affairs, and doing their banking affairs.

Misbehaviors, particularly psychological types, are generally done secretly (34). In the present study, the highest frequency was related to psychological abuse (41.3%) after care negligence. In the same line, Atri conducted a study in Tabriz in 2013 and reported that the highest frequency was related to psychological abuse (91%) (35). Psychological abuse also showed the highest frequency (86.10%) in the study carried out by Khanlary in Karaj in 2014 (21). However, Lacher showed that the prevalence of psychological abuse was 47% in Sweden (36). This inconsistency might be due to the differences in the cultures ruling eastern and western communities. In traditional eastern societies, particularly Iran, respect towards parents and their sovereignty over life and even their children's private affairs, such as selection of spouse or living place, is a part of the culture. Thus, even a slight disagreement with elderly people's ideas is considered to be disrespect and emotional misbehavior. However, such disagreements with elderly individuals are not regarded as disrespect in western cultures (37). In the current study, psychological abuse was manifested through blaming elderly people for no reason, shouting at them, not paying attention to their experiences, and causing them to feel frightened.

In this study, the frequency of financial abuse was 34.3%, which was manifested through not paying their money back, depriving them from their inheritance, and making them bear some life expenditures. Additionally, the frequency of authority deprivation was 29.5%. However, the results of the study conducted by Piri in Tehran in 2018 indicated that the highest frequency (68.5%) was related to authority deprivation (38). In the current study, authority deprivation involved not making elderly people aware of the important news, depriving them from using their properties, and depriving them from having contact with their families and friends.

In this study, the lowest frequency was related to ostracism (4.3%), which might be attributed to the fact that 87.8% of the participants lived in their own houses and did not let their acquaintances manipulate their assets.

The findings of the present study revealed a significant relationship between and all types of domestic abuse and the abuser factor. Accordingly, the abuser factors were mostly the participants' children (21%), spouses (5%), and other family members (6%). Although spouse and children comprised two main groups of abusers (20) and 67% of the study participants lived with their spouses, those who lived with their children (21%) were abused to a greater extent. This might result from the fact that the individuals who live with their children have normally lost their spouses and are highly dependent on their children due to physical and mental disabilities. However, children do not understand their conditions and abuse them either intentionally or unintentionally. Chalise also conducted a study in Nepal and reported a higher rate of abuse among the elderly individuals who lived with their family members and suffered from health problems (36). In spite of the fact that the majority of the present study participants lived in their own houses, which protected them against ostracism, having a house led to authority deprivation manifested

through their dependence on other family members due to physical and mental disorders, lack of sufficient income, and relatives' expectations to share their properties. These caused limitations in the participants' lives and resulted in authority deprivation. Similarly, Piri et al. disclosed that elderly people's low income was associated with a high rate of misbehaviors, which was in agreement with the findings of the studies performed in Mexico, Ireland, India, and the U.S. (38).

Although the majority of the present study participants had pensions and even bore their children's expenditures in some cases, they experienced financial abuse (34.3%). These results as well as those of other investigations demonstrated a significant relationship between elderly individuals' physical and economic dependence and being abused, especially when caretakers had to bear the expenses (39). In the current study, most participants were female and homemaker. Elderly women are more financially, mentally, and socially dependent on their acquaintances. Thus, they are more likely to be abused and neglected. This has been confirmed in numerous studies (40, 41, 42, 43, 44, and 45).

One of the risk factors of elder abuse is cognitive and mental problems, such as dementia and Alzheimer's disease (46, 47). Fang (2018) disclosed that elderly individuals with dementia were more prone to abuse compared to those without mental and cognitive disorders (48, 49). Dong also reported in 2014 that the prevalence of physical abuse was 3.5-23.1% among the elderly people suffering from dementia, which is on the contrary to the results of the present investigation. Furthermore, the risk of death due to abuse and negligence was found to be higher among the elderly individuals with high levels of cognitive disorders (50). In the current study, most of the participants belonged to the 60-69 age group and obtained acceptable cognitive scores (7-10). However, 16.8% got lower-than-normal scores (1-3), which might be attributed to illiteracy, lack of awareness about date and some life events, and some degrees of amnesia, exposing them to such misbehaviors as emotional and care negligence.

Although 95.5% of the study participants were covered by insurance, their insurance and health statuses were significantly associated with domestic abuse. This might result from the fact that many diagnostic and therapeutic measures are not covered by insurance and, consequently, the elderly individuals who were not covered by insurance and did not have sufficient incomes could not benefit from private healthcare services. This exerted negative effects on the participants' health and provided the ground for abuse, because 44.5% of the participants suffered from non-communicable chronic diseases.

