RESEARCH ARTICLE

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The Prevalence and Associated Factors of Elderly Abuse: A Cross-Sectional Study

ABSTRACT

Objective: The prevalence of elderly abuse varies between 2.2% and 30.1% in European countries. There is a limited number of studies that have investigated elderly abuse in Turkey. The aim of this study is to detect the prevalence and risk factors of elder abuse, identify the factors that can affect elderly abuse, and assess the possible measures to prevent this problem.

Methods: We stratified the districts enrolled in family health centers to ensure that participants were from diverse social, cultural, and economic backgrounds of Edirne and formed a representative sample of 211 people. In addition to sociodemographic characteristics, our survey consisted of the Hwalek-Sengstock Elder Abuse Screening Test, the Geriatric Depression Scale-short form, the Standardised Mini-Mental State Examination, the Barthel Index for activities of daily living, and the Lawton-Brody instrumental activities of daily living scale.

Results: The prevalence of elderly abuse was determined as 9.9%, and high abuse risk was 15.2%. We found that abuse risk was higher among older people who had no social security, lived alone, were abused physically or emotionally before, reported having bad family relations, and had fewer rooms at home which leads to a lack of privacy. Furthermore, we found significant relationships between abuse risk and the depression score.

Conclusions: Elderly abuse is a risk for every person regardless of gender, education level, and economic status. As an invisible problem for societies, elderly abuse brings a great burden by leading to the loss of physical, mental, and psychological health. Preventive measures should be the primary goal. All results suggest that governments, non-governmental organizations, and health care providers should combat this problem by increasing patient literacy and ensuring lifestyle changes.

Keywords: Elderly Abuse, Risk Factors, Living Arrangements, Community Health.

Yaşlı İstismarı Prevalansı ve Etkileyen Faktörler: Kesitsel Bir Çalışma

ÖZET

Amaç: Yaşlı istismarı prevalansı Avrupa ülkelerinde %2,2 ile %30,1 arasında değişmektedir. Türkiye'de yaşlı istismarını inceleyen sınırlı sayıda çalışma mevcuttur. Bu çalışmanın amacı yaşlı istismarı prevalansı ve risk faktörlerini saptamak, yaşlı istismarını etkileyen faktörleri tespit etmek ve nu sorunu önlemek için alınabilecek tedbirleri değerlendirmektir.

Gereç ve Yöntem: Katılımcıların tüm sosyal, kültürel ve ekonomik kesimlerden olması için aile sağlığı merkezleri nüfusları üzerinden tabakalandırma yapılarak 211 kişilik örneklem oluşturulmuştur. Sosyodemografik özelliklere ek olarak Hwalek-Sengstock Yaşlı İstismarı Tarama Testi, Geriatrik Depresyon Ölçeği Kısa Formu, Standardize Mini Mental Durum Testi, Barthel Günlük Yaşam Aktiviteleri İndeksi ve Lawton-Brody Enstrümental Günlük Yaşam Aktiviteleri Ölçeği ankete dahil edilmiştir.

Bulgular: Yaşlı istismarı prevalansı %9,9 ve yüksek istismar riski %15,2 olarak tespit edilmiştir. Sosyal güvencesi olmayan, yalnız yaşayan, daha önce fiziksel veya duygusal istismara uğramış, aile ilişkilerinin kötü olduğunu bildiren ve mahremiyet eksikliğine yol açacak şekilde evinde az sayıda odası olan yaşlılarda istismar riskinin daha yüksek olduğu tespit edilmiştir. Yapılan regresyon analizinde istismar riski ile depresyon skoru arasında anlamlı ilişki bulunmuştur.

Sonuç: Yaşlı istismarı cinsiyet, eğitim düzeyi ve ekonomik durumu ne olursa olsun her insan için bir risktir. Toplumlar için görünmez bir sorun olan yaşlı istismarı, fiziksel, zihinsel ve psikolojik sağlık kaybına yol açarak büyük bir yük getirmektedir. Önleyici tedbirler öncelikli hedef olmalıdır. Tüm sonuçlar hükümetlerin, sivil toplum kuruluşlarının ve sağlık hizmeti sağlayıcılarının hasta okuryazarlığını artırarak ve yaşam tarzı değişiklikleri sağlayarak bu sorunla mücadele etmesi gerektiğini göstermektedir.

