

# PREVALENCE AND RISK FACTORS OF ELDER ABUSE AND NEGLECT IN A WESTERN CITY OF TURKEY: A COMMUNITY BASED STUDY

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**Abstract:** *This study was undertaken to investigate elder abuse and neglect among elderly with in the family, identify risk factors and evaluate elderly' suggestions and expectations for ageism in a western city of Turkey. This community based study was conducted on 756 elderly using cluster, simple random and systematic sampling methods. Results show that 14.2% of the participants suffered from any types of abuse and neglect; according to subtypes 8.1% reported psychological, 7.6% neglect, 3.5% financial, 2.9% physical and 0.4% sexual abuse. Associated risk factors among each subtypes were found as; participants who had worse morale status increased the risk by 3.603, 95%CI(1.606-8.084) and who had social exclusion increased the risk by 1.084, 95%CI(1.034-1.136) in terms of having greater risk of psychological abuse. The variables that increased the risk of suspected neglect were worse morale status increasing the risk by 6.920, 95%CI(1.930-24.813) and social exclusion increasing the risk by 1.108, 95%CI(1.052-1.168). Because abuse and neglect may have serious effects on elderlies' health and well-being, it is important to identify different risk factors according to each subtypes in order to combat violence against older people.*

**Key words:** *elder abuse, domestic violence, violence exposure.*

## 1. Introduction

Elder abuse and neglect are gradually become important issues for all countries. Prevalence of overall abuse (including neglect) ranged between 3.2 and 35.0% in

general population studies [1-3]. World Health Organization (WHO) reported that present rates may only represent “*the tip of the iceberg*” and some of them are “*underreported by as much as 80%*” [4].

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The world's elderly population - people 60 years of age and older - is 650 million. By 2050, the "greying" population is estimated to reach 2 billion in the world [5]. As considering this increase in elderly population and if no action is taken for elderly abuse and neglect, approximately 9.8%-84.6% of this population will be at risk by 2050.

The phenomenon of elder abuse was first introduced with the term 'Granny Battering' in the UK in 1975 [6]. At the present day, researches, projects and political perspectives have been increasingly interested in elder abuse [7]. *WHO defines elder abuse as; 'a single, or repeated act, or lack of appropriate action, occurring within any relationship where there is an expectation of trust which causes harm or distress to an older person', and also defines types of elder abuse not only as physical, psychological or emotional, sexual and financial abuse, but also stated that it can occur as a result of intentional or unintentional neglect [8]. Neglect also defines as "failure of the caregivers (such as family members, social organization workers, private caregivers) to provide the daily needs of the elderly" [9-11]. Because of this reason any kind of abuse and neglect was searched in most of the studies.*

Elder abuse is not only a problem of developing countries, but also a problem in developed countries. Studies about elder abuse and neglect showed a wide range of prevalence rates perhaps because studies employ different populations, measures and definitions of terms. For example, according to WHO's reports, prevalence rates or estimates for elder abuse in selected developed countries have been ranging from 1% to 10% [8] but according to violence and abuse against older women (AVOW) study report, overall prevalence has been stated as 28.1% of older women in Europe [12]. As a country example; the Irish Health Service Executive [HSE] has reported over 2000 cases of "alleged elder

abuse" in 2010, an increase of 10% from the previous year in Ireland [13]. Another finding from ABUEL project performed in Italy, has been demonstrated that psychological abuse, the most seen type of abuse, was seen in approximately 10% of older people nationwide [14].

It is important to know the risky groups in avoiding abuse and neglect of the elderly. Abuse and neglect can be seen in all the old people. But, especially sensitive old people who have health problems, personality traits (such as, older age or female sex, divorced or lonely people), dependence others to meet basic needs, social isolation, limited social support and lack of information constitute the risk groups. Other factors were related with cultural, familial circumstances and offenders' characteristics [7], [15-18].

Population dynamics in Turkey show that it seems to be an old population in a few years. Recently, the population age 65 years and older accounts for 7.3% of the total population [19]. Life expectancy at birth is 73.7 years; 76.1 in females and 71.5 in males [20]. Both the increase in elderly population and longer life expectancy cause elderly-related problems more frequently [21]. There were limited number of studies about elder abuse and neglect in Turkey. Majority of these studies are conducted in retirement homes and/or nursing homes where elderly people live collectively [22-23]. Although elder abuse is an increasing concern for Turkey, it has been ignored or not understood for many years. Sometimes elder people sometimes the offenders are not aware of that abuse and neglect is an inhuman behavior. Elder abuse and neglect is thought as a family or domestic problem behind the closed doors, that's why the exact rate of it can not be found. One of the most recently studies conducted in western region of Turkey reported the rate of elderly who suffered from at least one type of abuse as 13.3% [24].

To address this limitation, we conducted this study to open the door and determine the prevalence and types of suspected abuse and neglect among elderly with in the family, identify risk factors and evaluate elderly' suggestions and expectations for ageism by a community based study.

