The Relationship Between Chronic Diseases and Healthy Lifestyle Behaviors of Individuals 65 Years and Older

65 Yaş ve Üstü Bireylerin Sağlıklı Yaşam Biçimi Davranışlarının Kronik Hastalıklarla İlişkisi

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Abstract

Aim: This study is designed to examine the differences in health habits among individuals aged 65 and over, based on chronic diseases.
Method: All individuals aged 65 and over registered to Unit 13 of Gazikent Family Health Center No. 3 in Gaziemir, Izmir constitute the study group. There were 300 eligible individuals and three of them rejected to participate and the study was completed with 297 participants. Data were collected with Questionnaire Form and Healthy Lifestyle Scale (HLSS). Data were analyzed with Variance analysis, Student t test, Mann-Whitney U test and Kruskall Wallis analysis.
Results: The average age of the elderly is 71.9 ± 6.5 (65-94) and 84.2% of them had at least one chronic disease (CD). Mean total HLSS score was 141 ± 20. The lowest mean score was obtained from the physical activity subgroup. HLS general and subgroup mean scores of those with CD were significantly lower (p<0.05). A significant difference was found between mean scores of HLSS and habits, socio-demographic and clinical characteristics (p <0.05).
Conclusion: In this study, it was determined that CD is quite common among the elderly and this group has difficulties in maintaining healthy lifestyle.
Keywords: Geriatrics, chronic diseases, healthy lifestyle

Özet

Amaç: Bu araştırma, 65 yaş ve üzeri bireylerde sağlık alışkanlıklarının kronik hastalıklara göre farklılıklarının incelenmesi amacıyla planlanmıştır.
Yöntem: Kesitsel ve tanımlayıcı tipte bir araştırmadır. İzmir Gaziemir 3 No'lu Gazikent Aile Sağlık Merkezi 13 No'lu birimine kayıtlı olan tüm 65 yaş ve üzeri bireyler (n= 300) araştırma grubunu oluşturmuştur. Çalışmaya katılmaya onay vermeyen 3 kişi çalışma dışı bırakılarak 297 kişi ile çalışma tamamlanmıştır. Verilerin toplanmasında Anket Formu ve Sağlıklı Yaşam Tarzı Ölçeği (SYTÖ) kullanılmıştır. Verilerin değerlendirilmesinde Varyans analizi, Student t testi, Mann-Whitney U testi ve Kruskall Wallis testi kullanılmıştır.
Bulgular: Katılımcıların yaş ortalaması 71,9±6,5 (65-94)'dır ve %84,2'sinin en az bir kronik hastalığı vardı. SYTÖ toplam puan ortalaması 141±20 idi. En düşük puan ortalaması fiziksel aktivite alt grubundan elde edildi. Kronik hastalığı olanların SYTÖ genel ve alt grup puan ortalamaları anlamlı düzeyde düşük idi (p<0,05). SYTÖ puan ortalamaları ile yaşlıların alışkanlıkları, sosyo-demografik ve klinik özellikleri arasında anlamlı düzeyde farklılık bulundu (p<0,05).
Sonuç: Bu çalışmada yaşlılar arasında kronik hastalığın oldukça yaygın olduğu ve bu grubun sağlıklı yaşam alışkanlıklarını sürdürmede zorlandıkları belirlenmiştir.
Anahtar Kelimeler: Geriatri, kronik hastalıklar, sağlıklı yaşam tarzı

Introduction

Scientific and technological developments in healthcare, early diagnosis and treatment of diseases and decreasing death rate have led to a prolongation of human life and an increase in the population aged 65 and over in the total population. Especially in developed countries, while the elderly population constitutes 20% of the general population, increasing life expectancy has also highlighted the phenomenon of "aging".[1-4] According to the data of the United Nations, the population aged 60 and over, was 600 million in 2000 and increased to 700 million in 2006 and it has been stated that it is expected to reach 2 billion in 2050 and will constitute 22% of the world population.[5]

The increase in life expectancy is likely to continue in older ages, but unless there is a fundamental change in a healthy lifestyle (regular diet, exercise, sleep, interpersonal communication, stress management, abstinence from smoking and alcohol, etc.), it is unlikely to delay old age or improve health.[6] In the 2000 report of the World Health Organization (WHO), the term "chronic diseases" (CD) was defined as a serious public health problem under the name of non-communicable diseases. It is stated that almost all of the elderly population aged 65 and over have at least one CD (such as cancer, diabetes, cardiovascular diseases, chronic lung disease and dementia). In addition, it was reported in this report stated that the increase in CD rates poses a serious economic burden, especially for developing countries, and that multi-sectoral national programs should be carried out on the understanding, prevention and control of the underlying determinants of these diseases.[5]

