



EXAMINATION OF THE RELATIONSHIP BETWEEN THE STATUS OF EXPERIENCING HOME ACCIDENT OF ELDERLY AND ADAPTATION DIFFICULTIES

YAŞLILARIN EV KAZASI GEÇİRME DURUMU VE UYUM GÜÇLÜĞÜ ARASINDAKİ İLİŞKİNİN İNCELENMESİ

Nihan YILMAZ¹ - Hande ŞAHİN² - Sibel ERKAL³

Abstract

This study was planned and carried out to examine the relationship between home accident and adaptation difficulties of the elderly. The population of the study consisted of elderly people aged 65years and older. In the research, systematic sampling method was used for a total of 506 elderly people. In the study, “Assessment Scale of Adaptation Difficulty for the Elderly” which was developed by Şişman & Kutlu (2016) was used. In the study, it was determined that 15.2% of the elderly experienced an accident in the last year and 62.3% of them were falling accidents. When the descriptive statistics for the subscales of Assessment Scale of Adaptation Difficulty for the Elderly were examined, adaptation difficulty is high in all four subscales. The relationship between experiencing an accident in the last year by the elderly and all of the subscales was found significant ($p<0.05$). All of the subscale scores for those who have experienced an accident in the last year are higher than those who didn't experience an accident. This situation shows that elderlies who have experienced a home accident in the last year have more difficulty in adaptation.

Keywords: Elderly, Adaptation, Adaptation Difficulty, Home Accident.

Öz

Bu araştırma yaşlıların ev kazası geçirme durumu ve uyum güçlüğü arasındaki ilişkiyi incelemek amacıyla planlanmış ve yürütülmüştür. Araştırmanın evrenini 65 yaş ve üzeri yaşlılar oluşturmaktadır. Araştırmada sistematik örnekleme yöntemi kullanılmış ve toplam 506 yaşlıya ulaşılmıştır. Çalışmada Şişman ve Kutlu (2016) tarafından geliştirilen “Yaşlılarda Uyum Güçlüğü Değerlendirme Ölçeği” kullanılmıştır. Çalışmada Yaşlıların% 15.2'sinin son bir yıl içerisinde kaza geçirdiği ve % 62.3'ünün düşme kazası olduğu belirlenmiştir. Yaşlılar için Uyum Zorluğu Değerlendirme Ölçeğinin alt ölçekleri için tanımlayıcı istatistikler incelendiğinde, uyum güçlüğü dört alt ölçek için de yüksektir. Yaşlıların Son bir yılda kaza geçirme durumu ile tüm alt ölçekler arasındaki ilişki anlamlı bulunmuştur ($p < 0.05$). Son bir yılda kaza geçirmiş olanların tüm alt ölçek puanları kaza geçirmemiş olanlardan daha yüksektir. Bu durum, son bir yılda ev kazası geçiren yaşlıların uyum sağlamada daha zorlandıklarını göstermektedir.

Anahtar Kelimeler: Yaşlı, Uyum, Uyum Güçlüğü, Ev Kazası.

¹ Arş.Gör.Dr. Hacettepe University, Faculty of Economics and Administrative Sciences, Department of Family and Consumer Sciences, Ankara, Turkey, nihangursoy@hacettepe.edu.tr. Orcid: 0000-0001-8283-0531, (Corresponding author).

² Assoc. Prof. Dr., Kırıkkale University, Faculty of Health Sciences, Ankara, Turkey, hande_k1979@yahoo.com, Orcid: 0000-0002-0012-0294

³ Prof. Dr., Hacettepe University, Faculty of Economics and Administrative Sciences, Department of Family and Consumer Sciences, Ankara, Turkey, erkalsibel@hotmail.com. Orcid: 0000-0002-8395-9705

INTRODUCTION

Advancements of medical technologies in the modern world where the average life expectancy for extending the human lifespan increases, the world population is getting older. (Buz, 2015; Samancı-Tekin and Kara, 2018). There is an increase in the population of the elderly in Turkey, as it is all over the world (Akin, 2012, p.17). According to the 2017 data of TSI, Turkey's population is 80 million 810 thousand 525 and 6 million 895 thousand 385 (8.5%) of them are elderly people. The elderly population has increased by 17% over the past five years. According to the population projection, it is predicted that the elderly population rate will be 10.2% in 2023, 12.9% in 2030, 16.3% in 2040, 22.6% in 2060 and 25.6% in 2080 (TSI, 2017). World Health Organization emphasizes all of the countries to be prepared against the negative results that would emerge as a result of demographic process which means the increase in elderly population (WHO, 2015).