Anahtar Kelimeler: Yaşlı İstismarı, Risk faktörleri, Yaşam Düzenlemeleri, Toplum Sağlığı.

INTRODUCTION

The share of elderly people is increasing within the total population as populations age. The number of older people aged above 65 will increase from 9% to 16% globally between 2019 and 2050 (1). By 2030, the elderly population is expected to increase by 140% in low- and middle-income countries and by 51% in high income countries (2). An increase in the elderly population comes with new problems that differ markedly from problems presented by young populations. One of those problems is elderly abuse, which also has a legal aspect.

The U.S. National Academy of Sciences defines abuse as 'intentional actions that cause harm or serious risk of harm (whether or not harm is intended) to a vulnerable elderly persons by a caregiver or other person who stands in a trusting relationship to the elder or failure by a caregiver to satisfy the elderly person's basic needs or to protect the elderly person from harm' (3,4). While elderly abuse is considered as a type of violence, it has not been studied as much as other types of violence. Elderly abuse can be classified as physical, sexual, psychological, financial, and anti-constitutional.

According to data from around the world, 6% of older people experience abuse once a month at best (5). Furthermore, various studies on this topic have suggested the ratio of elder abuse varies between 7.4% and 11.4 % in the U.S.A. and between 2.2% and 30.1% in some European countries (6). A meta-analysis, which was supported by WHO and which included 52 studies from 28 geographically-diverse low and middle income countries, found that the prevalence of elderly abuse was 15.7% (7). It was notable that 64.2% of elderly abuse cases were reported by health staff (8).

Prevention is the most important factor in terms of abuse, as for every other health issue. Our evidence-based information is insufficient to prevent abuse, and most information is either anecdotal or based on poorly designed and executed studies (6). Once abuse happens, it leads to severe physical, psychological, and social problems that are very difficult to reverse (7). The risk factors associated with elder abuse should be eliminated through interventions for both elderly people that are open to abuse and potential abusers (9-11).

The most effective method of preventing abuse is to raise awareness among older people regarding this topic. A study showed that patient training on preventing elder abuse can decrease abuse by 21% by itself (11).

Elderly abuse and neglect have become more frequent with the growth of the elderly population. Studies have shown that abuse is a preventable problem (6). Family physicians are health professionals who can easily observe older people in their environment, so they can detect the presence or risk of abuse more easily. Older people may hide abuse as they fear legal processes which may break family ties. Therefore, it is important for health professionals to know the risk factors of abuse to eliminate them.

This study aimed to detect the prevalence and risk of elderly abuse and identify the factors that can affect elderly abuse. Our study was the only one that heads towards elderly abuse in Edirne, Turkey which is a European border city with European relations and interactions are intensive.

MATERIAL AND METHODS

This study was conducted in Edirne city centre. According to Edirne Provincial Health Directorate, there were 15678 people aged 65 and over whom formed our universe. To calculate the minimum sample volume, we used the study by Ergin et al. (12) conducted in Aydın, where the prevalence of elderly abuse was 14.2%. We used that study because Aydın and Edirne share similar socioeconomic and cultural structures.

Assuming the true prevalence of 14.2%, and using 5% type 1 error and 80% power, we made a stratification according to the districts enrolled to 20 family health centres (31 units inside the centres); thus the participants were from all social, cultural, and economic backgrounds of Edirne. The number of males and females calculated separately according to the ratio in the total elderly population until the total number exceeded the minimum sample size.

