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Depression and affecting factors in patients over 50 years of age: A cross-sectional study

50 yaş üstü bireylerde depresyon ve etkileyen faktörler: Kesitsel bir çalışma

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Abstract

Aim: The population of the elderly in the society is increasing. Old age problems and depression are over looked for various reasons. The aim of this study is to determine the level of life satisfaction of the demographically elderly living in the city or village/town and employing in work life, to determine the frequency of depression among these persons and to find the factors that may be related.

Methods: 908 individuals over the age of 50 have been reached. Type of study is cross-sectional. Sociodemographic questionnaire, Euromodule questionnaire and Geriatric Depression Scale were administered to the subjects. Mann Whitney U, Kruskal Wallis test and Spearman correlation analysis, Binary Logistic regression analysis, Chi-square test were used in the analysis of the data.

Results: The prevalence of depression was found to be 40% in people over 50 years of age. Being a woman, low income and education level, becoming a single/widow, to have a chronic illness and using regular medication increases the risk of depression($p < 0.05$). Having a hobby and a close friend, using social media decreased the risk of developing depression ($p < 0.05$). Life satisfaction was found to be low-mid-level.

Conclusion: Depression is common in people over 50 years of age. In terms of life satisfaction, urban and rural life seem to be superior to each other in some way.

Keywords: Aged, Depression, Satisfaction

Öz

Amaç: Toplumda yaşlı nüfus giderek artmaktadır. Yaşlılık dönemi sorunları ve depresyonu çeşitli nedenlerle atlanmaktadır. Bu çalışmanın amacı kentte veya köy/kasabada yaşayan demografik olarak yaşlı ve çalışan yaşamında yaşlı olan bireylerin yaşam memnuniyet düzeylerini belirlemek, bu kişiler arasında depresyon sıklığını saptamak ve ilişkili olabilecek faktörleri bulmaktır.

Yöntemler: 50 yaş üstü 908 bireye ulaşılmıştır. Çalışma kesitsel tiptedir. Kişilere sosyodemografik anket, Euromodule soru kağıdı, Geriatrik Depresyon Ölçeği uygulanmıştır. Verilerin analizinde Mann Whitney U, Kruskal Wallis testi ve Spearman korelasyon analizi, Binary Lojistik Regresyon analizi, Ki-kare testi kullanılmıştır.

Bulgular: 50 yaş üstü kişilerde depresyon prevalansı %40 olarak bulunmuştur. Kadın olmak, düşük gelir ve eğitim seviyesi, bekar/dul olmak, kronik hastalığı olmak, düzenli ilaç kullanmak depresyon riskini artırmaktadır ($p<0.05$). Hobi sahibi ve yakın arkadaş sahibi olmanın, sosyal medya kullanımının depresyon gelişim riskini azalttığı bulunmuştur ($p<0.05$). Yaşam memnuniyeti düşük-orta düzey olarak bulunmuştur.

Sonuç: 50 yaş üstü bireylerde depresyon sık görülmektedir. Yaşam memnuniyeti açısından kent ve kır yaşamının birbirine üstün yönleri olduğu görülmüştür.

Anahtar kelimeler: Yaşlı, Depresyon, Memnuniyet

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Introduction

The population living in cities is increasing day by day, and the population of Turkey is becoming older with each passing day. According to the 2013 TNSA Report, while the population over the age of 65 constituted 7.9% of the general population, 8.5% of the population consists of the elderly according to the 2017 TUIK results [1, 2]. The inadequacies that appear in old age limit the daily activities, movement areas and social relations at various levels [3].

Old age neither corresponds to a state in which people live longer and are healthier, nor to a state in which the elderly are retired and obtain more income. Together with these, it must be considered as a category in which the elderly establish relations with other groups in the society by integration, and in which the elderly have expectations about the environment, the city, and the country in which they live. When chronological age is considered, the old age period which may be defined as the third age after the first period which consists of childhood and after the second period which consists of adulthood which have heavy responsibilities of social and economic life, must be considered as a period in which the elderly develop themselves and their interests freely [4]. The number of people and the elderly population living in cities is increasing with each passing day. More than half of our population lives in cities and 20.8% of the population living in cities are at and above the age of 50 [1].

One of the most frequently observed diseases in the elderly is depression. The diagnosis of depression is ignored in the elderly due to various reasons, and the results may be negative (5). The prevalence of old age depression was reported to be different in various societies (5). It was observed that the prevalence is between 1% and 60% [6]. When the etiology of old age depression was considered it was observed that many factors are influential in this process. Among these reasons, there are the physical inadequacies due to old age, chronic diseases, psychosocial reasons, neuroendocrine and neurochemical reasons. When the people diagnosed through the scale developed in society-based studies to evaluate the depression and through psychiatric examination were considered it was seen that the frequency is lower in terms of clinical evaluations. It was seen that the frequency varied between 1-48% in the scales reported in society-based studies [7].

