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## Research Article

## Hopelessness, Depression Levels and Associated Factors in Elderly Individuals

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## Abstract

**Purpose:** This study aimed to determine the levels of hopelessness, depression, and associated factors in individuals over the age of 65.

**Design and methods:** This cross-sectional study was conducted between 2023-2024 at the Family Health Center with a sample size of 375. Data were collected using a Personal Information Form, the Geriatric Depression Scale-Short Form (GDS-SF), and the Beck Hopelessness Scale-Short Form (BHS-SF).

**Results:** The average scores of the GDS-SF and BHS-SF were found to be 4.28±3.15 (3.00) and 7.21±6.27 (5.00). Participants who were married, had less income, living alone, living with relatives were showed higher GDS-SF scores BHS-SF scores were significantly higher among those who did not eat regularly, did not exercise regularly, took medication regularly, did not have chronic diseases, had regular medical check-ups once a month, and did not have hobbies.

**Conclusion:** It was observed that the Geriatric Depression Scale scores and Beck Hopelessness Scale scores differed according to the participants' educational status, marital status, income status, and the people they lived with.

**Practice implications:** The enhancement of social support networks has been demonstrated to engender a sense of value and assistance among elderly individuals. The enhancement of social support networks through family, friends, and community activities has been identified as a potential strategy to alleviate feelings of hopelessness and depression.

**Keywords:** Depression, hopelessness, nursing, old age.

## Highlights

- Strengthening social support networks creates a sense of value and assistance in older individuals.
- Due to the decline in the birth rate and the rapid growth of the elderly population, it is necessary to protect the quality of life of people over 65 and to develop easily accessible medical and psychosocial dynamics so that these people do not suffer from mental pathologies such as hopelessness and depression.
- Considering all these needs, the support of the public health nursing specialty requires significant skills in counselling people over 65, as the nursing profession is in contact with society.

## Introduction

Old age, a challenging stage of human life, often makes individuals more sensitive and vulnerable to both past experiences and future uncertainties by its very nature. Events that affect society as a whole – such as socio-cultural changes, political developments, global climate crises, natural disasters, and acts of terrorism – can leave a much deeper mark on the lives of older individuals. Older adults, who undergo lasting physical, mental, and emotional changes, may be more susceptible to external events and stressors they face (Mavi & Yıldız, 2021). Studies have shown that older people generally experience mild levels of hopelessness (Sarin et al., 2016), that the level of hopelessness increases with age (Karataş et al., 2019), and that eight out of ten older people have levels of hopelessness ranging from mild to severe (Şahin et al., 2018). The prevalence of depression in older people also varies worldwide. According to studies, around 10-20% of older people worldwide show symptoms of depression. In Turkey, several studies have been conducted on the prevalence of depression in the elderly. It has been reported

that about 15-30 per cent of older people in Turkey have symptoms of depression. Rates may vary between rural and urban areas depending on social and economic factors (WHO, 2002; Doğan et al., 2005).

The presence of depression and a sense of hopelessness in the elderly population can exert a detrimental effect on both physical and mental health. This may complicate the management of chronic diseases, lead to a weakened immune system and increased risk of mortality. Furthermore, depressed and hopeless older individuals often exhibit impaired social relationships, reduced inclination to engage in daily activities, and diminished overall life satisfaction. Untreated depression can lead to serious consequences, including suicide risk (Herrera et al., 2021; National Institute on Aging, 2019).

This study aims to examine the levels of hopelessness and depression, as well as the associated factors, among individuals aged 65 and older.

A wide range of factors have been identified as contributing to an increased risk of feelings of hopelessness and depression in later life. These encompass a range of adverse circumstances, including the decline of physical

strength, limited engagement in activities, the diminution of social connections, feelings of loneliness, the loss of dignity, financial constraints, and the bereavement of loved ones. In this period, elderly individuals may experience difficulties in expressing their feelings, especially due to their emotional state. The perception of a loss of interest and an inability to enjoy life as a natural process associated with the ageing process can complicate the diagnosis of depression. Individuals in this age group are more likely to manifest vegetative symptoms, including sleep disturbances and a reduced appetite, with greater frequency and intensity. However, the prevalence of psychological vulnerability among elderly individuals who experience feelings of hopelessness can reach up to 68.4%, as reported by Hoeyberghs et al. (2018). While depression is widely recognised as a significant barrier to healthy ageing (Coombes et al., 2018), the number of studies investigating the impact of healthy ageing and protective factors on depression in later life remains limited (Marin et al., 2022). In older adults, adequate physical and social preparation for old age is crucial for enhancing mental health and maintaining mental well-being (Davies, 2011; Akpınar et al., 2023).

