THE EFFECT OF OLDER PEOPLE'S ADAPTATION TO OLD AGE ON THEIR HEALTH-RELATED QUALITY OF LIFE

Güler Duru Aşiret

Faculty of Health Sciences, Nursing Department, Aksaray University, Aksaray, Turkey
gulerduru@gmail.com

Havva Yiğit

Aksaray University Training and Research Hospital, Aksaray, Turkey
havvayigit@gmail.com

Abstract

The changes that occur with age affect the older people's quality of life. This study aimed at determining the effect of older people's adaptation to old age on their health-related quality of life. This descriptive study was conducted with 250 older people that applied to the outpatient clinics of the Research and Training Hospital of Aksaray University between the dates of 15 January and 15 June 2017. The study data were collected by using an introductory information form, "Assessment Scale of Adaptation Difficulty for the Elderly (ASADE)" and "Nottingham Health Profile (NHP)". The study data were assessed by using descriptive statistical methods, Mann Whitney U, Kruskal Wallis, Spearman Correlation Test and multilinear regression model. This study found that older people's adaptation to old age and their health-related quality of life were at a good level. As their score from ASADE increased, their score from NHP increased (r=0.742, p<0.001). In addition, adaptation to old age, gender and expressed health status had a statistically significant on the quality of life (p<0.005). We suggest that the health personnel assess adaptation to old age, which is one of the factors affecting the quality of life, and increase the quality of life by conducting interventions to increase the adaptation to old age.

Keywords

Elderly, Adaptation, Quality of Life, Nursing

1. Introduction

The elderly population is rapidly increasing depending on the extension of life expectancy at birth all over the world. Nowadays, the increase in elderly population leads to encountering problems related to old age more frequently. Some of these problems are caused by the elderly individuals' own physical, mental and economic conditions while some of them are caused by the environmental conditions of the elderly (Kurt, Beyaztaş & Erkol, 2010). The union of the problems arising due to old age decreases the self-respect and life satisfaction of the elderly individual, and consequently, the quality of life can be negatively affected (Softa, Karaahmetoğlu, Erdoğan, Yavuz, 2015).

In the studies conducted in the literature, it is reported that the quality of life of elderly individuals are negatively affected by the factors such as chronic illness (İlhan, Arpacı, Havaoğlu, Kalyoncuoğlu, Sarı, 2016), multiple drug use (Gencer & Arica, 2017), long-term inpatient treatment (Yılmaz & Tekin, 2017), urinary incontinence (Demir & Erbesler, 2017), and living alone (Gencer & Arica, 2017). Furthermore, it is stated that negative life events experienced at younger ages (such as violence, neglect, abuse, chronic illness) negatively affect the quality of life during the old age period (Yılmaz & Tekin, 2017). In addition, it has been determined that the status of being pleased with aging and being hopeful for the future of elderly individuals also affects the quality of life (Gökulu, Uluocak, Aslan, Bilir, 2014).

One of the factors that will affect the quality of life of the elderly is adaptation to old age. The fact that elderly individuals do not know the changes occurring in the aging process, the presence of decline in physical and cognitive functions, and the limitations of participation in exercises and activities affect adaptation to old age. Moreover, adaptation to old age can be adversely affected due to negative life events such as the loss of spouse or children's separation from home during this period (Şişman & Kutlu, 2011). In a study in which adaptation to old age was evaluated within the context of active aging in the old age process, it is reported that 81% of elderly individuals adapt to the changes seen in old age (Jeste, Depp, Vahia, 2010). In the same study, it was also reported that adaptation to old age is associated with age, cognitive, physical, and mental health (Jeste, Depp, Vahia, 2010). In a different study conducted, it is stated that being male and having a high level of education positively affect individuals' adaptation to old age (Jopp, Rott, Oswalt, 2008). In a study conducted in our country, it has been determined that adaptation to old age decreases and men have higher levels of adaptation compared to women as the age increases (Şişman & Kutlu, 2016). When

the literature is examined, although studies aimed at determining the quality of life of elderly individuals are frequently encountered, no study aimed at determining the effect of adaptation to the old age process on the quality of life of elderly individuals has been found. For this reason, this study was conducted to determine the effect of adaptation to old age of elderly individuals on the health-related quality of life.