The quality of life of the elderly decreases due to the pathological changes brought about by aging and accompanying CDs decreases, thus increasing their need for care and support. All this information shows that CDs are one of the current and most important health problems that should be evaluated in the health system today.[6,7] In this sense, health-related attitudes and behaviors of elderly individuals significantly affect themselves, their families, and society in coping with CDs.[8-10]

Material and Methods

This study was designed as cross-sectional and descriptive in order to determine the relationship between CD status and health habits of individual's aged 65 and over. The population of the study consists of all individuals aged 65 and over registered in Gazikent Family Health Center No. 13, Unit No. 3 in Izmir, Gaziemir. There were 300 eligible individuals and three of them rejected to participate and the study was completed with 297 participants. Ethics Committee Approval (Ethics Committee No: 302.14.01) for Non-Interventional Clinical Research dated 02/07/2020 was obtained from the Health Sciences University and İzmir Bozyaka Health Education and Research Hospital Directorate in order to conduct the study. In addition, legal permission was granted by the institution management. The necessary permissions have also been obtained from the Provincial Health Directorate. In accordance with the Declaration of Helsinki, all participants gave written consent, which included permission to be interviewed.

The data were collected by using two different forms; The Survey Form and Healthy Lifestyle Scale (HLSS). The data were collected by the researcher via face-to-face interviews with individuals in the patient room of the Family Health Center where the study was conducted. Filling out the questionnaires took approximately 15-20 minutes for each patient.

The Survey Form: The form was prepared by researcher using relevant literature and consisted of 17 questions in total. Variables includes socio-demographic characteristics of individuals aged 65 and over (age, gender, occupation, educational status, marital status, place of residence, income status, social security status and cohabitants), health-related habits (cigarette and alcohol use) and some medical characteristics (additional disease status, what type of CD, when to be diagnosed with CD, regular drug use, and frequency of going to health check-ups) by the researcher, using the literature.

Healthy Lifestyle Scale (HLSS): This scale was developed by Walker et al. to determine health-promoting behaviors in elderly individuals. The Cronbach α reliability coefficient of the scale was determined as 0.94.[11] The Turkish validity and reliability study of the scale was performed by Bahar et al. [12]. The lowest score for the whole scale is 52, and the highest score is 208. The scale consists of 6 subscales; spiritual development (9 items), health responsibility (9 items), physical activity (8 items), nutrition (9 items), interpersonal relationships (9 items) and stress management (8 items). High scores obtained from the scale are interpreted as positive healthy lifestyle behaviors. All items of the scale are positive expressions. The rating is in the form of a 4-point Likert. The Cronbach Alpha coefficient of the scale is 0.92 and it has a high degree of reliability.

In the analysis of the data, descriptive statistical tests were applied in the evaluation of demographic data by using the IBM SPSS 20 statistical package program. The Kolmogorov-Smirnov test was used to assess normal distribution. When examining the differences between groups, One-way Analysis of Variance and Student's t test were used for continuous data with normal distribution, and Man-Whitney U test or Kruskall Wallis test was used for those without normal distribution. $P < 0.05$ value was considered statistically significant.

Results

Slightly more than half (55.9%) of the participants were women and most (71.7%) of them were between the ages of 65-74. The mean age was 71.9 ± 6.5 (65-94). With respect to other sociodemographic variables, 57.6% were married, 43.7% were high school graduates, and 94.9% had children. Many participants (69.3%) stated that they have medium income. Although 94.8% had social security, only 4.4% were actively working. The majority of the group (87.0%) consists of nuclear families (Table 1). The vast majority (91.5%) of the participants did not use tobacco or alcohol.

Table I. *Distribution of the participants according to their socio-demographic characteristics*

Socio-demographic Features		N	%
Gender	Male	131	44.1
	Female	166	55.9
Age 71.9±6.5 (65-94)	65-74	213	71.7
	75-84	66	22.2
	≥85	18	6.1
Education	Literate	28	8.7
	Primary	110	37.5
	High school	127	43.7
	University	32	10.1
Marriage	Married	171	57.6
	Single	15	5.1
	Widow& divorced	111	37.4
Children	Yes	282	94.9
	No	15	5.1
Residence	Urban	224	75.6
	Rural	73	24.4
Employment	Yes	13	4.4
	No	284	95.6
Income	Poor	34	11.5
	Medium	206	69.3
	Good	57	19.3
Social security	Yes	279	94.8
	No	18	5.2
Family type	Extended	40	13.0
	Nuclear	257	87.0
Total		297	100.0

Table 2 shows that, 84.2% of the participants had at least one CD, whereas 36.0% had two and 30.4% had three or more. A small proportion (15.8%) of participants stated that they do not have any chronic disease. The comorbidity rate was 62.3%. Diabetes mellitus (DM) was 25.0%, hypertension (HT) was 66.9%, and coronary artery disease (CAD) was 14.5%. For 55.2% of the participants, their chronic diseases were diagnosed more than 10 years ago.

