The frequency of chronic diseases and a health-promoting lifestyle in a group of elderly Romani people living in Northern Turkey

Aydın M.[A-F], Aydın-Avci İ.[A,E,F*]

Research Assistant, Public Health Nursing of Department, Ondokuz Mayis University Faculty of Health Science, Turkey

A- Conception and study design; **B -** Collection of data; **C -** Data analysis; **D -** Writing the paper;
E- Review article; **F** - Approval of the final version of the article; **G** - Other (please specify)

ABSTRACT

Purpose: To analyse the frequency of chronic diseases among Romani people who are sixty and older as well as their health-promoting lifestyle.
Materials and methods: This research was conducted as a descriptive study between January 2015 and June 2015. The study included 98 elderly Romani people lived in Samsun, Turkey. The study data were collected using the questionnaire included 22 questions along with the Health-promoting Lifestyle Scale II. The statistical analysis of the data was made using percentage means, t-test, correlation, and ANOVA test.
Results: The average age of the participating Romani people was 66.7±5.3. Of these Romani people, 83.7% had a chronic disease, and 80.6% had a medication that they used regularly. The mean score of the Romani citizens in the study sample on the Health-promoting Lifestyle Scale was 115.98±15.82. They obtained their highest score on the inter-personal relations sub-dimension and the lowest score on the stress management sub-dimension of the scale. There was a statistical correlation between the Romani people's gender, social insurance, income level, education level, family type, body mass index (BMI) and blood pressure monitoring and their scores on the scale ($p<0.05$). The study found that a health-promoting lifestyle did not affect the frequency of chronic diseases ($p>0.05$).
Conclusions: This study proved that the Romani people had risks of chronic diseases, did not attach sufficient importance to a health-promoting lifestyle and their health-promoting lifestyle is weaker compared to the elders in the rest of the population.
Keywords: Chronic disease; elderly age; healthy lifestyle; Romani

DOI:

***Corresponding author:**
Ilknur Aydın Avcı, Public Health Nursing of Department
Ondokuz Mayis University Faculty of Health Science
Turkey 05052031286
Tel.: +90 362 3121919; Fax: +90 362 4576926
e-mail:ilknura@omu.edu.tr

Received: 15.07. 2018
Accepted: 24.11.2018
Progress in Health Sciences
Vol. 8(2) 2018 pp 75-84

INTRODUCTION

The studies conducted in Turkey and in foreign countries demonstrate the main difficulties experienced by Romani people [1-3]. There is more interest shown in the history and cultures of the other ethnic groups in Turkey and in the world than for the Romani people. Yet there has been more interest in the Romani in recent ages, and more studies have been conducted about them. Although they have not provided a sufficient fund of knowledge till now, these studies found that the Romani people have a short education life, they are employed in irregular, temporary and low paid jobs which usually do not provide social insurance, and they have to struggle with personal and social problems created by early marriages, as well as collective identity problems including alienation [2,4,5]. In addition to all these factors, there is a connection between low socio-economic status and the Romani people's weak health status [6,7]. Thus, unhealthy living conditions have a negative effect on the quality of life and may shorten the average life span. Accordingly, Smith and Ruston stated that the average lifespan in the Roman population is 10 to 12 ages shorter than that of the general population [8].

Aging is an inevitable fact in physiological terms, and old age is a fundamental biological process seen in all living beings; it is described as individuals' gradually losing their physiological and mental powers in an irreversible way [9]. The aging of populations is the result of a demographic transition period. High mortality rates which are followed by the decrease in the high fertility level led to longer lengths of life. Moreover, there were shifts in the age structures of populations, and there was a transition from young age groups to elderly age groups [10].

In recent ages, there have been approximately 580 million elderly people world-wide, and more than half of them are living in the developing countries. It is anticipated that the population of elders aged 60 and older will reach 1 billion by the year 2020, and 700 million of this population will be living in the developing countries [10]. Due to the developments in fertility and mortality levels, the share of the elders aged 65 and older has become larger in the total population since the 1970s in Turkey. The share of this group in the total population was increased to 7.9% in 2014. It is estimated that the elder population will rise to 10.2% in 2023, to 20.8% in 2050, and to 27.7% in 2075 [11]. In addition, there has been an increase in chronic diseases in all societies due to the environmental and social factors which play a role in the formation of chronic diseases [12].

