ORIGINAL ARTICLE

Activities of daily living, quality of life, social support and depression levels of elderly individuals in Turkish society

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Abstract

Objective: To determine activities of daily living, quality of life, social support and depression levels of elderly individuals and the factors affecting each of these items.

Methods: The cross-sectional study was conducted from August 2009 to June 2012 in Edirne, Turkey, and included elderly individuals over 60 years of age. Data was collected using a survey form, the Katz Activities of Daily Living Scale, the Multidimensional Scale of Perceived Social Support, the European Quality of Life-5 Dimensions scale and the Geriatric Depression Scale. Data was analysed using Spearman's correlation analysis.

Results: Of the 912 subjects in the study, 509(55.8%) were females and 402(44.2%) were males, with an overall mean age of 68.05 ± 6.6 years (range: 60-94 years). Besides, 644(70.6%) of the subjects were married and 595(65.2%) were living with their spouse. The levels of social support and activities of daily living of elderly individuals with a high quality of life were higher, and their levels of depression were lower ($p<0.05$).

Conclusions: Older age, chronic health problems and polypharmacy should be taken into account when planning healthcare services for the elderly to ensure that they maintain a better quality of life.

Keywords: Activities of daily living, Elderly, Geriatric depression, Social support, Quality of life. (JPMA 65: 642; 2015)

Introduction

Populations around the world are rapidly ageing.[1] The proportion of the world's population over 60 is expected to double from about 11% to 22% between 2000 and 2050. The number of people aged 60 and older is expected to increase from 605 million to 2 billion over the same period.[1] Advances in medicine, treatment and care facilities, in addition to the elimination of many factors that lead to death, are contributing to the increasing number of elderly individuals in Turkey as well as worldwide.[2-6] In 2012, according to the Turkish Statistics Institute, Turkey's population was 75.6 million. The population aged 65 and older was 5.7 million, with this population accounting for 7.5% of the total population. By 2023, this population is expected to increase to 8.6 million and account for 10.2% of the total population.[7]

The period of old age is often one in which quality of life decreases. Adverse effects of individual characteristics may cause this decrease, in addition to functional impairment, decreased level of activities of daily living, lack of adequate mobility, fear of falling due to mobility and vision problems, sleep disorders and other health problems and situations that cause disability.[2,8] When elderly individuals become dependent on others, their families and other special persons meet their daily needs. However, the family structure has become smaller with increased industrialisation and urbanisation, and taking care of elderly individuals within the family structure has become more difficult. As a result, social support for elderly individuals has decreased.[9,10]

Chronic diseases are increasing gradually in elderly individuals, and they accounted for 141 million cases in 2010 worldwide.[1] A study conducted in Turkey reported that nine of 10 diseases with the highest disease burden in people aged 60 and older were chronic diseases.[10]

According to the World Health Organisation (WHO), depression ranks fourth among diseases that cause physical, emotional, social and economic problems.[1] The tendency of individuals to become depressed increases with age. Depression is a major health problem of old age, and the most common psychological problem in this age group.[11-14]

Gerontology nurses should have a good knowledge of the physical abilities, problems and needs of elderly individuals to improve their psychosocial, emotional and physical well-being. Assessment of elderly individuals aims at identifying their activities of daily living, social resources, economic resources and physical and mental health statuses.[10,15] We believe that the current research will provide a significant contribution to the literature, as there have been few studies conducted on elderly individuals in Turkey.

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The current study was planned to identify activities of daily living and quality of life, social support and depression in elderly individuals living at home, together with the factors affecting each of these items.

Our hypothesis was that the depression levels of elderly individuals would worsen when their activities of daily living, quality of life and social support levels decreased.

Subjects and Methods

The cross-sectional study was conducted in Edirne, a province in northwest Turkey, between August 2009 and June 2012. The available study population was 19,853 elderly individuals aged over 60 and registered with 18 family health centres, according to the Edirne Provincial Health Directorate data, 2009. The sample size was determined based on confidence interval (CI) of 95% using a table of random numbers and stratified sampling method based on age and gender information. All the subjects were 60 years of age or older, had no mental health problems diagnosed by their family physicians, had age-related health problems and volunteered to participate in the study. After explaining the study objectives to the subjects, the researchers conducted face-to-face interviews in the nurse interview rooms of respective family health centres. Potential subjects were contacted using information from the family health centres where they were registered. Each interview took approximately 25-30 minutes.

