



ASSESSMENT OF FEAR OF FALLING AND LIFE SATISFACTION AMONG ELDERLY PEOPLE IN A RURAL AREA OF WESTERN TURKEY

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ABSTRACT

Introduction: The prevalence of fear of falling is high in the population over 65 years of age. The aim of the study was to determine the frequency of fear of falling, to examine some variables that are thought to be related to it, and to evaluate the relationship between the level of satisfaction with life and fear of falling among individuals over the age of 65 living in a rural area of Western Turkey. **Material-Method:** This study is a cross-sectional study conducted on elderly people between 01 November and 31 December 2019. A total of 336 people formed the study group. The Falls Efficacy Scale-International (FES-I), and the Satisfaction with Life Scale (SWLS) were used. A logistic regression model (Backward Wald) was created. Statistical significance was accepted as $p < 0.05$. **Results:** By the results of the Logistic Model; Extended family (OR: 3.290) and low level subjective perception of health (OR: 4.056) were risk factors for fear of falling. The life satisfaction score was found to be lower in those with fear of falling compared to those without fear of falling ($p = 0.029$). **Conclusion:** It is suggested that with the development of programs that will increase the life satisfaction of the elderly, subjective health perception will increase and the fear of falling will decrease.

KEYWORDS : Fear of falling, Elderly, Life satisfaction

INTRODUCTION:

Turkey is a country that is aging. According to the 2019 Turkey Statistical Institute data, the ratio of the total population of the elderly population, while 8.0% in 2014, rose to 9.1% in 2019 (Turkish Statistical Institute, 2019). According to the World Health Organization, severe falls that require medical intervention reach 37.3 million per year (Pellicer-García et al., 2017). In a study conducted in Turkey, it is reported to carry a high risk of falls of 65.3% of individuals admitted to the emergency service (Erdem & Atay, 2018). It has been shown that there is a relationship between the history of falling and the fear of falling (Akosile et al., 2014). In general, the prevalence of fear of falling was found to be high in the population over 65 years of age, while it was shown that the fear of falling was higher in the elderly with a history of falling (Rahman et al., 2011; Kaya et al., 2012). Life satisfaction is one of the factors in determining the quality of life (Netuveli & Blane, 2008). Fall prevention programs are important for the quality of life measures, as they can affect other health dimensions as well as fall risks (Lin et al, 2007). Since falling is known to affect the quality of life negatively in the elderly, it is thought that there will be a relationship between life satisfaction and fear of falling. Therefore, this research was planned.

The aim of the study was to determine the frequency of fear of falling, to examine some variables that are thought to be related to it, to examine some variables that are thought to be related to it, and to evaluate the relationship between the level of satisfaction with life and fear of falling among individuals over the age of 65 living in Alpu district of Eskisehir province in Western Turkey.

MATERIALS AND METHODS:

This study is a cross-sectional study conducted on elderly people residing in Alpu district of Eskisehir province of Turkey

between 01 November and 31 December 2019. Alpu district is a rural area, and 18.8% of the population ($n = 2.061$) consists of the elderly.

The minimum number of elderly that should be reached was calculated as 323 with the Minitab 16 Statistical Package Program ($p: 0.30$; comparison $p: 0.35$; $\alpha = 0.05$; power of test; 0.85). A total of 336 people, who agreed to participate in the study during the study, formed the study group. The researchers have occurred the study group from the elderly who applied to the district hospital of Alpu, and family health centers during the study period, and the elderly living in elderly living centers of Alpu district.

A questionnaire was prepared by making use of the literature. The questionnaire includes some sociodemographic characteristics of the elderly and some variables thought to be related to fear of falls.

The fear of falling was evaluated with the Falls Efficacy Scale-International (FES-I). This scale was developed in 2005 by Yardley et al. (2005). Ulus et al. (2012) realized the reliability and validity of this scale in Turkey. The scale consists of 10 questions in a 10-point Likert type. Answers to each question are scored to be between very confident (1 point) and never (10 points). Scores that can be obtained from the scale range from 10 to 100. And 70 and above scores are considered to have "fear of falling".

The Satisfaction with Life Scale (SWLS) was used to evaluate the life satisfaction levels of the elderly. This scale was developed in 1985 by Diener et al. (1986). Durak et al. (2010) realized the validity and reliability study in Turkey. The scale consists of 21 questions in 5-point Likert type, and the 6th question is scored in reverse. The scores that can be obtained

from the scale vary between 21 and 105, and the higher the scores, the higher the level of life satisfaction.

The health institutions and elderly living centers included in the study were visited at the appointment dates and times previously taken and interviewed in the waiting rooms suitable for the elderly. The questionnaire forms and scales were filled by the researchers using face to face interview method. Each meeting lasted approximately 20-25 minutes.

Ethical approval of Eskişehir Osmangazi University Non-Interventional Clinical Research Ethics Committee dated 08.10.2019 and numbered 25403353-050.99-E.119265 was obtained in order to conduct this study.

The data obtained were evaluated in the computer environment in SPSS (version 15.0) Statistical Package Program. Shapiro-Wilk test was used for the normal distribution of the data. Chi-square test, Runs test and Mann-Whitney U test were used for analyses. The logistic regression model (Backward Wald) is created with variables which obtained statistically significant ($p < 0.05$) in bivariate analyses (Age group, gender, marital status, family type, obesity, subjective health perception, sleep problem history, orthopedic disability). Step final results were presented.

