Domestic elder abuse in Yazd, Iran: a cross-sectional study

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Abstract
Background: Social changes due to urbanism, acculturation, and fading of values have led to some challenges in family relationships, including domestic elder abuse. This study was conducted to determine elder abuse status in Yazd, Iran.

Methods: This cross-sectional study was conducted on 250 elderly people over 60 years in Yazd in 2014-2015. Clustered random sampling was used to recruit the participants from 10 clusters in Yazd (25 individuals from each cluster). The data were gathered by the 49-item, Iranian Domestic Elder Abuse Questionnaire which was filled out through private interviews with the participants.

Results: Mean score of elder abuse was 11.84 (SD: 12.70) of total 100. Of the participants, 79.6% (95% CI: 74.5-84.6) experienced at least one type of abuse. Emotional neglect was the most reported abuse and physical abuse was the least reported. Abuse score was associated with age, education level, living status, and insurance status of elders. Further, those who reported history of gastrointestinal problems, dyslipidemia, respiratory diseases, sleep disorders, audiovisual problems, joints pain, hypertension, dental/oral problems, cardiovascular disease, urinary incontinence and disability, reported a statistically significant higher abuse score.

Conclusion: Despite overall low rate of domestic elder abuse, its high prevalence indicates that some interventions are necessary to decrease domestic elder abuse. Emotional neglect of elders should be addressed more than other abuse types.

Introduction
There is scant evidence on elder abuse, one of the most hidden and frequent forms of family violence. According to the Centers for Disease Control and Prevention (CDC), elder abuse is an intentional act, or failure to act, by a caregiver or another person in a relationship involving an expectation of trust that causes or creates a risk of harm to an older adult.1 Social changes due to urbanism, acculturation, and fading of values and traditional beliefs have led to some challenges in family relationships, including domestic elder abuse. Elder abuse is not a new issue, but it has recently been raised as a main public health and a widespread, growing social problem worldwide. Elder abuse is targeted intentionally or unintentionally at the elderly and making them injured and annoyed.2 The World Health Organization (WHO) has reported the rate of elder abuse in domestic settings in developed countries to be 4%-6% if physical, psychological and financial abuse, and neglect are all included.3 A recently published paper reported an aggregate prevalence of 4.6% of elder abuse in New York state households, the United States in 2009.4 A systematic review of prevalence and risk factors for elder abuse in Asia reported the prevalence ranging from 0.22 per 1000 to 62%, across Asia.5 Despite the WHO’s emphasis on international awareness of detection and prevention of elder abuse incidence, unfortunately developing countries have not yet taken necessary measures to systematically gather the relevant data. However, there is much evidence on elder abuse incidence in these countries.6 A study on the prevalence of elder abuse in Gorgan and Aq-Qala cities, northern Iran in 2013 reported the total frequency of elder abuse to be 63.3%.7 Some studies, however, have indicated that many cases of elder abuse are not detected and only 1/10 cases of elder abuse is reported.3 Newton reported that actual figures show 67% of the abuse occurs in the elders’ own homes.8
Because abuses in the homes are usually not reported, the rate of hidden elder abuse is likely to be higher than the reported figures. This problem is under-reported in many communities because the victims rarely report or seek out assistance.

Several abuse type patterns have been reported in different studies. In a study by Buka and Sookhoo, psychological abuse was the highest at 38.9% with sexual and societal types at the lowest level, 1.9% and 1.5%, respectively. In Manoochehrri et al study, emotional abuse was the most prevalent (84.8%) subscale followed by neglect (68.3%), financial abuse (40.1%), and sexual abuse (35.2%). Furthermore, Heravi-Karimoei et al study on different types of elder abuse reported that most of the elderly were victims of emotional neglect, psychological abuse, and care neglect and the least number of them were victims of rejection and physical abuse.