2. Materials and Methods

2.1 Design and Participants

This descriptive study was conducted with the individuals aged 65 and older who applied to the polyclinics of Aksaray University Training and Research Hospital between January 15 - June 15, 2017. All elderly patients who applied to polyclinics between these dates constituted the population of the study. A total of 250 patients aged 65 and older who applied to general internal medicine, chest and cardiology outpatient polyclinics that were frequently applied by elderly individuals on the dates of the study, had no psychiatric disease, dementia, and disease that affects other cognitive functions, agreed to participate in the study, and could be communicated constituted the sample of the study.

2.2 Ethical Consideration

This study was conducted in accordance with the principles of the Declaration of Helsinki, and written permission was received from the local human research ethics committee and the institution where the study was conducted before starting the study. In addition, individuals were informed about the aim of the study and permission was obtained from the individuals.

2.3 Data Collection

The "introductory information form", the "Assessment Scale of Adaptation Difficulty for the Elderly (ASADE) and the "Nottingham Health Profile (NHP)" were used to collect data. The data of the study were collected with the individuals who voluntarily agreed to participate in the study using face-to-face interview method in the waiting rooms of the polyclinic. The individuals with literacy were asked to fill out the questionnaire form by researchers, the questions were read to the individuals who had reading disability or who were illiterate by researchers, and the answers of the individuals were recorded.

2.4 Introductory Information Form

The introductory information form consists of a total of 17 questions including 10 questions for evaluating sociodemographic and medical characteristics prepared by the researcher and 7 questions for evaluating sleep characteristics.

The difficulties in adaptation to old age of elderly individuals were evaluated using the Assessment Scale of Adaptation Difficulty for the Elderly (ASADE). This scale was developed by Şişman and Kutlu (2016) and consists of 24 items. The scale has four sub-dimensions including the form of role and self-actualization, interdependence, physiological state, and self-concept. The scores obtained from the items of the scale are collected and divided by the number of questions to obtain the total score of the scale. The level of adaptation to old age decreases as the score obtained from the scale by an individual increases. In the study of Şişman and Kutlu (2016), Cronbach's alpha value of the scale was determined to be 0.92.

The health-related quality of life of elderly individuals was evaluated using the Nottingham Health Profile (NHP). The validity and reliability of the scale for our country was performed by Küçükdeveci, McKenna, Kutlay, Gürsel, Whalley, Arasil, 2000. The scale consists of 38 items. The scale has six sub-dimensions including pain, physical activity, energy level, emotional reaction, sleep and social isolation. The lowest and highest scores that can be obtained from each sub-dimension of the scale are 0 and 100, respectively. 0 indicates the best health status while 100 indicates the worst health status (Küçükdeveci, McKenna, Kutlay, Gürsel, Whalley, Arasil, 2000).

2.5 Data Analysis

The data of the study were evaluated using the SPSS Version 20,0 (SPSS, Chicago, IL) package program. The descriptive characteristics of the individuals participating in the study were summarized using number, percentage, mean and standard deviation. The suitability of scale scores to normal distribution was evaluated using the Kolmogorov-Smirnov and Shapiro-Wilk test statistics. The evaluation of average scores of the scales according to the variables of the individuals was performed using the Mann Whitney U and Kruskal Wallis test. The relations between the scales were evaluated using the spearman correlation test. The determinants for the quality of life were determined using a multiple linear regression model. The results were evaluated at a confidence interval of 95%, and statistical significance was evaluated at $p < 0,05$ level.

3. Results

The average of age of the individuals participating in the study was 71,6± 6,5 years. It was determined that 50,8% of the individuals were female, 44,4% of them were illiterate, 63,2% of them were married and 96,4% of them had children. It was determined that 95,6% of the elderly individuals did not work and 56,4% of them had a moderate economic condition. 61,2% of the individuals participating in the study stated that they lived together

with their spouse and all of them (100%) stated that they had social support. It was determined that 74,4% of the individuals stated that they had at least one chronic illness, 79,6% of them stated that they regularly used drug, 46,4% of them stated that they used ancillary equipment, and 42,4% of them stated that their health condition was at a good level (see Table 1).

