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RESEARCH

THE RISK OF DEPRESSION IN ELDERLY INDIVIDUALS, THE FACTORS WHICH RELATED TO DEPRESSION, THE EFFECT OF DEPRESSION TO FUNCTIONAL ACTIVITY AND QUALITY OF LIFE

ABSTRACT

Introduction: The aim of this study is to determine the increased risk of depression and factors related with depression in elderly individuals, to investigate the effect of depression to functional status and quality of life.

Materials and Method: A total of 160 elderly individuals over 65 years old were participated. Demographic data of elderly individuals were enrolled. Standardized Mini Mental Test was used to determine the mental situation, Yesavage Geriatric Depression Scale for risk of depression Functional Activity Score for functional situation and SF-36 health survey scoring for the quality of life.

Results: Eighty one of the total elderly participants had risk of depression,79 ones had not. There were no differences between elderly individuals who had increased risk of depression and had not for sex, marital status, smoking cigarettes. Increased risk of depression was found more in elderly individuals who were illiterate, had more chronic diseases and used much more pills, had knee osteoarthritis and used accessory devices, had low B_{12} and folic acid levels. We found functional activity score low in elderly individuals who had increased risk of depression. Both of physical and mental health scores of SF-36 were lower in elderly individuals had increased risk of depression. The progress depression in elderly age, poor functional status was shown to be a risk factor. A linear relationship was found between depression scores and functional activity scores, quality of life scores.

Conclusion: Increased risk of depression and related factors in elderly individuals were determined. Increased risk of depression in elderly individuals effects the functional status and quality of life of elderly negatively.

Key Words: Aged; Depression; Quality of Life.

ARAŞTIRMA

YAŞLI BİREYLERDE DEPRESYON RİSKİ, DEPRESYONLA İLİŞKİLİ FAKTÖRLER, DEPRESYONUN FONKSİYONEL AKTİVİTE VE YAŞAM KALİTESİNE ETKİSİ

ÖZ

Giriş: Çalışmanın amacı yaşlı bireylerde artmış depresyon riski ve depresyonla ilişkili faktörleri belirlemek, depresyonun fonksiyonel aktivite ve yaşam kalitesine etkisini araştırmaktır.

Gereç ve Yöntem: Çalışmaya 65 yaş ve üzerinde olan 160 yaşlı birey alındı. Mental durumun değerlendirilmesinde Standardize Mini Mental Test, depresyon riskini değerlendirmede Yesavage Geriatrik Depresyon Ölçeği, fonksiyonel durumu belirlemede Fonksiyonel Aktivite Skoru ve yaşam kalitesini değerlendirmede SF 36 yaşam kalitesi ölçeği kullanıldı.

Bulgular: Yaşlı katılımcıların 81'inde artmış depresyon riski bulunurken, 79'unda artmış depresyon riski bulunmamaktaydı. Artmış depresyon riski olan ve olmayan yaşlı bireyler arasında cinsiyet, medeni durum, sigara kullanımı açısından farklılık yoktu. Okuma yazma bilmeyen, kronik hastalık ve kullandığı ilaç sayısı fazla olan, diz osteoartriti olan, yardımcı cihaz kullanımı olan, kanda vitamin B_{12} ve folik asit seviyeleri düşük olan yaşlı bireylerde artmış depresyon riskinin daha fazla olduğu görüldü. Depresyon riski olan yaşlı bireylerde tüm fonksiyonel aktivite skoru parametreleri depresyon riski olmayan yaşlı bireylerden daha düşük bulundu. SF-36 yaşam kalitesi ölçeğinin hem fiziksel ve hem de mental sağlık skorları da depresyon riski olan yaşlı bireylerde depresyon riski olmayan yaşlı bireylerden daha düşük bulundu. Yaşlı bireylerde depresyon gelişiminde yaşın, kötü fonksiyonel durumun risk faktörü olduğu gösterildi. Depresyon skorlarıyla fonksiyonel aktivite skorları, yaşam kalitesi skorları arasında lineer bir ilişki bulundu.