## 2. Method

### *Data Collection and Participants*

This cross-sectional study was conducted between September-October 2011, in Aydin, a western city of Turkey with a total population of 989 862 and 188 337 of them were within the Municipal boundary [25]. The number of people aged 65 years and above was approximately 19 399 (%10.3) in the city center [25].

Multi-stage sampling methods including cluster, simple random and systematic sampling methods were used for sampling. Neighborhoods were determined as cluster units. Aydin have 20 neighborhoods in the city center. They were classified into four parts according to their location from the city center such as western-eastern-northern and southern regions. Out of 20 neighborhoods in the city center, two neighborhoods from each of regions (totally eight) were selected to perform the study by simple random sampling method. The head of the neighborhoods keep records of the residences in every neighborhood. The records were listed according to the age of the residents and performed a list of elderly. Residences were selected by systematic sampling method from the elder list according to the proportion of elder population from each neighborhood. As a result of selection period, 768 residences were determined to be included in the study.

Sample size was determined in line with the prevalence values obtained from the results of the research in the literature. Studies showed that the rate of elder abuse

varies between 1.5-27.4% in Turkey related with regional characteristics [10], [24], [26]. In a one of the recent studies on this issue in Izmir province, neighbour of Aydin, elderly who suffered from at least one type of abuse was reported as 13.3%. Thus anticipated population proportion was accepted as 10%, taking an error margin of  $d=0.03$  and the design effect was two at a 95% CI, determined sample size would be 768. Taking a missing of 10%, the goal was to reach 845 individuals to account for nonresponses. Of the targeted 768 individuals, 756 were reached. The participants who did not have a communication problem, who did not have a perception problem (dementia, schizophrenia, etc), who agreed to participate in the research were included in the study. Individuals with difficulty in speaking or understanding Turkish, severe visual and hearing losses, dementia and Alzheimer's disease were not included in the study.

The study protocol was designed in compliance with the Helsinki declaration (Seul, October 2008) and approved by Adnan Menderes University Rectorate connected with approval of the Provincial Local Administration Committee of Aydin Governorship (ID for study 23.09.2011/6832) and consent was obtained from all participants. The Department of Public Health of Medical Faculty of Adnan Menderes University was responsible for the design and conducting of the study. Researchers introduced themselves before the interview and expressed the purpose of the study clearly. Data were collected by face to face interviews. A semi-structured questionnaire and three scales were used to collect data from the individuals. To ensure privacy the interviews were conducted in a room where the investigator and the participant were alone.

### 3. Measures

#### 3.1. Questionnaire

*Socio-demographics:* The semi-structured questionnaire was revised by two public health specialists interested in this topic. Prior to data collection the questionnaire was pretested in a pilot study by interviewing 10 elderly who were not included in the original study, in order to check for any discrepancies and misunderstandings. The socio-demographics section included questions such as age, gender, marital status, education, occupation and family type, presence of social security, monthly income of the elderly/family, chronic diseases diagnosed by a doctor, physical disability of the elderly, participation to social activities, family relationships, social relationships with the environment, participation in a paid work, participation to social activities etc.

*Elderly' suggestions and expectations for ageism:* An open-ended question was asked to analyze elderly' opinions and suggestions at the end of the questionnaire: "What are your expectations and suggestions about elderly' problems that they face with?"

*Scales.* Satisfaction with Life Scale, Philadelphia Morale Scale, Social Exclusion Scale, The Katz Index of Independence in Activities of Daily Living and Abuse Evaluation Form were used in the study.

*Satisfaction with Life Scale:* Turkish reliability and validity of Diener's "satisfaction with life scale" was done by Durak and his colleagues [27]. Scale consisted of 5 questions. The score of each response ranged from "1" (completely disagree) to 7 (completely agree). Higher

scores denoted a greater degree of life satisfaction.

*Philadelphia Geriatric Center Morale Scale -PGCMS:* Original Scale which was developed by Lawton in 1972, was revised by Morris and Sherwood (1975) and the revised version of the PGCMS (17 items: Lawton, 1975) contains three stable and replicable factors: Agitation (six items), Attitude Toward Own Aging (five items), and Lonely Dissatisfaction (six items). Each of the 17 questions is scored so that the value 0 indicates low morale and the value 1 indicates high morale; the total score ranges from 0 to 17. In the current study, a cut-off point of " $\leq 9$ " was taken to denote lower morale status of the elderly [28-30].

*Social Exclusion Scale:* Turkish reliability and validity of Jehoel-Gijsbers & Vrooman's [31] "social exclusion scale" was done by Bayram and his colleagues [32]. In this scale, there are four dimensions: financial deprivation, obtaining social rights, social participation, and cultural integration. The dimension of obtaining social rights has been considered in two separate sub-dimensions. While the first sub-dimension includes being able to benefit from public institutions and receive aid in terms of social rights, the second sub dimension consists of being able to benefit from suitable housing and a secure environment. For each of these dimensions, questions were arranged according to the 5-point Likert-type scale, which, in turn, were answered from never (1) to always (5), with higher scores meaning higher levels of social exclusion.

