The prevalence of elder abuse and associated factors among the elderly in Kashan city, Iran

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Abstract

Introduction: Elder abuse is among the major social health problems in today`s communities, and has significant effect on decreasing the health and security level in this group. The current study aimed to evaluate the prevalence and associated factors of abuse among the elderly in Kashan, Iran.

Materials and methods: This cross sectional study was conducted on 500 people over 60 years old in Kashan, Iran in 2014. Subjects were randomly selected from 10 healthcare centers of Kashan. Data were collected using elder abuse questionnaire. Cronbach alpha coefficient of the questionnaire was determined as 0.975. Data were analyzed by SPSS version 13. Pearson correlation coefficient and logistic regression analysis were used for data analysis. The statistically significant level was $P<0.05$.

Results: Results of the current study showed that 80% of subjects have experienced at least one type of abuse during the last year. The highest rate of abuse was in the form of financial abuse (45.6%), and the lowest was in ostracizing (16.6%). There was a statistical significant relationship between the elder abuse and variables such as sex, age, number of children, marital status, living arrangement, residential situation, home properties, monthly income, insurance situation, illness history, walking ability and using mobility aids. Logistic regression analysis also showed significant relationship between the elder abuse and unemployment, living in an apartment, and the age range 71-80 years.

Conclusion: Considering the high prevalence of abuse among the elderly, clarification of this phenomenon is considered as one of the main priorities, which can be achieved only through multidisciplinary approach in the community, and needs cooperation and collaboration of all community members.

Keywords: Prevalence, Elder, Abuse

Introduction

Aging is one of the most serious problems in the field of healthcare (1). In recent years, social and economic changes, and scientific developments have increased life expectancy and decreased the rate of mortality, which caused significant increase in the elderly population (2). It is estimated that the elderly population of the world will be doubled within the next 40 years (3). This growth in the developing

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countries is far more than the developed countries. Countries it is estimated that the elderly population of Iran, as a developing country, will increase from 8.24% to 10%, within 2011-2021(4). In addition to significant growth in the elderly population, no attention has been paid to their needs and problems as a vulnerable group of the society (5). Aging of population has many mental and emotional adverse consequences (6). Elder abuse is one of the most important and oldest problems of aging (7), which is considered as a widespread healthcare problem violating rights of the elderly (8). According to the world health organization (WHO), Elder abuse the inherent human rights and is a kind of intentional or unintentional violation in the forms of physical, mental, sexual, economical, discriminating, and neglecting(9). Problems caused by abuse are different in people with different races and cultures (10); unfortunately these problems are neglected by many authorities (7). Elder abuse not only causes physical damages, but it also has undesirable effects on the mental health of the aged (11), and threatens their health and safety (12). Studies reveal that abuse may cause mental disorders such as depression and anxiety, and decreases the life quality of the elderly (8, 13, 14). Dong`s studies in Chicago showed that the elderly who encountered abuse had higher level of depression in comparison with the others (13, 15). According to the National Center on Elder Abuse of the USA, out of 10 American elderly, one experiences abuse, annually; while just one out of 14 is reported(16, 17). Prevalence of elder abuse is between 5% and 30%, depending on the applied method and population under study (8, 18). The highest prevalence of elder abuse is reported regarding physical and extreme verbal violence in the USA and UK, respectively (19). A study in China showed that abuse among the Chinese elderly is 35% (13). In a review study, Cooper reported the prevalence of different types of elder abuse between 3.2% and 27.5% (20). The studies conducted in Iran also showed the elder abuse (5, 11, 21-24). In this regard, Heravi reported 1.6% to 19.3% of abuse among the members Club of Tehran. He also reported that emotional and mental negligence and ostracizing and physical abuse had the highest and lowest prevalence rate, respectively (23-25). Karimi and Elahi also reported that the prevalence of physical violence and negligence of the elderly population of Ahwaz city were 10.5% and 31.7%, respectively (21). Manouchehri et al. expressed that 84.4% of the elderly people referring to the parks of Tehran have experienced a type of emotional abuse (23). To evaluate the associated factors of elder abuse, Yuki Kishmoto stated that abuse among the Japanese elderly mostly associated with cognitive problems (26). Corina Naughton in Ireland reported that the most important abuse associated factors were unemployment and addiction of the care takers (27). While, Heravi believed that factors such as sex, age, education, insurance situation, employment and financial independence affect the level of abuse of the elderly (24). Another study showed that age is the main factor associated with the elder abuse; in a way that, with increase in age, there is an increase in the level of abuse (23). A study in China showed that the level of elder abuse had no association with the gender (28). But Naughton et al. reported that the level of elder abuse among women was higher than men (27). The study of Karimi, revealed that physical dependence was among the associated factors (21). Li Wu et al. reported higher level of elder abuse among those who had lower education and a chronic disease, and lived alone (28). But Lachs, believed that living with family can be considered as a factor associated with abuse (8). Cultural differences influence elder abuse according to different reports (10). Age, sex, unemployment, insurance situation, education, level of depression,