Data was collected using a survey form, the Katz Activities of Daily Living (ADL) Scale, the European Quality of Life-5 Dimensions (EQ-5D) Scale, the Multidimensional Scale of Perceived Social Support (MSPSS) Scale and the Geriatric Depression Screening (GDS) Scale.

The survey form consisted of two parts with 13 questions on individual (age, gender, level of education etc.) and health-related characteristics (presence of health problems, number of hospitalisations etc.).

The ADL Scale was developed in 1963.[16] It includes six categories of activities: bathing, dressing, toilet needs, transfer, continence and feeding.[17,18] Each item has three response options: dependent, partially dependent or independent. A score of 6 points on the scale shows dependence, a score between 7 and 12 shows partial dependence, and a score between 13 and 18 shows independence.[17,18] In this study, Cronbach's alpha value for the ADL Scale was 0.94.

The MSPSS was developed in 1988.[19] It is a 7-point, Likert-type, self-assessment scale that consists of 12 items that measure the adequacy of an individual's social support along a spectrum from "totally disagree" (1) to "totally agree" (7). The lowest and highest possible scores that can be obtained in the entire scale are 12 and 84, respectively. Higher scores demonstrate a higher level of perceived social support. The scale was first translated into Turkish and adapted to the Turkish culture in 1995.[20] In this study, the Cronbach's alpha reliability coefficient of the MSPSS was 0.93.

The EQ-5D scale is a generic instrument used for measuring health-related quality of life. The EQ-5D consists of the EQ-5D index scale and the EQ-5D a visual analogue scale.[21] A single index score can be produced using information from the five dimensions.[21] In this study, the Cronbach's alpha value for the EQ-5D was 0.84.

The GDS Scale consists of 30 questions that measure depression in older adults.[22] The total score possible on the scale is 30. Scores from 0 to 11 indicate no depression; from 11 to 14, possible depression; and 14 and above, clear depression. A score of 11 and above is considered positive for a diagnosis of depression.[22] The scale was translated into Turkish and adapted to the Turkish culture in 1997.[23] In this study, the Cronbach's alpha value for the GDS was 0.92.

The Ethics Committee of the Faculty of Medicine of Trakya University approved the study and the Provincial Health Directorate of Edirne granted the necessary official permissions.

The data was expressed as means with standard deviations (SDs) or frequency with percentages. The correlations among activities of daily living, social support, quality of life and depression were analysed using Spearman's correlation coefficient. $P<0.05$ was considered statistically significant.

Results

Of the 1044 elderly individuals registered with the family health centres, 98(9%) did not want to fill out the survey, 21(2%) were not available and 13(1.2%) were being treated in hospital. As such, the study sample comprised 912(87.3%) elderly individuals (Figure).

Of the 912 subjects, 509(55.8%) were females and 402(44.2%) were males, with an overall mean age of 68.05±6.6 years (range: 60-94 years). Besides, 644(70.6%) subjects were married and 595(65.2%) were living with their spouse (Table-1).

The average number of children that the subjects had was 3.2±1.4, the average number of hospitalisations was 1.7±1.6, and the average number of drugs taken daily was 2.8±2.5. The mean ADL score was 17.3±2.1, the mean EQ-5D score was 0.78±0.2, the average MSPSS score was

Table-1: Health-related characteristics (n=912).

Individual and Health-Related Characteristics	n	%
Gender		
Male	403	44.2
Female	509	55.8
Education Level		
Illiterate	163	17.9
Literate	171	18.8
Elementary school	395	43.3
Middle school	95	10.4
High school	60	6.6
University	28	3.1
Marital Status		
Married	644	70.6
Widow	250	27.4
Single	18	2
Persons lived with		
Spouse	595	65.2
Children	195	21.4
Alone	122	13.4
Hospitalisation		
Yes	643	70.5
No	269	29.5
Presence of a Health Problem		
Yes	695	76.2
No	192	21.1

60.6±17.1, and the average GDS score was 12.2±7.7.

There was a significant positive correlation between the ADL and MSPSS scores and the EQ-5D quality of life scores, in addition to a significant negative correlation between the ADL and MSPSS scores and the GDS scores ($p<0.05$). The levels of social support and activities of daily living of subjects increased and their depression levels decreased with an increased level of quality of life (Table-2).