The Katz Index of Independence in Activities of Daily Living (ADL) was used to determine dependence levels likely to play a role in elder abuse and neglect [33]. A score of 2 or less was taken as severe functional impairment and dependent [34].

*Abuse Evaluation Form.* The form interrogates physical, psychological, sexual, financial types of abuse and neglect in the last 12 months. The form contains the following five main and their sub-questions: (a) Do you think that you have ever been neglected by your family members, relatives and caregivers? What kinds of needs of yours are not fulfilled or delayed? Could you please give examples? How many times did it occur? Who did it? (b) Have your family members, relatives and caregivers ever used words or phrases or had behaviors which hurt you? Could you give examples? How many times did it occur? Who did it? (c) Are there any people who have tried to use or seize your income? How do they do it? Could you please give examples? How many times did it occur? Who did it? (d) Have your family members, relatives and caregivers ever hurt your body? Could you please give examples for it? How many times did it occur? Who did it? (e) Have you ever been exposed to an unacceptable sexual behavior? Could you please give examples? How many times did it occur? Who did it?

Evaluation of abuse and neglect was only based on comments and statements made by the elderly. But researchers decided whether abuse and neglect had occurred through evaluation of the examples given by the elderly.

#### 4. Statistical analysis

Means, standard deviations and percentages were used in the evaluation of descriptive statistics. In the analytical evaluation, chi-square test was used for comparison of the data collected by counting; Student's t-test and Mann-Whitney U tests were used to compare the means obtained from continuous data. After univariate analysis, logistic regression analysis was done for

statistically significant factors to determine the possible risk factors that could affect psychological abuse, financial abuse or neglect. Presence or absence of these subtypes of abuse or neglect was taken as dependent variables, while gender, age group, marital status, social security, family type, chronic diseases or physical disability of the elderly, relationship with the family, morale status, social exclusion and dependency of the elderly, satisfaction with life and having another relative to stay with were taken as independent variables. The results of logistic regression analysis were showed as relative risk (odds ratio-OR) and 95% confidence interval (CI). The Backward-Wald method was used as the regression model. A  $p < 0.05$  was accepted for significance.

#### 5. Definitions used in the study

##### *Physical Abuse*

Physical abuse is defined as the use of physical force that may result in bodily injury, physical pain, or impairment [35]. Acts like injuring the body of an elder—by throwing an object, kicking, slapping, pushing, hitting, shaking, and beating—and causing insufficiency and physical hindrances are considered as physical abuse, if they occurred more than twice a month [24].

##### *Emotional/Psychological Abuse*

Emotional or psychological abuse is defined as the infliction of anguish, pain, or distress through verbal or nonverbal acts [35]. Acts like verbal attacking, disdain, threatening, humiliating, criticizing continuously, scaring, nicknaming, and disregarding, isolating an elderly person from his/her family, friends, or regular activities are considered as psychological abuse if they occurred more than twice a month [24, 35].

### *Sexual Abuse*

Sexual abuse is defined as non-consensual sexual contact of any kind with an elderly person. Any sexual relation like rape and stripping, sodomy, coerced nudity, and sexually explicit photographing is considered as sexual abuse [24], [35, 36].

### *Economic Abuse*

Economic abuse (financial or material exploitation) is defined as the illegal or improper use of an elder's funds, property, or assets. Cashing an elderly person's checks without authorization or permission; forging an older person's signature; misusing or stealing an older person's money or possessions; coercing or deceiving an older person into signing any document (e.g., contracts or will); and the improper use of conservatorship, guardianship, or power of attorney [35].

### *Neglect*

Neglect is defined as the refusal or failure to fulfill any part of a person's obligations or duties to an elder [35, 36]. Neglecting the needs like eating, clothing, heating, and personal hygiene that cannot be satisfied by elder people themselves, depriving of emotional and social impulses, leaving alone for a long time, and ignoring the need for medical treatment, control, and necessary equipments are considered as neglect, if they occurred more than twice a month [24].

## **6. Results**

Of 756 participants, 14.2% (n=107) suffered from any types of abuse and neglect. Participant characteristics are shown in Table 1. Consistent with the demographic profile of Turkey, gender were about 50.0% male and female, and the mean age of the elderly was 70.84±6.50 (range 65-102). Of the selected

participants, 47.0% graduated from primary school, 65.7% were unemployed, 91.6% had nuclear family and 68.7% were married. About all elderly had social security, and 79.2% had regular income, 45.3% has below base wage rate as monthly family income and 60.4% has below base wage rate as own monthly income. Elderly who were living in their own house was 62.0%. Of the participants, 96.2% of them had children and mean number of children were 2.89±1.35. Elderly who had a private room were 88.3%; but most of them spent their time in saloons (45.8%) or in guest rooms (32.8%). Almost half of the elderly (41.4%) stated that they didn't have another relative to stay with. Participants provided information about their own health status. Of the elderly, 75.8% had diagnosed chronic disease, 23.3% had some form of physical disability and 70.9% took regular medical therapy. Almost most of the elderly described good relationships within the family (89.1%) and the environment (96.2%). Of the elderly, 88.6% stated they were visited by their friends but rarely participate in social activities like going to cinema or sportive activities.