Sonuç: Yaşlı bireylerde artmış depresyon riski ve ilişkili faktörler belirlendi. Yaşlı bireylerde depresyon riskinin artması fonksiyonel durum ve yaşam kalitesini olumsuz etkilemektedir.

Anahtar Sözcükler: Yaşlı; Depresyon; Yaşam Kalitesi.

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Introduction

Old age is a state of regression of physical and mental abilities during which morphological, physiological and pathological changes progress in adverse direction and the comorbidity of various diseases increases (1). Health problems specific to the advanced ages are gaining growing importance with the rapid increase in the number of elder population. Recent research has shown that depression, anxiety disorders, and psychosis are more common than previously supposed in elderly populations without dementia (2). Depression has been reported to be seen in 21-60% of the geriatric population in the previous data (3).

The prevalence of depressive disorders in the elderly has been reported to be 13.5%-41.5% in Turkey (4). Further, Bektaş et al. reported accurate depression in 48.5% and likely depression in 6.5% of the patients who were inpatient in internal medicine clinics (5). As stated before, depression is seen in almost half of the geriatrics community. Cognitive regression, feeling of desperation, loneliness and fear of death are the main causes of this condition.

Risk factors for depression in the elderly are not so different from those in the young population; however, exposure to these risk factors varies by age (6). Female gender, problems related to physical health, neurotic personality traits, a history of depression, living in nursing homes, inadequate life events, and lack of social support are significant risk factors for the development of depression in the elderly (7,8).

Depression is a condition that deteriorates the quality of life and productivity and that indirectly causes the deterioration of the existing chronic diseases, therefore resulting in economic losses. One study reported that cognitive function, depression, and daily life activities were extremely related processes with each other in elderly adults (1). One study reported in terms of daily living activities, semi-dependent elderly persons had higher depression, anxiety and somatization levels than the independent ones (9). Akyol et al. pointed out a higher prevalence of chronic diseases and disabilities in the elderly compared to other age groups, and accordingly limitations in their social activities, lead to a reduction in the quality of life (4). Eventually, investigations made about this matter in our country searched the effects of depression on the quality of life and functional activity and the risk factors that might be related to depression separately. The difference of our study is to investigate all these issues together and show the association between them. The aim of this study is to determine the increased risk of depression and factors that might be related with depression in elderly individuals, to investigate the effect of depression to functional status and quality of life.

Materials and Method

Patients

The present study was carried out descriptively, prospectively, cross-sectional on consecutive elderly individuals. One hundred and eighty individuals at above 65 years of age who had applied to the physical medicine and rehabilitation outpatient clinic were included in this study. Individuals were assessed sequentially according to the applications. Elderly individuals with cognitive function adequate for communication (Elderly individuals with Standardize Mini Mental Test scores over 26) were included. All subjects were evaluated by a face-to-face interview technique using a questionnaire form. Data collection was carried out by doctors. Approval of the local ethical committee of the hospital was obtained. Individuals were informed about the study and their consents were obtained.

The demographic data of the elderly individuals (age, sex, occupation, marital status and educational level), way of living (alone, together with the spouse, together with the spouse and children or together with children without the spouse), presence of chronic diseases and chronic drug use were recorded. Following the questionnaire perceptions of aging with questions, such as 'What do you think about aging? Description of old age by the individuals is recorded as "positive", "negative" or "no idea". Whether knee osteoarthritis had individuals as defined by the ACR criteria was assessed, the use of assistive devices was assessed. Blood vitamin B_{12} and folic acid levels of the elderly individuals were measured.

Scales Used in the Study

Standardized Mini Mental Test (SMMT) was used in the evaluation of the mental statuses of the elderly individuals included in the study, Functional Activity Scores (FAS) were used to evaluate functionality, Yesavage Geriatric Depression Scale (YGDS) was used to evaluate risk of depression, and SF 36 Quality of Life Scale was used to determine the quality of life.