There was a significant negative correlation between the age (in addition to ADL scores), the numbers of drugs taken daily and EQ-5D, MSPSS scores and a significant positive correlation with GDS scores ($p<0.05$), indicating that the quality of life, geriatric depression and social support of subjects worsened with increased numbers of drugs taken and older age, and activities of daily living getting worsened.

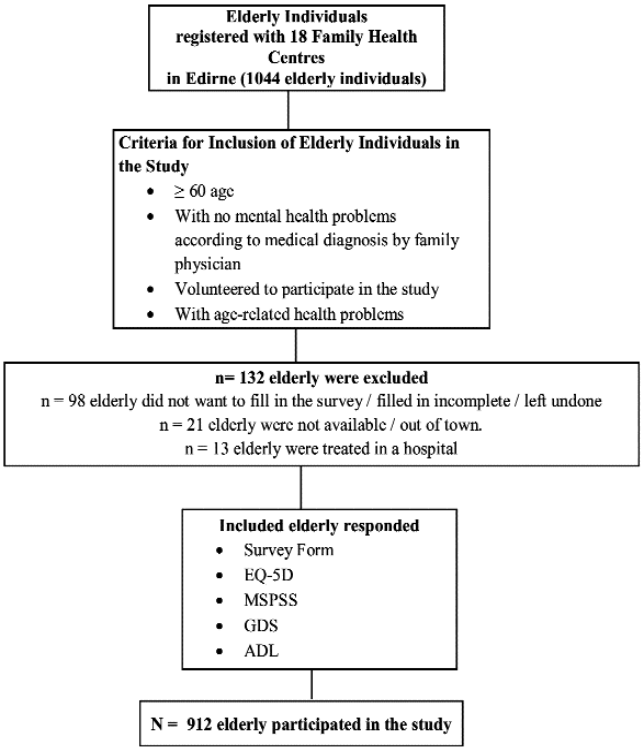
There was a significant negative correlation between the number of children and ADL, EQ-5D scores and a significant positive correlation with GDS scores ($p<0.05$), indicating that the levels of activities of daily living and the quality of life of subjects decreased and their depression levels increased with increased number of children.

There was a significant negative correlation between the

Table-2: Correlation between some paramaters and levels of Activities of Daily Living, Quality of Life, Social Support and Depression of the Elderly Individuals.

		ADL	EQ-5D	MSPSS	GDS
ADL	rs	1	0.563	0.16	-0.359
	p	-	< 0.001	< 0.001	< 0.001
EQ-5D	rs	0.563	1	0.233	-0.534
	p	< 0.001	-	< 0.001	< 0.001
MSPSS	rs	0.16	0.233	1	-0.406
	p	< 0.001	< 0.001	-	< 0.001
GDS	rs	-0.359	-0.534	-0.406	1
	p	< 0.001	< 0.001	< 0.001	-
Age	rs	-0.216	-0.224	-0.16	0.158
	p	<0.001	<0.001	<0.001	<0.001
Number of children	rs	-0.109	-0.168	-0.048	0.159
	p	0.001	<0.001	0.151	<0.001
Number of hospitalisation	rs	-0.06	-0.16	-0.067	0.081
	p	0.108	<0.001	0.072	0.03
Numbers of drugs taken	rs	-0.06	-0.248	-0.088	0.151
	p	0.1	<0.001	0.015	<0.001

ADL: Katz Activities of Daily Living Scale EQ-5D: European Quality of Life-5 Dimensions.
GDS: Geriatric Depression Scale MSPSS: Multidimensional Scale of Perceived Social Support.



ADL: Katz Activities of Daily Living Scale
EQ-5D: European Quality of Life-5 Dimensions
GDS: Geriatric Depression Scale
MSPSS: Multidimensional Scale of Perceived Social Support

Figure: Flow (CONSORT) diagram of the elderly through the study.

number of hospitalisation and EQ-5D scores and a significant positive correlation with GDS scores ($p<0.05$), indicating that the levels of quality of life of the subjects decreased and their depression levels increased with increased number of hospitalisations.

Discussion

This study aimed at identifying activities of daily living, quality of life, social support and depression levels in 912 elderly individuals who lived in their own homes in Edirne, along with the factors that affected these items. In addition, the study aimed at identifying correlations among the scores of activities of daily living, quality of life, social support and depression.