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chronic disease and disabilities are among the factors associated with abuse (2, 15, 23, 27). Considering the impact of culture on elder abuse, diversity of the Iranian culture and national healthcare system, the important role of this subject on health promotion and improving quality of life in elderly and insufficient information in this issue motivated the researchers to design and conduct a study to determine the level of abuse and its associated factors among the elderly of Kashan city, Iran. It is hoped that the results of the current study help to identify the aspects of this problem and its associated factors.

Materials and method

Study population and sampling: In this cross-sectional study in 2014 the Prevalence of Elder abuse and Associated Factors among the Elderly in Kashan City were studied. The study population included 500 elderly aged over 60 years who had health care records in health centers in Kashan city. Kashan is a warm and dry city located in the edge of great desert in the center of Iran and city has about 200000 populations. According to previous study and estimation of inactivity in 32% of the elderly, confidence level of 95% (d=0.05, p=0.32, z=1.96) the sample size was calculated to be 334 according to following formula (18). It was increased to 1.5 fold due to cluster sampling, and finally 500 Individuals were investigated. Inclusion criteria were age over 60 years, Iranian nationality, ability to speak Persian, lack of mental disorder, having full awareness during the study, and ability to answer the questions. The elderly people who did not have the inclusion criteria were not included in the study (Equation 1).

Equation 1. $$n=\left(z_{1-\frac{\alpha}{2}}\right)^2 \times p \times q / d2$$

After coordination with the Department of Health and Medical Education and obtaining necessary permissions; the Kashan city was divided into 5 regions (center, north, south, west and east) based on map. From each region, two healthcare centers were randomly selected. In each health care centers the elderly were determined from family records and the subjects were selected randomly based on the population covered by the center. The selected subjects were evaluated by telephone calls. If they did not meet the inclusion criteria or were reluctant to participate in the study, another subject was replaced randomly. If the questionnaire had some missing data, the researchers contacted to the subject to complete the items and if it was not possible, another subject was replaced randomly. Then the researchers went to the houses of the subjects and after explaining the objectives of the study the questionnaire was completed. In elderly who did not have the ability to read and write the questionnaire was completed through interview.

Questionnaire: The first part of the questionnaire contained demographic data including variables (such as age, gender, number of children, educational level, marital status, living arrangements, occupational status and residential situation, Living arrangement, Economic dependency, chronic diseases, and use of mobility aids), were recorded. The second part of the questionnaire contained 49 items about in eight subscales such of negligence, psychological, physical, and financial abuse, deprivation of authorities, and ostracizing, and financial and emotional negligence.

This tool can be completed with the options as: yes, no, and never mind. Scores questionnaire are in the range of 0-100; the highest scores indicate the highest level of abuse. Therefore, score 100 shows the maximum level of abuse and zero points to the lack of evidence regarding abuse.

The lowest score as zero devoted to no answers and the highest score as number one devoted to yes. The option never mind had no score; therefore, this option was deleted in interviews.

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This tool was designed and validated based for the Iranian elderly who suffered from abuse, considering cultural characteristics of the Iranian community and found reliable, with satisfactory internal consistency (Cronbach α= 0.97) and test-retest reliability(r= 0.99) (25).

Ethical Consideration: The study was approved by the Research Council and Research Ethics Committee of Kashan University of Medical Sciences, No. 92180 in 2014. The objectives of the study were explained to all the participants, and all of them signed a written informed consent before participation in the study. All the participants were informed that participation in the study is voluntary and were assured that their personal information would be treated confidentially. Researchers were committed to consider the participants rights in accordance to the principles explained in the Declaration of Helsinki.

Statistical analysis

The data was analyzed by SPSS version 13. The normality of the data set was analyzed by Kolmogorov-Smirnov test. Employing Pearson correlation coefficient; the logistic regression analysis was used for the multivariate analysis. The significance level for all the tests was considered P less than 0.05

Results

Out of 500 subjects participating in the current study, 290 (58%) were men and 210 (42%) were women. The mean age of the population under study was 72.07±9.03 years, and the age ranged 60-70 years had the highest frequency (47.8%). Considering education level, the highest frequency belonged to illiterate subjects (61.2%) and only 38.8% were educated. Most of the subjects (71.8%) were unemployed and (44.2%) lived independently. Most of them (87.4%) were married, 76.8% had their own house. Of the total, 26.2% had no chronic diseases, 23% had diabetes, and 38% had high blood pressure; 3.6% and 4.6% reported history of stroke, and heart attack respectively, and 2.8% experienced bone fracture. Regarding mobility aids, 66% of the elderly used no mobility aids, 30.6% of them used reed and 3.4% used walker. The relationship between demographic and the associated factors, and the elder abuse is shown in Table 1. According to the results of Pearson test, there was a significant statistical relationship between the level of elder abuse and demographic variables such as age, gender, number of children, marital status, life conditions, living arrangements, home situation, monthly income, insurance situation, illness background, walking ability and using mobility aids. The prevalence of different types of elder abuse is shown in Table 2.