Standardize Mini Mental Test: Standardize mini mental test was used for the assessment of mental status of the elderly individuals, which assesses cognitive functions under five different sections (orientation, memory, attention and calculation, recall and language) (10). It is regarded as a practical test

for daily medical practices and a very convenient tool for cognitive functional screening for elderly population (11). A SMMT score greater than 26 indicates a normal cognitive function whereas 24-26 indicates a mild cognitive dysfunction and below 24 indicates dementia (12).

Yesavage Geriatric Depression Scale: Turkish version of the Yesavage geriatric depression scale consisting of 30 items, which are to be responded with "Yes/No", was used to assess depression (13). The cutoff value in this scale is 13\14, and values exceeding this value indicate the depression of increased risk. Geriatric Depression Scale was read how understandable and clearly tone, without comment, at most two times.

Functional Activity Score: This score is obtained by summing the points given to the independence level in such functions as cleaning, shopping, transport, cooking, washing, clothing, toilet needs, transfer, continence and eating. In each function, 3 points is given for independence, 2 points is given for partial dependence and 1 point for dependence (14).

SF 36 Quality of Life Scale: SF 36, which was developed by Ware to assess the quality of life and of which validity and reliability in Turkey was validated by Koçyiğit et al., was performed to assess the quality of life (15,16). The scale consists of 36 items and provides for the measurement of the following 8 parameters: physical function (PF) (10 items), social function (SF) (2 items), physical role difficulties (PRD) (4 items), mental status role (MSR) (3 items), mental health (MH) (5 items), energy/vitality (4 items), pain (2 items), general perception of health 27 (GH) (5 items) (15). The subscales evaluate health with scores between 0 and 100, with 0 indicating the worst health status and 100 indicating a good health status. Consequently, it is possible to obtain separate scores for each scale. Higher scores indicate better health statuses. The total score of the scale is not calculated. Both the scores of 8 components were separately evaluated in the study and the scores of the two components, namely the physical health (PH) and mental health (MH), were evaluated.

Statistical Analyses

SPSS-15.0 software was used for the statistical analyses. Definitive statistics were applied in the analyses. After evaluating the 160 elderly individuals included in the study in regard to increased risk of depression, the elderly individuals with increased risk of depression were included in one group and those without increased risk of depression were included in the other group. Chi-square or Fisher's Exact Chi-square test was used to compare the categorical data of elderly individuals with and without increased risk of depression, including sex and educational status. The independent samples t-test was applied to compare the continuous variables between the two groups.

Linear regression analysis was performed to identify the relationship between age and depression score, FAS, quality of life. The Pearson correlation analysis was performed to identify the relationship between depression score, FAS, and the physical and mental component scores of quality of life. Logistic regression analysis was performed to determine whether the risk factors are age, FAS on depression of elderly individuals. Linear regression analysis was performed to determine the relationship between the quality of life and depression scores and FAS, respectively. Level of statistical significance was accepted as $p<0.05$.

Results

The elderly individuals included in the study, 93 were females (58.1%) and 67 (41.9%) were males, with an average age of 72.03±6.64. The SMMT average of individuals was 26.08±1.03. While risk of depression was found in 81 elderly individuals (50.6%), no risk was determined in 79 (49.4%) individuals. Characteristics of the elderly individuals in the groups with and without risk of depression are given in Table 1.