The subjects were independent in their activities of daily living and levels of quality of life and their social supports were good. However, their depression scores were within the category of 'potential depression'. The subjects' levels of social support and activities of daily living increased and their depression levels decreased with an increased level of quality of life. A study[24] found that the quality of life of Turkish elderly individuals living in their own home environment worsened with increased levels of depression. Another study[25] found that decreased levels of functional capacity and increased depression in elderly individuals decreased their health-related quality of life. One set of researchers[26] found that 64% of chronically hospitalised Turkish elderly individuals had depressive symptoms and that their mean EQ-5D index score was 0.50±0.40. A study of 849 community-dwelling elderly individuals[27] reported that overall levels of health among elderly individuals were not high, due, most likely, to poor physical function and social adaptability. It has also been reported[28] that increased social support decreased the depression levels of elderly individuals. Respecting elderly individuals and having them live with family members (children etc.) is common in Turkish culture. Living at home with a spouse and children and having social security all positively affected the levels of activities of daily living and the social support of participants in our study group.

This study found that levels of social support, quality of life and activities of daily living decreased and depression levels increased with increased age. Similarly, literature[27] found that bodily functions, self-care ability and physical health scores worsened with increased age. Another study of the elderly[29] found higher life satisfaction, higher self-care capacity, better overall self-reported health and higher participation in physical activities among younger individuals. Another study found that average scores in all subscales of quality of life decreased in Turkish elderly individuals with chronic disease and advanced age.[24] Yet another study found that the levels of health-related quality of life of elderly individuals who were living in nursing homes were lower than those living at home.[3] Researchers[2] found that the EQ-5D scores of elderly individuals decreased with increased age. The quality of life of individuals decreases because of functional impairments, disabilities and injuries. Cardiovascular, cerebrovascular, musculoskeletal and genitourinary system diseases that occur with age cause elderly individuals to become more dependent in their daily lives and social activities and worsen their quality of life and their activities of daily living, leading to psychosocial difficulties.

The study found that the levels of quality of life, activities of daily living decreased and the levels of depression increased with increase in the number of children. Our study found that 70.6% participants were married and the average number of children that the subjects had was 3.2±1.4. Literature[27] reported that most elderly people regarded their children as their main source of support though they were not satisfied with the support they received. In the Turkish family culture, parents have more traditional responsibilities for children. Parents assume much responsibility (children's education, marriage preparation, care for children, etc). Because of the requirement that they carry on their traditional roles in the family despite their age-related diseases, it is thought that Turkish elderly individuals have low quality of life and high depression.

The current study found that the quality of life and social support of the subjects decreased and that their depression levels increased with an increased number of drugs taken daily. Additionally, the quality of life of subjects decreased and their depression levels increased with an increased number of hospitalisation. One study[25] reported that the type and number of chronic diseases adversely affected the health-related quality of life of elderly individuals. The same study reported a lower level of quality of life of elderly individuals who were diagnosed with functional incapacity, arthritis, diabetes and depression.[25] Another study[26] reported that the duration of disease in depressed elderly patients was significantly longer than in non-depressed patients. Another study reported that the Short Form (SF-36) quality of life scores of individuals who did not use an assistive device were higher than the scores of those who did.[10] Previous studies reported that the quality of life of elderly individuals with multiple chronic diseases was lower.[3,8,10,24-26] It is important to ensure that elderly individuals with chronic diseases are enrolled in detailed assessment programmes run by healthcare professionals.

Conclusion

The quality of life and geriatric depression improved with

decreased number of drugs taken daily, the number of hospitalisations and the number of children and younger age. The levels of social support and the activities of daily living in elderly individuals with a high quality of life were higher, and their levels of depression were lower. It is important that healthcare professionals implement rehabilitation programmes that use an interdisciplinary approach, along with a detailed assessment programme to minimise problems that occur in elderly people due to chronic diseases and to ensure that elderly people maintain their independence in daily life and their quality of life. In addition, it is important to practice early detection/diagnosis of chronic diseases and depression using reliable scales, such as the GDS, and to develop primary, secondary and tertiary preventive health strategies to improve health conditions of elderly individuals to improve their quality of life. Older age, chronic health problems and polypharmacy should be taken into account when planning healthcare services for the elderly.

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