Table 1: *Sociodemographic and Medical Characteristics of Participants (N=250)*

Variable	n	%
Age (years)* mean±S.D. 71,6 ± 6,5		
65-74	183	73,2
75 and above	67	26,8
Gender		
Female	127	50,8
Male	123	49,2
Education Level		
Literate	111	44,4
Illiterate	55	22,0
Primary school and higher	84	33,6
Marital Status		
Married	158	63,2
Single	92	36,8
Working status		
Yes	11	4,4
No	238	95,6
Perception of Socioeconomic Level		
Income more than expenses	80	32,0
Income equal to expenses	141	56,4
Income less than expenses	29	11,6
People who you live with		
Alone	43	17,2
With spouse and children	153	61,2
With relatives	54	21,6
Social support		
Yes	250	100,0
No	0	0,0
Chronic diseases		
Yes	186	74,4
No	64	25,6
Takes medication regularly (Drug number 2,9 ± 2,5)		
Yes	199	79,6
No	51	20,4
Using auxiliary device		
Yes	116	46,4
No	134	53,6
General health status (self-assessment)		
Perfect	6	2,4
Very good	12	4,8

Good	106	42,4
Medium	94	37,6
Bad	32	12,8

It was determined that the mean total score of the individuals involved in the study was 0,7±0,5. When the mean total scores obtained by individuals from the sub-dimensions of ASADE were examined, it was determined that the form of role and self- actualization was 9,6±7,2, interdependence was 2,2±3,7, physiological state was 1,5±2,1, and the self-concept was 3,6 ±3.3 (see Table 2).

Individuals' NHP mean total score was 173,04±132,91. It was determined that sleep (37,89 ±29,95) and energy level (34,56±42,67) were on the first two ranks among the sub-dimension mean scores of NHP.

Table 2: *Individuals' ASADE and NHP Mean Scores and Sub-Dimension Mean Scores*

The subscales of ASADE	Mean± Standard deviation
Role and self-actualization	9,6 ± 7,2
Interdependence	2,2 ± 3,7
Physiological	1,5 ± 2,1
Self-concept	3,6 ± 3,3
ASADE total scor	0,7 ± 0,5
The subscales of NHP	
Pain	29,44 ± 32,07
Physical Activity	30,37 ± 24,91
Emotional Reaction	26,55 ± 25,06
Socialization	14,74 ± 22,94
Energy	34,56 ± 42,67
Sleep	37,89 ± 29,95
NHP total scor	173,04±132,91

The comparison of some demographic and medical characteristics of elderly individuals with NHP's mean total score is presented in Table 3. In the study, it was determined that the individuals who were in the age range 65-74, male, married, had a level of

primary education and higher education, had no chronic illness, and stated that their health status was perfect had higher health-related quality of life (p<0,05).

Table 3: *Comparison of Nottingham Health Profile mean scores according to some characteristics of individuals*

Variable	Nottingham Health Profile		
Age	Mean	Standard deviation	Z/ KW
65-74	152,28	123,55	**Z=-3,923**
75 and above	229,43	141,88	**p<0,001**
Gender			
Female	216,11	130,55	**Z=-5,769**
Male	128,91	120,77	**p<0,001**
Education Level			
Literate	220,89	130,65	**KW=27,633**
Illiterate	150,54	124,89	**p<0,001**
Primary school and higher	125,11	120,61	
Marital Status			
Married	143,66	123,01	**Z=-4,100**
Single	226,12	134,03	**p<0,001**
Chronic diseases			
Yes	195,11	130,98	**Z=-5,495**
No	109,23	117,89	**p<0,001**
General health status (self-assessment)			
Perfect	57,28	74,69	**KW=87,413**
Very good	71,70	86,53	**p<0,001**
Good	106,29	94,93	
Medium	217,59	123,74	
Bad	173,04	132,94	

Z: Mann Whitney U test, KW: Kruskal Wallis test

In the correlation analysis performed to evaluate the relationship between adaptation to old age of the individuals in the study and the health-related quality of life, it was determined that there was a strong positive relationship between adaptation to old age and quality of life, As the score obtained by elderly individuals from ASADE increases, the score they obtained from NHP increases (r=0,742, p<0,001).

