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RESEARCH

INVESTIGATION OF DEPRESSION AND COGNITIVE FUNCTIONS IN THE ELDERLY IN KARS

ABSTRACT

Introduction: This study was conducted for screening of depressive symptoms and cognitive functions to the elderly registered family health centres in Kars.

Materials and Method: This was a cross-sectional type study conducted in Kars to the elderly recorded by six family health centres. In the study; a questionnaire form, the Geriatric Depression Scale and Standardized Mini-Mental Test (for illiterate or literate) were used. Research data were evaluated using Mann-Whitney U test, Kruskal-Wallis test and Spearman Correlation analysis.

Results: According to the average points of the elderly people; they are between 72.06±6.65 years old, their depression points 13.43±6.86 and their SMMT/E-SMMT points are 20.48±8.05. 50.4 % of them were found risky in terms of depression and 57.7% of them were found risky in terms of cognitive status. There has been found a positive relation between their ages and their depression (r=.059; p<0.001), a negative relation between their ages and cognitive status (r=.-083; p<0.001) and also there has been found a negative relation between their depression levels and cognitive status (r=.-298; p<0.001). There has been determined a meaningful relation between the elderly individuals' depression and cognitive status according to marital status, educational status, job, income, the palace where they live mostly, frequency of contact with their family, being a smoker or nonsmoker, sleep disorder, the age that the perceive, perceiving health, health problem, frequency of using medicine and restriction due to a health problem.

Conclusion: The destruction which the elderly people witress in terms of depression and cognitive status in Kars, aged ≥65, also stands as an important problem.

Key Words: Aging; Cognitive Function; Depression.

ARAŞTIRMA

KARS'TA YAŞLI BİREYLERDE DEPRESYON VE BİLİŞSEL FONKSİYONLARIN ARAŞTIRILMASI

ÖZ

Giriş: Bu çalışmada Kars ilinde halk sağlığı merkezlerine kayıtlı yaşlı bireylerde depresyon ve bilişsel fonksiyonların taranması amaçlanmaktadır.

Gereç ve Yöntem: Kesitsel tipteki bu çalışma, Kars'ta altı aile sağlığı merkezine kayıtlı yaşlılarla yapılmıştır. Bu çalışmada anket formu, Geriatrik Depresyon Ölçeği ve Standardize Mini Mental Test (eğitimsizler veya eğitimliler için) kullanılmıştır. Araştırma verileri Mann-Whitney U testi, Kruskal–Wallis testi ve Spearman Korelasyon analizi ile değerlendirilmiştir.

Bulgular: Yaşlıların ortalama puanlarına bakıldığında; 72,06±6,65 yaşlarında, depresyon puanının 13,43±6,86, mini mental test puanının 20,48±8,05 olduğu görülmektedir. Yaşlıların %50,4'ü depresyon, %57,7'si bilişsel durum açısından riskli bulunmuştur. Yaşlıların yaşlarıyla depresyon düzeyleri (r=0,059; p<0,001) arasında pozitif ilişki bulunurken yaşlarıyla bilişsel durumları (r=-0,083; p<0,001) arasında negatif; depresyon düzeyleri ve bilişsel durumları arasında negatif bir ilişki belirlenmiştir (r=-0,298; p<0,001). Medeni durum, eğitim durumu, mesleği, gelir durumu, en uzun yaşadıkları yer, ailesiyle görüşme sıklığı, sigara içme durumu, sigara kullanımı, uyku sorunu, kendisini algıladığı yaş, sağlığı algılama, sağlık sorunu, ilaç kullanımı, sağlık sorununa bağlı hareket kısıtlaması ile yaşlıların depresyon ve bilişsel durumları arasında anlamlı ilişkiler saptanmıştır.

Sonuç: Kars'ta 65 yaş ve üzeri bireylerde depresyon ve bilişsel alanda yaşanan yıkım önemli bir sorun olarak durmaktadır.