Conclusion

It seems that the elder abuse is an exasperating phenomenon, which exists in all developing and developed communities and has harmful consequences, especially for elderly people. The findings of this study indicated the necessity to provide elderly people with healthcare and support services in order to prevent abuse, identify the victims, and improve their conditions.

Declarations

Acknowledgement

This article was extracted from Maryam Mashayekh's M.Sc. thesis in geriatric nursing approved and financially supported by the Vice-chancellor for Research Affairs of Shiraz University of Medical Sciences, Shiraz, Iran. Hereby, the authors would like to thank all elderly people for their cooperation in the research. They are also grateful for Dr. Heravi for provision of the domestic abuse questionnaire.

Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Authors' contributions

IS made substantial contributions to: conception and design, acquisition of data, analysis and interpretation of data as well as drafting the document the manuscript. Each author has participated sufficiently in the work to take public responsibility for appropriate portions of the content and each has agreed to be accountable for all aspects of the work.

Authors' information

Maryam Hazrati is an associate professor at school of Nursing and Midwifery, Shiraz University of Medical Sciences, Iran.

Maryam Mashayekh is a student Msc of Geriatric Nursing at school of Nursing and Midwifery, Shiraz University of Medical Sciences, Iran.

Nasrin Sharifi is an assistant professor at school of Nursing and Midwifery, Shiraz University of Medical Sciences, Iran.

Ethics approval and consent to participate

This study was approved by the Institutional Review Board of Shiraz University of Medical Sciences (#IR.SUMS.1396.S1045).

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

References

1. Sooryanarayana R, Choo W-Y, Hairi NN. A review on the prevalence and measurement of elder abuse in the community . *Trauma, Violence, & Abuse*. 2013;14(4):316-252.
2. Organizatio WHO (2002). *The world health report*. 2002:81-92.
3. Gorbien MJ, Eisenstein AR. Elder abuse and neglect: an overview. *Clinics in Geriatric Medicine*. 2005;21(2):279.
4. Ergin ,F,et al. prevalence and risk factors of elder abuse and neglect in a western city of Turkey : acommunity based study .*Bulletin of the Transylvania University of Brasov series VI: Medical Sciences* 5.54(2012):33-50

5. Borji M, Asadollahi K. Comparison between Perceived Misbehavior by Urban and Rural Elderlies. *J Nurs Educ.* 2016; 4(3):41-50.
6. Mirzaie M, Darabi S. Population aging in Iran and rising health care costs. *Iranian Journal of Ageing.* 2017 Sep 15; 12(2):156-69 [Persian original]
7. Heravi Karimoei M, Reje N, Foroughan M, Montazeri A. Elderly abuse rates within family among members of senior social clubs in Tehran. *Iranian Journal of Ageing.* 2012;6(4):37-50[Persian original]
8. Wu L, Chen H, Hu Y, Xiang H, Yu X, Zhang T, Cao Z, Wang Y. Prevalence and associated factors of elder mistreatment in a rural community in People's Republic of China: a cross-sectional study. *PloS one.* 2012 Mar 20; 7(3):e33857.
9. Nassiri H, Heravi Karimooi M, Jouybari L, Sanagoo A, Chehrehgosha M. The prevalence of elder abuse in Gorgan and Aq-Qala cities, Iran in 2013. *Iranian Journal of Ageing.* 2016;10(4):162-73[Persian original]
10. Kissal A, Beşer A. Elder abuse and neglect in a population offering care by a primary health care center in Izmir, Turkey. *Social Work in Health Care.* 2011;50(2):158-75
11. Cooper C, Selwood A, Livingston G. The prevalence of elder abuse and neglect: a systematic review. *Age and ageing.* 2008 Mar 1;37(2):151-60.
12. Lachs MS, Williams CS, O'brien S, Pillemer KA, Charlson ME. The mortality of elder mistreatment. *Jama.* 1998 Aug 5; 280(5):428-32.
13. Lachs MS, Pillemer KA. Elder abuse. *New England Journal of Medicine.* 2015 Nov 12;373 (20):1947-56.
14. Orfila F, Coma-Solé M, Cabanas M, Cegri-Lombardo F, Moleras-Serra A, Pujol-Ribera E. Family caregiver mistreatment of the elderly: prevalence of risk and associated factors. *BMC public health.* 2018 Dec; 18(1):167.
15. Nori, A, A. Rajabi , & F. Esmailzadeh. Prevalance of elder misbehavior in northern Iran (2012) *Journal of Gorgan University of Medical Sciences* 16.4 (2015) [Persian original]
16. Yon Y, Ramiro-Gonzalez M, Mikton CR, Huber M, Sethi D. The prevalence of elder abuse in institutional settings: a systematic review and meta-analysis. *European journal of public health.* 2018 Jun 5.
17. Maclsaac MB, Bugeja LC, Jelinek GA. The association between exposure to interpersonal violence and suicide among women: a systematic review. *Australian and New Zealand journal of public health.* 2017 Feb; 41(1):61-9.
18. Rinfret -Raynor M, Dube M. Understanding Family Violence: Treating and Preventing Partner, Child, Sibling, and Elder Abuse. *Canadian Journal of Criminology.* 2000 Oct 1; 42(4):515
19. Cronin G. Elder abuse: the same old story?. *Emergency Nurse (through 2013).* 2007 Jun 1; 15(3):11.
20. Radensky L, Parikh D. Developing a "train the trainer" program to identify elder abuse and neglect: The Jewish home lifecare system model. *Home Health Care Management & Practice.* 2008 Apr;20(3):254-9.
21. Khanlary Z, Maarefvand M, Biglarian A, Heravi-Karimooi M. The Effect of a family-based intervention with a cognitive-behavioral approach on elder abuse. *Journal of Elder Abuse & Neglect* 2016;28(2):114-26.[Persian original]
22. Heravi-Karimooi M, Anoosheh M, Foroughan M, Sheykhi MT, Hajizadeh E. Designing and Determining psychometric properties of the domestic elder abuse questionnaire. *Iranian Journal of Ageing.* 2010;5(1):0[Persian journal]
23. Burnett J, Achenbaum WA, Murphy KP. Prevention and early identification of elder abuse. *Clinics in Geriatric Medicine.* 2014;30(4):743-59.
24. Morowatisharifabad M, Rezaeipandari H, Dehghani A, Zeinali A. Domestic elder abuse in Yazd, Iran: a cross-sectional study. *Health Promot Perspect.* 2016; 6(2):104-10. [Persian original]

