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STUDENT'S CORNER / ÖĞRENCİ KÖŞESİ - Original Article/Özgün Araştırma

Determination of attitudes and behaviours in relation to active aging in individuals aged over 60 who are living in nursing homes

Bakım evlerinde yaşayan 60 yaş üstü bireylerin etkin yaşlanma konusunda tutum ve davranışlarının belirlenmesi

Pinar KURU, Yusuf KELLECI, Gokhan GULSAYAR, Muhammet Emin ARMAGAN, Can ERZIK

ABSTRACT

Aim: As the population ages, it is important to recognize the health problems of the elderly in relation to individual and public health issues. Our aim was to determine the daily habits and health-related behaviours of an aging population concerning factors such as nutritional status, physical and social activity levels and chronic health problems.

Patients and Methods: This is a cross-sectional study. The study included 175 participants over 60 years of age that were mentally healthy and living in different nursing homes. A mini-mental test, a study questionnaire, a geriatric depression scale and an activities of daily living (ADL, physically dependent on others) scale were applied to the participants face to face.

Results: Eighty-five (48.6%) of the participants were male. 42.3% of the participants did not do any regular physical exercise in their life time. The frequency of regular physical exercise was higher in the physically non-dependent to others (p=0.005) group in the ADL scale. Depression and ADL scores increased with increasing body mass index (BMI) (p= 0.012 and p= 0.010, respectively). In continuous medication users depression is quite high when compared to those who do not use medication constantly (p= 0.002). With increasing working years, there was a tendency to a decrease in scores of the physically dependent on others group in ADL.

Conclusion: Regular physical exercise and an active work history both have a negative correlation on dependency in ADL in later years. Depression is more common among individuals who are on medication due to chronic health problems. A greater BMI was related to a higher frequency of depression and to dependency in ADL.

Keywords: Elderly health, Depression, Exercise, Active aging

ÖZET

Amaç: Yaşlanmayla beraber açığa çıkan sağlık sorunlarının belirlenmesi birey ve toplum sağlığı açısından oldukça önemlidir. Çalışmamızda amaç, katılımcıların; beslenme, fiziksel ve sosyal aktivite gibi günlük alışkanlıklarının ve sağlıkla ilişkili davranışlarının ve kronik sağlık sorunlarının belirlenmesidir.

Hastalar ve Yöntem: Araştırma kesitsel tiptedir. Çalışmaya farklı huzurevi ve bakımevlerinde yaşayan, akıl sağlığı yerinde 60 yaş üstü 175 kişi katılmıştır. Yüz yüze görüşmeyle yapılan mini mental testin ardından çalışmanın anketi, geriatrik depresyon ve günlük temel yaşam aktiviteleri (aktivitelerinde başkasına bağımlı olma) ölçekleri uygulanmıştır.

Bulgular: Katılımcıların 85 (%48,6)'i erkekti. Tüm katılımcıların %42,3'ü hayatları boyunca düzenli olarak hiç fiziksel egzersiz yapmamıştı. Günlük yaşam aktivitelerinde bağımsız olanlarda düzenli fiziksel egzersiz yapma sıklığı daha fazla idi (p=0,005). Beden kitle indeksi arttıkça depresyon (p=0,012) ve bağımlılığın (p=0,010) arttığı tesbit edildi. Sürekli ilaç kullananlarda depresyon, sürekli ilaç kullanmayanlara göre oldukça fazla idi (p=0,002). Katılımcıların çalışma yılları arttıkça bağımlılıklarının, istatistiksel anlamlılık olmaksızın azaldığı gözlenmiştir.

Sonuç: Fiziksel egzersiz ve aktif çalışma hayatı ile ilerideki yaşlarda başka bir kişiye bağımlı olarak yaşama arasında ters orantılı ilişki saptanmıştır. Kronik sağlık sorunu nedeniyle ilaç kullanan bireylerde depresyon görülme sıklığı yüksek bulunmuştur. Beden kitle endeksinin artması ile depresyon ve bağımlılık arasında doğru orantılı ilişki vardır.