Anahtar Sözcükler: Yaşlılık; Bilişsel Fonksiyon; Depresyon.

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INTRODUCTION

An increase in the ageing population is a global phenomenon. The expected average life span has increased worldwide, including in Turkey. According to the World Health Organization, Turkey is among the top three countries with the highest rate of increase in the elderly population (1). Because this population is increasing faster than other age groups, their needs and problems have also proportionally increased. One of the most important areas is mental health with increases expected particularly in the incidence of depressive disorders and neurodegenerative conditions, such as Alzheimer's disease (2).

Depression is one of the common psychiatric disorders affecting those aged ≥65 years. The prevalence of depression in the elderly varies from 1% to 60%, depending on specifications of the selected group, their surroundings, purpose of the study and the study methods and measurement instruments used (3). Factors increase an individual's risk of depression include genetic predisposition, being female, being unmarried, neurotic personality characteristics, a history of depression, a lower education and income level and lack of treatment and medication. Furthermore, the loss of independence, chronic illness, insufficient social support, living alone, a decline in cognitive functions and daily activities, retirement, loss of a loved one and unfavourable living conditions increase the risk of depression. Adverse life events and chronic stress are additional precipitating factors in depression (1,2). In the elderly, depression may result in autonomy loss, the quality of life may deteriorate, physical illness may accelerate, suicide and deaths resulting from physical illnesses may increase and the use and costs of health care may rise (3). Considering this, the National Institute of Mental Health has defined depression in those aged ≥65 years as an important community health problem (4).

Depression in the elderly is considered to be the result of ageing or inability to adapt to changed life circumstances. Unless cognitive ability is affected or suicide occurs, depression is often left to its natural course without being diagnosed or treated. Early diagnosis and treatment of depression in the elderly should improve their quality of life and independence levels in performing activities of daily living, and these measures can help prevent early death (3).

Cognitive deficits tend to increase with age. Changes may occur in intelligence and problem-solving abilities, learning and memory, language, space cognition, carefulness, agility and executive functions. Studies on these changes have shown differences related to the person's environment. Studies in Turkey have found that the prevalence of cognitive deficits in the elderly is between 20.5% and 57.1% (4,5). Although this ratio is lower for the elderly living elsewhere, this population, in general, experiences cognitive problems on different levels (5,6).

Cognitive difficulties and depression may mask each other or may actually be the forewarning of each other. Certain studies have stated that depression and cognitive issues affect each other on different levels (7,8). Depression may sometimes be an early indication of dementia in the elderly or it may be a mixing variant in evaluation of cognitive functions. Among patients with dementia, 20% have major depression, and higher percentages have subthreshold depression or depressive indications (9). The frequency of depression indications in patients with vascular dementia is 31% and that in patients with Alzheimer's disease is 20% (10). Our present knowledge shows that an important component of depression in the elderly, particularly that occurring for the first time in later stages of life, is related to the precursors of dementia; it has also been suggested that a late onset of depression indicates the early stages of Alzheimer's disease (9,10). In recent years, the frequency of depression in patients with dementia, and their clinical appearance specifications and results, have become an area of study. Patients with late-onset depression, which results in dementia, and individuals with both depression and dementia have prompted researchers to consider that these two circumstances might be related to a common functional or structural pathology (9). Shahnavaz et al. (11) explained the relationship between depressive symptoms and cognitive decline by stating that depressive symptoms may cause cognitive decline via hypercortisolaemia or psychomotor slowing or vice versa. Depressive symptoms may be an early non-cognitive manifestation of dementia or a reaction to self-perceived cognitive decline, or they may affect the threshold for manifesting cognitive impairment (11). When distinct memory problems are seen in the elderly with depression, a differential diagnosis should be made among dementia, pseudodementia (or reversible dementia) and a comorbidity of both. These definitions indicate that depression presents with symptoms similar to those of dementia (12).