Elder abuse can lead to declined self-esteem, hopelessness, insufficiency, mental problems, and inability. Abuse at any degrees may decline the elderly health and safety. Regarding the significance of elder abuse and the elderly’s health as well as inconsistent findings of different studies and no large study of elder abuse in Iran, the present study was conducted to determine the status of elder abuse in the elderly population of Yazd in 2014-2015.

Materials and Methods
Participants and procedures
This cross-sectional study was conducted on 250 elders (60 years and older) in Yazd in 2014-2015. The required sample size was estimated 250 people considering 95% CI, elder abuse ratio of 0.7, and the design effect equal to 1.1. A clustered random sampling was used to select the participants. For this purpose, 10 geographic clusters were selected in Yazd and 25 people from each cluster were enrolled into the study. The questionnaires were filled out through 20 to 30-minute private interviews with the participants at their own homes. Interviews were carried out by two trained interviewers. The elders who were able to answer the questions were considered eligible to enter the study.

Measure
Data collection tool was a questionnaire including demographic information and a question about the history of disease and chronic conditions, and Iranian Domestic Elder Abuse Questionnaire. Demographic information included age, gender (male, female), marital status (married, dead spouse, divorced), house ownership status (owner, rented house), education level (illiterate, elementary, secondary, high school completion, academic), number of children, retirement status (yes, no), current occupational status (employed, housewife, unemployed), living status (with spouse, with single children, with married children, alone) and income source (current occupation, retirement, children support, institutional support, renting property). Iranian Domestic Elder Abuse Questionnaire consists of 49 items divided into eight subscales including care neglect (11 items), psychological abuse (eight items), physical abuse (four items), financial abuse (six items), authority deprivation (10 items), rejection (four items), financial neglect (four items), and emotional neglect (two items). The choices to answer the questions were “Yes,” “No,” and “No relevance.” The choice “No relevance” applies when the item has no relevance to the respondent’s living conditions. The score range is from 0 to 100 and higher scores represent more symptoms of abuse. The psychometric indices of the instrument have been reported by the developers of the scale, found to have face, content, and construct validity. They also reported a Cronbach alpha of 0.9 to 0.975 for the subscales.

This instrument is appropriate for investigating family elder abuse in Iran because of some characteristics such as being developed based on the perceptions and conceptions of abuse and abuse-related life experiences among Iran’s elderly population, explanation of a wide variety of family elder abuse, easy scoring, acceptable reliability and validity, and application in different situations.

Statistical analysis
The SPSS was used for data analysis. Frequency distribution tables were used to show descriptive results and Mann-Whitney U test to compare the abuse scores by two-level independent variables. Also, Kruskal-Wallis H test was used to compare the abuse scores by multi-level independent variables. The level of significance was 0.05.

Results
Demographic characteristics of the participants
Overall, 250 elders with mean age of 73.93 (SD: 8.20) years participated in this study. Of the participants, 49.6% were women and most of them were married. Regarding education level, most of the participants were illiterate. Over 35% of the participants were retired and 88% lived in their own homes. Complete demographic information of the participants is presented in Table 1.

Descriptive features of elder abuse
The most frequently reported abuse was family members’ indifference (52.8%) followed by no visit or call by family members (51.6%) in emotional neglect subscale. Forced sexual activity and touching sensitive parts of the body in deprivation subscale and abandoning elderly in nursing home in rejection subscale did not reported by any of the elders (Table 2).

Of the subscales, emotional neglect and physical abuse were the most and least reported subscales of abuse, respectively (Table 3).

Correlates of elder abuse
Examining the elder abuse score by some demographic characteristics showed that elder abuse increased by age increase and those who had a higher education level were less likely to be abused. Also, the uninsured elderly reported higher scores of abuse than those reported by the insured (P < 0.05; Table 4).

Regarding the diseases and problems, the elders who had the history of gastrointestinal problems, dyslipidemia, respiratory diseases, sleep disorders, audiovisual problems, joints pain, hypertension, dental/oral problems,
cardiovascular disease, urinary incontinence and disability, reported a statistically significant higher abuse scores (P < 0.05; Table 5).

