ÖZ

AMAÇ: Bu çalışma, yaşlı bireylerin sağlık hizmeti kullanımını etkileyen faktörleri incelemek amacıyla yapılmıştır.

GEREÇ VE YÖNTEM: Bir aile sağlığı merkezine 01.02.2019 – 01.06.2019 tarihleri arasında başvuran 266 yaşlı hasta rastgele seçilerek, araştırmaya katılmayı kabul eden yaşlılara yüz-yüzde görüşme tekniği ile anketler uygulandı. Yaş, medeni durum, eğitim düzeyi, iş durumu, cinsiyet, sağlık sigortası kapsamı, hane halkı geliri, kronik hastalık durumu gibi sosyodemografik özellikleri sayı ve yüzde olarak verildi. Sağlık hizmeti kullanımı ile medeni durum ve aylık hane halkı geliri arasındaki ilişkilerin analizinde, Fisher exact testi kullanıldı. Hangi faktörün sağlık hizmeti kullanımının önemli bir yordayıcısı olduğunu belirlemek için basit ikili lojistik regresyon analizi yapıldı.

BULGULAR: Cinsiyet, algılanan sağlık durumu ve kronik bir hastalığa sahip olmanın sağlık hizmeti kullanımı ile istatistiksel olarak anlamlı şekilde iliskili olduğu, kadınların sağlık hizmetlerini kullanım sıklığını erkeklere oranla 2,23 kat, en az bir kronik hastalığa sahip olan yaşlıların ise olaylananlara göre 3,27 kat fazla olduğu saptandı.

SONUCU: Çalışmanın amacı, sağlık hizmeti ve program yöneticileri tarafından yapılır yaşlar için sağlık hizmetlerine erişim arttırmak amacıyla, özellikle sağlık girişim teşvikleri ve geliştirmesi campanyalarında kullanılabilir. Böylece kronik bir hastalığa tanık olunan yaşlıların ise olaylananlara göre 3,27 kat fazla olduğu saptandı.

ANAHTAR KELİMELER: Yaşlı, Sağlık hizmeti, Sağlık sigortası, Kullanım, Planlama

ABSTRACT

OBJECTIVE: This study was carried out for the purpose of determining the factors that affect the usage of healthcare services by elderly individuals.

MATERIAL AND METHODS: 266 elderly patients who visited a family health center between the dates of 01.02.2019 – 01.06.2019 were randomly selected, and the questionnaires were applied to those who agreed to participate in the study with the method of face-to-face interviews. Sociodemographic characteristics as age, marital status, educational level, employment status, gender, scope of health insurance, household income and chronic disease status were given as frequencies and percentages. Fisher's exact test was used to analyze the relationships among usage of healthcare services and marital status and household income. Simple binary logistic regression analysis was used to determine which factor was a significant predictor of healthcare usage.

RESULTS: It was determined that gender, perceived health status and having a chronic disease were significantly related to usage of healthcare services, while usage of healthcare services among women was 2.23 times more than that in men, and it was 3.27 times more among those with at least one chronic disease than those without.

CONCLUSIONS: The data in our study may be used by health care policymakers and program administrators for the purpose of increasing the access to healthcare services among the elderly and especially for the sake of promotion and improvement of health campaigns. This way, it may be achieved to increase the probability of reaching healthcare counseling after being diagnosed with a chronic disease, and thus more severe complications and injuries that may occur may be prevented.

KEYWORDS: Elderly, Healthcare service, Health insurance, Planning, Usage
INTRODUCTION

While regulating healthcare services, countries try not only to improve the general health level of the society by using the most up-to-date medical knowledge but also to achieve the most suitable planning in accessing healthcare services. They also try to minimize the differences and inequalities among social groups in a way that will achieve the goal of keeping the society healthy. This is because one of the most important objectives of healthcare systems and planning activities is to improve public health.

In line with this objective, issues as demands on healthcare services, factors that affect these demands and those who demand (use) services have become more prioritized in recent years (1). This has made healthcare service usage a topic that needs to be carefully investigated, researched, and analyzed as a result of which policies are developed. Since healthcare needs and expenditures usually increase as age increases, developing countries whose demographic characteristics are changing fast have less opportunities and time in terms of adaptation to the needs of an aging society (2).

In order to allow the elderly to receive healthcare services in a more sensitive, lower-cost and sustainable way, healthcare service providers and policymakers need to understand the factors that affect the usage of healthcare services by the elderly. In this study that was carried out within this context, it was aimed to determine the factors that affect the demand of elderly individuals on healthcare services and the behaviors that show in usage of these services.

Such studies will allow planning on the future provision of healthcare services, determination of the health levels and behaviors of the society and establishment of effectiveness and efficiency in the provision of healthcare services.