Until recently, the serious nature of depression and cognitive failure in the elderly had not been completely recognized and acknowledged within the Turkish health care system. Problems in the older population can be overlooked for many reasons, including a lack of knowledge about the symptoms of depression and cognitive problems, a persistent belief by fam-

ilies and others that these are normal issues in the ageing process and a lack of qualified medical personnel to properly care for the geriatric population in Turkey where the current medical protocol emphasizes treatment (based on a family medicine model that focuses only on recorded patients). Furthermore, a systematic evaluation of problems in the elderly does not exist in Turkey, and services for them are generally inadequate. Another important issue is that individuals with mental and cognitive problems do not go to health centres at early stages of depression or cognitive decline as they fear being stigmatized. This situation is particularly unfortunate for the homeless senior citizens who are disabled and in need of care.

The State Planning Organization of Turkey has proposed several areas of development with the 'Conditions of Elderly in Turkey and National Aging Action Plan,' which calls for developing effective strategies for the early diagnosis of Alzheimer's disease, elderly depression and similar problems; educating patients, medical staff and caregivers and conducting and encouraging multidisciplinary research (13). It is very important to prevent cognitive and depression problems in the elderly or at least be able to diagnose these at early stages. The goal is to ensure that the elderly remain cognitively functional (6). For this purpose, a short mental history of the elderly patients can be taken and their cognitive abilities can be evaluated using instruments that are simple and easy to read, such as the Geriatric Depression Scale (GDS), Standardised Mini Mental State Examination for illiterate (SMMT-E) or literate (SMMT). Depending on the results of a pre-evaluation, patients should be referred to the appropriate specialists for a more thorough evaluation. Considering these goals, this study aims to evaluate and determine the risk factors of depressive symptoms and cognitive functions of the elderly living in their own homes in Kars, Turkey.

Materials and Method

This was a descriptive cross-sectional study designed to survey depressive symptoms and cognitive functions to the elderly in Kars. There are 10 family health centres (FHCs) in Kars city centre, but because some of them did not participate, the study was completed with 738 of 4000 individuals whose visits were recorded at six FHCs. Individuals with a FHC record were informed by telephone, and data were gathered using face-to-face interviews. Individuals who did not want to join the study, who were not at home or had hearing or speaking problems, were not included in the study. The present study was approved by the ethics committees of the University of Kafkas Medical Faculty and and signed informed consents were taken from all participants. All patients were informed about the objectives and content of the study. An information form, GDS and SMMT-E/SMMT were used. Details of these instruments described below.

The information form consists 21 questions about study participants' demographic features and health habits and status.

The GDS that was developed by Yesevage et al. in 1983 and evaluated for its validity and reliability in Turkey by Ertan et al. in 1997 (14), includes 30 self-reported questions with the answers 'yes' or 'no' which study participants can easily mark. Within the scale, questions 3, 4, 5, 6, 8, 10, 11, 12, 13, 14, 16, 17, 18, 20, 22, 23, 24, 25, 26 and 28 include reverse expression. For scoring, every answer in favour of depression is 1 point and other answers are 0 points. The scoring is as follows: 0–10, 'no depression'; 11–13, 'probable depression'; ≥14, 'definite depression' (14). Cronbach's alpha of the scale in this study was 0.79.

In this study, SMMT-E for illiterate people was applied to individuals who have less than five years education, whilst SMMT for literate people was used for individuals who have five years and more than five years education to assess overall cognition. This test was developed for the first time by Folstein et al. in 1975. The validity and reliability of SMMT for the diagnosis of mild dementia among the Turkish population has been shown by Güngen et al. SMMT-E scale was used for illiterate population by revised Ertan et al. The SMMT-E/SMMT consists of five parts: tendency, recording memory, attention, calculation and remembering and language. A total of 30 points is possible in the SMMT-E/SMMT, and a score of 0–9 considered as severe cognitive impairment, 10–19 as medium cognitive impairment, 20–23 as mild cognitive impairment and 24–30 as within normal limits (15,16). Cronbach's alpha of the scale in this study was 0.82.