Determining the levels of depression and hopelessness in the elderly is of critical importance in order to improve the quality of life of elderly individuals and to protect their health. Depression and hopelessness have been demonstrated to exert a deleterious effect on the physical and mental health of older people, to engender difficulties in the management of chronic diseases, and to diminish overall life satisfaction. Early identification and intervention are pivotal in preventing the progression of these emotional distresses into more severe psychological and physical health complications. Furthermore, the potential for dangerous consequences, such as suicide, underscores the necessity for early detection and treatment of these conditions (Adana, 2018; Özvurmaz et al., 2022).

Public health nurses' efforts to identify and manage depression and hopelessness levels make significant contributions to public health. The reduction of depression and hopelessness has been demonstrated to enhance the general health status of the elderly population, facilitate chronic disease management, and optimise the utilisation of health services (Adana, 2018; Özvurmaz et al., 2022). Moreover, the alleviation of such mental health issues can concomitantly reduce the burden on health services. Collaborations with local governments and health institutions can facilitate the development of programmes aimed at protecting and enhancing the mental well-being of older individuals (Adana, 2018; Gu et al., 2019).

## Methods

Data were collected at the Family Health Center No. 1 in Muğla city centre between September 2023 and September 2024.

### *Participants and sample size*

The population of the study consisted of 2,528 individuals over the age of 65 registered with five Family Medicine Units in Muğla Central Family Health Centre No. 1. The sample size was determined to be 323 participants, based on a 5% type 1 error rate, a 95% confidence interval, and an effect size of 0.25. The study was completed with 375 participants, considering the data loss (G-Power 3.1.3).

### *Application of the research*

The present study was conducted during working hours on weekdays. Following the provision of outpatient clinic services to individuals over 65 years of age who had applied to receive health services, the researcher requested their participation in the study and obtained their verbal consent. Following the acquisition of written consent from the participants, face-to-face interviews were conducted with individuals within the specified area, with the approval of the Muğla Central Family Health Centre management. Data were collected at the family health centre five days a week during working hours.

### *Data collection tools*

The socio-demographic information form is a tool designed to collect data on the socio-demographic characteristics of the elderly population. It comprises a series of questions meticulously designed to elicit information pertaining to the social life and personal characteristics of elderly individuals. The questionnaire encompasses inquiries pertaining to age, gender, educational attainment, marital status, occupation, current employment status, income status, the presence of chronic disease, and the continuous use of drugs.

The Geriatric Depression Scale-Short Form (GDS-15) is a scale designed to evaluate symptoms of depression in elderly individuals. The Geriatric Depression Scale (GDS), first created by Yesavage et al., is a widely utilised scale in the elderly population. In 1986, the Short Form GDS was developed, comprising 15 questions. The scale utilises a cut-off point of 5, with 5–8 indicating mild depression, 9–11 indicating moderate depression, and 12–15 indicating severe depression. The standardisation of the scale for Turkish populations was conducted by Ertan et al. in 1997. The scale demonstrated high internal consistency, with a Cronbach Alpha value of 0.92. Consequently, elevated scores on the scale are indicative of a high probability of geriatric depression. In this study, Cronbach Alpha value was found to be 0.82.

The Beck Hopelessness Scale (BHS) is a 20-item self-assessment tool developed by Aaron T. Beck and designed to measure three main aspects of hopelessness. In 1993, a Turkish validity and reliability study was conducted by Seber et al. (1993). The scale demonstrated a Cronbach's alpha coefficient of 0.86, indicating its reliability and validity. The total score that can be achieved by an individual ranges from 0 to 20, with a higher score indicating a greater tendency towards hopelessness. In this study, Cronbach's alpha value was found to be 0.94.