Discussion

In the present study, the mean score of elder abuse was obtained 11.84 (SD: 12.70) of a total score of 100, representing the low level of domestic elder abuse, but 79.6% of the studied elderly experienced at least on type of abuse. Manoochehri et al.\textsuperscript{10} study in 2008 indicated that the prevalence of at least one type of family elder abuse as 87.8%. It was reported 25.9% in Heravi-Karimoei et al.\textsuperscript{11} study in Tehran and 10.5%-25% in Karimi and Elahi study in Ahwaz.\textsuperscript{12} The prevalence of abuse has been obtained 4%-10% in Ahvaz.\textsuperscript{13} The prevalence of elder abuse type and emotional support which comprises sympathy, attention, kindness, and interest, could play an important role in improving the quality of life and health among the elderly. Clearly, emotional abuse is more common elder abuse type and emotional support which comprises sympathy, attention, kindness, and interest, could play an important role in improving the quality of life and health among the elderly.

Table 1. Frequency distribution of demographic information in the studied elderly

| Variable                        | Number | %   |
|---------------------------------|--------|-----|
| **Age (year)**                  |        |     |
| 60-69                           | 82     | 32.8|
| 70-79                           | 91     | 36.4|
| ≥80                             | 77     | 30.8|
| **Gender**                      |        |     |
| Male                            | 126    | 50.4|
| Female                          | 124    | 49.6|
| **Marital status**              |        |     |
| Married                         | 169    | 67.6|
| Dead spouse                     | 73     | 29.2|
| Divorced                        | 5      | 0.2|
| **House ownership**             |        |     |
| Owner                           | 222    | 88.8|
| Rented                          | 8      | 0.3|
| Children’s home                 | 19     | 0.7|
| **Education level**             |        |     |
| Illiterate                      | 127    | 50.8|
| Elementary                      | 80     | 32.0|
| Secondary                       | 26     | 10.4|
| High School completion          | 14     | 0.5|
| Academic                        | 3      | 0.1|
| **Number of children**          |        |     |
| 1-3                             | 59     | 23.6|
| 4-6                             | 123    | 49.2|
| ≥7                              | 68     | 27.2|
| **Retired**                     |        |     |
| Yes                             | 89     | 35.7|
| No                              | 160    | 64.3|
| **Current occupational status**|        |     |
| Employed                        | 44     | 0.7|
| Housewife                       | 114    | 46.0|
| Unemployed                      | 90     | 36.3|
| **Living status**               |        |     |
| With spouse                     | 168    | 67.2|
| With single children            | 6      | 0.2|
| With married children           | 28     | 11.2|
| Alone                           | 48     | 19.2|
| **Income source**               |        |     |
| Current occupation              | 52     | 20.9|
| Retirement                      | 128    | 51.4|
| Children support                | 45     | 18.1|
| Institutional Support           | 9      | 0.6|
| Renting property                | 5      | 0.6|

Abuse scores were significantly related to elder’s age, education level, living status and insurance status. In Keyghobadi et al.\textsuperscript{14} study no significant relation was observed between abuse and education level, living conditions, income source, and suffering from chronic diseases. Heravi-Karimoei et al.\textsuperscript{15} demonstrated that abuse was significantly associated with gender, insurance, occupation, adequate financial sources, age, and number of children. In Nori et al.\textsuperscript{16} study there was a significant association of elder abuse with income level and marital status. Karimi and Elahi\textsuperscript{17} derived a significant association between abuse and age in the elderly. More clearly, older participants were more predisposed to abuse.

