



## Assesment of Disabled Geriatric Health Council Reports

### Sağlık Kuruluna Başvuran Geriatrik Hastaların Engellilik Değerlendirmeleri

Geriatric Patients Assesment

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#### Özet

**Amaç:** Bu çalışmada, 65 yaş ve üzeri, özürli sağlık kuruluna başvuran olguların değerlendirilmesi amaçlandı. **Gereç ve Yöntem:** Çalışmada, özürli kurulu-na başvuran, 3112 olgu retrospektif tarandı, 601 olguya ait dosyalar değerlendirildi. **Bulgular:** Başvuruların %53,1'i erkek, %46,9'u kadındır. Ortalama yaş 60 (59± 18,35)'dir. En sık başvuru sebebi, sosyal hizmetler %45,6, özür-lülük oranının tespiti %21,6'dır. 65 yaş ve üzerinde, hipertansiyon %21,6; diya-bet %12,6; kronik obstruktif akciğer hastalığı ve dilate kardiyomyopati %3,7 ile ilk sıralardadır (p<0.05). Malignensi 65 yaş ve üzerinde %1,8'di (p>0.05). Dahili özür-lülük oranı istatistiksel anlamlı değilken, toplam özür-lülük oranı 65 yaş ve üzerinde anlamlıdır (p<0.05). Ek branş patolojileri 65 yaş ve üzerin-de anlamlıdır (p<0.05). **Tartışma:** Beklenen yaşam süresinin uzaması ve toplumdaki yaşlı bireylerin sayısındaki artış ile, özür-lü yaşlı bireylerin sayısında bir artış olmaktadır. Kronik hastalık tanısı almak, geriatrik hasta popülasyonunu için, hayatın sonu olmamalıdır. Geriatrik popülasyonun ruh hali, sosyal yaşa-mı, genel sağlık ve zihinsel sağlık düzeyleri en üst düzeyde tutulmalıdır. Yaşlı hastaların, özel ihtiyaçlarına, özel önem verilerek, imkanların daha geniş kul-lanımı sağlanmalıdır.

#### Anahtar Kelimeler

Kronik Hastalıklar; Engellilik Değerlendirmesi; Yaşlılar; Muğla; Türkiye

#### Abstract

**Aim:** In this study it is aimed to evaluate geriatric patients who apply to health council. **Material and Method:** The study retrospectively assessed 3112 patients admitted to the disability ward, of which 601 patients were included in the study. **Results:** Of the 601 patients, 53.1% were men and 46.9% were women. The mean age of these patients was 60 (std ± 18.35) years. Some of the reasons for admission in the hospital were need for social services (45.6%) and determination of disability rate (21.6%). Most common diseases in patients aged ≥65 years were hypertension (21.6%), diabetes (12.6%), and chronic obstructive lung disease and dilated cardiomyopathy (3.7%; p < 0.05). Malignancy was detected in 1.8% patients aged ≥65 years; however, its prevalence was not statistically significant (p > 0.05). Internal disability rate was not statistically significant (p > 0.05), but total disability was statistically significant (p < 0.05). Moreover, prevalence of additional conditions was statistically significant (p < 0.05) in patients aged ≥65 years. **Discussion:** Rapid increases in life expectancy and number of older people has increased the prevalence of disabilities among older people. Being diagnosed with chronic diseases should not be the end of life for geriatric populations. Their mood, social life, general health, and mental profile should progress. Sufficient attention should be paid to the special needs of older patients thereby leading to a wider use of facilities.