Types of abuse were given in Figure 1. From a totally five kinds of abuse or neglect, older people who suffered at least one type of abuse determined as "presence of abuse or neglect" which was shown as "total" (N=107) in Figure 1. Fifty-nine elderly stated that they suffered more than one types of abuse. From the elderly who experienced an abuse behavior; 8.1% were suffered from psychological abuse, 7.6% from neglect, 3.5% from financial abuse, 2.9% physical and 0.4% from sexual abuse. Mostly, children (68.1%), spouses (12.9%) and siblings (9.5%) were stated as the responsible person for the abusive behavior.

Distribution and chi-square analyses of characteristics of 107 elderly suffered from abuse and neglect were presented in Table 2. Because of the limited number of cases, sexual abuse was not conducted. According to Table 2, no significant differences were observed based on selected risk factors for physical abuse. A higher percentage of psychosocial abuse was observed in female participants (10.1%) than males (6.2%). Other associated factors for psychosocial abuse were to be widowed, absence of social security, to live in an extended family, to have a physical disability and having low morale status. Only marital status and age of the elderly was found as associated factors for financial abuse. Elderly who were 75 years old and above suffered from financial abuse more (6.0%) than others (2.5%). A higher percentage of neglect was observed in females (9.6%) than males (5.7%). Widowed elderly experienced a higher percentage of neglect (12.8%) than married (5.2%). Participants who had a chronic disease or physical disability, who were dependent in daily activities, who didn't have an another relative to stay with, who had bad relationship with the family and who had low morale status were suffered from neglect more than others.

According to the evaluation of scales, all dimensions of social exclusion were found higher in participants who suffered from psychological abuse and neglect. Social exclusion dimension related with social rights (access to adequate housing and safe environment) were found higher in participants who suffered from physical and financial abuse. Satisfaction with life were found lower in all subtypes of abuse ( $p < 0.05$ ).

Table 3 shows the results of the logistic regression analysis for each type of suspected abuse. Participants who had worse morale status increased the risk by 3.603 (95% CI [1.606-8.084];  $p = 0.002$ )

and who had social exclusion in the dimension of social rights related with accessing to adequate housing and safe environment, increased the risk by 1.084 (95% CI [1.034-1.136];  $p = 0.001$ ) in terms of having greater risk of psychological abuse. For financial abuse, no significant difference was found in logistic regression analysis. The variables that increased the risk of suspected neglect were worse morale status and social exclusion in the dimension of social rights related with accessing to adequate housing and safe environment. Worse morale status increased the risk by 6.920 (95% CI [1.930-24.813];  $p = 0.003$ ) and social exclusion by 1.108 (95% CI [1.052-1.168];  $p = 0.000$ ).

From a total of 136 responses, 39.7% of participants stated that "governor should take care of the elderly more" and 22.8% said that "sensitivity of the youngs toward elderly must be increased". Of the participants, 9.5% stated "the health care services for elderly must be developed", 8.8% stated that "the elderly people should be given care by their own families" and 2.9% said that "the elderly might be given care in the nursery homes if necessary".

## 7. Discussion

According to our knowledge, this is the first study to assess elderly abuse and neglect and risk factors using social exclusion scale in a representative community sample in Turkey. We found that elderly who suffered from any types of suspected abuse and neglect was 14.2%. Comparison of some population based studies were given in Table 4. Our study results were similar with Kissal's study, which was conducted in the same region of Turkey [24].

It is clear that elder abuse and neglect are important public health and societal problems in many parts of the world. Until

recently, this serious social problem was hidden from the public view and considered mostly a private matter [4]. According to the results of our study, 14 of 100 elderly suffered from an abusive behaviour, indicating elder abuse and neglect is being increasingly become a societal problems rather than a “private matter”.

It must be taken into account that elder abuse is a complex issue. Methodological factors (such as differences in tools for the detection of abuse, differences in target population) and real differences caused by cultural or regional factors such as different perceptions of the society for abuse and neglect, lack of the knowledge, unwilling of the elderly to provide information (fear of prosecution, fear of a worse treatment to her/himself, feel guilty), family structure etc. probably caused the differences in prevalence rates [37, 38]. A systematic review study which evaluated elder abuse prevalence of population based studies, identified a prevalence ranging from 3.2% to 27.5% [3]. It is possible to see this differences in Table 4.