The purpose of the present study was to determine the life satisfaction levels of the elderly people in working life and living in cities or village/towns in demographical terms; to determine the depression frequency in these people and to find out the factors that may be associated with depression.

Materials and methods

The type, population and sampling of the study

The population of the study, which was designed in the cross-sectional manner, consisted of the elderly individuals above the age of 50 living in the city center and villages and counties of Malatya. The study was conducted between June-November 2017. Type of study is cross-sectional. The minimum number of the individuals that had to be contacted was found to be 524 when the results of the pilot study which was conducted by taking the 80% power and 95% confidence interval as reference. 908 people were contacted in clusters with the Quota Sampling Method. The inclusion criteria for the study was being above the age of 50 and being voluntary to answer the questions. Ethical approval was received from the university for the study (Decision Number: 2017/23-4).

Evaluation Tools

The questionnaire applied to the individuals consisted of three sections;

Sociodemographic information form

The first section consisted of sociodemographic questions on age, gender, education, income, living area, and average living duration in city center for those living in city center. In this section, the hunger and poverty limits on the date of the study were taken as reference values when the income groups were being formed.

Euromodule standard question paper

The second section consists of a standard question paper with the name Euromodule, which was prepared by researchers from 19 countries, who were specialists in their fields [8]. Euromodule evaluates the life satisfaction in the elderly in 5 sub-dimensions; sociodemographic and economic variables, physical health, psychological health, environmental and social relations. The factors that define the life satisfaction in old age are physical health, psychological health, the opportunity of establishing social relations, and environmental and sociodemographic and socioeconomic variables [8]. Euromodule basically consists of a basic section and subsequent another elective section. The main section is compulsory for all participant countries; and includes subjective and objective evaluations on the fields included in life. The other section consists of elective questions each of which evaluating the subjective conditions of each country. For example, the income level of the individual reflects the objective dimensions, and the satisfaction of this income reflects the subjective dimension. As a result, both sections were prepared to evaluate subjective and objective indicators at individual and social level [9].

Geriatric depression scale

The third section consists of Geriatric Depression Scale. This scale consists of yes/no questions; and excludes somatic complaints that do not have much diagnostic value in the elderly and the items that might cause reactions. The validity and reliability study of the scale, which consisted of 30 questions, was performed for Turkish. The answers given to the questions are evaluated as 0-1 in the scale. According to the Geriatric Depression Scale, 0-10 scores mean no depression, 11-13 scores mean possible depression, 14 and over scores mean absolute depression [9].

Statistical analysis

The data were analyzed with the SPSS 22.0 program. The definitive data were expressed as percentage, median, arithmetic average, and change range. The Kolmogorov Smirnov test was used as the normal distribution test. The parametric tests were used in the analysis of the data that fit normal distribution, and the Non-Parametric tests were used in the analysis of the data that did not fit normal distribution. The Chi-Square test was used in the analysis of the categorical data. The Mann Whitney U, Kruskal Wallis and Spearman Correlation Analysis, Binary

Logistic Regression Analysis, Chi-Square tests were used in the analyses of the data. The significance level was taken as $p<0.05$.

Results

The mean age of the 908 people who participated in the study was 58.06±7.24; and 49% were female, and 51% were male. 81.5% of the participants were between 50-64 ages, 18.5% were at and above the age of 65. 86.9% of the participants lived in city center, and 13.1% lived in village/town. The average life in city of the participants who lived in city was 33.84 years. The sociodemographic properties and the distribution of the answers given to the Euromodule question paper are given in Table 1.

Table 1: The distributions and values of the answers given to the EUROMODULE questions