#### Keywords

Chronic Diseases; Disability Evaluation; Geriatrics; Muğla; Turkey

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## Introduction

With the exponential growth of older population, clinical problems such as the one we described here in this manuscript are becoming increasingly common in primary care centers. In the US, the number of persons aged  $\geq 65$  years was 40 million in 2010 and is predicted to increase to  $>55$  million by 2020 [1]. Chronic diseases such as cancer, diabetes, and cardiovascular diseases disproportionately affect older adults and result in disability and decreased quality of life. Today, approximately 80% older adults have at least one and 50% older adults have at least two chronic conditions [2]. Thus, we suppose that older adults develop disabilities due to aging and chronic diseases. Chronic diseases can lead to disabilities. Current estimates suggest that one in 10 people live with a disability. Most of these persons live in poverty, and their rights are often overlooked [3]. Intellectual and developmental disabilities (IDD) often develop among persons living in the sections of society with the lowest employment rate. Less than 10% of older adults with IDD in western countries are employed. Moreover, reports on employment rate are not available in many countries, suggesting that the real scenario may be much worse. Limited employment opportunities among this population may be attributed to the lack of understanding and acceptance of the behavior of a person with IDD, lack of expertise on behavior management, and technical barriers [4]. Labor force participation rate of populations with chronic illnesses was 22.87% in Turkey and 25.60% in Aegean region. Further, unemployment rate in this population was 10.77% in Turkey and 11.56% in Aegean region (the fourth highest population on an average in Turkey) [5]. We evaluated geriatric patients visiting the disability ward of this hospital to determine the shift in socio-demographics in this population because of an increase in life expectancy. We assessed the disabilities in the geriatric population to overcome the lack of community awareness on disabilities in this population. The proportion of elderly population is growing exponentially. Therefore, it is important to obtain information on disabilities in this population to improve their health status, social needs, and abilities.

## Material and Method

This retrospective, descriptive study has been approved by the Ethical Committee of the Muğla Sıtkı Koçman University (02.04.2015/73/64). 3112 patients aged 15–94 years who were admitted to the disability ward. So, we have randomly select 601 files. But, we wanted to examine 65 years and over results. According to the Turkish law, if the loss of body function is  $\geq 40\%$ , you can take advantage of disability rights [6]. For this reason, it takes 40% to evaluate the disability. Data were collected from data collection forms and hospital records by

using an automated system between January 1 and December 31, 2014. Dependent variables such as patients' age, gender, reason for hospital admission, and comorbid chronic diseases were evaluated. Statistical analysis was performed using SPSS 18.0. Descriptive data are expressed as means  $\pm$  standard deviation, and categorical variables are expressed as frequencies and percentages. Chi-square test was used to compare independent variables and to determine the relationship among other variables. Statistical significance was set at  $p < 0.05$  for all the tests.

## Results

Of the 601 patients evaluated, 53.1% (319) were men and 46.9% (282) were women. The mean age of the patients was 60 ( $59 \pm 18.35$ ) years (range, 15–94 years). Reasons for admission to the hospital were need for social services (45.6%), determination of disability rate (21.6%), tax credit (16.6%), to bind salaries (12.8%), reassessment of contested report (1.7%), employability from disability (1.3%), and class H license application (0.4%). Of the 601 patients, 6.2% ( $n = 37$ ) were aged  $\leq 30$  years, 28.0% ( $n = 168$ ) were aged 31–50 years, 19.6% ( $n = 118$ ) were aged 51–64 years, and 46.3% ( $n = 278$ ) were aged  $\geq 65$  years. The most common primary diseases among women were hypertension (20.3%,  $n = 122$ ), diabetes (13.0%,  $n = 78$ ), dilated cardiomyopathy (3.5%,  $n = 21$ ), and chronic renal failure (3.2%,  $n = 19$ ) while those among men were diabetes (13.3%,  $n = 80$ ), hypertension (13.0%,  $n = 78$ ), chronic obstructive pulmonary disease (7.0%,  $n = 42$ ), and dilated cardiomyopathy (6.5%,  $n = 39$ ). Incidence of these diseases was significantly higher among women than among men ( $p = 0.000$ ). Secondary conditions among women were senility (16.8%,  $n = 24$ ), dyslipidemia (5.6%,  $n = 8$ ), and asthma (4.2%,  $n = 6$ ) while those among men were coronary artery disease (8.4%,  $n = 12$ ), dyslipidemia (7.7%,  $n = 11$ ), and hypertension and senility (7.0%,  $n = 10$ ). No significant differences were observed between men and women with respect to the prevalence of the secondary conditions ( $p = 0.082$ ). Patients aged  $\geq 65$  years had hypertension (21.6%,  $n = 130$ ), diabetes (12.6%,  $n = 76$ ), and chronic obstructive lung disease and dilated cardiomyopathy (3.7%,  $n = 22$ ) as the primary diseases. Patients aged 51–64 years had hypertension (6.0%,  $n = 36$ ), diabetes (5.3%,  $n = 32$ ), and chronic renal failure (2.5%,  $n = 15$ ) as the primary diseases. Patients aged 31–50 years had diabetes (7.7%,  $n = 46$ ), hypertension (5.3%,  $n = 32$ ), and chronic obstructive lung disease (3.8%,  $n = 23$ ) as the primary diseases. Moreover, differences among these groups were statistically significant ( $p < 0.001$ ). Additional conditions in these patients are listed in Table 1. Additional condition such as hearing loss (7.7%,  $n = 33$ ), cardiovascular diseases (6.6,  $n = 28$ ), arthritis (5.6%,  $n = 24$ ) were present in patients aged  $\geq 65$  years while