Cardiovascular diseases, cancer types, chronic respiratory diseases and diabetes are the This clarified the need for a study in this area.

main chronic diseases which have affected societies in recent ages. Chronic diseases are increasing in all countries as a result of demographic and epidemiological transformation. Chronic diseases are a global health problem. It was determined that they were responsible for 63% of 57 million deaths that occurred in 2008. The estimations of World Health Organization (WHO) indicate that chronic diseases will lead to a major increase in the total number of deaths in the upcoming decade. It is anticipated that chronic disease-related deaths will increase by 15% worldwide (more than 44 million deaths) between 2010 and 2020 [13,14].

Studies to prevent chronic diseases are more prevalent in the developed countries. Health services in the developing countries are structured to combat acute infectious diseases rather than chronic diseases. However, chronic diseases are not mainly a problem in the developed countries any more, contrary to the common belief. More than 80% of the deaths caused by chronic reasons occur in countries with low and medium income [15,16].

In disease prevention, early diagnosis and maintaining health, a health-promoting lifestyle is fundamental. Chronic diseases and their treatment have a direct influence on individuals' quality of life due to changes in people's lifestyle [17].

Romani people try to maintain their lives in the suburbs and outskirts of certain districts of the regions where they live, often under unhealthy conditions. In old Chekoslovakia, 40% of the Romani people lived in a "marginal" way in districts which were not suitable for human health and deprived of any kind of infrastructure, including roads, water, electricity and schools as well as shanty houses. The Gypsies living in Germany have a variety of problems, including job and profession acquisition, children's education and training, health, free movement of persons and housing. The most severe problems of the Gypsies living in France include education and training, health and proper nutrition, unemployment, poverty, acquisition of any type of profession, literacy and adaptation to the social structure [18]. The living spaces are very narrow in Romani residential areas, and the houses are usually integrated, each hosting multiple families. Considering the Romani people living in Turkey, there are studies, even few, about the Romanis living in big cities (Istanbul, Ankara and Izmir) where more visible groups are located. These studies are about the social lives of the Romani people. The Romanis living in Samsun are a lesser-known group compared to the others [4]. In particular, the studies about the Romani people do not make a sufficient analysis of health-related issues. There is no information about their chronic diseases, their health protective behaviors, or whether they have a health-promoting lifestyle.

Purpose

This study was conducted to determine the frequency of chronic diseases of the Romani people aged 60 ages and older along with their health-promoting lifestyle.

Research Questions

1. Is there a correlation between the introductory characteristics of the participant Romani people aged 60 and older and their health- promoting lifestyle and chronic disease frequency?
2. Is there a correlation between the chronic disease frequency and health-promoting lifestyle of the Romani people in the study sample?

MATERİALS AND METHODS

Time and Setting of the Study

The study was conducted in two districts where Romani people are intensely settled in the town of Canik in the province of Samsun, northern Turkey, between January 2015 and June 2015.

The Population and Sample of the Study

The study population included the elder Romani people living in the two districts in question. In the districts, there were 70 Romani citizens aged 65 and older. The researchers decided that this number was not sufficient for the study. Considering that the average life expectancy is 10 to 12 ages shorter in the Romani people than in the general population [8], the Romanis aged 60 and older were also included in the study population.

During the study from January to June 2015, the researchers detected that there were 120 Romani citizens aged older than 60 in the records of the Primary Healthcare Center in the Romani district. According to local recording (these recordings belong to a Romani organization), the researcher contacted 109 of total 120 Romani citizens 60 ages and older. Since 11 Romani citizens aged older than 60 did not agree to participate in the study, the study was conducted with 98 elderly Romani citizens.