In the present study, regarding gender, there was no difference in elder abuse between men and women, which is consistent with Heravi-Karimoei et al.\textsuperscript{15} and inconsistent with Gil et al.\textsuperscript{18} According to National Center on elder abuse report, most abused elderly in the United States are women.\textsuperscript{19} The inconsistency of the findings could be ex-
Table 2. Distribution of participants’ responses to questionnaire items

| Subscale                  | Item                                                                 | Yes | No  | No relevance |
|---------------------------|----------------------------------------------------------------------|-----|-----|--------------|
| Emotional neglect         | Family members indifference                                          | 130 | 52.8| 116 | 47.2 | - | - |
|                           | No visit or call by family members                                   | 127 | 51.6| 119 | 48.4 | - | - |
|                           | No help for movement                                                  | 110 | 44.7| 115 | 46.7 | 21 | 8.5 |
|                           | No help for eating and drinking                                       | 84  | 34.1| 115 | 46.7 | 47 | 19.1|
|                           | No help for visiting physician                                        | 88  | 35.8| 119 | 48.4 | 39 | 15.9|
|                           | No help for providing and/or taking medications                        | 80  | 32.5| 117 | 47.6 | 49 | 19.9|
|                           | No help for personal hygiene and bathing                              | 51  | 20.7| 73  | 29.7 | 122 | 46.6|
|                           | No help for toilet and cleanliness                                    | 38  | 15.4| 74  | 30.1 | 134 | 54.5|
| Care neglect              | Failure to buy medical equipment such as eyeglasses                   | 55  | 22.4| 72  | 29.3 | 119 | 48.4|
|                           | Failure to give food or water and fluids on time                      | 41  | 16.7| 153 | 62.2 | 52 | 21.1|
|                           | No adherence to diet despite privilege                                | 30  | 12.2| 171 | 69.5 | 45 | 18.3|
|                           | Failure to do outdoor activities such as shopping and paying bills    | 40  | 16.3| 156 | 63.4 | 50 | 20.3|
|                           | Failure to do home activities such as cleaning and maintenance         | 44  | 17.9| 158 | 64.2 | 44 | 17.9|
| Financial neglect         | Failure to provide the needed money to supply basic life needs        | 35  | 14.2| 159 | 64.6 | 52 | 21.1|
|                           | Disrespectfully paying money in case of urgent need                   | 22  | 8.9 | 164 | 66.7 | 60 | 24.4|
|                           | No payment of money to provide prize or pay votive despite privilege   | 16  | 6.5 | 166 | 67.5 | 64 | 26.0|
|                           | Failure to provide the required comfort appropriate for the elderly   | 21  | 8.6 | 224 | 91.4 | - | - |
| Authority Deprivation     | Interdiction of social activities such as offering voluntary services | 15  | 6.1 | 231 | 93.9 | - | - |
|                           | Interdiction of traveling with friends and relatives                  | 13  | 5.3 | 233 | 94.7 | - | - |
|                           | Depriving grandchildren visit                                        | 9   | 3.7 | 131 | 53.3 | 106 | 43.1|
|                           | Interdiction of the elderly awareness of important news about themselves | 10  | 4.1 | 236 | 95.9 | - | - |
|                           | Dictation of the ideas regarding choice of spouse, remarriage, or residence | 5  | 2   | 125 | 50.8 | 116 | 47.2|