The mean age of the group with risk of depression (76.12±6.56 years) was found to be significantly higher than the mean age of the group without risk of depression (67.84±3.25 years) ($p=0.0001$). No statistical differences were observed regarding gender in elderly individuals with and without risk of depression ($p=0.979$). As regards the educational statuses, risk of depression was found in 69.8% of all the illiterate individuals while 30.2% of them had no risk of depression. The same rates were respectively 41.1% (with risk of depression) and 58.9% (without risk of depression) in literate individuals. This difference was statistically significant ($p=0.001$). To evaluate whether or not there were any differences regarding the marital status, the five cases who were either divorced or not married at all were excluded (because this number was too small to be included in the statistical analyses) and a test was made to see if there were any differences between the married or widow/widower individuals, which resulted a statistically insignificant difference ($p=0.501$).

Table 1— Characteristics of Elderly Individuals with and without Risk of Depression.

	Elderly Individuals without Risk of Depression n=81 (%)	Elderly Individuals with Risk of Depression n=79 (%)
Sex		
Female	46 (58.2)	47 (58.0)
Male	33 (41.8)	34 (42.0)
Marital status		
Married	55 (69.6)	58 (71.6)
Widowed	23 (29.1)	19 (23.5)
Never married	1 (1.3)	3 (3.7)
Divorced	-(-)	1 (1.2)
Educational statuse		
İlliterate	16 (20.3)	37 (45.7)
Primary school	49 (62)	37 (45.7)
Sekondary school	9 (11.4)	5 (6.2)
High school	5 (6.3)	2 (2.4)
Style of life		
Alone	3 (3.8)	9 (11.1)
With spouse	15 (19.0)	30 (37)
With spouse and children	57 (72.2)	39 (48.1)
Without spouse and with children	4 (5.1)	3 (3.7)
Definitions of old age		
Positive	67 (84.8)	7 (8.6)
Negative	11 (13.9)	73 (90.1)
Unideaed	1 (1.3)	1 (1.2)
Cigarette smoking		
Positive	15 (9.4)	16 (10.0)
Negative	65 (40.6)	64 (%40)
The presence of osteoarthritis of the knee	29 (36.7)	67 (82.7)
The use of ancillary tools	9 (11.4)	52 (64.2)

Table 2— Systemic Disease and Chronic Drug Use Cases in Elderly Individuals with and without Risk of Depression.

	Elderly Individuals without Risk of Depression n=79 (%)	Elderly Individuals with Risk of Depression n=81 (%)
Systemic disease		
Two and less than two chronic disease	18 (32.1)	38(67.9)
Three and more three chronic disease	55 (52.9)	49(47.1)
Chronic drug use		
Two and less than two chronic drug use	56 (44.8)	69 (55.2)
Three and more than three chronic drug use	23 (65.7)	12 (34.3)

Since the number of individuals who lived alone or together with their children without their spouse was too small to perform the statistical analysis, these subjects were excluded from the analysis. Then, the risk of depression rates obtained for the elderly individuals who lived with their spouses were compared with the rates of the elderly individuals who lived with their children and spouse. While 66.7% of the elderly individuals who lived with their spouses had risk of depression and 33.3% did not, 40.6% of the elderly individuals living with their spouse and children had risk of depression and 59.4% did not.

The risk of depression rate was 32.1% in the elderly individuals with one or two chronic diseases, while it was 52.9% for the elderly individuals with three or more chronic diseases.

Table 3— Comparison With the Functional Activity Scores in Elderly Individuals with and without Risk of Depression, to Scores of Quality of Life sf-36