We received approvals from the Scientific Researches Ethics Council of Trakya University (numbered 2017/70) and from the Provincial Public Health Directorate of Edirne. We randomly chose 211 participants between March and June 2017 and met with 103 females and 108 males aged over 65, who lived in the city centre of Edirne. These randomly selected people were reached by phone or by going to their neighbourhood and a meeting time scheduled. One researcher met the participants face-to-face and alone in the family health centres or in the participants homes, depending on the participants' request, and implemented the questionnaires. The researcher was trained on the use of scales beforehand and applied all the questionnaires to ensure standardization. Participants' personal identity information was not recorded. They were informed verbally, and their consent was received before participation. If they didn't want to participate, didn't want to continue because of any reason, they were excluded from the study and replaced by another random chosen elderly from the same district. Each questionnaire took about 30 minutes to apply.

The survey first provided information regarding the topic; and has been checked by receiving feedback. Then, it listed 34 questions on the following; participants' sociodemographic characteristics; whether they had any chronic

diseases; relationship with family, relatives, neighbours and friends; whether they experienced abuse; the features of their residence; and whether they knew about the social support hotline '183' for abuse counselling.

In addition, the survey included the following; the Hwalek-Sengstock Elder Abuse Screening Test (HS-EAST), including 14 questions that evaluated abuse risk; the Geriatric Depression Scale-short form (GDS), including 15 questions that evaluated depression in older people; the Standardised Mini Mental State Examination (SMMSE), evaluating cognitive functions; the Barthel Index for Activities of Daily Living (BI-ADL), evaluating daily life activities; and the Lawton-Brody Instrumental Activities of Daily Living Scale (LBIADLS), evaluating the instrumental activities of daily life. Although the highness of the HS-EAST score indicates a potential increase in the risk of elder abuse, a score of 3 or more can be interpreted as the presence of abuse (13). They all have Turkish validity and reliability studies and suitable for using in Turkish elderly population (13-17).

We checked normality assumption using Shapiro-Wilk tests prior to the hypothesis tests. Mann-Whitney U test was used to compare two independent groups, while Kruskal-Wallis test was used to compare more than two independent groups. Spearman correlation coefficient was used to evaluate relationships between numerical variables. Multiple linear regression with stepwise selection was used to investigate relationships between HS-EAST and other scales. Median and interquartile range were used for numerical variables, while frequency and percentage used for categorical variables. A $p<0.05$ considered as statistically significant.

RESULTS

Of the 211 elderly people in the study, 48.8% (n=103) were women. The mean age was 72.0±6.5 (65-92) years. The prevalence of elderly abuse was 9.9% (n=21; seven females, 14 males). When we evaluated the abuse risk with using HS-EAST, there was no difference between genders ($p>0.05$), but abuse happened twice as much in females. Mean HS-EAST score was 1 (0-11). HS-EAST score was 3 or more in 15.2% (n=32) of participants which can be interpreted as the presence of abuse.

The abuse risk was higher among elderly people who had no or low social security ($p=0.016$), were abused physically ($p<0.001$) or emotionally ($p<0.001$) before, reported having bad family relations ($p<0.001$), and had fewer rooms at home ($p=0.002$). Only one abused person knew about the social support hotline '183' for abuse counselling, and this person never called the hotline.

We found negative correlation between the amount of total house income and abuse risk ($p=0.001$); but there was no relationship between abuse risk and the amount of self-income ($p>0.05$). Table 1 indicates the relationship between HS-EAST score and some sociodemographic characteristics of the participants.

Table 1. The relationship between HS-EAST score and sociodemographic characteristics of participants

	n (%)	HS-EAST Median Score (IQR*)	p
Gender			
Male	108 (51.2)	1 (2)	p = 0.876
Female	103 (48.8)	1 (2)	
Education			
Illiterate	17 (8.1)	1 (4)	p = 0.835
Literate	27 (12.8)	1 (1)	
Primary school	115 (54.5)	1 (2)	
Secondary school	14 (6.6)	1 (2)	
High school	25 (11.8)	1 (1)	
University	13 (6.2)	1 (1)	
Marital status			
Single	5 (2.4)	2 (7)	p = 0.069
Married	143 (67.8)	1 (2)	
Widow	63 (29.9)	1 (2)	
Working status			
Not working	197 (93.4)	1 (2)	p = 0.665
Working	14 (6.6)	1 (2)	
Have self income			
No	49 (23.2)	1 (2)	p = 0.081
Yes	162 (76.8)	1 (2)	
Living in own home			
No	75 (35.5)	1 (2)	p = 0.169
Yes	136 (64.5)	1 (2)	
Living alone			
No	171 (81.1%)	1 (2)	**p = 0.033**
Yes	40 (18.9%)	1 (3)	
Chronic disease			
No	38 (18)	1 (1)	p = 0.259
Yes	173 (82)	1 (2)	
Incompatibility in home			
No	191 (90.5)	1 (2)	**p = 0.005**
Yes	20 (9.5)	2 (3)	