Statistical Analysis

Statistical analysis was performed using the SPSS 20.0 (Statistical Package for Social Science, Chicago, IL, USA). Data were descriptively expressed as a mean±standard deviation, frequency and percentage. Normal distribution was evaluated using the by Shapiro-Wilk test and histograms. Because of data show a non-normal distribution MannWhitney-U test, Kruskal-Wallis test and Spearman correlation analysis have been used for evaluation. As the

Table 1— GDS and SMMT-E/SMMT Scores of the Participants

Scores	n (%)	X (±sd)
GDS		
≥10 scores (no depression)	270 (36.6)	
11-13 scores (probable depression)	96 (13.0)	13.43 (6.86)
≥14 scores (definite depression)	372 (50.4)	
SMMT-E/SMMT		
≤ 9 scores (severe cognitive impairment)	90 (12.2)	
10-19 scores (moderate cognitive impairment)	192 (26.0)	20.48 (8.05)
20-23 scores (mild cognitive impairment)	144 (19.5)	
24-30 scores (normal range)	312 (42.3)	

result of Kruskal-Wallis test, the groups have been compared pairwise with Mann-Whitney U test in order to determine the difference between the groups. A p value of < 0.05 was considered significant.

Results

Our results indicated that 13% study participants presented a risk of probable depression, 50.4% had definite depression and 57.7% were at a risk of cognitive decline (12.2% were severe) (Table 1). Identifying features of the study participants are shown in Tables 2 and 3.

When it is looked at GDS scores; female, 85 and elderly group, singles in compared to marrieds/widows, widows in compared to marrieds, the educational levels out of high school compared to the groups which have higher education level, who have an moderate monthly income and the poor compared to good, the ones who don't have social security compared to those, the ones who don't have social security compared to those, those who live mostly in rural areas, who have sleeping problems, who perceive themselves young compared to those who don't have an idea and perceive themselves young, those who have a bad health perception, those who have a disease, those who use a drug, those who had a surgical history and have a movement limitation have been found meaningfully higher (Table 2,3).

When it is looked at SMMT-E/SMMT scores; female, singles compared to married/widowed, widows compared to married one, illiterate ones compared to those who have an education level (except university), literate ones', secondary school or high school graduated ones' compared to university graduated ones, the ones' who don't have social security compared to those, who have an moderate monthly income compared to the worst, those who live mostly in rural areas, those who don't have a communication with their family, those who smoke cigarette, who have sleeping problems, who perceive themselves as young, those who have a bad health perception, those who have a disease, those who use a drug, who don't have a surgical history and in those who have a a movement limitation have been found meaningfully lower, but also it has been found higher in 65 to 74 age group compared to other ages (Table 2 and 3).

There was a weak negative correlation between the SMMT-E/SMMT score and the GDS score (r=-0.298; p<0.001). As the GDS score of participants increased, their SMMT-E/SMMT score decreased. There were a weak negative correlation between age of participants and the SMMT-E/SMMT score (r=-0.083; p<0.001) and a weak positive correlation between age of participants and the GDS score (r=0.059; p<0.001). As the age of participants increased, the GDS scores increased and SMMT-E/SMMT decreased considerably (Table 4).

Discussion

For this study, we intended to survey individuals aged ≥65 years who live in Kars. However, one constraint of our study was our inability to reach the entire group. Many were not at home because they had to be moved because of issues pertaining to their care owing to the cold climate. In addition, depression level and cognitive impairment also affect the daily activities of elderly people, however because of being unable to use a screening scale which aims to evaluation of daily life activities, is a limitation for our study. Nonetheless, we believed that it is important to conduct this study on those aged ≥65 years of age in a city where health services and social activities for the elderly are limited.