	Elderly Individuals without Risk of Depression	Elderly Individuals with Risk of Depression	p
Functional activity score			
Dressing	2.50±0.67	2.98±0.11	0.001*
Transport	1.93±0.71	2.81±0.39	0.001*
Shopping	1.93±0.74	2.81±0.39	0.001*
Cleaning	2.11±0.97	2.87±0.33	0.001*
Food preparation	2.44±0.57	2.97±0.15	0.001*
Take a bath	2.60±0.64	2.98±0.11	0.001*
To the toilet	2.80±0.40	3.00±0.00	0.001*
Continenece	2.71±0.50	3.00±0.00	0.001*
Transfer	2.79±0.40	3.00±0.00	0.001*
Nutrition	2.83±0.36	3.00±0.00	0.001*
Quality of life			
Physical function	26.97±7.75	38.05±7.94	0.001*
Physical role limitations	40.35±11.16	40.61±8.28	0.869
Pain	40.90±7.23	43.94±10.43	0.033
General health	31.56±4.33	33.93±7.04	0.011
Energy	37.33±7.38	37.30±8.36	0.979
Social function	43.32±7.26	43.71±7.37	0.737
The role of mental state	41.58±10.24	47.13±6.72	0.001*
Mental heath	37.64±5.11	41.70±3.16	0.001*
Physical score	34.53±7.75	43.20±7.89	0.001*
Mental score	42.82±7.01	47.66±3.86	0.001*
The avarage depression scores	18.81±3.25	11.17±1.39	0.001*

*: Significantly

This difference was statistically significant (p=0.012). While 44.8% percent of the elderly individuals who used one or two chronic drugs had risk of depression, 65.7% of the elderly individuals who used three or more drugs chronically had risk of depression. This difference was statistically significant (p=0.029).

No differences were found regarding smoking between the elderly individuals with and without risk of depression (p=0.902).

The description of old age was negative in 90.1% of the elderly individuals with risk of depression and positive in 84.8% of the elderly individuals without risk of depression.

Increased risk of depression was present in 69.8% of the elderly individuals with knee osteoarthritis, in 21.9% of the elderly individuals without knee osteoarthritis, in 85.2% of the elderly individuals using ancillary tools, and in 29.3% of the elderly individuals not using ancillary tools. These differences were statistically significant (p=0.0001).

Increased risk of depression was present in 87.5% of the elderly individuals with low vitamin B_{12} and folic acid levels and in 41.4% of the elderly individuals with normal values. This difference was statistically significant (p=0.0001).

All the parameters of physical activity scores we used to measure the functionality in the groups with and without risk of depression were significantly lower in the group with increased risk of depression (p=0.0001). The scores of physical function, role of mental status and mental health, which are among the sub-parameters of the quality of life, were found significantly lower in the group with increased risk of depression (p=0.0001). No differences were found between the groups with and without risk of depression with respect to physical role, pain, general health status, vitality/energy and social function parameters (p>0.05). When we evaluated the SF-36 quality of life scale in terms of two components, namely, the physical health (PH) and the mental health (MH), both scores were found to be low at statistically signif-

Table 4— Linear Regression Analysis Results on the Effect of Age to Depression Score, FAS and Physical and Mental Component Scores of SF-36 Quality of Life Scale.

	Beta	r	%95	CI	f	p
Depression scores	0.522	0.757	0.451	0.593	(1.158) 212.72	<0.0001*
FAS	-0.503	0.783	-0.566	-0.440	(1.157) 248.22	<0.001*
SF 36 PH	-0.387	0.288	-0.589	-0.184	(1.158) 14.25	<0.001*
SF 36 MH	-0.583	0.628	-0.697	-0.470	(1.158) 103.14	<0.001*

*: Significantly

CI: Confidence interval. FAS: Functional Activity Score. SF 36 PH: The physical health scores of SF 36 quality of life scale. MH: The mental health scores of SF 36 quality of life scale.

Table 5— Correlation Between Depression Scores, FAS, Physical and Mental Component Scores of SF-36 Quality of Life Scale.

	SF-36 PH		SF-36 MH		Depression Scores	
	r	p	r	p	r	p
FAS	0.371	0.001*	0.569	0.001*	-0.732	0.001*
Depression scores	-0.490	0.001*	-0.550	0.001*		

*: Significantly

FAS: Functional Activity Score. SF 36 PH: The physical health scores of SF 36 quality of life scale. MH: The mental health scores of SF 36 quality of life scale.

icant levels in the group with increased risk of depression (p=0.0001).