Anahtar Kelimeler: Yaşlı sağlığı, Depresyon, Egzersiz, Aktif yaşlanma

Introduction

Age over 60 is defined as being elderly by the World Health Organization (WHO) [1]. Aging can also be defined as morphological, physiological and pathological deterioration of physical and mental health and it can even lead to diseases [2, 3]. According to WHO policy framework active aging is defined as an increase in the quality of life by optimizing health opportunities, cooperation and security [4] : '*Active aging allows people to realize their potential for physical, social, and mental well being*

Pinar Kuru (✉), Yusuf Kelleci, Muhammet Emin Armagan, Gokhan Gulsayar
School of Medicine, Marmara University, Istanbul, Turkey
e-mail: pnr.kuru@gmail.com

Can Erzik
Department of Medical Biology, School of Medicine, Marmara University, Istanbul, Turkey

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throughout the life course and to participate in society according to their needs, desires and capacities, while providing them with adequate protection, security and care when they require assistance.'. Healthy or active aging in other words, is an important topic in public health. To implement active aging and decrease the health problems in elderly populations has a crucial importance for public health in social and economical terms.

According to WHO, quality of life (QoL) is defined as "*individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns*" [5]. It is affected by 4 main factors: a) physical and occupational functions, b) psychological status, c) social interaction, d) economic status. QoL is also an important issue in evaluating the optimal medical care in chronic diseases.

Depression is an important factor that affects the QoL, especially in the elderly with or without other comorbidities [6]. A tendency to depression increases in the elderly [7]. During aging, the elderly experience some psychosocial changes leaving a productive period for themselves and the community behind. Their role in the social life starts to regress with fewer close contacts, activities, and social support. They may have to face loss of relatives and friends, due to death, or disabilities due to chronic diseases. If adequate social support cannot be given, social isolation can arise as a very important problem [8]. Further, if any chronic disease like cardiovascular or mental disorders are inadequately treated, they can aggrevate the deterioration of physical and mental status simultaneously and even lead to an early death. Thus, appropriate treatment with social support would increase the QoL of the patients.

In this study, we aimed to determine the sociodemographic status, the healthy and risky behaviours, chronic health conditions, social activities, depression and activities of daily living of an elderly population. This knowledge may help to identify important risk factors and possible preventive strategies could be designed according to these results.

Patients and Methods

In this cross sectional study, we recruited a randomly selected group of 175 elderly males and females from 3 different nursing homes in January 2011. They had scores between 24-30 from Mini-Mental test. Approval of the Marmara Universty, School of Medicine Ethical Committee and written consent from the nursing homes where the study was conducted, were obtained. Oral consent was also obtained from the subjects and a face-to-face interview technique was used by the researchers. All the procedures followed were in accordance with the ethical standards of the Declaration of Helsinki.

Dependent variables such as the health status (physical and mental), activities of daily living score and the depression score were compared with independent variables such as socioeconomic status, nutrition status, gender, age, body mass index (BMI), exercise status and daily habits. There were 25 question in our sociodemographic form. 23 of them were multiple choice and 2 of them were open ended. There were also 3 scales (Mini-Mental Status Evaluation Form, Geriatric Depression Scale, Lawton-Brody Instrumental Daily Activity Index). The reliability and validity of those tests were calculated for a Turkish population [9-11].

Table I. Demographic characteristics of the patients

Patients	Frequency (N)	Percent
Male	85	48.6
Female	90	51.4
Literate	138	78.9
Social security presence	140	80.0
Active working history	123	70.3
Currently physically activite	61	34.9
Current smokers	43	24.6
Depression score above limit	73	41.7
ADL above limit	43	27.0
Less than 8 hours sleepers	84	48.0

Statistical Analysis

In the present study, the statistical analysis was done with SPSS 11.5. For descriptive results mean ±SD and percentages were given and categorical data were expressed as a number (percentage). Comparisons between continuous variables were carried out by Student's t-test, and comparisons between categorical data were carried out by the $\chi 2$-test or by Fisher's Exact test when appropriate. For all tests, a p-value <0.05 (two-tailed) was considered statistically significant. The post-hoc power analysis were performed and for primary outcome measures (physical activity history, depression and ADL scores) with alpha=0.05, power= 0.8.