Variables	%	X	Median	Change interval
Sociodemographic variables				
Gender; Male /female	51.0/49.0			
Marital status; married / single / widowed	80.6/6.8/12.6			
Settlement; urban / rural	86.9/13.1			
Education level				
Not literate / Literate-Elementary school	12.4/28.0			
Secondary / High School / University	15.6/17.7/26.3			
Satisfaction level of education		4.35	4.0	1-10
Household income				
0-1529/1530-4980/5000 tl and above	28.6/55.7/15.7			
Satisfaction level of household income		4.03	4.0	1-10
The social class you feel, workers / middle / upper	31.2/59.7/9.0			
Physical health				
Chronic disease present / absent	48.2/51.8			
Regular medication available / not available	52.0/48.0			
Satisfaction level from general health		4.36	4.0	1-10
Mental health				
Spiritual troubles (stress, constant fear, worry..)		1.66	1.80	0-5
Social relations				
Close friend present/absent	79.2/20.8			
Social participation (association membership) pre/abs	21.2/78.8			
Number of close friends		4.39	4.0	0-10
Interview frequency with children		9.72	10	0-14
Environment				
1- Living space: House				
Host: host / tenant	78.7/21.3			
Number of rooms		3.30	3.0	1-8
Facilities and conditions at home (separate kitchen, bathroom, hot water, heating, terrace balcony)		5.08	6.0	
2- Living space: Neighborhood				
Personal security		0.27	0.00	0-4
Close complaint (noise, air-water pollution, recreational areas)		9.60	10.0	0-16
Satisfaction level from neighbors		3.97	3.0	0-10
3- Living space: Country				
Belief in social adherence		2.36	2.33	1-4

Nearly half of the participants had chronic diseases and used continuous medication. The satisfaction from general health was low. When their social life was considered, it was determined that many people had close friends and the rate of membership in social associations was found to be low. It may be claimed that the opportunities were good in general. Complaints from close surroundings and dissatisfactions from the relations with neighbors were high. The belief in social justice was at medium level.

The sub-dimensions of the Euromodule responses of the participants were analyzed in terms of living in city or village/town. When the results were considered in terms of complaints about the physical environment, it was found that the complaints about the close surroundings were less at a significant level in the participants living in village/town (p=0.001). It was determined that the physical depression was low at a significant level in those who were living in village/town (p=0.004). When the results were considered in terms of satisfaction from general health, it was seen that the participants living in cities and the participants who were male had more satisfaction scores at a significant level (p=0.032, 0.001). When the results were considered in terms of chronic diseases, it was determined that there were no differences between the city and village (p=0.145). When the belief in social justice was considered in terms of age, gender and the area where the participant lived, no differences were determined (p=0.159, 0.879, 0.425). It was seen that the number of the participants who lived in cities had few close friends at a significant level (p=0.001). When the results were analyzed in terms of education and satisfaction from income levels, it was observed that the participants who lived in cities were satisfied at a significant level (p=0.001, 0.002). In terms of social association memberships, no differences were determined between those who lived in city and in village/town (p=0.661).

According to the scores received from the Geriatric Depression Scale, the depression frequency was found to be 40.2% in the Study Group in the analysis made about depression (Table 2). It was determined to be 47% in the group who was above the age of 65 (Table 7). The mean score received from the scale was 11.85±6.71.

Table 2: Prevalence of depression according to geriatric depression scale

Group	n	%
No depression	402	44.5
Possible depression	138	15.3
Depression	363	40.2

The scores received from the depression scale according to sociodemographic properties are given in Table 3. It was observed that the scores received from the depression scale were high at a significant level in women and in participants who were above the age of 65. In addition, it was also found that as the education and income levels decreased, the scores received from the scale increased at a significant level (Table 3).

Table 3: Average scores of depression scale according to sociodemographic characteristics

İndependent variable	Point (X±S.D.)	p
Male / Female	11.23±6.9 / 12.48±6.4	0.002
50-64 years / 65 and over	11.41±6.5 / 13.58±7.0	0.001
Not literate / Literate-Elementary school	14.44±7.4 / 12.78±6.5 /	<0.001
/ Secondary / High School / University	11.73±6.1 / 11.33±6.1 / 9.97±6.5	
0-1529/1530-4980/5000 tl and above	13.12±6.9 / 11.77±.6.5 / 9.86±6.5	<0.001
Married / single / widowed	11.45±6.4 / 12.95±7.0 / 13.92±7.7	0.005
Living in the village/ Living in the city	12.44±6.7 / 11.76±6.7	0.245

The findings on the results of the correlation among scores received from the depression scale in terms of the life in city, age, meeting children, the belief in social justice, and complaints from the close surroundings, are given in Table 4.

Table 4: Relationship between some factors and GDS

	GDS point	
Factor	r	p
Age	0.131	<0.001
Close complaint	0.174	<0.001
Interview frequency with children	-0.196	<0.001
Lifetime in the city	-0.119	0.001
Belief in the social adherence	-0.194	<0.001

According to the results of the binary logistic regression analysis, which was made to determine whether there was depression according to membership in a social club, close friends, hobby, chronic disease, it was observed that the model fitness was good (Hosmer and Lemeshow Test; p=0.449). The independent variables included in the model explained 10.1% of

the total variance in the dependent variable according to Nagelkerke R Square. The true estimation percentage of the model is 62.7%. It was observed that the coefficients of the independent variables that were included in the model were significant except for membership in a social association (Table 5).