The multiple linear regression model which is shown in Table 4 and was established to examine the effect of ASADE total score, age, gender, educational status, marital status, chronic illness and general health status on NHP is a statistically significant model (F=49,151 p<0,001). There is no autocorrelation problem in the model established (Durbin Watson=1,732). When VIF values of independent variables ASADE, age, gender, educational status, marital status, chronic illness and general health status are examined, there is no multiple connection problem in the model (VIF<5). The model established accounts for 60,8% of the change in the NHP (Straight, R^2=0,608).

When the coefficients of the independent variables in the model are examined, age, educational status, marital status, and chronic illness have no statistically significant effect on NHP (p>0,05). ASADE, gender and general health status variables have a statistically significant effect on NHP (p<0,05). Accordingly, the score obtained from NHP increases by 144,076 as the score obtained from ASADE increases by 1 unit. The score obtained by women from NHP is 60,183 more compared to men. The score obtained from NHP decreases by 22,151 as the health status improves by 1 unit.

Table 4: *Effects of Elderly Individuals' Adaptation to Old Age and Some Variables on Health-Related Quality of Life*

	Beta	St. Error	t	P	VIF	Model Statistics
Constant	136,246	79,553	1,713	0,088		F=49,151
ASADE	144,076	12,669	11,373	**0,000***	2,050	
Age	-0,563	1,002	-0,562	0,575	1,532	**p=0,000***
Gender (Female)	60,183	12,503	4,814	**0,000**	1,405	
Education Level (Illiterate)	-5,420	15,331	-0,354	0,724	1,455	
Education Level (Primary school and higher)	5,738	14,893	0,385	0,700	1,784	R^2=0,621
Marital Status (Married)	0,804	12,705	0,063	0,950	1,346	Düz,
Chronic diseases (Yes)	-3,463	13,815	-0,251	0,802	1,311	R^2=0,608
General health status	-22,151	8,134	-2,723	**0,007***	1,777	D,W,=1,732

4. Discussion

Since human life is constantly changing, adaptation is important in every age group and gains more importance in old age, which is the last stage of life (Şişman & Kutlu, 2016). In this stage, individuals have problems in adaptation to old age due to realizing that death is approaching, increase in health problems, difficulty in fulfilling new social roles, having problems in participation in social activities, loneliness, social isolation and mental problems. All these problems affect both adaptation to old age and quality of life of the individuals (Zheleva, 2013). The effect of adaptation to old age of elderly individuals on the health-

related quality of life was discussed in this study. In the study, it was determined that adaptation to old age and health-related quality of life of the individuals were at a good level. It was determined that individuals' health-related quality of life decreased as their problems related to adaptation to old age increased. It was also determined in the study that adaptation to old age positively affected the health-related quality of life. It is important that elderly individuals can go beyond their physical losses to be able to adapt to aging successfully. The fact that the individuals benefit from their existing limited capabilities during this process makes it easier for them to manage their environment successfully (Smedema & Ebener, 2010). The elderly individual will be able to cope with all the problems that come with old age if he/she determines the functions he/she has lost to adapt to the changing living conditions and makes an effort so that this situation will not affect his/her life. Furthermore, they will be able to continue their life in peace with the problems they cannot cope with. The problems that cannot be coped with in old age may negatively affect an individual's life and cause an individual to have difficulty in adapting to old age. This may also negatively affect the quality of life of elderly individuals. The fact that elderly individuals are respected and cared in Turkish culture, the presence of the idea that old age is considered as the last step for the beginning of a new life, and the support of elderly individuals by family members make individuals' adaptation to old age easier. It is thought that individuals will have less difficult in daily life along with the increase in their adaptation to old age or will be able to cope with difficulties more easily, and thus, this may have a positive effect on quality of life.