Psychological abuse was the most reported one (8.1%) in Aydin study. Not only in İzmir study, but also some other studies in literature confirmed the findings of our study as psychological abuse and neglect was the most frequent subtypes of abuse [10, 24, 39, 40].

According to the results of this study; the elderly were abused mainly by the children (68.1%), spouses (12.9%) and siblings (9.5%). In a study by Boldy et al. about 43.0% of the elderly suffered abuse from their children [41]. In a study by Oh et al., sons and brides in-law were responsible in more than 75-80% of the elder abuse [40]. Changes in the societal structure, rapid industrialization and urbanization, resulting in changes in the economical and social structure, transition from the

agricultural to the industrial and urban setting and difficult life conditions in the cities lead to the elderly people to be perceived as a burden by the persons who they live with, raising the elder abuse and neglect issues [42, 43].

In the current study univariate analysis results showed that, female gender, living in an extended family, lack of the social security, not being married, having physical disabilities, low morale level, social exclusion and low level of life satisfaction were found to affect psychological abuse. In the studies by Kışsal and Keskinoglu, women were found to suffer from abusive behaviors more frequently compared to men [10, 24]. In the countries in which the male dominance is seen more, women to be abused more frequently can be explained by the lower educational status of women, higher economic dependence, lack of the social security and difficulty for reporting the abusive behavior. Similar to this study, there are several studies in the literature reporting that physical disability status, not being married and living with the family of the spouse affected the abusive behavior experience [15, 37, 44,45]. In case of a physical disability, elderly's self capacity for self-defense or escape from the abusive situation may be limited or caregivers burden might be greater in case of a dependency. Like in this study, some empirical studies indicated that a shared living situation (living with family members) was a major risk factor for elder abuse, and that people living alone were at the lowest risk [46].

Another important point in the current study was to investigate whether morale status, social exclusion and life satisfaction of the elderly affect the abuse or neglect. Current study results demonstrated that, there were an association between morale status, social exclusion and life satisfaction of the elderly, and the risk of psychological



abuse. But it is obvious that, it was not possible to determine whether psychological abuse caused the presence of these status or presence of them increased the risk of psychological abuse.

Logistic regression analysis results showed that psychological abuse was strongly associated with low morale status of the elderly and social exclusion. Social exclusion was determined by a social exclusion scale of which Turkish reliability and validity was done by Bayram and his colleagues [32]. Socially excluded person were unable to participate in social activities and integrate to social relations or unable to benefit from suitable housing and a secure environment. Also literature findings supported that social isolation has been identified as an important risk factor for abuse [7],[15],[37]. The problems faced in the social relationship increase the risk of abuse and neglect.

As in psychological abuse, neglect status also found to be influenced by the factors such as female gender, not being married, presence of a physical disability, low morale status, social exclusion and low level of life satisfaction. In addition, elderly having a chronic disease, not having a relative to stay with, being dependent for the daily activities and poor familial relationship were found as the factors affecting neglect status. Kissal & Beşer reported that perception of familial relationships as average and below were found to increase abuse 8.72 times [24]. A project performed in New Zealand noted that abused older people described poor physical health, chronic health status, being dependent on the others for assistance with the daily activities and a lowered mood state as a contributing factor for abuse or neglect. Majority of abuse cases explained that they were lived with other members of the extended family, including children and grandchildren [46]. Although many variables were associated

with neglect, logistic regression analysis results demonstrated that neglect was strongly associated with low morale status of the elderly and social exclusion in accessing to adequate housing and safe environment as in psychological abuse.

Only marital status, age of the elderly, life satisfaction and social exclusion was found as associated factors for financial abuse. Elderly who were 75 years and above suffered from financial abuse more (6.0%) than others (2.5%). Dependency of the elderly to the environment increases and his/her influence in the family settings decreases with the age. In this case, caregivers thought that the elderly was unable to make correct decisions. If presence of social security systems that protect and support the elderly was insufficient, abusive behaviours might take place inevitably. Although the stated factors were found significant in univariate analyses, they were not significant in logistic regression analysis.

Our results should be viewed in the framework of three main methodological limitations. (a) The factors causing abuse can be grouped as the characteristics of abusers and abused persons and the social factors. In this study, we interrogated only the factors affecting abuse and neglect in terms of the elderly suffered from abuse which was one the limitations of this study. (b) Detection of abuse was based on self response of the participants rather than inspection of physical signs or injuries to confirm the abusive behaviours. Because data was collected through an interview, participants who had cognitive deterioration excluded from the study. (c) This study was conducted in a city center which is located in the western of Turkey. Thus, the results of this study can not be extrapolated to populations in rural areas.

Despite all the limitations, results of this study provide evidence of the attempts with an integrated approach to the elderly

health, supporting morale status and level of life satisfaction are important factors for the active ageing. The main strengths of this study was, it was a community-based study, determining risk factors for each of the abuse subtypes and individual's privacy was taken into account by interviewing with elderly alone in a separate room.