Table 1. Additional pathologies among patients included in the study

Additional pathologies	Psychiatric conditions	Neurological diseases	Eye Diseases	Surgery	Ear-nose-throat diseases	Orthopedic diseases	Cardiovascular surgery	P
0–64 years	40 (9.3%)	53 (12.4%)	36 (8.4%)	7 (1.6%)	11 (2.6%)	31 (7.2%)	2 (0.5%)	$p < 0.001$
65–74 years	6 (1.4%)	31 (7.2%)	19 (4.4%)	0 (0.0%)	10 (2.3%)	19 (4.4%)	0 (0.0%)	
75–84 years	2 (0.5%)	54 (12.6%)	21 (4.9%)	1 (0.2%)	23 (5.4%)	22 (5.1%)	0 (0.0%)	
85–94 years	1 (0.2%)	24 (5.6%)	3 (0.7%)	0 (0.0%)	4 (0.9%)	8 (1.9%)	0 (0.0%)	
Total	49	162	79	8	48	80	2	

arthrosis (2.3%, n = 10) and cardiovascular diseases and visual impairment (1.2%, n= 5) were present in patients aged 51–65 years age. Statistical differences were observed among the different age groups ( $p < 0.001$ ) and between men and women ( $p < 0.05$ ) with respect to the prevalence of these conditions. Malignancy was present in 1.8% (n=11) patients aged 31–50 years. Patients aged  $\geq 65$  years showed considerable prevalence of malignancies. However, the difference was not statistically significant ( $p > 0.05$ ). Moreover, statistical difference was not observed between men and women ( $p > 0.05$ ) with respect to the prevalence of malignancies. Tertiary conditions among patients aged  $\geq 65$  years were walking impairment and hearing loss (14.6%, n= 6) and cataract (12.2%, n= 5). The incidence of these conditions was higher among other age groups; however, the difference was not statistically significant ( $p > 0.05$ ). In addition, no differences were observed between men and women with respect to these conditions ( $p > 0.05$ ). The reported internal disability rates were 19.1% (n= 115) in patients aged  $\geq 65$  years, 9.0% (n= 54) in patients aged 51–64 years, 13.6% (n= 82) in patients aged 31–50 years, and 4.2% (n= 25) in patients aged  $\leq 30$  years. These differences in internal disability rates were not statistically significant ( $p > 0.05$ ). The reported internal and total disability rates are listed in Table 2.

## Discussion

Aging is an integral and natural part of life. Health status of

Table 2. Disability rates among patients included in the study

Age	Internal disability rate		Total disability rate	
	1%–39%	40%–100%	1%–39%	40%–100%
0–64 years	160 (26.6%)	158 (26.3%)	73 (12.1%)	248 (41.3%)
65–74 years	49 (8.2%)	45 (7.5%)	16 (2.7%)	80 (13.3%)
75–84 years	81 (13.6%)	58 (9.7%)	8 (1.3%)	133 (22.1%)
85–94 years	30 (5.0%)	13 (2.1%)	1 (0.2%)	42 (7.0%)
85–94 years	4 (0.6%)	3 (0.4%)		
Total	324	277	98	503
	$p > 0.05$		$p < 0.001$	

