RESEARCH ARTICLE

The relationship between psychological factors and quality of life in elderly population of Van, eastern Turkey.

Murat Toprak

Abstract

Objective: To evaluate psychological factors and quality of life in the elderly population.

Methods: The cross-sectional observational study was conducted at the outpatient clinics of the Physical Medicine and Rehabilitation Department, Van Training and Research Hospital, Van Yüzüncü Yil University, Van, Turkey, from 01.01.2010 to 01.03.2010, and comprised the elderly aged 65 years or more. Demographic data of the individuals was recorded All subjects were evaluated using the Geriatric Depression Inventory, Beck Anxiety Inventory, Pittsburgh Sleep Quality Index, Multidimensional Assessment of Fatigue and World Health Organisation Quality of Life-Old Module. SPSS 16 was used for data analysis.

Results: Of the 119 elderly subjects, 56(47%) were females and 63(53%) were males. The overall mean age was 72.81±7.07 years. Depression was found in 43(36.3%) subjects, and anxiety in 47(39.5%). The mean Multidimensional Assessment of Fatigue score was 26.57±10.45 and the mean Pittsburgh Sleep Quality Index score was 8.59±3.31. The sensory ability domain had the highest quality of life score 62.18±27.35, followed by intimacy 60.77±25.52, while the social participation domain had the lowest score 45.89±22.03.

Conclusion: Detecting and treating disabilities among the elderly is critical in improving their quality of life.

Keywords: Depression, Fatigue, Sleep quality, Quality of life, Elderly. (JPMA 69: 1803; 2019)
DOI:10.5455/JPMA.291124

Introduction

We need to be aware of the psychological condition of the elderly, and we need studies to help find solutions and effective strategies through intervention programmes, especially to reduce anxiety, depression, fatigue, sleep quality and quality of life (QOL) in the community.

The increasing elderly population is a primary health problem in Turkey as well as in the world. According to World Health Organisation (WHO) estimates, population aged ≥60willreach 2 billion by 2050, the vast majority of it in the developing world.[1] Not surprisingly, by2050, the percentage of people aged >65 years in Turkey will likely be 20.8% (19.5 million) of the total population of Turkey.[2] As a result, age-associated health complications will also increase along with the increase in the elderly population, which is thus of paramount concern. Old age is a state of regression of physical and mental abilities during which morphological, physiological and pathological changes and comorbidity with various diseases increase.[3] Because of these complications, the elderly experience inter-related changes and problems in social dimensions. When they are not able to cope with all of these changes, they suffer from many emotional disorders. Mental health is an important indicator of the health status of the elderly and it is crucial for achieving successful aging and having a good QOL among the elderly in different communities.[4] Depression and anxiety are two of the most common mental health problems that occur in old age and can frequently occur simultaneously. These psychiatric disorders are linked to considerable physical, cognitive, and overall functional disabilities and even mortality.[5] Epidemiological studies have shown that approximately 50% of older adults experience sleep problems, many of which lead to deleterious consequences that affect physical and mental health as well as social functioning.[6] Ageing is associated with a reduction in the duration, quality and efficiency of sleep. Poor sleep quality causes excessive daytime sleepiness, health problems, depression and reduced QOL.[7] In older adults, fatigue is a commonly reported symptom.[8] Approximately 30% adults aged >50 years suffer from fatigue, with the prevalence steadily increasing in those >70 years.[9]

The current study was planned to determine the prevalence of depression, anxiety, sleep quality and fatigue among the elderly, and to assess the association among these conditions.

Subjects and Methods

The cross-sectional observational study was conducted at the outpatient clinics of the Physical Medicine and

Department of Physical Medicine and Rehabilitation, Yüzüncü Yil University, Van, Turkey.
Correspondence: Email: dr.murattoprak@gmail.com

Rehabilitation Department, Van Training and Research Hospital, Van Yüzüncü Yil University, Van, Turkey, from 01.01.2010 to 01.03.2010, and comprised the elderly aged 65 years or more.