Aging is a process that causes social, mental and physical decline in the individual. Although there are personal differences in each individual, aging causes mental and physical impairments in some functions, decreases in social relations and losses. (Bilir & Subaşı, 2006). Along with physical and mental aging, psychomotor, perceptual and cognitive abilities are also decreasing. (Glasgow & Higgins 2010, p.275). These physiological changes in the elderly cause the increase of daily dependencies and in parallel increase the risk of home accidents. Home accidents are the fourth most important cause of disability and death in elderly individuals. (Şahbaz & Tel, 2006, p. 85-93).

The most prominent features of the aging period are observed in the changes in the physical structure of the individual. In addition, problems such as health problems, problems caused by retirement and spouse loss, role losses and economic losses constitute important problems in old age. Because of this and similar problems, the old age becomes difficult for most elderly people. Therefore, the adaptability of the elderly person is seriously affected by all these problems (Can, 1990). These problems affect the adaptation of the elderly with the environment and themselves. (Şişman & Kutlu, 2016).

As human life is constantly changing, adaptation is a necessary process for a happy life in every generation. Elderly individuals are one of the groups that need adaptation process. Adaptation is very important in this age group as it is a process that requires adaptation to the critical conditions of life, such as old age, physical and cognitive progressions, differences, losses and the end of life. (Ouweland, Ridder & Bensing, 2007). If elderly individuals cannot adapt to the physical and functional changes that occur in their bodies, problematic consequences arise. As a result, if individuals develop and use a variety of mechanisms to cope with this difficulty of adjustment, they achieve a higher level of adaptation than those who do not develop coping mechanisms or those who often do not (Flood, 2005).

Aging is a period in which there are serious changes in the biological structure, social relations and a decline in the psychological field. (Er, 2009). Old age is a period of loss. Reduction of activity, loss of status with retirement, health deterioration, slowing of movements, decrease in income, need of others, reminder of death, etc. old age is considered as an undesirable and difficult universal period. (Arpacı, 2005).

Growing old as healthy and successful, increasing the life qualities of elderly, integration of them with the society and living in harmony with the society are in the agenda of the world (Güngör-Ergan, 2007).

In Turkey it is in a limited number of studies on adaptation to old age (Can, 1990; Güngör-Ergan, 2007; Şişman & Kutlu, 2016) and there aren't any studies that examine the relationship between the home accidents and adaptation difficulty. For this reason, this research was planned and conducted with the aim of examining the relationship between the status of experiencing home accident of elderly and adaptation difficulties.

1. MATERIALS AND METHOD

The population of this study which aims to determine the relationship between the status of experiencing home accidents and adaptation difficulty of elderly consists of elderly who are aged 65 and over 65 and residing in the Çankaya province of Ankara. In the research, due to the limitations such as time, cost etc., among the sampling methods, systematic sampling method was used and a total of 506 elderly groups living in Kurtuluş, Kolej, Cebeci districts, constitute the sample group of the research.

The population of the study (N=107.537) consists of individuals aged 65 and over and living in the Çankaya district (Municipality of Cankaya, 2018). Sample size calculation was performed to estimate the overall score of Aging in Place Scale. In the research sample size was calculated using the formula

$$n_0 = \frac{t^2 s^2}{d^2} \text{ and } n = \frac{n_0}{1 + \frac{n_0}{N}} \text{ that is recommended for quantitative studies and finite population}$$

(Cochran, 1977). From the parameters that form the formula; $t=2$, $s=0,5$ and $d=0,04$ and the minimum sample was calculated with this formula was 500 people. Considering missing and not returning questionnaires, a total of 540 questionnaires were distributed and 506 questionnaires were evaluated.