Among 500 participants, 400(80%) reported that they had experienced at least one type of abuse in the past year. The highest rate of elder abuse was observed regarding financial abuse (45.6%) and psychological abuse (45%), and the lowest rate was measured for ostracizing (16.6%) and physical abuse (22.2%).

To control for confounding factors, logistic regression analysis was performed using elder abuse as the dependent variable, and all variable that reached a P value less than 0.05 in the Pearson test were examined as the independent variables. Result showed that elder abuse was significantly associated with unemployment, living in an apartment, age range 71-80 years (Table 3).

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Table 1. The relationship between demographic and the associated factors the elder abuse.

Variable	Category	Confirmed elder abuse [a]	No elder abuse [a]	P value
Gender	Female	232(80)	58(20)	0.001
	Male	168(80)	42(20)	
Age (year)	60-70	181(75.7)	58(24.3)	0.0001
	71-80	133(77.3)	39(22.7)	
	＞80	86(96.6)	3(3.4)	
Number of children	0	11(68.8)	5(31.2)	0.001
	1-4	152(71.7)	60(28.3)	
	＞5	237(87.1)	35(12.9)	
Marital status	Married	342(78.3)	95(21.7)	0.01
	Widowed/single/separated	58(92.1)	5(7.9)	
Educational level	Illiterate	249(81.4)	57(18.6)	0.601
	Primary	119(78.3)	33(21.7)	
	Diploma and above	32(76.2)	10(23.8)	
Living arrangement	Living with spouse	169(74.4)	58(25.6)	0.001
	Living with spouse & children	129(79.1)	34(20.9)	
	Living with children	69(92)	6(8)	
	Living alone	33(94.3)	2(5.7)	
Job	Unemployed	295(82.2)	64(17.8)	0.151
	Employed	54(75)	18(25)	
	Pensioner	51(73.9)	18(26.1)	
Residential situation	Leased	42(75)	14(25)	0.001
	Landlord	299(77.9)	85(22.1)	
	Children's home	59(98.3)	1(1.7)	
Home properties	Apartment	52(98.1)	1(1.9)	0.001[b]
	Home without a yard	103(81.7)	23(18.3)	
	Villa house	245(76.3)	76(23.7)	
Economic dependency	Independent	170(76.9)	51(23.1)	0.225[b]
	Dependent	109(84.5)	20(15.2)	
	Support organizations	121(80.7)	29(19.3)	
Having insurance status	No	129(92.8)	10(7.2)	0.001[b]
	Yes	271(75.1)	90(24.9)	
Chronic disease	No	89(67.9)	42(32.1)	0.02[b]
	Yes	311(84.3)	58(15.7)	
Walking ability	Independent	255(75.4)	83(24.6)	0.001[b]
	Dependent	145(89.5)	17(10.5)	
Use of mobility aids	No	225(77.3)	75(22.7)	0.004[b]
	Yes	145(85.3)	25(14.7)	

[a] All data are presented as number or percent.
[b] Pearson test.

Table 2. Prevalence of various types elder abuse.

Any elder abuse	Confirmed elder abuse	No elder abuse
Emotional abuse	149(29.8)	351(70.2)
Caregiver abuse	178(35.6)	322(64.4)
Financial neglect	189(37.8)	311(62.2)
Deprivation of authority	206(41.2)	294(58.8)
Psychological abuse	225(45)	275(55)
Financial abuse	228(45.6)	272(54.4)
Physical abuse	111(22.2)	389(77.8)
Ostracizing	83(16.6)	417(83.4)
Any abuse	400(80)	100(20)

All data are presented as number or percent.

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Table 3. The multivariate logistic regression analysis of odds ratios (OR) for elder abuse among elderly.