After approval from the institutional ethics review board, the sample size was calculated at P=0.500, confidence interval (CI) = 95%, d=0.05 and power=80%. Accounting for possible dropouts, the sample size was spiked by 20%. Those included were aged ≥65 years and free of speech and hearing problems. Those excluded were individuals with history of confusion or amnesia, psychiatric history, consumption of drugs used in psychiatric disorders, loss of a close relative in the preceding 6 months. Hypertension (HTN), diabetes mellitus (DM), chronic obstructive pulmonary disease (COPD), benign prostatic hyperplasia (BPH), chronic renal failure (CRF), coronary artery disease (CAD), chronic heart failure (CHF), sequelae of cerebrovascular disease (CVD), rheumatoid arthritis (RA), osteoporosis, glaucoma and cataract were defined as chronic conditions.), Informed consent was obtained from all the subjects.

All subjects were evaluated by a face-to-face interview using a self-generated questionnaire. Demographic data, like age, gender, occupation, marital status and educational level, and status of chronic diseases and chronic drug use were recorded. The subjects were also asked about alcohol consumption and smoking habits.

All the subjects were evaluated using the Geriatric Depression Inventory (GDI), Beck Anxiety Inventory (BAI), Pittsburgh Sleep Quality Index (PSQI), Multidimensional Assessment of Fatigue (MAF), and WHO Quality of Life Assessment-Old Module (WHOQOL-Old). The validity and reliability studies on the Turkish version of these questionnaires are already part of literature.[10-14]

Data was analysed using SPSS 16. Descriptive data was expressed as mean ± standard deviation (SD), median, range, and frequencies and percentages. Student's t-test and Mann-Whitney U test were performed to compare continuous variables. Chi-square or Fisher's exact test was used to compare the distribution of the categorical variables. Pearson correlation coefficient was calculated to determine linear relationships between the continuous variables. P<0.05 was considered statistically significant.

Results

Of the 119 elderly subjects, 56(47%) were females and 63(53%) were males. The overall mean age was 72.81±7.07 years (Table-1).

Depression was found in 43(36.3%) subjects, and anxiety in 47(39.5%). The mean MAF score was 26.57±10.45 and the mean PSQI score was 8.59±3.31. The sensory ability domain had the highest WHOQOL-Old score 62.18±27.35, followed by intimacy 60.77±25.52, while the social participation domain had the lowest score 45.89±22.03 (Table-2).

Table-1: Socio-demographic characteristics.

		N (%) or mean ± SD	
Age (years)		72.81 ± 7.07	
	60-69	42	35.3
	70-79	52	43.7
	80-89	24	20.2
	>90	1	0.8
Sex	Female	56	47.1
	Male	63	52.9
Marital status	Married	105	88.2
	Single	4	3.4
	Divorced	10	8.4
Education	Illiterate	81	68.1
	Literate	22	18.5
	Primary school	8	6.7
	College	8	6.7
Cigarette	Yes	20	16.8
	No	99	83.2
Alcohol	Yes	15	12.6
	No	104	87.4
Systemic disease	HT	57	47.9
	DM	13	10.9
	COPD	8	6.7
	BPH	8	6.7
	CVD	8	6.7
	CHF	7	5.9
	Glaucoma	6	5.0
	Cataract	5	4.2
	Other	7	5.9
GDI		43	36.3
BAI		47	39.5
MAF		26.57 ± 10.45	
General fatigue		6.45 ± 2.07	
Physical fatigue		6.78 ± 2.91	
Reduced activity		6.40 ± 2.58	
Reduced motivation		4.65 ± 1.59	
Mental fatigue		6.56 ± 2.18	
PSQI Global score		8.59 ± 3.31	
Sleep quality		1.00 ± 0.63	
Sleep latency		1.26 ± 0.51	
Sleep duration		1.58 ± 0.77	
Habitual sleep efficiency		1.91 ± 1.13	
Sleep disturbance		1.17 ± 0.70	
Use of sleep medication		1.35 ± 0.77	
Daytime dysfunction		1.21 ± 0.78	

GDI: Geriatric depression inventory; BAI: Beck anxiety inventory; MAF: Multidimensional Assessment of Fatigue Inventory; PSQI: Pittsburgh Sleep Quality Index; SD: Standard deviation. HT: Hypertension; DM: Diabetes mellitus; COPD: Chronic Obstrictive pulmonary disease; BPH: Benign prostatic hyperplasia; CVD: Cerebro- vascular disease; CHF: chronic heart failure.The p value of ?0.05 was considered significant.