In the study, questionnaire technique was used as a data collection tool and "Assessment Scale of Adaptation Difficulty for the Elderly" which was developed by Şişman and Kutlu (2016), was used.

1.1. Assessment Scale of Adaptation Difficulty for the Elderly

The scale is a four point likert scale ("none," 0 points, "a little," 1 point, "very much," 2 points and "A lot," 3 points) that consists of 24 items. The evaluation of the scale is determined by calculating the mean score and the lowest score that can be acquired from the scale is 0 and the highest score is 3. As the acquired score approaches 0, the level of adaptation increases. The scale has four sub-scales as, "Role and Self-Actualization Mode" (items of 1, 5, 9, 12, 13, 14, 15, 16, 24), "Interdependence Mode" (items of 17, 18, 19, 20, 21, 22, 23), "Physiological mode" (items of 2, 4, 10, 11) and "Self-Concept Mode" (items of 3, 6, 7, 8) (Şişman & Kutlu, 2016).

In the research, skewness and kurtosis values were calculated to determine the suitability of the data for normal distribution. It was observed that the coefficients of skewness (2,6) and kurtosis (10,4) of the scale were not between -1 and +1. Mann Whitney U test and Kruskal Wallis test were used because the results were not normal distribution. Reliability analysis of the scale was determined with Cronbach's Alpha coefficient and the coefficient was calculated as 0.897.

1.2. Ethical consideration

Signed informed consent was obtained from all elderly. The ethics committee of Hacettepe University approved the study, which was conducted according to the Declaration of Helsinki. Scale was used after receiving permission from the authors.

2. RESULTS

Some demographic features of the participants are given in Table 1. Of the study participants, 68.8% were male (n=348), and 31.2% (n=158) were female; and 88.9% were between 65 – 75 years of age. The percentages of those who were primary education and lower (32.2%), those who had a monthly income of between 1501-2250 TL (36.2%), those who have two children (36.2%), those who were married (76.3%), those who were living with spouse (45.8%), those who were homeowner (81.0%) and those who had Bağkur (45.7%) were the highest (Table 1).

Table 1. Distribution of Elderly People on the Basis of Their Demographic Features (n=506)

Variable	Group	n	%
Gender	Female	158	31.2
	Male	348	68.8
Age Group	65-75	450	88.9
	76-85	56	11.1
Educational Level	Primary Education and Secondary Education	163	32.2
	High School	83	16.4
	University	128	25.3
		132	26.1
Monthly Income Level (TL)	1000 and Less	23	4.6
	1001-1500	78	15.4
	1501-2250	183	36.2
	2251-3000	107	21.1
	3001 and Over	115	22.7
Number of Children	None	21	4.2
	One	56	11.1
	Two	183	36.2
	Three	139	27.5
Marital Status	Never Married	15	3.0
	Married	386	76.3
	Widow/widower	105	20.7
People Living Together	Alone	83	16.4
	With Spouse	232	45.8
	With Relatives	7	1.4
	With Spouse and children	139	27.5
House Property	Homeowner	410	81.0
	Tenant	96	19.0
Health insurance	None	5	1.0
	Health Card for Uninsured	20	4.0
	People in Turkey	190	37.5
	(HCUPT) Retirement	60	11.8
Total		506	100

Of the elderly people 15.2% were found to have had an accident in the previous year and 62.3% were falls. As for the reasons of the accidents, 59.7% of the participants mentioned that they had accidents due to carelessness, while 31.2% of them stated that they had accidents because the floor was slippery. When they were analyzed according to the locations

where they had the accidents, most common location was the kitchen (31.2%) followed by the bathroom (18.2%), the stairs (13.0%) and the bedroom (11.7%). A little more than half of the elderly who had an accident (51.9%) visited health center after the accident, and the majority reported spontaneous recovery (67.5%) (Table 2).