### *Statistical methods*

SPSS 22.0 statistical package program was used in the analysis of the data. The study's dependent variables were the Geriatric Depression Inventory-Short Test (GDI-15) and the Beck Hopelessness Inventory (BDI) scale scores and sub-scores. The study's independent variables comprised the individual's personal and health characteristics.

In order to evaluate the distribution of the normal data, the Kolmogorov-Smirnov test was employed. This test revealed that the data did not conform to a normal distribution. In the evaluation of the data, descriptive statistical analyses (mean, standard deviation, median, frequency), non-parametric examinations, and the Mann-Whitney U test, Kruskal-Wallis H test, and Spearman's rho test were used to explain the linear relationship between

two or more variables. The significance level was set at  $p \leq 0.05$ .

### Ethical aspects

The study was approved by the Ethics Committee (number 2023/023 and date 07.09.2023) of Aydın Adnan Menderes University Health Sciences Institute Non-Interventional Clinical Research Ethics Committee at the beginning of the study. Institutional permission and written consent were obtained from the participants. Participation in the study was on a voluntary basis. Permission to use the scales employed in the study was obtained.

### Results

The mean Geriatric Depression Inventory-Short Form and Beck Hopelessness Inventory scores were found to be  $4.28 \pm 3.15 (3.00)$ ;  $7.21 \pm 6.27 (5.00)$ , respectively (see Table 1).

**Table 1.**

Geriatric depression inventory-short form and beck hopelessness scale mean scores of the participants.

	Min.	Max.	Median	$\bar{X}$	SD
Geriatric Depression Scale-Short Form	1.00	14.00	3.00	4.28	3.15
Beck Hopelessness Scale-Short Form	0.00	20.00	5.00	7.21	6.27

Min: Minimum; Max: Maximum,  $\bar{X}$ : Mean score; SD: Standard Deviation.

Of the participants, 52.8% were male, 38.1% were between the ages of 66 and 70, 50.1% had received a primary education, 74.7% were married, 92.5% received social security, 55.2% had an income lower than their expenses, and 54.1% were living with their spouses. Furthermore, 83.7% of the participants did not consume alcohol, while 82.1% were non-smokers. 77.9% of the participants reported that they ate regularly, 71.5% did not exercise regularly, 78.9% were constantly taking medication and had a chronic disease. 89.3% of participants reported being under medical supervision and 28.3% did not have regular medical check-ups. 73.3% of the participants considered their weight to be normal, 78.9% had no hobbies and slept an average of  $6.47 \pm 1.31$  hours per day. The study revealed that 68.8% of the participants did not exhibit symptoms of depression, 17.6% exhibited mild depression, 8.8% exhibited moderate depression, and 4.8% exhibited severe depression (See Table 2).

**Table 2.**

Classification of participants according to geriatric depression scale-short form scores.

Geriatric Depression Scale-Short Form	n	%
No depression	258	68.8
Mild Depression	66	17.6
Moderate Depression	33	8.8
Severe Depression	18	4.8

The mean scores of those with a literate education were found to be significantly higher than those who had completed primary, secondary, high school and university education. The Geriatric Depression Scale scores of single participants were found to be significantly higher than those who were married, those whose income was less than their expenses and equal to their expenses compared to those whose income was more than their expenses, and those living alone and with relatives compared to those living with their spouses and children. The study revealed no statistically significant correlation between the participants' age, gender characteristics and Geriatric Depression Inventory scores. The scores of those with a literate education were found to be significantly higher than those who had completed primary, secondary, high school and university education; those with primary school compared to those who had completed secondary and university education. The Beck Hopelessness Inventory scores of single participants were found to be significantly higher than those who were married, those whose income was less than their expenses and equal to their expenses compared to those whose income was more than their expenses, those living alone compared to those living with their spouses, spouses and children; and those living with relatives compared to those living with their spouses and children. The investigation revealed no statistically significant differences in Beck Hopelessness Inventory scores based on factors such as age, gender, or social security characteristics of the participants (see Table 3 for details).

**Table 3.**

Comparison of participants' personal characteristics and geriatric depression inventory-short form and beck hopelessness scale scores.