Table-2: The WHOQOL-Old domain scores.

	Mean ± SD
Sensory abilities	62.18 ± 27.35
Autonomy	52.10 ± 42.50
Past, present and future activities	48.99 ± 28.79
Social participation	45.89 ± 22.03
Death and dying	47.77 ± 17.91
Intimacy	60.77 ± 25.52

WHOQOL-Old; World Health Organization Quality of Life Instrument-Old Module. SD: Standard deviation.

Table-3: Correlation between the scores of depression, anxiety and WHOQOL-Old domains.

	Age	GDI	MAF	BAI	PSQI	Sensory	Autonomy	Past, Present, and Future	Social	Death	Intimacy
Age	1										
GDI	0,158	1									
MAF	0,290**	0,325**	1								
BAI	0,300**	0,484**	0,531**	1							
PSQI	0,153	0,204*	0,273**	0,365**	1						
Sensory	0,059	0,164	0,038	0,030	0,057	1					
Autonomy	-0,094	-0,011	-0,060	-0,034	0,051	0,524**	1				
Past, present, Future	-0,103	0,036	-0,077	0,021	0,125	0,533**	0,604**	1			
Social	-0,097	0,077	-0,001	0,019	0,136	0,464**	0,602**	0,611**	1		
Death	-0,110	-0,051	-0,082	-0,125	0,083	0,461**	0,494**	0,590**	0,535**	1	
Intimacy	-0,128	-0,079	-0,151	-0,018	0,073	0,413**	0,591**	0,664**	0,572**	0,447**	1

*: $p < 0.05$; **: $p < 0.01$, according to Pearson correlation analysis

WHOQOL-Old; World Health Organization Quality of Life Instrument-Old Module. GDI: Geriatric depression inventory; BAI: Beck anxiety inventory; MAF: Multidimensional Assessment of Fatigue Inventory; PSQI: Pittsburgh Sleep Quality Index.

A positive correlation was observed between GDI (11.21±6.28) and BAI (19.17±12.35) scores ($p<0.05$) as well as between MAF and PSQI ($p<0.05$). A negative correlation was observed among BAI, GDI, MAF and PSQI scores in most WHOOL-Old domains (Table-3).

Discussion

The increase in the elderly population and increased lifespan has led to an increase in the prevalence of chronic, debilitating and stress-related disorders.[15] The prevalence of depression and anxiety in the current study was high which is consistent with the results of previous studies.[16,17] Some difficulties are associated with the diagnosis of anxiety. Specifically, in the elderly, it is suggested that assessing the symptoms of anxiety disorders makes it difficult to examine pre-existing physical illnesses.[18] In addition, anxiety disorders are regarded as normal reactions to the many losses that are associated with old age, such as job loss, companion loss and physical loss. Third, the frequent occurrence of somatic anxiety symptoms in the elderly is suggestive of medical illnesses instead of anxiety disorders, which may lead to a misdiagnosis. For these reasons, anxiety disorders are well-recognised, but cannot be treated in the elderly, and emotional disturbances in anxiety disorders are not included. We also think that the economic, social and income situation in the region is contributing to this facet. A study[7] demonstrated an adverse effect of low income level on QOL. In addition, anxiety often accompanies other psychiatric disorders in the elderly, making proper diagnosis and treatment difficult.[17] Depression and anxiety may reduce participation in rehabilitation programmes, which may adversely affect QOL, may cause more complaints of pain, and may interfere with the treatment of accompanying medical problems. Sleep disorders are reportedly present in >50% of the general population aged >65.[19] Some changes in sleep patterns are observed with age in the elderly. The poor sleep quality score observed in the current study was 8.59±3.31, which was quite high. One study found poor sleep quality score 6.21±3.33 using the same scale.[20] Ageing causes deterioration in sleep quality and quality of life due to various problems, such as neurological, psychiatric, cardiovascular, respiratory diseases, bad nutrition and decreased vision and hearing. In addition, the amount of medication used during this period of life increases, leading to changes in sleep duration, order and rhythm.[21] Poor socio-economic status, low educational status, large number of children, large family structure and limited social environment also contribute to poor sleep quality. Fatigue was very common among older primary care patients, with 70% reporting any fatigue and 43% reporting feeling tired most of the time.[22] A few studies on fatigue during old age have been published, but the current study