* Interquartile Range

According to the cognitive status, we found that 21.3% (n=45) had moderate dementia, and only 1.4% (n=3) had severe dementia. There was no significant relationship between cognitive status and abuse risk ($p>0.05$). The median GDS score was 3 (0-15). We found a relationship between depression and abuse risk ($p<0.001$).

The median BI-ADL score was 100 (min:60 max: 100). Mean LBIADLS score was 7.1 ± 1.25 (median: 8). We found no significant relationship between abuse risk and daily life activities ($p > 0.05$) and between abuse risk and instrumental activities of daily living ($p>0.05$) (Table 2). Table 2 shows the relationship between HS-EAST score and SMMSE, GDS, BI-ADL and LBIADLS scores.

Table 2. Relationship between HS-EAST and SMMSE, GDS, BI-ADL, LBIADLS

	n (%)	HS-EAST Median score (IQR*)	p
SMMSE			
normal	163 (77.2)	1 (2)	
moderate dementia	45 (21.3)	1 (2)	p = 0.063
severe dementia	3 (1.5)	1	
GDS			
normal	138 (65.4)	1 (1)	
mild depression	48 (22.7)	1 (2)	**p < 0.001**
moderate depression	17 (8.1)	2 (3)	
severe depression	8 (3.8)	5 (3)	
BI-ADL			
fully independent	165 (78.2)	1 (2)	
mildly dependent	24 (11.4)	1 (2)	p = 0.242
moderately dependent	21 (10)	1 (2)	
highly dependent	1 (0,4)		
LBIADLS	211 (100)	8 (1)	p = 0.251

* Interquartile Range
SMMSE: Standardised Mini Mental State Examination; GDS: Geriatric Depression Scale-short form; BI-ADL: Barthel Index for Activities of Daily Living; LBIADLS: Lawton-Brody Instrumental Activities of Daily Living Scale

Multiple linear regression analysis is performed to investigate the effects of clinical variables on HS-EAST score. The results showed that only GDS has a significant, independent and negative effect on HS-EAST score (p<0.001) (Table 3).

Table 3. Multiple linear regression of SMMSE, GDS, BI-ADL and LBIADLS on HS-EAST score

	Coefficient	Standard Error	p
SMMSE	0.322	0.241	0.182
GDS	0.247	0.032	**<0.001**
BI-ADL	0.003	0.021	0.874
LBIADLS	-0.059	0.101	0.557

SMMSE: Standardised Mini Mental State Examination
GDS: Geriatric Depression Scale-short form
BI-ADL: Barthel Index for Activities of Daily Living
LBIADLS: Lawton-Brody Instrumental Activities of Daily Living Scale

DISCUSSION

In our study, the prevalence of elderly abuse was 9.9%. There was no statistically significant differences between genders (p>0.05).

A study in Manisa reported that elder abuse was 8% (18); and the study by Ergin et al. (12) found that the prevalence of elderly abuse was 14.2%. It is difficult to reach sufficient and correct data about elderly abuse which is a hidden and social issue. Although the definition of elderly abuse has not changed, the differences between cultures can affect the perception and detection of elderly abuse. Elderly people and aging people should know the definition of elderly abuse; and they should be aware of the results of elderly abuse and its effects on health (19).