Participants' personal characteristics	Geriatric Depression Scale-Short Form			Beck Hopelessness Scale- Short Form		
	$\bar{X} \pm SD$	Median	Test;p	$\bar{X} \pm SD$	Median	Test;p
<b>Age</b>						
60-65	3.62±2.19	3.00	**4.831;	5.90±5.22	3.00	**8.234;
66-70	4.19±3.06	3.00	0.305	6.62±6.05	4.00	0,083
71-75	4.29±3.11	3.00		7.64±6.35	5.00	
76-80	3.95±2.98	3.00		6.75±6.13	4.00	
81 and above	5.60±4.10	4.00		9.95±7.21	9.5	
<b>Gender</b>						
Female	4.48±3.16	3.00	*15867;	7.10±6.15	5.00	*17459.000;
Male	4.10±3.13	3.00	0.951	7.30±6.39	5.00	0.107
<b>Education Level</b>						
***Not literate	4.00	4.00	**29.027;	0.00	0.00	**19.544;
Literate	6.15±4.02	5.00	0.000	10.06±7.39	10.50	0.001
Primary School	4.36±3.10	3.00	2>3,4,5,6	7.47±6.16	5.50	2>3,4,5,6
Middle School	2.73±0.91	3.00		3.60±3.35	2.00	3>4,6
High School	3.59±2.39	3.00		6.51±5.98	4.00	
University	2.91±1.95	2.00		4.86±4.45	3.00	
<b>Martial Status</b>						
Married	3.90±2.81	3.00	*9899.000;	6.66±6.06	4.00	*10379.500;
Single	5.45±3.80	4.00	0.000	8.89±6.68	7.00	0.003
<b>Social Security</b>						
Yes	4.16±3.05	3.00	*3754.000;	7.10±6.16	5.00	*4582.000;
No	5.71±3.91	4.00	0.041	8.57±7.54	5.50	0.615
<b>Income status</b>						
Less than expenditure	4.66±3.30	3.00	**13.277;	7.88±6.31	6.00	**12.339;
Equals expenditure	4.00±3.00	3.00	0.001	6.78±6.17	4.00	0.002
More than expenditure	3.13±2.33	2.00		4.91±5.84	1.50	
<b>Living With</b>						
None	5.40±3.81	4.00	**15.015;	8.96±6.50	9.00	**19.372;
Partner and children	3.65±2.45	3.00	0.005	5.26±6.13	2.00	0.001
Relatives	5.89±3.99	4.50	1,3>2,4	9.32±7.20	5.50	1>2,4
Partner	3.95±2.90	3.00		7.15±5.95	5.00	3>2
Residents of nursing home	3.50±1.29	3.50		4.00±2.70	5.00	

\*Mann-Whitney U test; \*\* Kruskal Wallis-H Test; \*\*\*Excluded data;  $\bar{X}$ : Mean score; SD: Standard Deviation;  $p < 0.05$ .

The Geriatric Depression Scale scores of individuals who do not consume alcohol, adhere to regular dietary habits, engage in consistent physical activity, take regular medication, do not suffer from chronic diseases, have regular check-ups with a physician, and those who have check-ups either once a month or once a year, were found to be significantly higher than those who do not engage in hobbies. No statistically significant differences were observed between the study participants' characteristics, including smoking, regular medical check-ups, and perceived weight, and their Geriatric Depression Scale scores.

The Beck Hopelessness Scale scores were significantly higher among those who did not eat regularly, did not exercise regularly, took medication regularly, did not have chronic diseases, had regular medical check-ups once a month, and did not have hobbies. Conversely, no significant differences were observed between the characteristics of smoking, alcohol consumption, regular medical check-ups, and perceived weight, and the Beck Hopelessness Scale scores (refer to Table 4 for details).

**Table 4.**

Comparison of participants' health characteristics and geriatric depression inventory-short form and beck hopelessness scale scores.