older adults depends on the activities performed in the earlier phase of life. Worldwide, women have longer life expectancy than men. Moreover, larger percentage of women develop disabilities than men, which is also observed among older populations. Patients aged  $\geq 65$  years develop chronic medical conditions such as diabetes, hypertension, and Parkinson's disease. Hypertension has roughly constant prevalence among women while diabetes is the third most prevalent disease among men in the US [7]. The American Heart Association has reported that the prevalence of hypertension is 52% among both men and women aged between 55 and 64 years; 63.9% and 70.8%, respectively, among men and women aged between 65 and 74 years; and 72.1% and 80.1%, respectively, among men and women aged  $\geq 75$  years [8]. In our study, diabetes and hypertension were the most common chronic diseases among women. In our country, women show higher prevalence of some components of metabolic syndrome, hypertension, and diabetes [9]. Another study performed in Turkey confirmed our results, with 82.0% prevalence of chronic illnesses, including diabetes mellitus, chronic obstructive pulmonary disease, coronary artery disease, osteoporosis, hypertension, hyperthyroidism, and

chronic liver disease, among in women [10]. In fact, diabetes and hypertension are commonly prevalent among the elderly worldwide. Aging affects various body functions, including the cardiovascular system. Thus, presence of chronic diseases is an important predictor of disability. Analysis of disability in the elderly and the relationship between various socio-demographic features indicates a significant correlation among gender, age, and chronic disease [10]. Except among persons aged 83–88 years who showed limitations in the activities of daily living, the mean number of limitations in the activities of daily living increased or remained unchanged in near-elderly and elderly persons in the US during 1996–2010 [11]. In 1999, a multi-centric geriatric study performed in Turkey reported 31.1% disability rate in persons  $> 60$  years. In our study, the total disability was 45.9% and the internal disease-associated disability rate was 42.1% in persons aged  $\geq 65$  years. Modern lifestyle affects survival. Moreover, advancements in technology have simplified the activities of daily living. Life expectancy is increasing and late-life activity limitations are common. Aging wears away the body, with older age being associated with an increased incidence of disabilities. Because, in 1987 geriatric patients predominantly suffering from cardio-cerebrovascular diseases (stroke, heart insufficiency) and operations of the locomotion system (fractures, arthrosis) [12]. In 1999, the incidence of coronary disease, congestive heart failure, and stroke was significantly higher among hypertensive elderly persons than among normotensive elderly persons. Hypertension is associated with 50% mortality rate and 70% morbidity rate in the elderly [13], which is consistent with that observed in the present study. Moreover, geriatric populations develop secondary conditions. The geriatric population included in our study had hearing problems. Prevalence of hearing loss has drastically increased worldwide. It has been estimated that 19% and  $> 20\%$  adults aged  $\geq 65$  years in the US and European countries, respectively, will develop hearing loss [14]. Sensorial deficits and hearing impairment have a negative impact on the socio-environmental interactions of older people that may lead to social isolation and dependence [15]. In our study, hearing loss was found to be a common condition among the geriatric population and was almost always associated with senility and disability. Gait disturbance and arthrosis are the most common additional pathologies in geriatric populations in Turkey. Worldwide estimates indicate that OA affects  $> 10\%$  population aged  $> 60$  years; however, the impact of this health condition is still underestimated. Genetic factors, joint trauma, and lifestyle-associated risk factors (such as obesity and excessive joint use in occupational or leisurely activities) can contribute to the onset and progression of OA [16]. In humans, aging triggers many changes in all the systems of the body. In addition, aging affects posture, balance, and gait and decreases bone turnover. Cancer is a common cause of disability and death in the elderly, with  $> 50\%$  malignant neoplasms being detected in persons aged  $> 70$  years. These results are consistent with those obtained in the present study. However, aging is not associated with cancer. Higher prevalence of cancer in the elderly than in other older persons simply reflects a more prolonged exposure to carcinogens [17].

## Conclusion

Chronic diseases have a negative impact on the quality of life

of persons belonging to all age groups, especially among older persons, thus indicating the need for rapid diagnosis. Older persons almost always develop chronic diseases. Increases in life expectancy and proportion of older population have increased the prevalence of disabilities among the older population. The concept of disability is very dynamic and involves different types of disabilities. Older persons with disabilities include those having long-term physical, mental, intellectual, or sensory impairments that may hinder their complete and effective participation in the society on an equal basis with others. In fact, we know the necessities of the geriatric people's group and attendance but did not take enough care and noticed their vulnerable and special community presence. It is possible that we do not know how to take good care. However, our study could be used as a basis for developing health plans and care centers in the future.

### Competing Interest

The authors have no financial conflicts of interest.

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