We found that 50.4% elderly in our study could be categorized as having definite depression. More than half of the individuals had depressive symptoms. Our results are consis-

Table 2— Comparasion of Scale Scores According to Participants' Demographic Characteristics

Characteristics	n (%)	GDS X (±sd)	SMMT-E/SMMT X (±sd)
Sex			
Female	462 (62.6)	22.80 (8.65)	21.32 (8.61)
Male	278 (37.4)	20.64 (4.73)	23.28 (4.71)
	p<0.001*	p<0.001*	
Age			
65-74	510 (69.1)	13.15 (6.49)	21.25 (8.31)
75-84	180 (24.4)	13.33 (7.83)	20.13 (6.80)
85 and ↑	48 (6.5)	16.87 (6.03)	13.62 (5.95)
	p=0.02**	p<0.001**	
Marital status			
Single	12 (1.7)	28.00 (0.00)	13.00 (0.00)
Married	480 (65.0)	11.90 (6.97)	20.96 (8.26)
Widowed	246 (33.3)	13.43 (6.86)	19.76 (7.59)
	p<0.001**	p=0.011**	
Educational status			
Illiterate	264 (35.8)	16.63 (5.62)	17.77 (7.38)
Literate	228 (30.9)	13.05 (6.53)	21.36 (8.90)
Primary education	180 (24.4)	11.23 (6.58)	23.53 (6.20)
High school	36 (4.9)	6.66 (3.13)	21.66 (10.46)
University graduate	30 (4.1)	9.60 (10.08)	18.00 (4.81)
	p<0.001**	p<0.001**	
Social security status			
Yes	654 (88.6)	13.20 (7.00)	20.84 (7.61)
No	84 (11.4)	15.28 (5.31)	17.71(10.49)
	p=0.006*	p = 0.06*	
Monthly income			
Good	42 (5.7)	8.42 (7.94)	19.57 (7.19)
Moderate	474 (64.2)	13.40 (6.87)	20.11 (8.03)
Poor	222 (30.1)	14.45 (6.20)	21.45 (8.19)
	p<0.001**	p = 0.036**	
Place most of life is spent			
Town center	444 (60.2)	12.68 (6.84)	21.89 (7.42)
Rural areas	294 (39.8)	14.57 (6.75)	18.36 (8.50)
	p<0.001*	p<0.001*	
Contacts with family members			
No	54 (7.3)	15.33 (8.53)	15.11 (9.73)
Yes	684 (92.7)	13.28 (6.70)	20.91 (7.75)
	p=0.11*	p<0.001*	

*Mann-Whitney Utest, **Kruskal–Wallis test

tent with those of other studies conducted in the inner and eastern parts of Turkey (4,6). Secondly, SMMT-E/SMMT mean point of elderly people is 20.48(±8.05) and 57.7% of them (12.2% serious, 26% moderate and 19.5% mild) have cognitive problems (Table 1). These results are similar to the study conducted by Karatay et al. (6). Diker et al. (17) have been found serious cognitive problems as 6.9% and moderate cognitive problems as 25.7% according to the SMMT-E/SMMT in elderly people over age 65. According to these results it can be easily seen that the elderly people in Kars

Table 4— Comparasion of Scale Scores According to Participants' Healthy Living and Health Characteristics