Table 5: Logistic regression analysis results for depression

	Depression				
				95% C.I. for Exp(B)	
	B	p	Exp(B)	Lower	Upper
Not being a close friend	0.663	<0.001	1.884	1.350	2.629
Not being a hobby	0.514	<0.001	1.672	1.257	2.224
Chronic illness	0.422	0.003	1.525	1.156	2.012
Becoming a social association member	-0.096	0.571	0.909	0.653	1.265

When we considered the OR (i.e. the Odds Ratio) of the independent variables included in the model, it was observed that the risk of developing depression in the elderly who did not have close friends was 1.884-fold more; 1.672-fold more in those who did not have a hobby, and 1.525-fold more in those who had a chronic disease. According to social media use status, the average scores received in the Geriatric Depression Scale are given in Table 6.

Table 6: Average scores from the SDO by using social media

	GDS point		
Social media use	(X±S.D.)	Median	p
Yes	10.96±6.82	10.0	<0.001
No	12.80±6.47	13.0	

When considered in terms of age groups, there were statistically significant differences and the depression frequency in the individuals who were over the age of 65 was observed to be 47% (Table 7). When we considered the social media use in terms of age groups, it was determined that 74.4% of the individuals who were above the age of 65 did not use the social media (p<0.001).

Table 7: Depression frequency according to age group, chronic disease status and place of residence

	Geriatric depression scale group (n/%row)				
	No depression	Possible depression	Depression	X^2	p
Yaş grubu					
50-64	342/46.7	109/14.9	282/38.5	6.674	0.036
65 years and over	60/35.7	29/17.3	79/47.0		
Chronic disease					
Yes	167/38.5	67/15.4	200/46.1		
No	233/50.0	71/15.2	162/38.4	13.875	0.001
Living place					
City	353/45.0	124/15.8	308/39.2		
The village / town	49/41.5	14/11.9	55/46.6	2.698	0.259

Discussion

It was reported that depression symptoms were frequent in the elderly at a rate of 20% [10, 11]. It was observed that depression was more frequent in people who had long-term physical limitations. For example, the frequency of depression in diabetes patients was 30%. It was also reported that this frequency was 25% and above in COPD patients [12,13]. Depression is seen to be increased at a 7-fold in people who have two or more physical diseases [12]. In 36% of the people between 65-74 years of age, and in 47% of the individuals above the age 75, there is a chronic disease that limits life and this is a potential risk factor for depression development and causes that the mortality also increases (14). Depression is rarely detected and treated in the elderly patients. Especially in the elderly that have chronic diseases, this may be ignored [15,16]. Another delay reason in diagnosis is the labeling of the general practitioners about mental diseases in the elderly [17,18]. In addition, elderly patients want to speak rather than antidepressant treatment [18].

In a study conducted in China, it was observed that there were depression symptoms in 40.6% of the hypertension patients [19]. In the same study, a Logistic Regression Analysis was made about the factors that might be influential in depression development, and it was determined that the risk of developing depression increased in women, non-married people, people with low income, lonely people, people with chronic diseases, and in low social support (19). In another study conducted in China, the depression prevalence was found to be 5.9% in adults who were above the age of 35, 8; 8.1% in women, and 3.9% in men [20]. It was observed that income level, educational level, daily sleep duration, salt and meat consumption, and chronic disease were associated with depression symptoms [21].

In a thesis study conducted in Turkey to investigate the frequency of depression in individuals above the age of 65, the average score received from Geriatric Depression Scale was found as 14.04±7.6. It was seen that age, gender, marital status, educational status, income, chronic diseases, and continuous medication use were influential on depression development [21]. Increasing age, being woman, having deceased spouse, low educational status, low income levels, chronic diseases increased the scores received from the depression scale at a significant level [21]. It was reported that the frequency of depression in old age varied according to residential area at a rate of 0.9-42%. In our study, on the other hand, the mean score received from the Depression Scale was found to be 11.85±6.71. The depression prevalence in the group that was above the age of 50 was found to be 40.2%; and 47% at the age group above 65. Being woman, being above the age of 65, low education and income level, being single-widow or widower, having chronic disease, using continuous medication increased the risk of depression. The average scores received by the participants in this group were high at a significant level. It was observed that having close friend, having a hobby or activity and using social media were influential factors in protecting from depression. Social media use is lower in participants above the age of 65. It is considered that this age group has problems in adapting the modern age.