Table 2. Distribution of the Elderly People Who Had An Accident in the Past Year (n=506)

Variable	Group	n	%
Had an accident in the past year	Yes	77	15.2
	No	429	84.8
Accident type	Fall	48	62.3
	Burn/Scald	12	15.6
	Cut	10	13.0
	Poisoning	4	5.2
	Electric shock	3	3.9
Cause of the accident	Carelessness	46	59.7
	Slipperiness of the Floor	24	31.2
	Stumbling Upon an Object While Walking	7	9.1
Location of the accident	Kitchen	24	31.2
	Bathroom	14	18.2
	Stairs	10	13.0
	Bedroom	9	11.7
	Corridor	8	10.4
	Garden	7	9.1
	Dining room	5	6.5
Place of admission after the accident	Health care facility	40	51.9
	None	37	48.1
Consequence of accident	Full recovery	52	67.5
	Treatment is continuing	20	26.0
	Disability	5	6.5
Total		506	100

Descriptive statistics for the subscales (factors) of the Assessment Scale of Adaptation Difficulty for the Elderly are presented in Table 3. In general, the level of adaptation difficulty was high for all four subscales. For the sub-dimension “Role and mode of self realization” sub-dimension .3494 (min : 0.00 max: 3.00); 0.1883 (min : 0.00 max: 3.00) for the ‘interconnection’; For the physiological state :, 0.2125 (min : 0.00 max: 3.00) and 0.5000 (min : 0.00 max: 2.75) for “self-styled“. The highest subscale means were computed for “Self Style” (\bar{x} =.5000). And the lowest subscale means were computed for “Interconnection” (\bar{x} =.1883).

Table 3. Descriptive statistics for the subscales of the Assessment Scale of Adaptation Difficulty for the Elderly

Subscales/Factors	n	Number of Items	Min	Max	\bar{x}	sd
Role and Mode of Self-Realization	506	9	0.00	3.00	.3494	.46452

Interconnection	506	7	0.00	3.00	.1883	.39341
Physiological State	506	4	0.00	3.00	.2125	.37670
Self Style	506	4	0.00	2.75	.5000	.56332
Overall	506	24	0.00	2.92	.3047	.36086

The results of the correlation analysis of the participants' age, home accident status, type of accident, cause of accident, place of accident and result of accident are shown in Table 4.

As a result of the analyzes, a positive significant relationship was found between age and Role and Mode of Self-Realization and Physiological State scores ($r = .195$, $p < .01$, $r = .104$, $p < .05$, respectively). Negative significance was found between all scale subscales and home accident in the last year ($r = -.237$, $p < .01$, $r = -.134$, $p < .01$, $r = -.179$, $p < .01$, $r = -.153$, $p < .01$), while between all scale subscales and type of home accident ($r = .234$, $p < .01$, $r = .141$, $p < .01$, $r = .182$, $p < .01$, $r = .160$, $p < .01$), cause of accident ($r = .239$, $p < .01$, $r = .134$, $p < .01$, $r = .184$, $p < .01$, $r = .152$, $p < .01$), location of accident ($r = .232$, $p < .01$, $r = .136$, $p < .01$, $r = .179$, $p < .01$, $r = .160$, $p < .01$), place of admission after the accident ($r = .232$, $p < .01$, $r = .136$, $p < .01$, $r = .179$, $p < .01$, $r = .151$, $p < .01$) and the result of accident ($r = .244$, $p < .01$, $r = .130$, $p < .01$, $r = .182$, $p < .01$, $r = .151$, $p < .01$), were determined significant positive relationship.