Table 2. *Distribution of participants according to the characteristics of CD*

CD Features		N	%
CD number*	1	250	84.2
	2	90	36.0
	≥3	76	30.4
CD diagnosis period (year)	≤1	10	4.0
	2-9	102	40.8
	≥10	138	55.2
DM	+	75	25.0
	-	222	75.0
HT	+	199	66.9
	-	98	33.1
CAD	+	43	14.5
	-	254	85.5
Osteoporosis	+	37	12.5
	-	260	87.5
Comorbidity	+	185	62.3
	-	112	37.7
Total		297	100.0

n more than one option is marked.

Table 3 shows that, 47.4% of the participants visits a health institution when they ran out of their medication and 39.9% of them consult a physician when they had a complaint. Most of them (81.5%) had prescribed their medications regularly. Vision and hearing problems were mentioned by 24.5% and 9.4% of the participants respectively. More than half of the participants (56.4%) reported that they were vaccinated. Of these, 43.1% had influenza, 12.8% had tetanus, and 38.7% had pneumococcal vaccine.

The total mean score of the HLSS was 141.3±20.1. The mean scores of the scale subgroups were as follows: 23.6±3.7 for "health responsibility", 16.2±5.0 for "physical activity", 24.8±2.9 for "nutrition", 26.6± 4.5 for "spiritual development", 27.0±4.1 for "interpersonal relationships" and 22.8±4.2 for "stress management". The lowest mean score of HLSS was obtained from the "physical activity" subgroup, and the highest from the "interpersonal relations" subgroup.

Table 3. *Distribution of the participants according to their clinical characteristics*

Clinical Features		N	%
Regular Check up	<1 month	22	6.9
	>6 month	19	5.8
	On complaint	118	39.9
	Out of medicine	140	47.4
Regular medicine	Yes	239	81.5
	No	58	18.5
Vision problems	Yes	73	24.5
	No	224	75.5
Hearing problems	Yes	28	9.4
	No	269	90.6
Total		297	100.0

Table 4 shows HLSS scores with respect to the age group of the participants. Mean scores of total and all subgroups of HLSS differed significantly between age groups ($p<0.05$). Mean scores of health responsibility, physical activity and interpersonal relations subgroups were significantly higher in the 65-74 age group. Nutrition and spiritual development were higher in the 85-year-old group, and stress management scores were higher in the 75-84-year-old group.

Table 4. *HLSS score distributions by age*

Age		N	Mean	SD	F**	p
Health responsibility	65-74	213	24.38	3.344	21.724	0.001*
	75-84	66	22.20	3,609		
	≥85	18	19.78	4.400		
Physical activity	65-74	213	23.62	3.708	23.853	0.001*
	75-84	66	17.36	4.870		
	≥85	18	14.27	4.464		
Nutrition	65-74	213	10.78	3.388	8.662	0.001*
	75-84	66	16.27	5.059		
	≥85	18	25.23	2.667		
Spiritual development	65-74	213	24.02	3.690	19.659	0.001*
	75-84	66	22.89	2.166		
	≥85	18	24.82	2.974		
Interpersonal relationships	65-74	213	27.51	4.242	16.172	0.001*
	75-84	66	25.33	4.659		
	≥85	18	21.56	4.148		
Stress management	65-74	213	26.66	4.597	9.748	0.001*
	75-84	66	27.74	3.911		
	≥85	18	25.95	4.112		
Total	65-74	213	22.78	4.138	26.039	0.001*
	75-84	66	27.04	4.168		
	≥85	18	23.38	4.172		

*$p<0,05$, ** Kruskall Wallis test*

Table 5 shows HLSS scores with respect to the presence of a chronic disease. Mean scores of all subgroups and total scale were significantly higher in participants without any chronic disease ($p<0.05$).