Another finding obtained from this study is that men's adaptation to old age is better and their quality of life associated with it is also higher than women. The finding obtained from many studies in the literature indicates that men's adaptation to old age (Jeste, Depp, Vahia, 2010; Şişman & Kutlu, 2016) and quality of life (Carta et al., 2012; Hajek et al., 2016) are higher compared to women. In our country which has a patriarchal social structure, it is reported that the role sharing by gender in line with the traditions and customs which is more rural areas, and many restrictions imposed on women in these role sharings may negatively affect the quality of life of women (Tarsuslu Şimşek, Tütün Yümin, Sertel, Öztürk, Yümin, 2010).

Health has a significant effect on the life satisfaction and quality of elderly individuals (Michalos, Zumbo, Hubley, 2000). Furthermore, it is also emphasized that it is secondarily important for individuals to evaluate their own health well. In the studies carried out, it is reported that the quality of life of elderly individuals who consider their health as excellent is higher (Zhang, Huang, Ye, Zeng, 2008; Chen, Hicks, While, 2014). In this study, it was

determined that the score obtained from NHP decreased by 22.151 when the general health status expressed by elderly individuals improved by 1 unit. This also shows that the quality of life increases as the general health status expressed by individuals improves. As individuals get older, they have difficulty in fulfilling their daily life activities due to increased functional limitations, which affects their lives (Lyu & Wolinsky, 2017). The fact that the health problems and physical activity difficulties that prevent individuals from fulfilling their existing roles in life lead to the feelings of sadness, distress and restlessness in the individual, and deterioration in health status may affect the health-related quality of life along with the deterioration in physical well-being (Tarsuslu Şimşek, Tütün Yümin, Sertel, Öztürk, Yümin, 2010).

5. Conclusion And Recommendations

As a result of this study, it was determined that elderly individuals' adaptation to old age and health-related quality of life were at a good level, and the health-related quality of life of individuals decreased as the problem related to adaptation to old age increased. It was also determined that the health-related quality of life of female individuals who have a low level of education, are single, have a chronic illness and are reported to have a poor general health status was poor. In the regression analysis performed, it was determined that adaptation to old age, male sex and defining general health status as good positively affected the quality of life of individuals. In line with these results, it is important that the quality of life of elderly individuals should be evaluated in health and care institutions by health personnel in certain periods and that adaptation to old age, which is one of the factors that will affect the quality of life, should be considered in these evaluations. Furthermore, the health personnel should plan initiatives to improve adaptation to old age and quality of life providing that they are more frequent for the individuals in the group with low adaptation to old age and quality of life, should implement these initiatives routinely and evaluate its results. It is suggested that future studies should be conducted in a larger sample group in different cultures.

6. Research Limitations

The limited number of sample since the study was carried out in a single center is the limitation of this study.

References

Carta, M. G., Aguglia, E., Caraci, F., Dell'Osso, L., Di Sciascio, G., Drago, F., Del Giudice, E., Faravelli, C., Hardoy, M. C., Lecca ME, et al. (2012). Quality of life and urban /

rural living: preliminary results of a community survey in Italy. *Clin Pract Epidemiol Ment Health*, 8(1): 169-174. https://doi.org/10.2174/1745017901208010169

Chen, Y., Hicks, A., While, A. E. (2014). Quality of life and related factors: a questionnaire survey of older people living alone in Mainland China. *Qual Life Res*, 23(5): 1593-1602. https://doi.org/10.1007/s11136-013-0587-2

Demir, G., Erbesler, Z. A. (2017). Qualıty of life and factors assocıated with it in elderly women with urınary ıncontinence. *Turk J Gerıatr,* 20(3): 213-222.

Gencer, M. Z., Arica, S. (2017). Use of polypharmacy and herbal medication on quality of life in elderly patients at okmeydani hospital's polyclinics in Istanbul, Turkey. *J Pak Med Assoc,* 67(6): 895-900.

Gökulu, G., Uluocak, Ş., Aslan, C., Bilir, O. (2014). The factors affecting the quality of life among 65 years or older individuals living in the city center of Çanakkale. *The Journal of International Social Research*, 34(7): 666-677.