MATERIALS AND METHODS

This cross-sectional study was carried out with 266 elderly individuals who visited a family health center in the province of Burdur between the dates of 01.02.2019 – 01.06.2019 and voluntarily agreed to participate in the study after being informed about the process. In the 25-item questionnaire lasting 10 minutes that was developed by us, the variables related to usage of healthcare services were divided into preparatory, effective and need variables. The statistical calculations were made in SPSS 20 (Statistical Package for the Social Sciences ver. 20). Variables as age, marital status, educational level, employment status, gender, scope of health insurance, household income and chronic disease status were presented as frequencies and percentages.

Chi-squared test was used to determine the relationship between the dependent variable (usage of healthcare services) and the independent variables (age, educational level, employment status, gender, health insurance, chronic disease status and perceived health). Fisher’s exact test was used to analyze the relationships among usage of healthcare services and marital status and income status.

Kruskal Wallis analysis was used for the data that did not show a normal distribution. Simple binary logistic regression analysis was used to determine which factor was a significant predictor of usage of healthcare services, and the value of p≤0.050 was accepted as statistically significant.

ETHICAL COMMITTEE

The ethical approval for the study was obtained from the Noninterventional Clinical Research Ethics Board of Mehmet Akif Ersoy University (No: 208/2018).

RESULTS

Among the participants, 58.2% were female, 67.6% were married, 51.1% had education on a primary school level, 62.7% were not employed, 58.6% had equal income and expenditure, all had a regular monthly income; 96.6% had social security, 86.8% had at least one chronic disease and were on medication for this, most had a good level of perceived health, 75.5% received healthcare services from state-based healthcare institutions, and the sources of funding for healthcare services of 91.3% was their health insurance (Table 1). The mean age of the participants was calculated as 72.6 ± 3.1 (n=266).
Gender, perceived health status and having a chronic disease were found to be significantly related to usage of healthcare services (Tables 2 and 3).

Table 1: Some sociodemographic characteristics of the participants (n=266)

| Variables            | Frequency (n) | Percentage (%) |
|----------------------|---------------|----------------|
| Age                  |               |                |
| 20-29                | 101           | 38.2           |
| 30-39                | 23            | 8.7            |
| 40-49                | 35            | 13.1           |
| 50-59                | 40            | 15.1           |
| 60-69                | 36            | 13.5           |
| 70 or older          | 68            | 25.8           |
| Gender               |               |                |
| Female               | 148           | 55.7           |
| Male                 | 118           | 44.3           |
| Marital status       |               |                |
| Married              | 161           | 60.6           |
| Widowed              | 3             | 1.1            |
| Single               | 102           | 38.5           |
| Divorced             | 3             | 1.1            |
| Educational level    |               |                |
| Less than primary    | 94            | 35.3           |
| Secondary or high    | 103           | 38.9           |
| Post secondary or higher | 76 | 28.8       |
| Employment status    |               |                |
| Employed            | 224           | 84.5           |
| Unemployed           | 42            | 15.5           |
| Health insurance     |               |                |
| Yes                  | 217           | 81.5           |
| No                   | 49            | 18.5           |
| Chronic disease status |          |                |
| No chronic disease   | 131           | 49.3           |
| At least one chronic disease | 135 | 50.7       |
| Perceived health status |       |                |
| I am unhealthy       | 115           | 43.4           |
| My health is a bit poor | 44            | 16.5           |
| I am moderately healthy | 112        | 42.1           |
| I am healthier than average | 48 | 17.9       |
| I am very healthy    | 49            | 18.5           |
| Income status        |               |                |
| Income more than expenditure | 87 | 32.6       |
| Income and expenditure equal | 102 | 38.5     |
| Income less than expenditure | 77 | 28.9       |
| Has health insurance |               |                |
| Yes                  | 236           | 88.9           |
| No                   | 30            | 11.1           |

Table 2: Factors related to the participants’ usage of healthcare services

| Variables                          | Frequency (n) | Percentage (%) |
|------------------------------------|---------------|----------------|
| Gender                             |               |                |
| Male                               | 100           | 37.7           |
| Female                             | 166           | 62.3           |
| Marital status                     |               |                |
| Married                            | 140           | 52.7           |
| Widowed                            | 2             | 0.7            |
| Single                             | 122           | 45.9           |
| Divorced                           | 8             | 3.0            |
| Educational level                  |               |                |
| Less than primary                  | 95            | 35.5           |
| Secondary or high                  | 107           | 39.9           |
| Post secondary or higher           | 64            | 24.0           |
| Employment status                  |               |                |
| Employed                           | 227           | 86.0           |
| Unemployed                         | 39            | 14.0           |
| Health insurance                   |               |                |
| Yes                                | 209           | 79.0           |
| No                                 | 57            | 21.0           |