25. Uhlmann RF, Larson EB. Effect of education on the mini-mental state examination as a screening test for dementia. *Journal of the American Geriatrics Society*. 1991;39(9):876-80.
26. Wallace M, Shelkey M. Katz index of independence in activities of daily living (ADL). *Nursing Clinics of North America*. 2007;39(3):473-93.
27. Heravi-Karimooi M, Rejeh N, Foroughan M, Ebadi A. Designing and Determining psychometric properties of the elder neglect Checklist. *Iranian Journal of Ageing*. 2013;8(3):25-34. [Persian journal]
28. Karimi M, Elahi N. Elderly abuse in Ahwaz city and its relationship with individual and social characteristics. *Sālmand*. 2008 Jan 1;3(1):42-7. [Persian original]
29. Molaee M, Etemad K, Taheri Tanjani P. Prevalence of Elder Abuse in Iran: A Systematic Review and Meta Analysis. *Iranian Journal of Ageing*. 2017 Sep 15;12(2):242-53. [Persian original]
30. Mohebbi L, Zahednejad S, Javadi Pour S, Saki A. Domestic aldera in rural area of dezful, iran and Its relation with their quality of life. *Iranian Journal of Ageing*. 2016;10(4):50-9. [Persian journal]
31. Keyghobadi F, Moghaddam Hosseini V, Keyghobadi F, Rakhshani MH. Prevalence of elder abuse against women and associated factors. *Journal of Mazandaran University of Medical Sciences*. 2014;24(117):125-32. [Persian original]
32. Yon Y, Ramiro-Gonzalez M, Mikton CR, Huber M, Sethi D. The prevalence of elder abuse in institutional settings: a systematic review and meta-analysis. *European journal of public health*. 2018 Jun 5.
33. Chalise HN, Basnet M. Abuse of older adults residing in the community of Nepal. *J Gerontol Geriatr Res*. 2017;6(415):2.
34. Wang JJ. Psychological abuse and its characteristic correlates among elderly Taiwanese. *Archives of gerontology and geriatrics*. 2006 May 1;42(3):307-18.
35. Atri SB, Behshid M, Seydi S, Sahebi MH. Abuse to elders living with family in iran -tabriz. *International Research Journal of Applied and Basic Sciences*. 2013; 4:424-9. [Persian original]
36. Lacher .Simon ,et al .Types of abuse and risk factors associated with wlder abuse .*Swiss Med Wkly* 16(2016) : w14273
37. Ghodoosi A, Fallah Yakhdani E, Abedi HA. Studying the instances of elder abuse and their relationship with age and sex in the hospitalized elderly. *IJFM*. 2014 May 15;20(1):367-76. [Persian original]
38. Piri N, Tanjani PT, Khodkarim S, Etemad K. Domestic elder abuse and associated factors in elderly women in Tehran, Iran. *Epidemiology and health*. 2018;40. [Persian original]
39. Vida S, Monks RC, Rosiers PD. Prevalence and correlates of elder abuse⁹⁰. McGarry J, Simpson C, Hinchliff-Smith K. The impact of domestic abuse for older women: a review of the literature. *Health & social care in the community*. 2011 Jan; 19(1):3-14
40. Zink T, Jacobson CJ, Regan S, Fisher B, Pabst S. Older women's descriptions and understandings of their abusers. *Violence Against Women*. 2006 Sep; 12(9):851-65.
41. Zink T, Jeffrey Jacobson Jr C, Regan S, Pabst S. Hidden victims: The healthcare needs and experiences of older women in abusive relationships. *Journal of Women's Health*. 2004 Oct 1;13(8):898-908.
42. Mears J. Survival is not enough: Violence against older women in Australia. *Violence against women*. 2003 Dec;9(12):1478-89.
43. Montminy L. Older women's experiences of psychological violence in their marital relationships. *Journal of gerontological social work*. 2005 Dec 12;46(2):3-22.