|                           | No permission to use assets based on their own desire                 | 17  | 6.9 | 229 | 93.1 | - | - |
|                           | Interdiction of access to life equipment such as telephone and TV     | 11  | 4.5 | 235 | 95.5 | - | - |
|                           | Changing appearance like cutting hairs without the elderly consent     | 12  | 4.9 | 234 | 95.1 | - | - |
|                           | Forced sexual activity                                               | 0   | 0   | 247 | 100  | - | - |
|                           | Forced touching sensitive parts of the body                           | 0   | 0   | 247 | 100  | - | - |
| Psychological abuse       | Threatening such as threats of beating, imprisonment, deprivation of assistance | 4   | 1.6 | 234 | 98.4 | - | - |
|                           | Revealing the secrets of the elderly with others                      | 10  | 4   | 237 | 96   | - | - |
|                           | Failure to give importance to personality, knowledge, ability, and experience of the elderly | 83  | 33.6| 164 | 66.4 | - | - |
|                           | Blaming for no reason                                                | 41  | 16.7| 205 | 83.3 | - | - |
|                           | Addressing by means of impolite names, inappropriate tone and/or offensive language | 44  | 17.8| 203 | 82.2 | - | - |
|                           | Shouting                                                             | 33  | 13.4| 214 | 86.6 | - | - |
|                           | Doing offensive gestures                                             | 30  | 12.1| 217 | 87.9 | - | - |
| Physical abuse            | Attempt to beat                                                      | 6   | 2.4 | 241 | 97.6 | - | - |
|                           | Throwing objects and furniture to the elderly                         | 5   | 2   | 242 | 98   | - | - |
|                           | Attempt to strangle the elderly                                      | 0   | 0   | 247 | 100  | - | - |
|                           | Prescription of hypnotics or sedatives for no reason                 | 5   | 2   | 242 | 98   | - | - |
| Financial abuse           | Borrowing money from others on behalf of and without the awareness of the elderly | 18  | 7.3 | 229 | 92.7 | - | - |
|                           | Failure to repay money borrowed from the elderly                     | 101 | 40.9| 146 | 59.1 | - | - |
|                           | Imposing living costs on the elderly without their consent           | 12  | 4.8 | 235 | 95.1 | - | - |
|                           | Obtaining possession of salary, money, equipment, home or property without the elderly consent | 8   | 3.2 | 238 | 96.7 | - | - |
|                           | No payment of inheritance                                           | 6   | 2.4 | 241 | 97.6 | - | - |
|                           | Obtaining power of attorney by force or changing will without elderly consent | 6   | 2.4 | 241 | 97.6 | - | - |
| Rejection                 | Being driven from the homes of family members                        | 3   | 1.2 | 244 | 98.8 | - | - |
|                           | Being driven from his/her own home                                   | 5   | 2   | 242 | 98   | - | - |
|                           | Abandoning the elderly in hospital                                  | 17  | 6.9 | 230 | 93.1 | - | - |
|                           | Abandoning elderly in nursing home                                   | 0   | 0   | 247 | 100  | - | - |
Table 3. Min, max, median and mean (standard deviation) of elder abuse subscales scores in the studied elderly