Results

There were 85 (48.6%) males in our study (Table I). The mean age of participants was 75.84±8.82 years (men 73.98±7.78; women 77.59±9.42). 34% of the participants were older than 84 years of age and 36% participants were between 75-84 years old. 78.9% of participants were literate and 70.3% of participants had working life, and 57.7% of them had at least 11 years of working life. There were no statistically significant differences between the working years and the depression score or the ADL scores.

When working years were analyzed, 43% of the participants had worked for less than 11 years, 18.29% had worked for 11-24 years, 25.7% had worked for 25-40 years, 13.71% had worked for more than 40 years. There were no statistically significant differences between groups according to working years and depression scores and ADL. When women and men were compared according to working years, men had higher working years (p<0.001). More working years were found to be in positive relation with increasing age (p=0.015). Independency percentages in ADL were 77.2% and 71.2%, non-depression rate were 59.3% and 55.8% in participants with/without active occupational history respectively but these differences were not statistically significant.

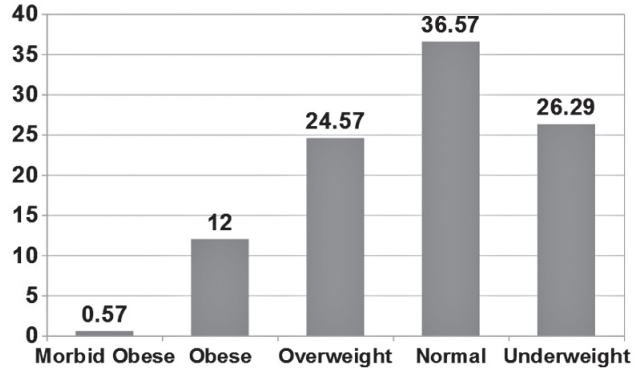

Figure 1: BMI groups of participants with percentages

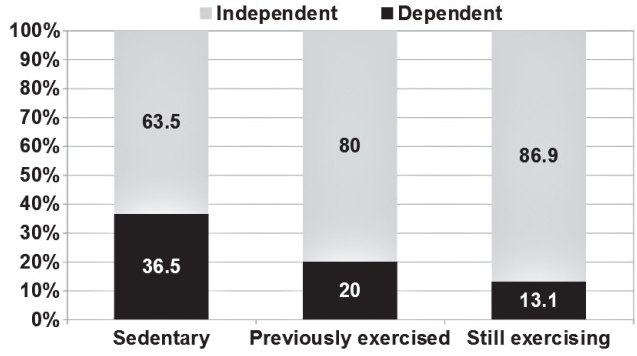

Figure 2: Physical exercise status relation with dependency in activities of daily living situation

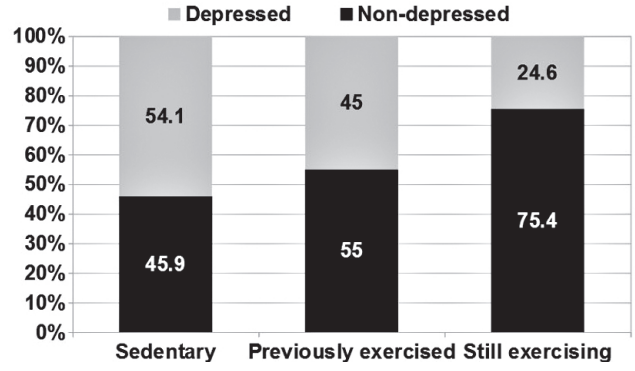

Figure 3: Physical exercise status relation with depression status

BMI groups of participants are given in figure 1 and BMI according to gender is given in Table II. Depression scores were increased in the higher BMI group (p=0.012) and also dependency in ADL was higher in the upper BMI group (p=0.01). The BMI of participants who had had an active occupational history were statistically significantly lower than who had not (p=0.018), and also BMI scores were lower in participants with more working years but this was not statistically significant.