The relationship was found between age and depression scores, age and FAS, age and the PH and MH scores of quality of life scale (Table 4). Model was statistically significant. (p<0.05).

The correlation between depression scores, FAS and the PH and MH scores of quality of life scale are summarized in Table 5. According to the table, the correlation was found moderately negatively between depression scores and quality of life, correlation was found weakly negatively between depression scores and PH component scores SF 36 quality of life scale, correlation was found moderately negatively between depression scores and MH component scores SF 36 quality of life scale.

According to the logistic regression analysis that has been done in order to determine whether age is a risk factor of FAS in elderly individuals, it has been found that when age goes up by 1, the risk of having a depression increases by 0.731 times. 95% confidence interval for the OR is 0664-0806. If FAS decreases by one unit, the risk of having a depression goes down by 1.897 times. 95% confidence interval for the OR is 1.513-2.378.

The relationship between depression scores, FAS and quality of life are summarized in Table 6. According to the table, the negative linear relationship was found between both PH and MH component scores of SF 36 quality of life scale and depression scores, the positive significantly linear relationship was found between both PH and MH component scores of SF 36 quality of life scale and depression scores.

Table 6— Linear Regression Analysis Results on the Relationship Between Physical and Mental Component Scores of SF-36 Quality of Life Scale and FAS, Depression Scores.

	Beta	r	%95	CI	f	p
SF 36 PH-Depression scores	-0.957	0.490	-1.224	-0.690	(1,158) 50.20	<0.0001*
SF 36 PH-FAS	0.776	0.371	0.470	-1.081	(1,157) 25.12	<0.001*
SF 36 MH-Depression scores	-0.740	0.550	-0.917	-0.563	(1,158) 68.36	<0.001*
SF 36 MH-FAS	0.821	0.569	0.634	1.008	(1,157) 75.19	<0.001*

*: Significantly.

CI: Confidence interval FAS: Functional Activity Score SF 36 PH: The physical health scores of SF 36 quality of life scale MH: The mental health scores of SF 36 quality of life scale.

Discussion

During the advanced age period, changes occur in the health status, social role, economic status and family structure of the individual and the individual faces many problems that cause feelings of hopelessness and loneliness. Based on the data of our study, we determined that advanced age was a risk factor in elderly individuals for depression. Cole et al. also reviewed twenty prospective studies to define risk factors in the geriatric population, and found that age is a significant factor (17). Although many studies have demonstrated that being female, widow or unmarried are among risk factors for depression, no differences was found in our study between genders or marital statuses of the elderly individuals with and without increased risk of depression (17). In terms of the educational statuses, depression being more frequent in our illiterate elderly individuals is a finding consistent with the literature, which contains several reports indicating that low level of education is among the factors increasing the risk of depression (1,17-20).

Loss of the spouse and close relatives with the advancing age and the decrease of social support increase the risk of depression. Researchers have shown that social support from the family and friends is satisfactory for the elderly individuals who are married who have children and who enjoy hobbies while elderly individuals who are dependant for their daily living activities have poor family support (19,20). This is supported by the fact that lower frequencies of depression are observed in the elderly who live their spouses and their children compared to those living only with their spouses. Depression rate was higher in elderly individuals who live with their partners and children than who live only with their partners in our study in accordance with the previous literature. Aksüllü et al. found depression signs in 68.9% of the elderly individuals who live in nursing homes and 27.8% in their homes (7).

Deterioration of the physical health restricts the movements of the individual, increases dependence on others, and fears of loss of physical performance and paves the way for clinical depression by damaging the role in life and respectability (1). Presence of one adversely affects the course of the other. It was found in our study that the individuals with depression have more physical diseases and use more drugs, which is consistent with the literature (2,21).

It was found that smoking was not related with depression seen in the advanced ages (22). Consistently with this, there were no differences as regards smoking between our individuals with and without increased risk of depression.