| Subscales             | Min | Max  | Median | Mean  | SD    |
|-----------------------|-----|------|--------|-------|-------|
| Emotional neglect     | 0   | 100  | 50     | 51.40 | 47.71 |
| Care neglect          | 0   | 100  | 7.14   | 21.85 | 29.93 |
| Financial neglect     | 0   | 100  | 0      | 09.10 | 24.89 |
| Authority deprivation | 0   | 80   | 0      | 03.51 | 11.49 |
| Psychological abuse   | 0   | 100  | 0      | 13.00 | 20.55 |
| Physical abuse        | 0   | 50   | 0      | 01.60 | 07.91 |
| Financial abuse       | 0   | 83.3 | 0      | 10.06 | 14.00 |
| Rejection             | 0   | 50   | 0      | 02.50 | 08.74 |
| Total abuse score     | 0   | 75.51| 8.16   | 11.84 | 12.70 |

Table 4. Distribution of min, max, median and mean (standard deviation) of elder abuse scores by some demographic characteristics of the studied elderly

| Variable              | Labels                        | Mean  | SD   | Min   | Median | P    |
|-----------------------|-------------------------------|-------|------|-------|--------|------|
| Age (year)            | 60-69                         | 8.02  | 9.94 | 0     | 59.18  | 5.76 |
|                       | 70-79                         | 11.80 | 11.61| 0     | 49.06  | 10.34| 0.004|
|                       | ≥80                           | 15.96 | 15.18| 0     | 75.51  | 12.24|      |
| Gender                | Male                          | 12.33 | 12.34| 0     | 54.90  | 9.00 | 0.33 |
|                       | Female                        | 11.34 | 13.09| 0     | 75.51  | 8.08 |
| Education Level       | Illiterate                    | 14.26 | 13.46| 0     | 75.51  | 11.76|      |
|                       | Elementary                    | 10.40 | 11.59| 0     | 54.90  | 7.54 | 0.012|
|                       | Secondary                     | 8.27  | 13.19| 0     | 59.18  | 3.38 |
|                       | High school completion        | 5.95  | 5.71 | 0     | 20.41  | 4.61 |
| Living status         | With Spouse                   | 9.50  | 10.30| 0     | 59.18  | 6.15 | 0.001|
|                       | Without spouse                | 16.72 | 15.60| 0     | 75.51  | 15.09|      |
| Current occupational  | Employed                      | 12.13 | 14.66| 0     | 54.90  | 5.96 |
|                       | Housewife                     | 11.23 | 12.58| 0     | 75.51  | 8.24 | 0.39 |
|                       | Unemployed                    | 12.72 | 11.92| 0     | 53.85  | 9.44 |
| Insurance             | Yes                           | 11.05 | 12.01| 0     | 75.51  | 8.16 | 0.009|
|                       | No                            | 19.77 | 16.06| 0     | 51.02  | 19.60|      |
| Income source         | Current occupation            | 12.94 | 14.19| 0     | 54.90  | 7.40 |
|                       | Retirement                   | 10.23 | 12.57| 0     | 75.51  | 6.34 |
|                       | Children                     | 15.03 | 11.95| 0     | 51.02  | 16.39| 0.071|
|                       | Support institute             | 13.06 | 11.64| 0     | 34.69  | 15.09|      |
|                       | Renting property              | 12.16 | 9.70 | 0     | 28.30  | 11.54|      |
| House ownership       | Owner                         | 11.90 | 12.70| 0     | 75.51  | 8.16 |
|                       | Rented                        | 14.82 | 19.50| 0     | 49.06  | 3.73 | 0.87 |
|                       | Children's home               | 10.03 | 9.47 | 0     | 32.65  | 9.54 |

*Mann-Whitney U test for 2-level variables; Krukal-Wallis H test for multi-level variables.*
Conclusion
Despite a low rate of domestic elder abuse, a large proportion of the elders experience some type(s) of abuse. Emotional neglect is the most frequently seen elder abuse type despite emphasis on respect for the elderly in Iran. Regarding the significance of affective domain in healthy ageing, raising the awareness and sensitivity of people and the related organizations is recommended to take effective measures to prevent elder abuse.

Ethical approval
The study was approved by the institutional review board at Shahid Sadoughi University of Medical Sciences. Moreover, participation in the study was voluntary and oral informed consent was taken from the participants for participation in the study after the study aims were explained for them before the interviews.

Competing interests
Authors declare that they have no competing interest.

Authors contributions
MSHMA and RP H, designed and implemented the study and wrote the paper. DA, participated in data analysis and ZA, participated in the study design.