Participants' health characteristics	Geriatric Depression Scale-Short Form			Beck Hopelessness Scale- Short Form		
	$\bar{X} \pm SD$	Median	Test;p	$\bar{X} \pm SD$	Median	Test;p
<b>Use of alcohol</b>						
Yes	3.62±2.97	3.00	*7829.500;	6.01±6.01	3.00	*8327.500;
No	4.41±3.17	3.00	0.021	7.44±6.30	5.00	0.105
<b>Smoking</b>						
Yes	4.17±3.23	3.00	*9786.500;	7.41±6.45	6.00	*10253.000;
No	4.30±3.13	3.00	0.500	7.16±6.24	5.00	0.935
<b>Regular Diet</b>						
Yes	3.72±2.62	3.00	*7648.000;	6.12±5.82	4.00	*6752.000;
No	6.24±3.98	5.00	0.000	11.03±6.35	11.00	0.000
<b>Regular Physical Activity</b>						
Yes	3.28±1.98	3.00	*11469.000;	5.23±4.90	3.00	*11124.500;
No	4.68±3.43	3.00	0.002	8.00±6.59	6.00	0.001
<b>Medication</b>						
Yes	4.52±3.33	3.00	*9695.000;	7.55±6.34	5.00	*9796.000;
No	3.36±2.09	3.00	0.017	5.91±5.88	3.00	0.026
<b>Chronic Disease</b>						
Yes	3.37±2.08	3.00	*9765.000;	5.92±5.86	3.00	*9835.500;
No	4.52±3.34	3.00	0.022	7.55±6.34	5.00	0.029
<b>Routine Medical Check-Ups</b>						
Yes	4.31±3.22	3.00	*6395.500;	7.20±6.38	5.00	*6197.500;
No	4.05±2.45	3.00	0.632	7.27±5.35	6.50	0.436
<b>Frequency of Doctor Visits</b>						
Once a month	5.29±4.31	3.00	**12.326;	9.02±7.49	7.00	**20.076;
Once every 3 months	4.13±2.85	3.00	0.015	5.88±5.60	3.00	0.000
Once every 6 months	3.84±2.68	3.00	1>3,4	6.09±5.55	4.00	
Once a year	3.52±2.85	2.00	5>3,4	6.12±6.08	3.00	
Not visiting regularly	4.93±3.33	4.00		9.21±6.49	8.00	
<b>Weight perception</b>						
Skinny	5.73±3.99	3.00	**1.871;	11.06±7.50	15.00	**4.946;
Normal	4.22±3.20	3.00	0.392	7.18±6.23	5.00	0.084
Fat	4.09±2.57	6.00		6.47±5.60	4.00	
***Very fat	14.00	14.00		18.00	18.00	
<b>Hobby</b>						
Yes	3.15±1.93	3.00	*9188.000;	4.78±4.68	3.00	*8627.000;
No	4.58±3.34	3.00	0.003	7.85±6.49	6.00	0.000

\*Mann-Whitney U test; \*\* Kruskal Wallis-H Test; \*\*\*Excluded data;  $\bar{X}$ : Mean score; SD: Standard Deviation;  $p < 0.05$ .



A moderate positive relationship was identified between the Beck Hopelessness Inventory and the Geriatric Depression Inventory, indicating a moderate positive relationship between the Beck Hopelessness Inventory and the Geriatric Depression Inventory. A negative low-level relationship was identified between the Beck Hopelessness Inventory and sleep duration, and a negative low-level relationship was identified between the Geriatric Depression Inventory and sleep duration (see Table 5).

**Table 5.**

Relationship between the participants' beck hopelessness scale-short form, geriatric depression scale-short form, and sleep duration.

	Geriatric Depression Scale-Short Form		Sleep Duration	
	r	p	r	p
Beck Hopelessness Scale-Short Form	0,657	0,000	-0,104	,002
Sleep Duration	-0,096	0,000		

## Discussion

The ageing process can lead to inadequate healthcare, depression, social isolation, loss of self-confidence, social exclusion and feelings of inadequacy and loneliness (Keskin et al., 2018; Gu et al., 2019; Tel et al., 2020). Studies on old age are valuable because a significant proportion of the population is elderly. This period is considered fragile depending on the characteristics of this life stage and requires special care. This part of the study discusses the levels of hopelessness and depression of elderly individuals and related factors considering literature findings. The findings revealed that depression and hopelessness in older adults are significantly associated with various personal, social, and health-related factors.