We found that the abuse risk was lower among older people who had social security. Similarly, Ergin et al. (12) found that lack of social security was a risk factor for psychological abuse. In particular, lack of social security leads older people to loneliness and prevents them from getting health services due to financial difficulties. Therefore, the existence of social security is a protective factor against abuse (10). In Turkey, the state guarantee for infants and children can be implemented for older people, and it can serve as a powerful measure to prevent abuse.

In our study, there was no significant relationship between education level and abuse risk. Similarly, the systematic review by Johannesen et al. (9) reported that education level was not a risk factor for abuse. This makes us consider the possibility that abuse is a problem for older people from all sociocultural levels.

We found negative correlation between the amount of total house income and abuse risk; but the self-income of the elderly did not affect the risk of abuse. Economic status of the family has a significant effect on elderly abuse. This result makes us think that, if we want to prevent elderly abuse, we need to raise not only the economic level of the elderly, but families to a better level.

The abuse risk was higher for elderly people who lived alone (9). Whereas some studies have reported that those living with caretakers and children had a higher risk of abuse, other studies have reported results similar to our study (9,10,20). Living alone can cause social isolation, depression, and physical, emotional, economic, and medical neglect. In addition, those living alone are more vulnerable to abuse as they are more defenceless. Therefore, having more active social lives protects older people from abuse as well (10).

Our study found that the abuse risk was higher among elderly people who defined their domestic relations as problematic. Studies by Kissal

and Johannesen reported similar findings (9,19). As possible domestic problems affect the whole family, counselling should be provided for family members, and attention should be paid to keeping domestic relations healthy (19).

We found that repetition risk was higher among previously abused elderly people. In our study, 4.7% of participants experienced physical abuse, and 7.6% experienced emotional abuse. Any case of abuse detected around older people should be alarming and preventive measures should be taken without delay.

Elderly abuse is probably higher than reported cases. It may be difficult for older people to report abuse due to various reasons. Perception of abuse may also change due to cultural differences.

Home environment can pose a risk for elderly abuse. In our study, we found that fewer rooms in a house and probably certain types of heating could be risk factors. It is not possible to have privacy in houses with stoves because families usually gather in one room. This may lead to intolerance and abuse. Studies by Keskinoglu and Goodrich reported that an unfit home environment can lead to abuse and neglect for older people (21,22). Risks in living environments of older people can be detected by making house calls, and remedial measures can be applied (23). Also, health care providers can detect abuse by examining clues. Visible lacerations or bruises on the skin during examination are alarming (19). Conditions can be improved for poor families with the support of state entities and nongovernmental organisations (NGOs).

Due to the Covid-19 pandemic, social isolation has increased for older people who are at higher risk. Curfew has been declared in Turkey and many other countries. Time spent at home has increased globally. The expected result of home isolation and increased time spent with family in closed quarters is an increased risk of abuse and neglect for older people in some families (20). Particularly with the addition of psychological burden and intolerance, this may lead to worse problems. Health professionals will have a bigger role to play after the pandemic to prevent those problems.

We found a positive and significant relationship between depression score and elderly abuse risk. Depression or depressive symptoms have been associated specifically with emotional and physical abuse in the United Kingdom, China, and Canada (3). We found no studies in Turkey regarding depression. We thought that depression causes social exclusion in older people and makes them more dependent on other people, thus increasing the risk of abuse.

Although we did not find a significant relationship between cognitive functions and abuse risk, some studies like Dong et al. (24) reported that lowered cognitive functions were associated with increased risks of physical and emotional abuse in the USA. Living with and caring for a dependent older person with low cognitive functions may trigger burnout syndrome. This challenging situation can lead to elder abuse. Providing training to caregivers can build awareness of this and prevent abuse (19).

As the limitation of our study; although we could not find a significant relationship between elderly abuse and BI-ADL and LBIADLS scores, the number of participants remained low to achieve definitive results.

CONCLUSION

Elderly abuse is a risk for all elderly persons regardless of gender and education level. In addition, living alone, incompatibility at home, having bad family relations, scarcity of total house income, history of abuse, lack of social security and factors that can cause depression are risk factors for elderly abuse. Preventive measures should be the primary goal. We think that the supportive role of the society can reduce these problems with the help of the state and NGOs.

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