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References
1. CDC. Elder Abuse: Definitions. Available from: http://www.cdc.gov/violenceprevention/elderabuse/definitions.html.
2. Taylor DK, Bachuwa G, Evans J, Jackson-Johnson V. Assessing barriers to the identification of elder abuse and neglect: a communitywide survey of primary care physicians. J Natl Med Assoc. 2006;98(3):403.
3. Krug EG, Mercy JA, Dahlberg LL, Zwi AB, eds. World report on violence and health. Geneva: World Health Organization; 2002. p. 129.
4. Burns D, Pillemer K, Caccamise PL, Mason A, Henderson CR, Berman J, et al. Prevalence of and risk factors for elder abuse and neglect in the community: a population-based study. J Am Geriatr Soc. 2015;63(9):1906-12. doi: 10.1111/jgs.13601.
5. Yan E, Chan KL, Tiwari A. A systematic review of prevalence and risk factors for elder abuse in Asia. Trauma Violence Abuse. 2015;16(2):199-219. doi: 10.1177/1524838014555033.
6. Levin SP. Discussing screening for elder abuse at primary health care level. Geneva: World Health Organization: 2008. Available from: www.who.int/ageing/publications/Discussing_Elder_Abuseweb.pdf.
7. Nassiri H, Heravi Karimooi M, Jouybari L, Sanagoo A, Chehrehgoshia M. The prevalence of elder abuse in Gorgan and Aq-Qala cities, Iran in 2013. Iranian Journal of Ageing. 2016;10(4):162-173. [Persian].
8. Newton JP. Abuse in the elderly: a perennial problem. Gerontology. 2005;22(1):1-2. doi: 10.1111/j.1741-2358.2005.00055.x.
9. Buka S, Sookhoo D. Current legal responses to elder abuse. Int J Older People Nurs. 2006;1(4):194-200. doi: 10.1111/j.1748-3743.2006.00029.x.
10. Manoochehr H, Ghorbi B, Hosseini M, NasiriOsouyiee N, Korbakhsh M. Degree and types of domestic abuse in the elderly referring to parks of Tehran. Journal of Nursing & Midwifery. 2009;18(63):39-45. [Persian].
11. Heravi-Karimooi 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].
12. Criner JA. The Nurses role in preventing abuse of elderly patient. Rehabil Nurs. 1994;19(5):277-97. doi: 10.1002/j.2048-7940.1994.tb00822.x.
13. Khoshbin S, Ghousi A, Frahani A, Motalagh ME. Guideline of promote healthy lifestyles in the elderly, nutrition and physical activity. 1st ed. Tehran: Office of Elderly Health, Office of Family Health and Population; 2007. [Persian].
14. Heravi-Karimooi M, Rejeh N, Montazeri A. Health-related quality of life among abused and non-abused elderly people.
a comparative study. Payesh. 2013;12:479-88. [Persian].
15. Heravi-Karimooi M, Anoosheh M, Foroughan M, Sheykhi M, Hajizadeh E. Designing and determining psychometric properties of the Domestic Elder Abuse Questionnaire. Iranian Journal of Ageing. 2010;5(1):7-21. [Persian].
16. Karimi M, Elahi N. Elderly abuse in Ahwaz city and its relationship with individual and social characteristics. Iranian Journal of Ageing. 2008;3(7):42-6. [Persian].
17. Penhale B. Older women, domestic violence, and elder abuse: a review of commonalities, differences, and shared approaches. J Elder Abuse Negl. 2003;15(3/4):163-183. doi: 10.1300/J084v15n03_10.
18. Chokkanathan S, Lee AEY. Elder mistreatment in urban India: A community based study. J Elder Abuse Negl. 2005;17(2): 45-61. doi: 10.1300/J084v17n02_03.
19. Dong X, Simon MA, Gorbien M. Elder abuse and neglect in an urban Chinese population. J Elder Abuse Negl. 2007; 19(3-4):79-96. doi: 10.1300/J084v19n03_05.
20. O'Neill D, McCormack P, Walsh T, Coakley D. Elder abuse. Irish Journal of Medicine Sciences. 1990;159:48-9. doi: 10.1007/BF02937248.
21. United Nations. Elder abuse widespread and unreported says new report by Secretary-General. Second World Assembly on Ageing. 2002. Available from: http://www.globalaging.org/waa2/articles/elderabuse.htm