44. Fisher BS, Regan SL. The extent and frequency of abuse in the lives of older women and their relationship with health outcomes. *Gerontologist*. 2006; 46(2):200-209.
45. McGarry J, Simpson C, Hinchliff-Smith K. The impact of domestic abuse for older women: a review of the literature. *Health & social care in the community*. 2011 Jan; 19(1):3-14.
46. Dyer CB, Pavlik VN, Murphy KP, Hyman DJ. The high prevalence of depression and dementia in elder abuse or neglect. *Journal of the American Geriatrics Society*. 2000 Feb; 48(2):205-8.
47. Fang B, Yan E, Lai DW. Risk and protective factors associated with domestic abuse among older Chinese in the People's Republic of China. *Archives of gerontology and geriatrics*. 2019 May 1; 82:120-7.
48. Fang B, Yan E. Abuse of older persons with de mentia: a review of the literature. *Trauma, Violence, & Abuse*. 2018 Apr; 19(2):127-47.
49. Rivera-Navarro J., Contador I. Family caregivers' perceptions of maltreatment of older adults with dementia: findings from the northwest of Spain. *Journal of elder abuse & neglect*. 2018 Nov 15:1-9.
50. Dong XQ., Chen R., Simon MA. Elder abuse and dementia: a review of the research and health policy. *Health Affairs*. 2014 Apr 1; 33(4):642-9.

Tables

Table 1: The frequency distribution and percentage of domestic abuse subscales

Index		Frequency	Percentage
Misbehavior			
Emotional negligence	No	245	61.3
	Yes	155	38.8*
	Total	400	100
Care negligence	No	229	57.3
	Yes	171	42.8*
	Total	400	100
Financial negligence	No	285	71.3
	Yes	115	28.8*
	Total	400	100
Authority deprivation	No	282	70.5
	Yes	118	29.5*
	Total	400	100
Psychological abuse	No	235	58.8
	Yes	165	41.3*
	Total	400	100
Ostracism	No	383	95.8
	Yes	17	4.3
	Total	400	100
Physical abuse	No	379	94.8
	Yes	21	5.3
	Total	400	100
Financial abuse	No	263	65.8
	Yes	137	34.3*
	Total	400	100

Table 2: The frequency distribution of negligence among the participants based on the observational elder neglect checklist

Observational negligence		Frequency	Percentage
Inappropriate clothes	Negligence	27	6.8
	Lack of negligence	373	93.3
	Total	400	100
Smelly body and clothes	Negligence	15	3.8
	Lack of negligence	385	96.3
	Total	400	100
Dirty and untidy hair	Negligence	12	3
	Lack of negligence	388	97
	Total	400	100
Long and dirty nails	Negligence	12	3
	Lack of negligence	388	97
	Total	400	100
Dental problems	Negligence	95	23.8*
	Lack of negligence	305	76.3
	Total	400	100
Bedsore	Negligence	6	1.5
	Lack of negligence	394	98.5
	Total	400	100
Joints motion limitation	Negligence	100	25*
	Lack of negligence	300	75
	Total	400	100

Table 3: The relationship between the demographic characteristics and the various types of domestic abuse

Demographic features	Education level	Income	House ownership	Living status	Health status	Insurance	Abuser factor	Cognitive status
Types of abuse								
Emotional negligence		P=0.019		P=0.015		P=0.040	P<0.001	P=0.015
Care negligence		P=0.014	P=0.026	P=0.008			P<0.001	P=0.005
Financial negligence	P=0.003	P<0.001					P<0.001	
Authority deprivation			P=0.004		P=0.020		P<0.001	
Psychological abuse							P<0.001	
Ostracism			P=0.025				P<0.001	
Physical abuse				P=0.003			P<0.001	
Financial abuse				P=0.034	P=0.040	P=0.039	P<0.001	