Table 4. Correlation Analysis Results of Research Variables

	1	2	3	4	5	6	7	8	9	10	11
1. Age	-	-	-	-	-	-	-	-	-	-	-
2. Role and Mode of Self-Realization	,195**	-	-	-	-	-	-	-	-	-	-
3. Interconnection	,041	,308*	-	-	-	-	-	-	-	-	-
4. Physiological State	,104*	,459*	,332**	-	-	-	-	-	-	-	-
5. Self Style	,008	,455*	,346**	,418**	-	-	-	-	-	-	-
6. Had an accident in the past year	,027	,237*	,134**	,179**	,153**	-	-	-	-	-	-
7. Accident type	-,034	,234*	,141**	,182**	,160**	-,997**	-	-	-	-	-
8. Cause of the accident	-,026	,239*	,134**	,184**	,152**	-,997**	,996**	-	-	-	-
9. Location of the accident	-,035	,232*	,136**	,179**	,160**	-,996**	,997**	,993**	-	-	-
10. Place of admission after the accident	-,033	,232*	,136**	,179**	,151**	-,997**	,995**	,993**	,994**	-	-
11. Consequence of accident	-,021	,244*	,130**	,182**	,151**	-,997**	,993**	,994**	,992**	,992**	-

* $p < 0.05$, ** $p < 0.01$

3. DISCUSSION

Elderly is a period in which the dependency and the risk of accident increases, many problems are experienced and the individual becomes dependent on other people due to increasing physical illnesses and loss of ability (Tel, Güler & Tel, 2011).

In the study, it was determined that 15.2% of the elderly had an accident in the last year. This rate was, 27.1% in that by Dağhan, Arabacı & Hasgül (2017), 20.6% in that by Doğan et al. (2010), and 34.3% in the study by Şahbaz & Tel, 38.6% in that by Evci, Ergin Beşer different frequency rates recorded for home accidents can be attributed to environmental rearrangements to reduce accidents, educational status, socioeconomic status, and individual differences.

It was determined that 62.3% of the elderly who had a home accident experienced a fall accident. This is an expected finding and can be associated with reduced age, ability to move, balance problems and visual impairment. As a matter of fact, fall accidents in the elderly are the most common type of accidents (Dağhan et al., 2017; Lök & Akın, 2013; Doğan, et al., 2010; Sütuluk, Savaş, Demirhindi, Özdener & Akbaba, 2007; Kılıç et al., 2006; Şahbaz & Tel, 2006). The experience of falling in the life of an elderly person causes him to see the fall event as a sign of fear and weakness for his later life. The fear of falling leads to various consequences, such as the limitation of activities in the elderly to the restriction of independence and daily activities (Murphy, Williams & Gill, 2002).

In addition to personal factors such as aging with muscle strength, walking disorders, visual impairment, imbalance, chronic illness and drug use, environmental factors (inadequate lighting, slippery surfaces, etc.) are the basis for falling (Huang, Gau Lin & Kernohan 2003). In our study, 59.7% of those who had an accident were careless and 31.2% had an accident due to slippery ground. This result suggests that older people should be informed about house accidents more carefully and arrangements should be made to prevent accidents in the housing. Evaluating the factors that play a role in most falls in the houses and making appropriate environmental regulations decreases the risk of falling of the elderly and improves the quality of life. In this framework, kitchen, bathroom, toilet and non-slippery floors in the room floor should be used; carpets and rugs should be arranged in such a way that they do not slip. Adequate lighting should be done in the corridors and rooms, night light should be used (Bilik, Damar & Karayurt, 2017).

In the study, it was found that elderly people had an accident in the most common kitchen (31.2%), followed by bath (18.2%), stairs (13.0%) and in the bedroom (11.7%). More frequent accidents in the kitchen; more time spent in the kitchen while carrying out daily tasks and more in this area can be attributed to the presence of more cutting equipment. Lök & Akın (2013) stated that there are wet places (bath and toilets, kitchen), bedroom, living room, hall, corridors and stairways.

It was determined that more than half of the elderly went to medical center after the accident (51.9%) and 67.5% of them stated they were self-recovered. In their study, Dağhan et al (2017) stated that more than half of the elderly didn't receive a medical attention after a home accident and only 33.3% of them went to a hospital after the accident.