Table 3: Simple binary logistic regression analysis of predictors of health service utilization of respondents

| Usage of healthcare services in the last 1 year | Odds ratio | p-value |
|-----------------------------------------------|------------|---------|
| a. Preparatory variables                      |            |         |
| Age                                           |            |         |
| Under 20                                      | 1.00       | 0.610   |
| 20-29                                         | 1.68       | 0.100   |
| 30-39                                         | 2.86       | 0.025   |
| Gender                                        |            |         |
| Male                                          | 1.00       | 0.0005  |
| Female                                        | 2.54       | 0.0005  |
| Marital status                                |            |         |
| Married                                       | 1.00       | 0.640   |
| Widowed                                       | 2.01       | 0.217   |
| Single                                        | 1.01       | 0.112   |
| Employment status                             |            |         |
| Not employed                                  | 1.00       | 0.316   |
| Employed                                      | 0.62       | 0.316   |
| Employment                                   |            |         |
| Income less than expenditure                  | 1.00       | 0.661   |
| Income and expenditure equal                  | 1.02       | 0.661   |
| Income more than expenditure                  | 1.14       | 0.653   |
| Has health insurance                          |            |         |
| Yes                                            | 1.00       | 0.717   |
| No                                             | 0.85       | 0.717   |
| b. Need variables                              |            |         |
| Status of chronic disease                     |            |         |
| No chronic disease                            | 1.00       | 0.010   |
| At least one chronic disease                  | 3.05       | 0.010   |
| Perceived health status                       |            |         |
| I am very healthy                             | 1.00       | 0.107   |
| I am healthier than average                   | 1.25       | 0.052   |
| I am moderately healthy                       | 1.60       | 0.0002  |
| My health is a bit poor                       | 2.55       | 0.043   |
| I am unhealthy                                | 3.65       | 0.024   |

DISCUSSION

Effective production and provision of healthcare services is among the main foundations of social development regarding the health of individuals and societies as well as the achievement of the continuity of this status. In developing countries, the increase in population density and increased? lifespans have led to a rapid growth in the elderly population, and this has brought about a rise in healthcare expenditures. This is because the nature of aging, the increased number of chronic diseases caused by physical capacity, disruptions in the functions of organs and aging-related physiological changes had caused the elderly to need healthcare services more in comparison to other age groups. Previous studies have also demonstrated that old age has an increasing impact on the demand for healthcare services (1, 3).

The results of our study showed that women and elderly people with at least one chronic disease utilize healthcare services to a significantly greater extent than the others (Table 2). There are different findings in the literature regarding gender. While some studies did not find a demand-increasing impact of gender (4, 5), many others, as in our study, found it to be a demand-increasing variable (6-10). Higher utilization of healthcare services by women may be associated with high morbidity load in women, their negative perceptions about their health status, or the conditions of the women? as in the case of traditional societies like Turkish society, where the burden of care is on women, and the rate of social isolation in women increases with aging (9). Moreover, as in our study, other studies in the literature have shown that having a chronic disease is certainly a demand-increasing variable regarding utilization of healthcare services (4-10). This situation may be caused by more frequent visitations at healthcare institu-

Table 4: Full-model binary logistic regression analysis of predictors of health service utilization of respondents

| Usage of healthcare services in the last 1 year | Odds ratio | p-value |
|-----------------------------------------------|------------|---------|
| Gender                                        |            |         |
| Male                                          | 1.00       |         |
| Female                                        | 2.23       | 0.025   |
| Chronic disease status                        |            |         |
| No chronic disease                            | 1.00       |         |
| At least one chronic disease                  | 3.27       | 0.001   |

329
tions by individuals with chronic diseases to get their prescribed medication. Especially poor management of chronic disease at old age may lead to injuries in addition to several complications. For this reason, it would be useful to implement screening programs to be able to make the necessary determinations early.

Our study determined that the income status and health insurance variables did not affect the demand (p>0.050; Table 2). This may be related to the fact that the vast majority of our participants (96.6%) had health insurance. The finding that the main source of funding healthcare services was pension (91.3%) or private health insurance (5.3%) supported this result.

Contingting (2019) also found that the variable of health insurance does not have an effect on the demand, while some studies determined that increased income status is a significant variable that increases the demand (1, 2, 11-18).

In a study that was conducted in Greece by Geitona et al. (2007), it was found that moderate or low levels of perceived health are factors that increase the demand (3). In our study, it was seen that the demand decreased as perceived health level increased, it increased on moderate and low perceived health levels and this relationship was statistically significant (p=0.042, Table 2).