Although gender, age and social security status were not significantly associated with levels of depression or hopelessness, educational attainment, marital status, economic status and household composition were found to be key determinants. Consistent with previous research indicating that education acts as a protective psychosocial factor in old age (Weyerer et al., 2008; Üskül et al., 2006), lower levels of education were associated with higher levels of depression and hopelessness. Participants who were married had lower depression and hopelessness scores than those who were single or living with relatives, emphasising the protective role of family and social support (Tong et al., 2011; Hsieh & Leung, 2019).

In relation to health-related behaviours, it was found that regular nutrition and physical activity provided a protective effect against both depression and hopelessness. This finding lends further support to the notion of a robust correlation between physical and mental health in older adults (Lu et al., 2023). Conversely, individuals who lacked regular medical check-ups, had chronic illnesses, or were on long-term medications exhibited significantly higher levels of both depression and hopelessness. This finding underscores the importance of stable access to healthcare (Bakimli, 2024; Pinto et al., 2024).

Contrary to the findings of some previous studies, this study did not identify a significant association between smoking and levels of depression or

hopelessness (Weyerer et al., 2008). It is noteworthy that participants who reported abstaining from alcohol consumption exhibited higher levels of depression, which may be attributable to the absence of distinction in the frequency and quantity of alcohol consumption. It is conceivable that sporadic or minimal alcohol consumption, in certain instances, may function as a provisional coping strategy, thereby exerting an influence on self-reported depressive symptoms (Weinberger, 2020).

Participants who engaged in hobbies exhibited significantly lower levels of depression and hopelessness. This finding suggests that active engagement in meaningful activities may have a positive impact on psychological well-being in later life (Ooi et al., 2021). In addition, a negative correlation was identified between sleep duration and both depression and hopelessness. As sleep decreased, depressive and hopelessness symptoms increased, consistent with extant studies highlighting the detrimental effects of disrupted sleep patterns on older adults' mental health (Yaremchuk, 2018; Marchi et al., 2023).

A moderate positive correlation was observed between BHS and GDS-SF scores, thereby supporting the extant literature that identifies hope as a protective factor against depression (Chimich & Nekolaichuk, 2004; Gupta & Singh, 2020). The findings of this study indicate a reciprocal relationship, suggesting that a decline in hope is closely associated with the onset of depressive symptoms.

The study demonstrates that depression and hopelessness in older adults are not solely shaped by biological aging, but are also heavily influenced by social, economic, and lifestyle factors. Several factors have been identified as key determinants of psychological distress in old age. These include low educational attainment, social isolation, financial inadequacy, chronic illness, limited access to regular healthcare, physical inactivity, and lack of hobbies. Consequently, the provision of preventive and supportive public health services is imperative in addressing these conditions. Community health nurses are advised to give priority to these risk factors when formulating holistic and value-based care strategies for the elderly. Interventions that foster social participation, physical health maintenance, and psychological resilience may significantly enhance quality of life in later years.

## Limitations and strengths

The study's most notable strength is the significant findings that have emerged from the examination of hope and depression levels in old age. The study also has potential limitations: the assessments were limited by the scales used the findings were constrained by the inclusion of results from a specific region, and the results were constrained by the self-reported data provided by the older individuals.

## Conclusion

The results of the study demonstrated a positive correlation between levels of hopelessness and depression, with an increase in one corresponding to an increase in the other. Furthermore, a negative correlation was identified between sleep duration and both hopelessness and depression, with a decrease in sleep duration resulting in increased levels of both. In light of the findings, it is recommended that more comprehensive and diverse sample groups be studied, that various intervention and support methods be

implemented to cope with hopelessness and depression, and that elderly people be supported by public health nurses in expressing their feelings. Furthermore, the enhancement of social support networks has been demonstrated to engender a sense of value and assistance among elderly individuals. The enhancement of social support networks through family, friends, and community activities has been identified as a potential strategy to alleviate feelings of hopelessness and depression.

#### CRedit authorship contribution statement

**R. Zirek:** Writing – review & editing, Writing – original draft, Visualization, Methodology, Formal analysis, Data curation, Conceptualization. **S. Özvurmaz:** Writing – review & editing, Writing – original draft, Visualization, Methodology, Formal analysis, Data curation, Conceptualization.

#### Data availability statement

The data that support the findings of this study are not available.

#### Declaration of competing interest

There are no conflicts of interest between institutions, individuals or authors in the study.

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