22. Pillemer K, Finkelhor D. The Prevalence of Elder Abuse: A Random Sample Survey. Gerontologist. 1988;28(1):51-7. doi:10.1093/geront/28.1.51.
23. Cooper C, Katona C, Finne-Soveri H, Topinková E, Carpenter GL, Livingston G. Indicators of elder abuse: a cross national comparison of psychiatric morbidity and other determinants in the Ad-HOC study. Am J Geriatr Psychiatry. 2006;14(6):489-7. doi: 10.1097/01.JGP.0000192498.18316.b6
24. Tatara T. Elder Abuse in the United States: An Issue Paper. Washington DC: National Aging Resource Center on Elder Abuse (NABCEA); 1990.
25. Zandi F, Fadaei F. Victimization of elderly. Proceeding of the Second congress of Analysis of Geriatrics Issues in Iran. Tehran: Andisheh Kohan; 2008. [Persian].
26. Nowrouzi S. Assessment of Elder Abuse in Tehran. [Dissertation]. Tehran: University of Social Welfare and Rehabilitation Sciences; 2009. [Persian].
27. Nori A, Rajabi A, Esmaizadeh F. Prevalence of elder misbehavior in northern Iran (2012). J Gorgan Univ Med Sci. 2015;16(4):93-8. [Persian].
28. Keyghobadi F, Moghaddam Hosseini V, Keyghobadi F, Rakhshani MH. Prevalence of Elder Abuse against women and Associated Factors. J Mazandaran Univ Med Sci. 2014; 24(117): 125-132. [Persian].
29. Compton SA, Flanagan P, Gregg W. Elder abuse in people with dementia in Northern Ireland: prevalence and predictors in cases referred to a psychiatry of old age service. Int J Geriatr Psychiatry. 1997;12(6):632-5.
30. Dong X. Elder abuse and neglect in an urban Chinese population. J Elder Abuse Negl. 2007;19(3):79-96. doi: 10.1300/J084v19n03_05.
31. Yan E, Tang CS. Proclivity to elder abuse: A community study on Hong Kong Chinese. J Interpers Violence. 2003;18(9):999-1017. doi: 10.1177/0886260503254661.
32. Acierio R, Hernandez MA, Amstdader AB, Resnick HS, Steve K, Muzzy W, et al. Prevalence and correlates of emotional, physical, sexual, and financial abuse and potential neglect in the United States: the national elder mistreatment study. Am J Public Health. 2010;100(2):292-7. doi: 10.2105/AJPH.2009.163089.
33. Comijs HC, Pot AM, Smit JH, Bouter LM, Jonker C. Elder abuse in the community: prevalence and consequences. J Am Geriatr Soc. 1998;46(7):885-8.
34. Luoma ML, Kuvisulta M, Lang G, Enzenhofer E, De Donder L, Verté D, et al. Prevalence Study of Abuse and Violence against Older Women. Results of a Multi-cultural Survey in Austria, Belgium, Finland, Lithuania, and Portugal (European Report of the AVOW Project). Finland: National Institute for Health and Welfare (THL); 2011.
35. Tsukada N, Saito Y, Tatara T. Japanese older people's perceptions of "elder abuse". J Elder Abuse Negl. 2001;13(1):71-89. doi: 10.1300/J084v13n01_04.
36. Oh J, Kimb H S, Martinsb D, Kmic H. A study of elder abuse in Korea. Int J Nurs Stud. 2006;43(2):203-14. doi: 10.1016/j.ijnurstu.2005.03.005.
37. Gil AP, Kislaya I, Santos AJ, Nunes B, Nicolau R, Fernandes AA. Elder abuse in Portugal: findings from the first national prevalence study. J Elder Abuse Negl. 2015;27(3):174-95. doi: 10.1080/08946566.2014.953659.
38. National Center on Elder Abuse. World Elder Abuse Awareness Day. Available from: http://www.ncea.aoa.gov/Get_Involved/Awareness/WEAAD/index.aspx.
39. Wieglesworth A, Mosqueda L, Mulnard R, Liao S, Gibbs L, Fitzgerald W. Screening for abuse and neglect of people with dementia. J Am Geriatr Soc. 2010;58(3):493-500. doi: 10.1111/j.1532-5415.2010.02737.x.
40. Ghodouis A, Maghsoudool S, Hoseini SM. Forensic aspect of elder abuse: risk factors and characteristics. J Res Med Sci. 2011;16(12):1598-604.
41. Phua DH, Ng TW, Seow E. Epidemiology of suspected elderly mistreatment in Singapore. Singapore Med J. 2008;49(10):765-73.