We found in our study that having health insurance increased utilization of healthcare services, but it was not significantly effective. With this aspect, our study was in agreement with other studies that were carried out in Turkey (1, 2, 19). We may state that this could have been caused by state policies such as elderly care salaries for those who do not have pensions or private health insurance, free health and care assistance for the elderly, or that the elderly may also receive healthcare services by making payments without receiving any healthcare insurance or assistance. However, as our study was conducted only in one province, and healthcare service utilization and opportunities may change from one province to another, the results may not be generalized to the entire country.

Consequently, we determined that most elderly participants who were included in the study utilized healthcare services with a mean frequency of 4.7 times per year. They visited physicians the most to receive healthcare services.

The mean of reaching healthcare facility duration was found as 13 minutes. Being female and having a chronic disease were found to be significantly related to utilization of healthcare services. Age, marital status, education level, employment status, scope of health insurance and income level were not related to utilization of healthcare services. These results may be used by healthcare policymakers and program administrators for the purpose of increasing the access of the healthcare services among the elderly and especially for the sake of promotion and improvement of health campaigns. This way, it may be achieved to increase the probability of reaching healthcare counseling after being diagnosed with a chronic disease, and more severe complications and injuries to occur may be prevented.

In our study, while we determined some factors were effective on utilization of healthcare services by elderly individuals, we did not study to what extent utilization of healthcare services was affected by other health problems frequently encountered at old age such as physical dependence, presence or severity of cognitive degradation, hearing problems and factors such as having experienced a loss recently, retirement, changes in living conditions and loss of social status. Future studies may investigate the effects of variables such as the environment, healthcare financing, personal beliefs and local culture on utilization of healthcare services.

REFERENCES

1. Yaylalı M, Kaynak S, Karaca Z. Health Services Demand: A Study in Erzurum. Ege Academic Review 2012;12(4):563-73.

2. Şenol V, Çetinkaya F, Balçı E. Factors associated with health services utilization by the general population in the center of Kayseri, Turkey. Türkiye Klinikleri J Med Sci 2010;30(2):721-30.

3. Geitona M, Zavras D, Kyriopoulos J. Determinants of healthcare utilization in Greece: implications for decision-making. Eur J Gen Pract 2007;13:144-50.

4. Habtom GK, Ruys P. The choice of a health care provider in Eritrea. Health Policy 2007;80(1):202-17.
5. Brown PH, Theoharides C. Health-Seeking Behavior and Hospital Choice in China's New Cooperative Medical System. Health Econ 2009;18(2):47-64.

6. Cotingting CT, Apal ZHL, Franco MBM, et al. Examining determinants of health service utilisation among Filipino older people: A cross-sectional study. Australas J Ageing 2019;38(1):31-6.

7. Habibov N. What determines healthcare utilization and related out-of-pocket expenditures in Tajikistan? Lessons from a national survey. Int J Public Health 2009;54(4):260-6.

8. Wang Y, Hunt K, Nazareth I, et al. Do men consult less than women? An analysis of routinely collected UK general practice data. BMJ Open 2013;3:1-7.

9. Carretero MT, Calderon-Larranaga A, Poblador-Plou B, et al. Primary health care use from the perspective of gender and morbidity burden. BMC Women's Health 2014;14:145-50.

10. Redondo-Sendino A, Guallar-Castillon P, Banegas JR, et al. Gender differences in the utilisation of health-care services among the older adult population of Spain. BMC Public Health 2006;6:155-60.

11. Al-Ghanim SA. Factors influencing the utilisation of public and private primary health care services in Riyadh City. Journal of King Abdulaziz University 2004;19(1):3-27.

12. Gotsadze G, Bennett S, Ranson K, et al. Health care-seeking behaviour and out-of-pocket payments in Tbilisi, Georgia. Health Policy Plan 2005;20(4):232-42.

13. Harper S. Economic and social implications of aging societies. Science 2014; 346: 587-91.

14. Amaghionyeodiwe LA. Determinants of the choice of health care provider in Nigeria. Health Care Management Science 2008;11:215-27.

15. Kermani MS, Ghaderi H, Yousefi A. Demand for medical care in the urban areas of Iran: an empirical investigation. Health Econ 2008;17(7):849-62.

16. Thuan NTB, Lofgren C, Lindholm L, et al. Choice of healthcare provider following reform in Vietnam. BMC Health Services Research 2008;8(162):1-9.

17. Girma F, Jira C, Girma B. Health services utilization and associated factors in Jimma Zone, south west Ethiopia. Ethiop J Health Sci 2011;21(Special Issue):91-100.

18. Polluste K, Kalda R, Lember M. Accessibility and use of health services among older Estonian population. Cent Eur J Public Health 2009;17:64-70.

19. Mahal A, McPake B. Health systems for aging societies in Asia and the Pacific. Health Syst Reform 2017;3:149-53.