Characteristics	n (%)	GDS X (±sd)	SMMT-E/SMMT X (±sd)
Smoking status (daily)			
I do not smoke	654 (88.6)	13.44 (7.00)	20.10 (7.98)
I'm smoking	84 (11.4)	13.42 (5.75)	23.50 (7.95)
	p=0.746*	p<0.001*	
Sleep problems			
Yes	324 (43.9)	16.85 (6.26)	18.20 (7.67)
No	414 (56.1)	10.79 (6.09)	22.27 (7.89)
	p<0.001*	p<0.001*	
Self-detection status			
Young	516 (69.9)	14.41 (6.68)	19.83 (8.18)
Elderly	192 (26.0)	10.34 (6.13)	22.25 (8.04)
Not sure	30 (4.1)	16.40 (8.20)	20.40 (1.77)
	p<0.001**	p<0.001**	
Health perception			
Good	174 (23.6)	8.96 (5.48)	23.37 (5.62)
Moderate	318 (43.1)	12.94 (6.29)	20.18 (8.60)
Bad	246 (33.3)	17.27 (6.34)	18.82 (8.25)
	p<0.001**	p<0.001**	
The presence of disease			
Yes	594 (80.5)	13.95 (6.71)	19.80 (8.40)
No	144 (19.5)	11.29 (7.08)	23.29 (5.58)
	p<0.001*	p<0.001*	
The drug that is consistently used			
Yes	558 (75.6)	14.04 (6.55)	19.97 (8.25)
No	180 (24.4)	11.56 (7.46)	22.06 (7.19)
	p<0.001*	p<0.001*	
Surgical history			
Yes	390 (52.8)	13.92 (6.82)	21.90 (7.79)
No	348 (47.2)	12.89 (6.88)	18.89 (8.04)
	p=0.018*	p<0.001*	
Limitation of movement			
Yes	458 (61.8)	15.51 (6.76)	19.18 (8.22)
No	282 (38.2)	10.08 (5.68)	22.59 (7.30)
	p<0.001*	p<0.001*	

* Mann-Whitney U test, ** Kruskal–Wallis test

have more depressive symptoms and cognitive problems. The literacy rate in Kars population is low. The low rate of literacy, having a lower intellectual capacity may be an increasing factor for depression and cognitive problems risk. Also, Kars is a city located in the eastern part of Turkey, where the elderly spend most of their time at home owing to the cold climate, with limited socio-cultural resources and traditional structure. Because the eastern or suburban parts of Turkey have a more traditional social structure, children of older family members generally take care of their own relatives. Unfortunately, this means that the caregiver in these situations limits the productivity of the person being cared for. Although this may at first seem ideal, it eventually causes them to become more dependent on others, which may trigger depression and cognitive problems (6).

Although the SMMT-E/SMMT scores of the illiterate study participants were lower, the SMMT-E/SMMT score considerably increased with higher education level. In the

study by Ilhan et al. (4), the risk of cognitive impairment in those who were not elementary school graduates was 6.80-fold greater than that in those who were. Again, as education level increased, the GDS scores decreased considerably (Table 2). This result is similar to the findings in other studies (3,6). It is clear that the impact of education level on lifestyle affects a person's mental state in a positive way. Older members of society with a higher level of education have more opportunities to access information and inform themselves by reading or researching. They may also be more able to deal with stress and to fight depression.

Sleep problems are common in the elderly, yet many studies on this topic have produced different results. Difficulties with sleep can trigger depression when sleep-deprived elderly try to catch up and sleep during the day (18). Therefore, along with mental problems, sleep issues also need to be evaluated in the older population. Although we were unable to complete a thorough search of information on sleep problems in the elderly, individuals with sleep problems had higher GDS scores and lower SMMT-E/SMMT scores (Table 3). According to the study which has been made by Niu et al. (19) it has been seen that in elderly people who sleep less than five hours at night time have more cognitive decline.

We observed low GDS scores and high SMMT-E/SMMT scores for study participants who felt elderly and had a good perception of their health (Table 3). In their evaluation of the GDS and SMMT-E/SMMT, Arnadottir et al. (20) reported that health perception affects depression but does not affect the cognitive state.

In contrast, we observed high GDS scores and low SMMT-E/SMMT scores in individuals with illness (Table 3). This result is similar to the results of other studies which have shown that the process of ageing will often bring an increase in chronic health problems and dependency on others to help with daily activities and thus an increase in the risk for depression (3,6). Although most of the patients in this study had physical illnesses, these illnesses might cause depression related to dependency on others, adaptation to a treatment and change in life-style. Ilhan et al. (4) reported that the depressive indication risk increases 3.75 times in the elderly subjects with physical illnesses.