The physical capacities of individuals decrease as their ages advance and this situation limits the functional independence of elderly. Some diseases and environmental factors make it difficult for them to adapt the new conditions that were brought to their lives. Reasons such as losing the spouse, retirement, fear of death cause elderly to feel sad, to become introverted with the change in the mood and to lose abilities such as perceiving, problem-solving and adapting (Er, 2009). When the descriptive statistics for the subscales (factors) of "Assessment Scale of Adaptation Difficulty for the Elderly" were examined, adaptation difficulty is high for four subscales and for the general of the scale. This result shows that the adaptation level

of elderly who participated in the study is high. In the study of Şişman and Kutlu (2016), the level of adaptation of elderly were found near to one. This result supports the finding of our study.

In our study, the highest subscale tool was calculated for "Self-Still" (= .5000) (= .1883). This situation indicates that the elderly feels more distressed, weaker and this situation impairs the adaptation of the elderly. The lowest subscale was calculated for "Interconnection" (= 1883). This result demonstrates that the elderly experience less adaptation difficulty in "Interconnection". In the study of Şişman and Kutlu (2016), the subscale scores of "Role and Mode of Self-Realization" were found higher by 1.36 than other subscales (min.: 0.00 max.: 2.89).

The relationship between experiencing an accident in the last year by the elderly and all of the subscales was found significant ($p < 0.05$). All of the subscale scores for those who have experienced an accident in the last year are higher than those who didn't experience an accident. This situation shows that elderlies who have experienced a home accident in the last year have more difficulty in adaptation. For this reason, being exposed to accidents and experiencing adaptation difficulties can be prevented by informing elderlies about the home accidents and making appropriate regulations in the house they live.

4. RECOMMENDATIONS AND LIMITATIONS

As a result of the research it was determined that;

- 15.2% of elderly people had a home accident in the last year,
- Those who had an accident, fall among the elderly and those who had an accident in the kitchen were in the first place, who stated that they had an accident due to careless behavior,
- It has been determined that seniors who have had a home accident in the last year have more difficulty in adapting.

According to these results it can be suggested that;

- Informing the elderly about the risks, causes, consequences and protection of accidents by using mass media, so that they are more careful against accidents,
- The old ways to protect himself from diseases and accidents to be learned by taking measures.
- Home security assessments in the housing where the elderly live, and identifying the main factors leading to falls, making in-house arrangements that will prevent an accident and create a comfortable and reliable environment,
- Studies that would comprehensively evaluate the home accidents and adaptation difficulty of elderlies should be conducted throughout Turkey.

5.1. Declaration of interest statement

The authors report no conflict of interest.