revealed a high level of fatigue in the elderly. Sources of fatigue remain unclear and may include aging, obesity, depression, poor sleep, poor physical conditioning, and specific diseases which are known, to lead to fatigue.[23] It is known that many older people report "complaints of fatigue" even when there is no underlying medical or psychiatric illness. The majority of elderly people continue to experience most subfields of fatigue (general fatigue, physical fatigue reduced activity, and mental fatigue) in life when fatigue is felt at different levels related to age, gender, psychological status, smoking and the presence of a chronic illness. The fatigue level increases with the increase in age. This may be due to the physiological changes that ocur with age. In addition, increased domestic responsibilities, a woman's social position, inability of a man to share responsibilities with his wife, and working at home also cause fatigue. QOL is a broad concept that encompasses both the functional state of individuals and the state of their physical health. The perception of QOL can vary according to the person, and, therefore, QOL is difficult to measure. It is important to have and maintain good QOL through old age. The QOL subscale scores in the current study were high. This may be because the study population contained more male individuals than females. In Turkey, studies on QOL of the elderly have suggested that QOL subfield scores are higher in males than in females.[24] According to a study on QOL of the elderly, family activities and social relationships are factors that determine QOL.[25] This can also be influenced by advancing age, collective participation, independence, social communication and respect for older adults in eastern societies.

The current study has three limitations. First, the self-reporting technique was used to measure stress, anxiety and depression in the elderly which is not a completely reliable method of data-collection. Secondly, the subjects were patients visiting a polyclinic. Third, difficulty in reaching file patients. Finally, the sample size was too small to allow generalisation of the findings.

Conclusion

Psychological problems, fatigue and sleep problems were common among the elderly. While performing medical assessment regarding the elderly, detecting and treating psychological disabilities is valuable in terms of improving QOL.

Disclaimer: The study was presented as a poster at the Turkish Geriatrics 2010 - 4th National Elderly Congress, April 01-04, 2010, Izmir, Turkey.

Conflict of Interest: None.

Source of Funding: None.