Forty-two point three percent of participants had no regular physical exercise history, whereas 34.9% were actively taking

Table II: BMI (kg/m^2) according to gender differences

BMI groups*	Female		Male		Total	
	N	%	N	%	N	%
Underweight (<18.5)	36	40.0	10	11.8	46	26.2
Normal (≥18.5-<24.9)	22	24.4	42	49.4	64	36.6
Overweight(≥25-<29.9)	21	23.3	22	25.9	43	24.6
Obese (≥30.0-< 39.9)	10	11.1	11	12.9	21	12.0
Morbid Obese (≥ 40.0)	1	1.1	0	0	1	0.6
Total	90	100	85	100	175	100

(*Pearson Chi-Square, p= 0.000)

Table III: Smoking history according to gender

Smoking status*	Female		Male		Total
	N	%	N	%	
Never smoked	62	68.9	16	18.8	78
Previously smoked	20	22.2	34	40.0	54
Smoking	8	8.9	35	41.2	43
Total	90	100	85	100	175

(*Pearson Chi-Square, p= 0.000)

Table IV. Effect of daily medication use on ADL and Geriatric Depression Scores (Two-sample, unpaired t-test)

	Daily Medication Use (+)	Daily Medication Use (-)	p value
ADL score	6.70± 0.43	3.37± 0.65	0.047
Depression score	4.63± 3.75	2.26± 2.68	0.002

ADL: Activities of daily living

regular physical exercise. 22.8% had recently started doing physical exercise. Those who had a history of active physical exercise, but had been inactive for the last 5 years had statistically significant higher depression scores compared to the actively exercising group (p=0.005) (Figure 2).This actively exercising group had significantly the lowest depression and ADL scores (p=0.001; p=0.005 respectively) (Figure 3).

There were 41.7% participants with high depression scores without any statistically significant difference between genders. The depression scores were higher among participants who had chronic diseases (p=0.000) and who were on continuous medication (p=0.002). 25% of the participants were physically dependent in ADL. Physical dependency on others was more frequent with increasing age (p=0.003). 16 men (18.8%) and 27 women (30%) were physically dependent on others in ADL and there were statistically significant differences between genders (p=0.015).

Ninety-one of participants had a chronic disease and were currently on medication . Depression scores were higher in chronic

Table V. Helpful strategies to prevent depression and dependency in the elderly [21]

- Quality of care in nursing homes should be increased
- At home follow up and healthcare service should be improved
- Social support to the elderly and their families is important to prevent the social isolation of the elderly
- To prevent possible complications, physical and psychiatric observations of the patients should be made
- Depression is more common among elderly living in nursing homes than living at home. So the healthcare providers should be informed about this situation, social support nursing activities could also be the part of health service
- Social and cultural activities should be planned for elderly to increase socialisation, other activities that would make them more productive should be planned and hobbies should be supported

medication users compared to healthy participants (p=0.002) and depression scores also increased with increasing daily medication use (p=0.028). In a post hoc analysis of numbers of medications grouped as 6-10 medication/day group, these had a higher score in depression than the group with no-medications (p=0.039) and the group with 1-5 medications/day (p=0.004). There was also statistically significant relation between ADL and chronic medication use (Table IV).

Forty-four point six percent of participants had no smoking history, 30.8% had previously smoked and 24.6% were smokers at the time of the study. Smoking history according to gender was given in Table III. There was no relation between depression and smoking years and the average number of cigarettes they smoked per day.

Discussion

World populations are aging and noncommunicable diseases are on the rise. Those are preventable issues and nowadays affects huge numbers of people [12]. The principal finding of our study was that nine in ten elderly people living in nursing homes had one or more chronic diseases and thus use medications. Similar results were reported in a study done with retired doctors [3]. Those results showed that many elderly people have chronic diseases and indicated the importance of preventing disease and illness before they occur.