In the current study, elderly's suggestions and expectations for ageism were also questioned. Most of the participants stated that the government should be interested in elder care more and the young people must be more sensitive to them. On the other hand, 2.9% of the participants stated that the elderly can receive care in the nursery homes if necessary. These results indicated that the elderly sought more support from the government in terms of social support and security. In Turkey, there is no specific law on elder abuse. But it has been emphasized in the Turkish Republic Constitution that regardless of age, religion, language and gender, everybody has the right of living in a healthy and well-balanced environment. Again, although not specific to elderly people, some mistreatment (to leave, not to help, to mistreat, and so on.) to the persons who are unable to handle themselves, are punished with criminal fine or imprisonment (3months-3years) in Turkish Penal Code [47]. Nevertheless, because of the unawareness of both the abuser and abused people (such as abuse and neglect are not considered as a crime), these punishment are insufficient to be deterrent. This study was first to be conducted in Aydin province on this subject. Results of the study will provide contribution to the planning of the elderly care services. In fact determining problems in elder care and constitute the policies on this subject is one of the commitment to be fulfilled until 2013 for Aydin province which has

been awarded with the healthy city certificate.

In summary, 14.2% of elderly aged 65 years and older were identified as possible victims of abuse. Psychological abuse and neglect were found as the most common subtypes. It is important to identify different risk factors according to each subtypes in order to combat with age related violence. The research findings suggest that worse morale status and social exclusion in the dimension of social rights related with accessing to adequate housing and safe environment increased the risk for psychological abuse and neglect. From the literature, some other possible associations between different factors could be seen, but further detailed exploration is needed to find out the interaction between these variables. Detailed researches should be done to find out possible risk factors by longitudinal studies, focus group or in-dept interviews. As abuse and neglect may have serious effects on elderlies' health and well-being, preventive measures and adequate regulations must be put into place to combat violence against older people. Public awareness, provision of health and social care services must be held to improve the quality of elder care for old people. Health and social service professionals may be at the key point to detect the signs and symptoms of abuse and neglect and must be encouraged to address suspected cases of elder abuse.

#### **Declaration of Conflict of Interest**

The authors declared no potential conflicts of interests with respect to the authorship and/or publication of this article.

#### **Funding**

The authors declared that they received no financial support for their research and/or authorship of this article.

Table 1

*Characteristics of 756 Elderly Who Participated to Aydin Study, Turkey, 2011*

	<b>n</b>	<b>%</b>
<b>Gender (n=756)</b>		
Female	367	48.5
Male	389	51.5
<b>Age Group (n=755)</b>		
65-74	553	73.2
+75 years	202	26.8
<b>Educational Status (n=756)</b>		
Illiterate	195	25.8
Primary School	360	47.6
Secondary school and above	201	26.6
<b>Occupational Status (n=756)</b>		
Employed	259	34.3
Unemployed	497	65.7
<b>Family Type (n=741)</b>		
Nuclear	712	96.1
Extended	29	3.9
<b>Marital Status (n=755)</b>		
Married	519	68.7
Divorced	236	31.3
<b>Social Security Health Insurance</b>		
Yes	681	90.1
No	75	9.9
<b>Regular Income (n=755)</b>		
Yes	598	79.2
No	157	20.8
<b>Monthly Income of the Family (n=559)</b>		
Below base wage rate	253	45.3
Above base wage rate	306	54.7
<b>Monthly Income of The Elderly (n=450)</b>		
Below base wage rate	272	60.4
Above base wage rate	178	39.6
<b>Owner of the House/Flat (n=753)</b>		
Elderly' house	467	62.0
Living as a tenant	110	14.6
Other (husband, sons, daughters, etc)	176	23.3
<b>Type of the House (n=754)</b>		
Flat	564	74.8
Detached house	200	25.2
<b>To Have a Private Room (n=753)</b>		
Yes	665	88.3
No	88	11.7

Table 2

*Distribution and Chi-Square Analyses:  
Characteristics of 107 Elderly Suffered from Abuse and Neglect,  
(Aydin, Turkey, 2011)*