References

1. World Health Organization. World Health Organization launches new initiative to address the health needs of a rapidly ageing population. [Online] [Cited 2017 December 16]. Available from: URL: http://www.who.int/mediacentre/news/releases/2004/pr60/en/.
2. TurkStat, Elderly Statistics, 2014, Turkish Statistical Institute. [Online] [Cited 2017 November 19]. Available from: URL: http://www.tuik.gov.tr/UstMenu.do?metod=temelist.
3. Conradsson M, Littbrand H, Boström G, Lindelöf N, Gustafson Y, Rosendahl E. Is a change in functional capacity or dependency in activities of daily living associated with a change in mental health among older people living in residential care facilities? Clin Interv Aging. 2013; 8:1561-8.
4. Babazadeh T, Sarkhoshi R, Bahadori F, Moradi F, Shariat F, Sharizadeh Y. Prevalence of depression, anxiety and stress disorders in elderly people residing in Khoy, Iran (2014-2015).J Anal Res Clin Med. 2016; 4: 122-8.
5. Kang HJ, Kim SY, Bae KY, Kim SW, Shin IS, Yoon JS, et al. Comorbidity of depression with physical disorders: research and clinical implications. Chonnam Med J. 2015; 51: 8-18.
6. Rodriguez JC, Dzierzewski JM, Alessi CA. Sleep problems in the elderly. Med Clin North Am. 2015; 99: 431-9.
7. Gündüz E, Eskin F, Gündüz M, Bentli R, Selçuk EB, Zengin Y, et al. Effects of sleep quality, income level and comorbid conditions on quality of life a Turkish elderly population: A multicentre study. Turkish J Geriatr. 2015; 18: 136-42.
8. Vestergaard S, Nayfield SG, Patel KV, Eldadah B, Cesari M, Ferrucci L, et al. Fatigue in a representative population of older persons and its association with functional impairment, functional limitation, and disability. J Gerontol A Biol Sci Med Sci. 2009; 64: 76-82.
9. Meng H, Hale L, Friedberg F. Prevalence and predictors of fatigue among middle-aged and older adults: evidence from the Health and Retirement Study. J Am Geriatr Soc. 2010; 58: 2033-4.
10. Ertan T, Eker E. Reliability, validity and factor structure of the Geriatric Depression Scale inTurkish elderly: Are there different factor structures for different cultures? Int Psychogeriatr. 2000; 12:163-72.
11. Ulusoy M, Sahin NH, Erkmen H. Turkish Version of the Beck Anxiety Inventory: Psychometric Properties. J Cogn Psychother Int Q. 1998; 12: 163-72.
12. Ağargün MY, Kara H, Anlar O. The Validity and Reliability of the Pittsburgh Sleep Quality Index. Turkish J Psychiatr. 1996; 7: 107-15.
13. Yildirim Y, Ergin G. A validity and reliability study of the Turkish Multidimensional Assessment of Fatigue (MAF) scale in chronic musculoskeletal physical therapy patients. J Back Musculoskelet Rehabil. 2013; 26:307-16.
14. Eser S, Saatli G, Eser E, Baydur H, Fidaner C. The reliability and validity of the Turkish version of the World Health Organization quality of life instrument-older adult's module (WHOQOL-Old). Turk Psikiyatri Derg. 2010; 21:37-48.
15. Guler N, Guler Z, Ozsel D. Ageing in the rural area: Quality of life and associated factors in Sivas/Turkey. Turkish J Geriatr. 2016; 19:245-52.
16. Dastan NB, Akkuş Y. Investigation of depression and cognitive functions in the elderly in Kars. Turkish J Geriatr. 2016;19:113-21.
17. Kizil ETO, Turan E. Anxiety disorders in elderly people. Turkish J Geriatr. 2007; 10:150-55.
18. Lenze EJ, Wetherell JL. A lifespan view of anxiety disorders. Dialogues Clin Neurosci. 2011; 13:381-99.
19. Fadiloglu C, Ilkbay Y, Yildirim YK. Sleep quality among nursing

home residents. Turkish J Geriatr. 2006; 9:165-9.
20. Bilgili N, Kitiş Y, Ayaz S. Assessment of loneliness, quality of sleep and affecting factors in elderly. Turkish J Geriatr. 2012; 15:81-8.
21. Hoffman S. Sleep in the older adult: Implications for nurses. Geriatr Nurs. 2003;24:210-4.
22. Hardy SE, Studenski SA. Qualities of fatigue and associated chronic conditions among older adults. J Pain Symptom Manage. 2010; 39:1033-42.
23. Egerton T, Chastin SFM, Stensvold D, Helbotad JL. Fatigue may contribute toreduced physical activity among older people: an observational study. J GerontoloA Biol Sci Med Sci. 2016; 71:5:670-6.
24. Saraçli Ö, Akca ASD, Atasoy N, Önder Ö, Şenormanci Ö, Kaygisiz İ, et al. The relationship between Quality of Life and Cognitive Functions, Anxiety and Depression among Hospitalized Elderly Patients. Clin Psychopharmacol Neurosci. 2015; 13:194-200.
25. Gunaydin R. Assessment of quality of life in older people. Turkish J Geriatr. 2010; 13:278-84.