RESULTS:

The most important and statistically significant findings obtained in this study will be presented and discussed.

In our study, 149 (44.3%) of those constituting the study group are women and 187 (55.7%) of them are men. Their ages ranged from 65-88, with a mean of 73.2 ± 5.9 years. The frequency of fear of falling in the elderly was found to be 15.2% ($n = 51$).

More than half (55.1%) of the study group reported that their subjective perception of health was moderate. The number of patients with a history of any chronic disease with a physician diagnosis was 63 (8.8%), and the number of those with a history of falling within the last 1 year was 135 (40.2%). The number of those with visual impairment is 187 (55.7%), and the number of those with orthopedic disability is 143 (42.6%).

Results of the Logistic Regression Model created with variables found to be possible associated with the fear of falling (Backward Wald; step final) were presented in Table 1.

According to the SWLS scores, the life satisfaction median score (73.0 (39.0-97.0)) was found to be lower in those with fear of falling than the life satisfaction median score (79.0 (40.0-105.0)) in those without fear of falling ($z = 5.876$; $p = 0.029$)

DISCUSSION:

Fear of falling can be expected to be higher due to differences in access to health services and lack of family-based social support, especially in studies conducted in developing countries. In our study, the frequency of fear of falling was found to be 15.2%. Considering the results of the studies conducted in countries that differ in socio-cultural and development levels such as the USA, Netherlands, Japan, Nigeria, it is observed that the frequency of fear of falling in the elderly varies between 23% and 80% (Akosile et al., 2014; Scheffer et al., 2008; Kempen et al., 2009; Boyd & Stevens, 2009; Sawa et al., 2014). In a study from Turkey, The question was asked, "Are you afraid of falling?". It has been reported that 79.8% of the elders fear falling (Lok, 2010). As can be seen, the frequency of fear of falling was found low in our study. Detecting the fear of falling with different methods may be a leading reason for achieving different results. Apart from this, the fact that Eskişehir is developed socioculturally and that the services provided for the elderly in Eskişehir are in

good condition can explain the low frequency of fear of falling. Extended type families in Turkey are families with low socioeconomic status, generally. In the extended family, the elderly will be in need of other family members. In addition, there is a risk that home accidents occur more frequently in homes with extended family types. Therefore, it can be expected that the fear of falling is more common in elderly people living in extended family types. In our study, it was found that the frequency of fear of falling was 3.290 times higher in those with extended family type.

In this study, one of the risk factors for fear of falling was found to be poor health perception (OR: 4.056). In a study conducted in Turkey (Altay et al., 2016), which is less subjective health perception of those living in the extended family and it has been shown to negatively affect the quality of life. It is known that the perception of health affects the healthy lifestyle behaviors of a person. The development of healthy lifestyle behaviors also causes a high perception of health. Silva et al. (2013) showed that the elderly who participated in regular physical activity programs developed a high level of health perception and this reduced the fear of falling. The study of Silva and colleagues is similar to our study. It was determined that the level of life satisfaction in the elderly with the fear of falling was lower than those without the fear of falling ($p < 0.05$). Studies dealing with the issue of fear of falling in the elderly have revealed a positive relationship between the health-related decrease in quality of life and the fear of falling (Lin et al., 2007). The concept of life satisfaction is also a concept that overlaps with the concept of quality of life. Life satisfaction is defined as 'the cognitive judgmental global assessment of one's life'. It has been reported that there are very few publications analyzing the relationship between life satisfaction and falling and life satisfaction in the elderly population. Stenhagen et al. (2014) reported that the health-related quality of life and life satisfaction levels of the elderly with a history of falling decreased.

Limitations:

The elderly, who constitute the target group, were reached not in their homes, but in health centers and elderly living centers. The most important limitation of our study is that the elderly who could not attend these institutions could not be represented in the sample, enough.

CONCLUSION:

The results of this study conducted in a rural area of Turkey, have revealed the relationship between the extended family and subjective health perception with fear of falling in the elderly. There is an association between low-level life satisfaction and fear of falling among elderly people. At the end of this study, it is suggested that with the development of programs that will increase the life satisfaction of the elderly, subjective health perception will increase and the fear of falling will decrease.

TABLES:

Table 1. Results of the Logistic Regression Model (Backward Wald; step final)

Variables*	β	SE ^a	p	OR ^b	%95 CI ^c
Age group (reference: 69 and below)					
70-79	-0.126	0.410	0.759	0.882	0.394-1.970
80 and upper	0.733	0.446	0.100	2.081	0.868-4.985
Family type (reference: nuclear family)					
Alone	0.683	0.379	0.071	1.979	0.942-4.155
Extended family	1.191	0.413	0.004	3.290	1.464-7.393
Subjective perception of health (reference: High)					
Middle	0.899	0.581	0.122	2.457	0.786-7.674
Low	1.400	0.621	0.024	4.056	1.201-13.695
Sleep problem history (reference: No)					

Yes	0.633	0.351	0.071	1.883	0.947-3.742
Constant	-3.532	0.603	0.000	-	-
Se ^a : Standard error, OR ^b : Odd's ratio, CI ^c : Confidence interval					
* Variables included in the model: Age group, gender, marital status, family type, obesity, subjective health perception, sleep problem history, orthopedic disability					

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