REFERENCES

- Akin, A. (2012). Gender and Aging. In: Aslan D & Ertem M. (Eds). *Elderly health: problems and solutions* (pp. 17-25). Ankara, Turkey: Palme Publications.
- Arpaci, F. (2005). *Different dimensions of aging*. Ankara: Publication of Turkey Association of Retired Workers. (In Turkish)
- Bilik, Ö. Damar, H.T. and Karayurt, Ö. (2017). Fall behaviors and risk factors among elderly patients with hip fractures. *Acta Paulista de Enfermagem*, 30(4), 420-427.
- Bilir, N. and Subaşı Paksoy, N. (2006). Elderly problems and control of non-infection diseases. In: Güler Ç, Akın L. (Eds). *Public Health Rudiments* (pp 1020-24). Ankara: Hacettepe University Publications. (In Turkish)
- Buz, S . (2015). Age discrimination against elderly persons. *Electronic Journal of Social Sciences*, 14 (53) , 268-278. (In Turkish)
- Can, G. (1990). Retirement and adjustment problems in old age. *Journal of Kurgu*, 8, 633-63. (In Turkish)
- Cochran, W.G. (1977). Sampling Techniques. John Wiley& Sons. 3th Edition. Retrieved from https://archive.org/details/Cochran1977SamplingTechniques_201703/page/n49 .
- Dağhan, Ş., Arabacı, Z. and Hasgül, E. (2017). Investigation of home accidents in elderly according to cognitive situation and related factors. *Journal of Social Policy Studies*, 17(39),75-95. (In Turkish)
- Doğan, H., Canbaz, S., Tander, B., Pekşen, Y., Cantürk, F. and Ozal Oruç N. (2010). The prevalence of home injuries among elderly people in Samsun, Turkey, and the influencing factors. *Turkish Journal of Medical Sciences*, 40(4), 651-658.
- Er, D. (2009). Psychosocial aspects of old age. *Journal of Fırat Medical Services*, 4(11), 131-144. (In Turkish)
- Flood, M. (2005). A mid-range nursing theory of successful aging. *The Journal of Theory Construction and Testing*, 9, 35–39.
- Evcı, E.D., Ergin, F. and Beşer, E. (2006). Home injuries in the elderly in Turkey. *The Tohoku Journal of Experimental Medicine*, 209, 291-301. (PMID:16864951).
- Güngör-Ergan N. (2007). *Social adaptation in old age*, 1. National Old Age Council Congress, İstanbul: Türyak and Hacettepe University. (In Turkish)
- Glasgow, A. and Higgins, P.G. (2010). Age-related cognitive impairment and home technology design. 11 th Ifac/Ifip/Ifors/Iea Symposium on Analysis, Design, and Evaluation of Human-Machine Systems. *Ifac Proceedings*, 43(13), 275-80.
- Huang, H., Gau Lin, W. and Kernohan, G. (2003). Assessing risk of falling in older adults. *Public Health Nursing*, 20(5), 399-411.
- Kiliç, B., Demiral, Y., Özdemir, Ç., Özdemir, S., Djemalaj, F., İlim, O., Ilişer, R., Akgün, M., Şentürk, B. and Şahin, F. (2006). Incidence of home injuries in a slum settlement district in İzmir. *Bulletin of Community Medicine*, 25(3), 27-32. (In Turkish)
- Lök, N. and Akin, B. (2013). Domestic environmental risk factors associated with falling in elderly. *Iranian Journal of Public Health*, 42(2), 120 – 128. (PMID:23515204).

- Municipality of Cankaya (2018). *Cankaya city health indicators and Cankaya city health development plan 2019-2023*. Retrieved from <http://www.skb.gov.tr/wp-content/uploads/2018/04/Cankaya-Belediyesi-2018.pdf>.
- Murhpy, S., Williams, C.S. and Gill, T.M. (2002). Characteristics associated with fear of falling and activity restriction in community-living older persons. *Journal of American Geriatrics Society*, 50, 516-20.
- Samanci-Tekin, Ç. and Kara, F. (2018). Aging in the world and Turkey. *Journal of International Scientific Research (IBAD)*, 3(1), 219-29. (In Turkish)
- Ouwehand, C., de Ridder, D.T. and Bensing, J.M. (2007). A review of successful aging models: proposing proactive coping as an important additional strategy. *Clinical Psychology Review*, 27(8),873–84. (PMID:17328997).
- Sütoluk, Z., Savaş, N, Demirhindi, H., Özdenler, N. and Akbaba, M. (2007). Etiological and demographic characteristics of domestic accidents at the adult emergency department of faculty of medicine, Cukurova University, *Bulletin of Community Medicine*; 26 (2): 29-34. (In Turkish)
- Şahbaz, M. and Tel, H. (2006). Determination of the relationship between the dependence status on daily living activities and home accidents among 65 years of age and older individuals living at home. *Turkish Journal of Geriatrics*, 9(2), 85-93. (In Turkish)
- Şişman, N. and Kutlu, Y. (2016). Development of an assessment scale of adaptation difficulty for the elderly (asade) and its psychometric properties. *Journal of Psychiatric Nursing*, 7(1), 25–33. (In Turkish)
- Tel, H., Güler, N. and Tel, H. (2011). Status of maintaining daily life activities at home and quality of life in elderly. *Society for Research and Development in Nursing*, 2, 59-67. (In Turkish)
- Turkish Statistical Institute. Address Based Population Registration System Results. 2017, [Internet] Available from <http://www.tuik.gov.tr>. Accessed: 1.12.2018. (In Turkish)
- World Health Organization. World report on ageing and health. [Internet] Available from <http://apps.who.int/iris/bitstream/handle>. Accessed: 1.12.2018.