Being woman and low educational and income status bring disadvantages in reaching resources in social life, in participating to social life, in reaching services, and participating to activities. It is considered that this situation contributes to the development of depression. When the fact that being widow or widower cause that individuals grieve and become lonely is considered, it is possible to consider that these factors are also influential in the development of depression. Participating in social life and increased sharing with people are considered as protective factors from depression. Having close friends, having a hobby, and using social media probably facilitate integration to social life and decrease the loneliness and the feeling of insignificance brought by old age. The negative correlation between the life in city and depression supports this situation. The decrease in the number of people living in villages, and the social and economic opportunities being low in villages may help explain this relation.

The old age period is a period in which the material and spiritual dependencies of people are increased due to various reasons. If this issue is not considered in detail and no precautions are taken, we may become fully dependent on other people when we become old just like it is the case in a newborn baby [21]. While the death of friends or children in old age, residing at an old-age home after leaving one's home, the lack of social relations, falling, loss of movement, bad oral health, losing independency and similar situations cause stress, depression and similar diseases in the elderly, they also reduce life quality [22,23]. Cooking, painting, listening to music, going to the cinema, doing physical activity, spending time with peers prevent the dementia and depression in the elderly [22-24].

When we considered the sub-dimensions of life satisfaction, it was observed that the satisfaction from sub-dimensions was at low-medium level. It was observed that living in city increased satisfaction in some points. When the advantages of the city in terms of education, economy and access to healthcare services are considered, this situation may be explained. We believe that this advantageous situation increased satisfaction. When the results were analyzed in terms of complaints about physical environment, it was determined that the complaints of the people living in villages were lower at a significant level. It was observed that the people living in village/town complained less about the noise, air-water pollution, and similar physical environmental factors. The less traffic, crowd and living very close to one another in cities being also less may be the reason of this difference. It was found that the depression was low in people living in village/town at a significant level. Living close to the nature and the imprisoned home life being low in villages may be influential in this situation.

When the satisfaction from general health levels were analyzed, it was observed those males and those who lived in city were more satisfied from general health status. It is considered that benefiting more from healthcare institutions and facilitated treatment and medication for those living in city are important in explaining this situation. When considered in terms of chronic disease, no differences were detected between city-village. It is considered that living healthily and individual effort in old age and health behaviors and genetic factors are influential in this result. When the results were analyzed in terms of belief in social justice and age, gender and residential area, no differences were determined. Social justice includes several concepts like justice in the distribution of income, equal opportunities, protecting the weak one against the strong one, etc. It is clear in general that there are inequalities in the distribution of income, education, reaching healthcare services, and use of resources in our country, and it is considered that this outcome stems from general dissatisfaction. It was seen that the number of close friends was more in those who lived in the city. It is considered that the number of residents and the number of the living are explanatory in this result. It is probable that the migrating peers in village/towns or their peers being deceased may affect the low number of friends. When education and satisfaction from income are considered, it was observed that those who lived in city were more satisfied at a significant level. The majority of economic activities being in cities, and the decreased effect of agricultural life and agricultural economy triggered the migration to cities; and ensured that the people living in cities had better economic conditions when compared with those living in villages. Another advantage of city life is the availability of educational institutions and services and the increased opportunity of employment in service sector for those who receive education. When these factors are considered, the more satisfaction of education and the income, which is the result of education, is an expected outcome for people who live in cities for longer durations. In terms of membership in social associations, no differences were detected between the people living in villages and in cities. It is possible that socializing and social activities being formed as depending on various cultural factors may reduce the need for social memberships in people or does not have any difference.

In many previous studies that were conducted on the life satisfaction of the elderly it was observed that 25% of the participants were satisfied from life [25]. It was observed in the present study that the satisfaction of the elderly individuals from their performances in activities which they cared for affected their life satisfactions at a positive level; however, there was a negative relation between life satisfaction and the obstacles in the environment where the individual lives and the difficulties in reaching healthcare services, reaching information, receiving help at home and transportation [25]. In many studies in which life satisfaction was investigated according to demographical properties, it was reported that the expectations of the individuals who were married and who had low socio-cultural levels were limited, and their expectations were related with the cultural structure [25].

Our study was conducted at a single center, which limits the generalization of our findings to other institutions or populations with different resources.

As a result, the depression prevalence in the individuals who were over the age of 50 was found to be high, and even higher in the individuals who were above the age of 65. Being woman, having low income and education level, being single/widow or widower, having chronic disease and using regular medication increase the depression risk. Having close friend, having a hobby/regular activity, and use of social media decrease the depression development risk.

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