	<b>Physical (22/752)</b>		<b>Psychological (61/753)</b>		<b>Financial (26/753)</b>		<b>Neglect (57/754)</b>	
	<b>n</b>	<b>(%)</b>	<b>n</b>	<b>(%)</b>	<b>n</b>	<b>(%)</b>	<b>n</b>	<b>(%)</b>
<b>Gender</b>								
Female	12	(3.3)	37	<b>(10.1*)</b>	17	(4.6)	35	<b>(9.6*)</b>
Male	10	(2.6)	24	(6.2)	9	(2.3)	22	(5.7)
<b>Age</b>								
65-74	15	(2.7)	42	(7.6)	14	(2.5)	38	(6.9)
+75 years	7	(3.5)	19	(9.5)	12	<b>(6.0*)</b>	19	(5.5)
<b>Education</b>								
Primary school and less	14	(2.5)	49	(8.9)	17	(3.1)	48	(8.7)
Secondary school and above	8	(4.0)	12	(6.0)	9	(4.5)	9	(4.5)
<b>Occupation</b>								
Unemployed or housewife	14	(2.8)	47	(9.5)	18	(3.6)	42	(8.5)
Employed or retired	8	(3.1)	14	(5.4)	8	(3.1)	15	(5.8)
<b>Family type</b>								
Nuclear	21	(3.0)	53	(7.5)	24	(3.4)	50	(7.0)
Other	1	(3.4)	7	<b>(24.1*)</b>	2	(6.9)	4	(13.8)
<b>Marital status</b>								
Married	14	(2.7)	33	(6.4)	12	(2.3)	27	(5.2)
Divorced/death spouse	8	(3.4)	28	<b>(12.0*)</b>	14	<b>(6.0*)</b>	30	<b>(12.8*)</b>
<b>Social security</b>								
Yes	19	(2.8)	49	(7.2)	25	(3.7)	49	(7.2)
No	3	(4.1)	12	<b>(16.2*)</b>	1	(1.4)	8	(10.8)
<b>Monthly income of the family</b>								
Below base wage rate	8	(3.2)	19	(7.5)	9	(3.6)	17	(6.7)
Above base wage rate	12	(3.9)	24	(7.8)	11	(3.0)	17	(5.6)
<b>Monthly income of the elderly</b>								
Below 837 TL	9	(3.3)	20	(7.4)	8	(3.0)	16	(5.9)
Above 838	11	(6.2)	13	(7.3)	10	(5.6)	12	(6.7)
<b>Health status of the elderly (chronic disease)</b>								
Yes	16	(2.8)	51	(8.9)	23	(4.0)	50	<b>(8.8*)</b>
No	6	(3.3)	10	(5.5)	3	(1.6)	7	(3.8)
<b>Physical disability of the elderly</b>								
Yes	6	(3.4)	24	<b>(13.7*)</b>	9	(5.1)	24	<b>(13.7*)</b>
No	16	(2.8)	37	(6.4)	17	(3.0)	33	(5.7)
<b>Having another relative to stay with</b>								
Yes	9	(2.0)	33	(7.5)	11	(2.5)	26	(5.9)
No	12	(4.2)	28	(9.0)	15	(4.8)	31	<b>(10.0*)</b>
<b>To participate social activities</b>								
Yes	10	(3.0)	29	(8.8)	9	(2.7)	20	(6.0)
No	12	(2.9)	32	(7.6)	17	(4.0)	37	(8.8)

	Physical (22/752)		Psychological (61/753)		Financial (26/753)		Neglect (57/754)	
	n	(%)	n	(%)	n	(%)	n	(%)
<b>Relationship with the family</b>								
Good	21	(2.8)	58	(7.8)	24	(3.2)	50	(6.8)
Bad	1	(7.7)	3	(23.1)	2	(15.4)	7	(53.8*)
<b>Good relation with the environment</b>								
Yes	22	(3.0)	59	(8.1)	25	(3.4)	54	(7.4)
No	-	-	2	(7.4)	1	(3.7)	3	(11.1)
<b>Regular income</b>								
Yes	21	(3.5)	46	(7.7)	22	(3.7)	42	(7.0)
No	1	(0.6)	15	(9.6)	4	(2.6)	15	(9.6)
<b>To participate in paid work</b>								
Yes	1	(2.6)	3	(7.5)	-	-	3	(7.5)
No	21	(2.9)	58	(8.1)	26	(3.7)	54	(7.6)
<b>Activities in Daily Life (ADL)</b>								
Dependent	0	0	5	(16.1)	0	0	8	(25.8*)
Independent	22	(3.5)	53	(7.4)	25	(3.5)	44	(6.2)
<b>Morale status</b>								
Low	9	(4.3)	29	(13.9*)	8	(3.8)	31	(14.8*)
High	7	(2.3)	12	(3.9)	7	(2.3)	5	(1.6)

\*p &lt; .05

Table 2. (cont.)