Table 5. *HLSS score distributions according to chronic disease*

CD		N	Mean	SD	t**	p
Health responsibility	Yes	250	23.35	3.667	-2.948	0.003*
	No	47	25.06	3.626		
Physical activity	Yes	250	15.37	4.643	-7.750	0.001*
	No	47	21.06	4.489		
Nutrition	Yes	250	24.41	2.877	-5.773	0.001*
	No	47	27.00	2.519		
Spiritual development	Yes	250	25.92	4.359	-6.873	0.001*
	No	47	30.60	3.792		
Interpersonal relationships	Yes	250	26.56	3.990	-4.823	0.001*
	No	47	29.64	4.178		
Stress management	Yes	250	22.31	3.955	-5.640	0.001*
	No	47	25.94	4.479		
Total	Yes	250	137.92	18.553	-7.220	0.001*
	No	47	159.30	19.010		

*$p<0,05$, ** Mann-Whitney U test*

Discussion

In this study, it was determined that a significant proportion of the elderly individuals was diagnosed with a CD (84%). WHO stated that more than two-thirds of elderly individuals were diagnosed with at least one CD.[13] In the study of Gulbayrak et al, the prevalence of CD in elderly individuals was found to be 50%, and in the study of Dudak et al. with 1472 elderly people, this ratio was 79.4%.[14,15] In the light of all these findings, it can be said that CDs constitute a very common social problem in the elderly. Despite some strategies developed in our country, the incidence of CD and their complications remains to be an important problem. However, in parallel with scientific, technological, political and economic achievements in developed countries, significant progress has been made in the management of CD.[16-20]

Most CDs result from preventable risk factors. In particular, individuals' health behaviors and lifestyles related to their disease management skills have become increasingly important to improve health outcomes. In order to increase the effectiveness of preventive services, more information is needed about individuals' perceptions of CD as well as disease-specific management skills and behaviors.[21] In the present study, the mean healthy lifestyle behavior score of the elderly was 141±20.2. The highest score to be obtained from the original scale was 208, so the general health habits of the study group could be rated as "moderate". In addition, according to the statistical analyzes performed in this study, it was concluded that negative health lifestyle behaviors had a significant effect on the presence of CD. In other studies examining healthy lifestyle behaviors of elderly individuals, general health score averages were 117±18 in the study of Annaç, 127±20 in the study of Küçükberber et al., 153±22 in the study of Kuru & Piyal, and 128±22 in the study of Savaşan et al. In these studies, a strong relationship was found between CD and health lifestyle behaviors.[22-25]

In this study, when the distribution of the HLSS subgroups was examined, the scores of the "interpersonal relations" subgroup were found to be higher than the other subgroups. This showed that social behaviors contributing to individual development were at a better level in older individuals. The lowest mean score of HLSS was in the "physical activity" subgroup. Results regarding prominent subscale groups show similarities[23,24] and differences with other studies.[25] It is thought that this situation arises from the different adult age groups in the studies. In this study, most of the participants were retired and they may adopt a less physically active lifestyle. On the other hand, it can be said that this result reflects attitude against physical in-activity in our society. This attitude shows itself in either individual factors such as not to create enough time for exercise or social factors such as insufficiency of physical activity programs. However, inactivity leads to many CDs, as it will accelerate circulatory problems and fat increase in the body. Therefore, supporting the active participation of elderly individuals in social life within the framework of their limitations is of vital importance in the management of CDs.[26] As a matter of fact, in this study, the general scores of HLSS and physical activity subgroup scores of retired individuals were found to be lower. Decreased productivity with aging can lead to substantial changes in the social roles of the individual and even resulting in the loss of role. This result is also consistent with the results in the literature.[18]

When the relationship between age and mean HLSS subgroup scores was examined, it was seen that health behaviors related with "health responsibility" and "physical activity" were significantly lower whereas, behaviors related with "spiritual development" and "stress management" were significantly higher in in older age group. In general, individuals in the older age group may have difficulty in coping with self-care activities due to increased inactivity, changes in the level of dependency, and loss of cognitive and physical functions. Considering that the older age group is generally retired, they are expected to experience less work stress and devote more time to spiritual activities. On the other hand, this result may also reflects the one's come to awareness of his/her mortality and fatalism. The findings of the study are similar to the literature.[23,24]

According to other studies on the subject, various services such as home care services, mentoring, peer support groups, clinical guides, technological tools and instruments that improve the patient's independence and assist hygiene requirements. Smart cards, subcutaneous nano-technological sensors, virtual reality applications, media communication tools and biotechnological telemedicine reduces clinical hospitalizations. In addition, these services positively affect patients' adaptation to the disease process, quality of life and patient satisfaction.[19,21,26]

Conclusion and Recommendations

In this study, it was concluded that CD is quite common, positive lifestyle behaviors are not at the expected level, especially low physical activity levels, and this situation is associated with CD. It is recommended to determine the most effective methods in which self-management programs for elderly individuals can be applied.

Limitations

The research is limited to elderly individuals affiliated with the family health center, the results cannot be generalized. The answers given to the forms used in the research are limited to the subjective perceptions of the individuals participating in the research.

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