Regarding medications, we did not question the dosage, doctor's recommendations or which illness the medication was used for, but the GDS score was high and the SMMT-E/SMMT score was low in patients who regularly took medications (Table 3). Other studies have shown different results. Karatay et al. (6) have indicated that medication use does not affect the SMMT-E/SMMT score, and Pantzar et al. (21) found that it does not affect depression and cognitive problems. Vascular problems in the elderly are a primary reason for required regular drug use (6,21). The relationship between vascular problems and cognitive state was featured in a review conducted by Byers and Yaffe (22), and further investigation is needed to understand the relationship between regular drug use and depression and cognitive problems in the elderly.

We observed high GDS scores and low SMMT-E/SMMT scores in individuals with decreased mobility (Table 3). While problems with mobility increase depression and cognitive problems in the elderly, it can also be the result of cognitive problems. Studies conducted on this subject have reported that increasing physical and social activities are effective in decreasing depression and cognitive problems (23,24).

We observed that as age increased, the GDS scores were meaningfully higher and the SMMT-E/SMMT scores were meaningfully lower (Table 1). Ilhan et al. (4) showed that the risk for cognitive impairment in people over 75 years of age is 6.3 times higher than that in those under 75 years of age. In studies of Karatay et al. (6), it has been stated that cognitive problems increases by aging and in people over 85 years of age have 14 times more disease risk than that in those aged 65 to 69. As seen in the study mentioned above cognitive problems increases by getting older and older. However, Table 4 showed that there was a weak negative correlation between age of participants and the SMMT-E/SMMT score. This result between age and cognitive conditions in elderly people shows a similarity with other studies made in our country (17,25). In our study the most of the elderly people are aged from 65 to 74 (n=510) and as this period's cognitive function has a better grade, may supply this relation to be weak.

Table 4 also showed a weak correlation between depressive symptoms/depression and cognitive problems in the elderly (6). Shahnavaz et al. (11) found that elderly subjects with impaired cognitive functioning exhibited more depressive symptoms at a ratio of 6.1%. Ilhan et al. (4) reported that the

Table 4— Correlations Between Age, GDS and SMMT-E/SMMT

	Age	GDS	SMMT-E/SMMT
Age		.059**	-.083**
GDS	.059**		-.298**
SMMT-E/SMMT	-.083**	-.298**	

**p<0.001 according to Spearman Correlation analysis

risk of depression in the elderly with cognitive impairment was 3.01 times more likely than that in those without cognitive impairment. Similarly Diker et al. (17) showed that increase in severity of cognitive impairment causes to increase in depression level. However, in our study a weak correlation has been found. This condition makes us to think that depression and cognitive problems may affect each other, may develop independently from each other and diagnosing it in early period would be important in terms of prevention and rehabilitation. This may be owing to our inability to access all subjects in the sampling group.

Although we have made great progress in the diagnosis and treatment of chronic illnesses in the elderly, the increase in longevity accelerates the urgency for accurate data to enable us to expand the health services that are greatly needed. For community members of Kars, Turkey, who are aged ≥65 years, the decline in mental health status and cognitive abilities are important problems. In providing adequate health care to the elderly in our society, an all-encompassing approach needs to be taken. Mental health is equally important as physical health and should not be ignored. The aged should have regular physical and mental health check-ups. They should also be screened for cognitive changes and depressive symptoms that often occur in the geriatric population.

The important role of nurses is of utmost importance in screening patients for the depressive symptoms and cognitive problems of the elderly. They are the key health professionals responsible for preserving and enhancing community health, and this responsibility also extends to the early diagnosis and prevention of mental problems. Their task is to assess the general health of the patients and healthy individuals and conduct risk factor analysis. More studies need to be conducted on both the general and mental health status of the elderly. Results of these may help pave the way for improvements in mental health services for all community members, including the elderly.

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