*Distribution and Chi-Square Analyses:  
Characteristics of 107 Elderly Suffered from Abuse and Neglect,  
(Aydin, Turkey, 2011)*

Evaluation of scales (mean±SD, (yes)/(no)**)	Physical (22/752)	Psychological (61/753)	Financial (26/753)	Neglect (57/754)
Satisfaction with life scale	18.0±6.9/ 21.7±7.4***	19.6±7.8/ 21.8±7.3***	18.7±8.5/ 21.7±7.3**	17.1±7.6/ 21.9±7.2***
Social exclusion (dimension- material deprivation)	18.5±9.9/ 16.5±8.2	21.9±10.2/ 16.4±7.9***	19.1±10.1/ 16.5±8.2	22.7±9.5/ 16.1±7.9***
Social exclusion (dimension- social rights/access to institutions and provisions)	8.8±5.2/ 8.5±5.0	10.9±6.1/ 8.3±4.8***	9.6±5.5/ 8.4±5.0	10.5±5.9/ 8.3±4.9***
Social exclusion (dimension- social rights/Access to adequate housing and safe environment)	17.1±6.6/ 12.8±6.2***	17.6±8.1/ 12.5±5.8***	15.8±6.2/ 12.8±6.2**	18.9±7.5/ 12.4±5.8***
Social exclusion (dimension- social participation)	19.9±10.2/ 20.3±8.6	23.1±10.7/ 20.0±8.5***	23.1±9.8/ 20.1±8.6	26.4±9.8/ 19.7±8.4***
Social exclusion (dimension- cultural/normative integration)	10.1±6.2/ 9.9±4.9	11.5±5.3/ 9.7±4.9***	10.7±5.7/ 9.8±4.9	12.0±5.1/ 9.7±4.9***

\*\*Score shows experience of abuse "Yes" to "no"

\*\*\* p&lt;.05

Table 3

*Logistic Regression: Characteristics of 107 Elderly Suffered from Abuse and Neglect, Aydin, Turkey, 2011*

Abuse Type	Predictors		B	SE	OR	95% CI	p
Psychological	Morale score	Low	1.282	0.412	3.603	1.606-8.084	<b>0.002</b>
		High	1*				
	Social exclusion (dimension-social rights/Access to adequate housing and safe environment)		0.081	0.024	1.084	1.034-1.136	<b>0.001</b>
Financial	Age	75 above	0.714	0.430	2.042	0.879-4.744	0.097
		65-74	1*				
	Marrital status	divorced	0.818	0.436	2.266	0.965-5.322	0.060
		married	1*				
	Social exclusion (dimension-social rights / Access to adequate housing and safe environment)		0.052	0.028	1.053	0.998-1.112	0.059
Neglect	Physical disability	Yes	0.805	0.425	2.238	0.973-5.146	0.058
		No	1*				
	Morale score	Low	1.934	0.652	6.920	1.930-24.813	<b>0.003</b>
		High	1*				
	Satisfaction with life		-0.052	0.030	0.949	0.894-1.007	0.086
	Social exclusion (dimension-social rights / Access to adequate housing and safe environment)		0.103	0.027	1.108	1.052-1.168	<b>0.000</b>

\*reference category

Table 4  
*Comparison of Some Population Based Studies on Elder Abuse and Neglect, 2011*

	Physical	Psycho- logical	Financial	Sexual	Neglect	Total
Ergin et al., Aydin,Turkey, 2011	2.9	8.1	3.5	0.4	7.6	14.2
Kissal et.al., İzmir, Turkey, 2011	4.2	9.4	2.1	0.9	8.2	13.3
Naughton et al., Ireland, National Prevalence Study, 2011	0.5	1.2	1.3	0.05	0.3	2.2
Garre-Olmo et al., Girona, Spain, 2009	0.1	15.2	4.7	-	16.0	29.3
The Association Gabija, Lithuania, 2006*	50.2	18.5	23.9	7.3		
Dutch National Platform, Netherlands, 2005*	41.0	46.0	-	3.0	18.0	-
Keskinoglu et al., İzmir, Turkey, 2004	1.5		2.5		3.5 (absolute) 28.9 (probable)	
Anme T, Japanese, 2004	3.8	9.0	6.4	1.3	7.7	17.9
Boldy et al., Western Australia, 2002	30.0	55.0	81.0	4.0	25.0	-
Oh et.al, Seoul, Korea, 1999	1.9	4.2 (emotional) 3.6 (verbal)	4.1	.	2.4	-
Commis et al., Amsterdam, Holland, 1998	1.2	-	1.4	.	0.2	5.6

\*Retrieved from The European Older People's Platform

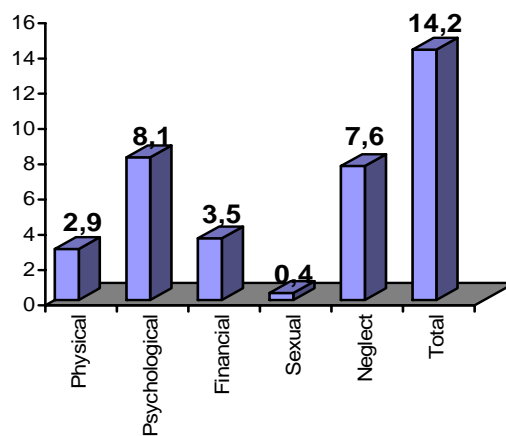


Fig.1. *Types of Elder Abuse And Neglect, Aydin, Turkey, 2011 (%)*

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