In this study, we found that the description given for old age as "a bad state and death" by elderly individuals with depression of risk, and the definition of the same as "maturity, being respected, wealth, resting and living in comfort" by elderly individuals without depression of risk were consistent with their current emotional statuses.

There are studies showing the relationship between the depressive emotional status and the deficiencies of vitamin B_{12} and folic acid while there are other studies stating that such relationship could not be shown (23,24). In our study, depression was more frequent in the elderly individuals with lower vitamin B_{12} and folic acid levels suggesting the opinion that low levels of these vitamins creates tendency for depression.

Total adaptation of the depression of increased risk with elderly individuals is deteriorated and this makes it more difficult for them to carry on with their daily living activities, self-care and cleaning jobs (25). One study reported in terms of functional activity, semi-dependent elderly persons had higher depression, anxiety and somatization levels than the independent ones (10). In our study, it was demonstrated that functional situation has gotten worse when people get older, poor functional situation is a risk factor for depression and poor functional situation has a negative impact on PH and MH component scores of SF 36 quality of life scale. In this condition, the causative relationship with the deterioration of functionality and the depressive emotional condition overlaps.

Age-related changes in the organism may have an effect on the quality of life. Arslan et al. have shown in their study, in which they reviewed the evaluation of quality of life in the old age, that the quality of life is a multidimensional concept and its evaluation should cover separate measurements including the physical, social, psychological and somatic sense aspects (14). Skevington et al. reported that increasing age had a negative effect on all aspects of the quality of life (26). In contrast to these findings, Akyol et al. did not find a significant difference between quality of life scores of different age groups; however, they observed an increase in the levels of depression by increasing age (4). We also found the subparameters of the quality of life including physical function, role of the mental status and mental health were lower in the group with depression of increased risk while there were no differences between the groups with and without depression of risk as regards pain, general perception of health, vitality/energy and social function. Depression was seen more frequently in elderly individuals who had worse functional

situation since they were more dependent in their quality of life as expected. On the other hand, no significant difference found between the groups as regards the parameters of pain, general health, vitality/energy, social functioning in SF-36. We could attribute this to the compensation mechanisms due to the chronicity of this condition. When we evaluated the PH and MH component scores of SF-36 quality of life scale, we found both of these scores low, which corresponds with the data in the literature (14,25). In our study, it was demonstrated that the quality of life scores has decreased with advanced age, and it is shown that there is a negative relationship between depression scores and PH and MH component scores of SF 36 quality of life scale. Akyol et al. noted that the PH and MH component scores of SF 36 quality of life scale were reduced as depression scores were increased in the study population (4). Tarsuslu-Şimşek et al. reported depression being an important factor in quality of life and life satisfaction, prosecuting is essential in order to increase the health related quality of life in the elderly individuals physical, physiological and emotional well-being (27). It has been reported that depression is a frequent problem and might have a significant effect on the quality of life in the elderly population (4).

In the clinical practice of the depression seen in the elderly, physical complaints and anxiety stand out instead of the melancholy and grief, which are the signs of the emotional status related to the acceptance of the losses, disappointments and traumas encountered in the life. In this case, both the doctor and the patient focus on the medical condition and divert from the diagnosis of depression. Again, since both the patient and the doctor consider the depressive signs as a natural part of the ageing, the depression of increased risk may be overlap.In conclusion, determination the depression of increased risk in elderly individuals is very important for increase the quality of life and the independence level in the daily activities. Therefore, we, as the rehabilitation physicians, must be attentive about depression when evaluating elderly individuals, and must remember that this condition can play a key role in increasing the potential of rehabilitation.

Limitations

A major limitation of this prospective study is that the psychiatric evaluation which is among the exclusion criteria was performed in the setting of the polyclinic according to the history obtained from the patient. Further psychiatric evaluation of these patients is warranted. However, due to the scarcity of the studies conducted on the subject, the results of the present study may be beneficial.

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