Hajek, A., Brettschneider, C., Lange, C., Posselt, T., Wiese, B., Steinmann, S., Weyerer, S., Werle, J., Pentzek, M., Fuchs A., et al. (2016). Gender differences in the effect of social support on health-related quality of life: results of a population-based prospective cohort study in old age in Germany. *Qual Life Res,* 25(5): 1159-1168. https://doi.org/10.1007/s11136-015-1166-5

İlhan, N., Arpacı, S., Havaoğlu, D., Kalyoncuoğlu, H., Sarı, P. (2016). Quality of life and factors affecting the quality of life of elderly nursing home residents. *Clin Exp Health Sci,* 6(2): 56-65. https://doi.org/10.5152/clinexphealthsci.2016.0052

Jeste, D. V., Depp, C. A., Vahia, I. V. (2010). Successful cognitive and emotional aging. *World Psychiatry*, 9(2): 78-84. https://doi.org/10.1002/j.2051-5545.2010.tb00277.x

Jopp, D., Rott, C., Oswalt, F. (2008). Valuation of life in old and very old age the role of sociodemographic, social, and health resources for positive adaptation. *Gerontologist*, 48(5): 646-658. https://doi.org/10.1093/geront/48.5.646

Kurt, G., Beyaztaş, F. Y., Erkol, Z. (2010). The problems of aged people and the life satisfaction. *Turkish Journal of Forensic Medicine,* 24(2): 32-39.

Küçükdeveci, A. A., McKenna, S. P., Kutlay, S., Gürsel, Y., Whalley, D., Arasil, T. (2000). The development and psychometric assessment of the Turkish Version of the Nottingham Health Profile. *Int J Rehabil Res,* 23(1): 31-38. https://doi.org/10.1097/00004356-200023010-00004

Lyu, W., Wolinsky, F. D. (2017). The onset of ADL difficulties and changes in health-related quality of life. *Health Qual Life Outcomes*, 15(217): 1-30. https://doi.org/10.1186/s12955-017-0792-8

Michalos, A. C., Zumbo, B. D., Hubley, A. (2000). Health and the quality of life. *Soc Indic Res,* 51(3), 245-286.

https://doi.org/10.1023/A:1007010401301 https://doi.org/10.1023/A:1006930019814

Smedema, S. M., Ebener, D. (2010). Substance abuse and psychosocial adaptation to physical disability: analysis of the literature and future directions. *Disabil Rehabil*, 32(16): 1311-13119. https://doi.org/10.3109/09638280903514721

Softa, H. K., Karaahmetoğlu, G. U., Erdoğan, O., Yavuz, S. (2015). A research on the factors affecting the level of life satisfaction of the elderly people. *Elderly Issues Research Journal,* 8(1): 12-21.

Şişman, F. N., Kutlu, Y. (2011). Effectiveness of Nursing Care Based on Roy Adaptation Model For Development Cognitive Status of Elderly Individuals. Istanbul University, Institute of Health Science, Department of Psychiatric Nursing, *Master Thesis.* Istanbul.

Şişman, F.N., Kutlu, Y. (2016). Development of an Assessment Scale of Adaptation Difficulty For The Elderly (ASADE) and ıts psychometric properties. *J Psy Nurs,* 7(1): 25-33. https://doi.org/10.5505/phd.2016.82905

Tarsuslu Şimşek, T., Tütün Yümin, E., Sertel, M., Öztürk, A., Yümin, M. (2010). The effect of depression on life satisfaction and health related quality of life in the elderly men and women. *F Ü Sağ Bil Tıp Derg*, 24(3): 147-153.

Yılmaz, F., Tekin, R. N. (2017) Effects of early life factors on the health and quality of life of older adults. *Psychogeriatrics*, 18(1) :30-35. https://doi.org/10.1111/psyg.12278

Zhang, J. P., Huang, H. S., Ye, M., Zeng, H. (2008). Factors ınfluencing the subjective well being (swb) in a sample of older adults in an economically depressed area of China. *Arch Gerontol Geriatr*, 46(3), 335-247. https://doi.org/10.1016/j.archger.2007.05.006

Zheleva, E. (2013). Psyho-social adaptation of the elderly. *TJS,* 11(3): 234-236.