Characteristics	β	SE	Wald x2	P	OR (95%CI)
Age					
71-80	-1.81	0.753	5.80	0.01	0.6 (0.037-0.713)
Job					
Unemployment	0.976	0.479	4.15	0.04	5.75 (1.03-6.78)
Home properties					
Living in apartment	2.31	1.11	4.33	0.03	88.75 (1.14-89.90)

Discussion

In the current study, 80% of the subjects had experienced at least a type of abuse within the last year, a result which was quite different in comparison with the results obtained in the studies conducted in developed and even developing countries. This level of prevalence was higher than that of reported in Australia, Canada and England (3-10%)(8), USA (4% - 10%)(29), Korea (6.3%)(30), Japan (17.9%)(31), Hong Kong (23.5%)(32), Russia (28.63%)(33) and China (27.5%)(34). Results of Manouchehri et al. showed that 87.8% of the population under study had experienced at least a type of abuse by their family members (6), which is higher than that of the current study. Abuse is an old issue associated with the elderly, but is rarely reported and has remained hidden due to lack of an appropriate definition and knowledge. Most of the conducted studies regarding mistreating the elderly have led to disagreement between the researchers and have created an obstacle to compare the results, due to employing different research methods, non-probability sampling, relative agreement on the concept of mistreating the elderly, using improper tools and difficulties associated with reliable data collection. It may be the reason for this statistical difference. The current study showed that financial and psychological abuses are the most common types of elder abuse, which is compatible with that of karimi et al.(21). Results of Manouchehri et al. showed that most of the subjects had experienced negligence and emotional abuse, and physical abuse was experienced the least (6). In the study by Zandi, financial abuse was the most common abuse among the elderly (35). On the other hand, in many other researches such as Oh (2), Rubio (36), and Amstadter (18) the psychological abuse was common. High prevalence of financial and psychological abuses among the Iranian elderly indicates the growth of personal and financial problems of the children in today`s modern life. Besides, economic crisis and inflation not only disable children to provide financial supports, but severe economic pressures may lead to financial abuse. The prevalence of financial abuse, 45.6%, indicated the same result in the current study. Also, the present study showed that ostracizing and physical abuse had the lowest prevalence; the studies of Karimi(21), Manouchehri(6), Dong(37), Yan(34), and Rubio(36); confirmed this result. Similarities between the elder abuse in the developed countries and their differences with those of the developing countries probably indicate that elder abuse is affected by culture. It is noteworthy that since the other types of abuse are not usually visible, due to lack of knowledge they may not be considered as elder abuse, which results in more abuses. Elder abuse is a kind of severely complicated family violence, and many factors may affect it. In the current study, different associated variables, such as age range 70 to 80 years, having no children, living with the spouse, having home and adequate income, health insurance, hypertention, and physical disabilities were evaluated and the results showed significant statistical relationship between them and the level of elder abuse. Hence, results of the current study are compatible

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with those of the previous ones (24), and showed that the married elderly people and those who lived with their spouse encountered higher levels of abuse (8, 38). The study of Li Wu, showed that the elderly people who live alone usually experience higher levels of abuse (28), and other studies indicated that being widowed can be considered as the high risk for experiencing abuse (39); this may result from the fact that cohabitation increases the risk of conflicts and contacts; therefore, the level of abuse may increase in contrast. In the current study, elderly men were at higher risk of abuse than women; while, in the studies of Li Wu, Garre, and Nowrouzi women had experienced higher abuse (28, 40, 41). This difference may result from different sampling methods, more men rather women in the population under study, or elderly women are more respectable and usually experience lower levels of abuse; since they do house hold responsibilities such as cooking or taking care of grandchildren. Also in the current study, adequate income, and having their own home were among the factors which increase the risk of financial abuse. Li Wu reported that physical disability and chronic diseases are the factors for psychological abuse (28). According to this study, it was expected that elderly people who live alone or have a good financial situation experience lower level of abuse, but results showed that these people experience higher levels of abuse. This may result from high level of emotional abuse; these elderly people are usually neglected by their children since they are financially independent. Also, abusers may have financial problems and be financially dependent on their elderly parents, which increase the level of abuse. Results of the current study showed no significant relationship between abuse, education level and job; while, in some other studies the level of education(2, 24) and having a job(24, 28), were considered as the factors associated with increasing abuse. Results of the current study showed the high prevalence of abuse among the elderly of Kashan, Iran, and at least eight out of ten elderly people experienced one type of abuse.

Limitations

The following cases are among the limitations of the current study: It was a cross-sectional study and to find the cause affect relationship, a prospective study should be conducted. Since the information regarding elder abuse was self-reporting it may result from perception and prejudice of the participants. In the current study the characteristics of abusers have not been evaluated, while mental disorder, using drugs and alcohol may increase the risk of abuse. Finally, the current study used an Iranian local tool and has considered even a type of abuse within the last year as elder abuse; therefore, it may have estimated elder abuse higher than real current situation.

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