WHO reported that tobacco kills approximately 6 million people per annum and causes more than half a trillion dollars of economic damage each year with a currently increasing trend [12]. One in four elderly were smokers in our study and more than half had a hisory of smoking and this is in accord with the literature [3,13]. In a study done by Caraballo et al. [13] 39% of the participants were classified as former smokers who had relapsed at least once and 69.5% had quit again. This tobacco epidemic shows that if adequate interventions could be implemented, a great many people will benefit [12].

Physical exercise is known to have an important role in disease prevention and control. It has many positive physiologic effects on both physical [14,15] and psychological [16] health. It has physical anti-oxidant effect and increases well being [17]. In our study only 22.8% of participants were taking physical exercise regularly. Sun et al. reported that, the percentage of older people meeting recommended physical activity differred between 2.4 – 83.0% [18]. In the study done by Aslan et al. half of the retired doctors were regularly doing physical exercise [3]. These results showed that the importance of doing regular physical activity was not recognized by the elderly. It is essential to suggest the appropriate exercises for their health conditions and to provide suitable places to this is crucial.

It is also important for the elderly to keep the BMI within normal limits. Akman et al. [19] reported that one in every three patients who were admitted to an internal medicine outpatient clinic was obese. In our study it was found that one in every eight patients was obese. It has also been shown that depression and dependency in ADL also increased with higher BMI. Higher BMI was also found to be related with lower QoL [20]. Diabetes, heart disease, osteoarthritis and high blood pressure were common among overweight and obese patients [20]. So it is crucial to suggest healthy eating habits and suitable exercises for good health conditions. Physical exercise and an active working history had preventive effect on depression and dependency in ADL. People could be encouraged to take part in active work. As suggested by Bahar et al.[21], some of the helpful strategies for the elderly are given in Table V.

In Turkey the rate for major depression was stated to be 6% and depressive symptoms as 11% [22]. According to the Epidemiologic Catchment Area Study, among people over 60 who were admitted to hospitals for any reason, the depression rate was 15% and this increases to 25% in nursing homes [23]. According to the study done by Sahin et al. [8] in Turkey, the depression rate was 29% among the elderly living with their families and 41% among living in nursing homes in Edirne. In our study 46% of the participants had a high depression score and there was no gender difference. The depression score was statistically significantly lower in men than women in the study done by Sahin et al. [8]. In that study, there were a lot of risk factors defined for depression in the elderly. Female gender, low socioeconomic status, being divorced, living alone, low social support, having cognitive decline or other chronic diseases, being physically dependent on others in ADL are some of the risk factors [8]. In our study, having a chronic health problem, medication use, sedentary life style and high BMI were related with having a depression. It has not been previously discussed in the literature that chronic health problems with increased medication use were associated with depression. Those findings also indicate the salience of active aging on the psychology of elderly.

Some of the factors protecting against depression in the elderly are good functionality, hobbies, routine health control, being socially active, healthy eating habits, better sight/eye health, good cognitive functions, living as a couple, having strong family relations, higher income, living in a known environment. Healthy aging, early diagnosis and preventive interventions becomes much more important than prescribing medications. People should be informed about active aging and be aware about the importance of early diagnosis and preventive methods.

Conclusion

High scores in the Geriatric Depression Scale means that there was inadequate social support for the elderly and there was a lack of appropriate health care for depression in the nursing homes. Physical exercise rates were also low among the elderly and BMIs were quite high. There were some reasons for these features, such as lack of awareness, inappropriate environmental conditions for exercising, etc. As mentioned in the study, physical exercise was preventive for both depression and dependency in ADL. From the beginning of young adulthood, appropriate exercises should be suggested by physicians and governments could take the responsibility for increasing the green areas and public places were people take exercise and social activities with their families. To be able to reach healthy and affordable food also has great importance. Green groceries, places where people can eat healthy foods could also be more common in the cities.

Limitations

Although we did our study in 3 different nursing homes, it would be better to add a group of elderly living at their home.

Conflict of Interest

The authors declare that there is no conflict of interest. This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

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