Data Collection Tools

The study data were collected using a questionnaire which included six questions about the socio-demographic characteristics of the Romani citizens aged 60 and older. Three questions were about height, weight and BMI; seven questions were about blood pressure, blood sugar and whether they or members of their family suffered from any chronic diseases. They were also asked if they used medication, regularly. Six questions were about cigarette smoking or use of alcohol. They were also

Stress management is an individual's capability to determine physiological and guestio-

ned about whether they had their blood pressure and blood sugar monitored regularly, and if they had regular medical check-ups. The questionnaire was created based on the relevant literature. Also, the researcher used the health-promoting lifestyle scale to collect the study data.

Health-promoting Lifestyle Scale

The scale was created by Walker et al., and revised in 1996 which produced the Health-promoting Lifestyle Scale II (Walker, 1996). The scale consisted of 52 items and six factors [19]. The factors are mental development, inter-personal relations, nutrition, physical activity, health responsibility and stress management.

The validity and reliability study of the Turkish scale was conducted by Bahar et al. In their study, the Cronbach's alpha reliability coefficient of the scale was 0.90. The factors are health responsibility, physical activity, nutrition, inter-personal relations and stress management. The minimum score on the total scale is 52, and the maximum score is 208. The total score on the scale is the health-promoting lifestyle score. This is a 4-point Likert type scale, including all positive items. In the scale, 1 indicated "never", 2 indicated "sometimes", 3 indicated "often" and 4 indicated "regularly". The inter-personal support sub factor in the first version of the scale was renamed as inter-personal relations, and the self-realization sub factor was renamed as mental development [20]. Health responsibility measures how an individual takes active responsibility for his or her own well-being. It means taking care of and getting informed about his or her own health, and being able to seek professional support when needed. Physical activity measures how often an individual engages in light, moderate or heavy exercise, and whether exercise is a planned part of daily life. Nutrition regards selection and frequency of meals, as well as the health value in food selection.

Mental development focuses on the development of a person's internal resources. This development can be realized by building relationships and getting beyond the limits. Crossing our limits provides inner peace, and creates the possibility of new opportunities for new experiences besides who we are and what we do. Building relationships is being in a relationship with the universe and feeling to be in harmony with it.

Development is an individual's working to achieve life goals, and maximizing the ability to promote his or her own well-being. Inter-personal relations, relationships with others, require the use of communication in order to build a meaningful relationship except for the causal necessities. Communication includes sharing thoughts and feelings using verbal and non-verbal messages [18].

psychological resources and activate them to be able to reduce tension or control it effectively [18].

Data Collection

The researcher detected the individuals aged 60 and older from the records of the Primary Health Care Center.

On the pre-determined date, the researcher went to the homes of the Romani citizens and recorded their responses to the introductory form, including 22 questions, and to the health-promoting lifestyle scale, which included 52 questions.

All the questions were read one by one.

It took approximately 20 minutes to fill out each form.

Data Analysis

In particular, the studies about the Romani people do not make a sufficient analysis of health-related issues. There is no information about their chronic diseases, their health protective behaviors, or whether they have a health-promoting lifestyle.

This clarified the need for a study in this area. The data were analyzed using SPSS package program's version 15.0.

The reliability analysis was conducted using Cronbach's alpha coefficient.

The statistical analysis of the data was made using percentage calculation, arithmetic means, t test, and correlation and ANOVA test.

For the data which did not have a normal distribution, the researcher applied the single-factor variance analysis test (F test).

Ethical Concern

Before conducting the study, the researcher presented the information form, which included the objective and scope of the study, to the Ethics Board of Ondokuz Mayis University's Medical Faculty, and obtained their approval for the study (B.30.2.ODM.0.20.08/1312).

In addition, the necessary legal permissions were received from the Samsun Community Health Directory.

The researcher explained the study objective to the participants, and those who volunteered were included in the study sample.

RESULTS

Introductory Characteristics of the Elderly Romani Individuals

Of the Romani individuals, 83.7% had chronic diseases, 56.1% had chronic disease in their family history, and 80.6% used medication regularly.

Of the participating Romanis, 42.9% were slightly overweight and 32.6% were overweight. Of the participants, 31.6% had high blood pressure and 50% had high blood sugar.

Of the elderly Romanis, 34.7% smoked and 8.2% drank alcohol. Also, 14.3% had their blood pressure monitored regularly, 31.6% had their blood sugar monitored regularly, and 17.3% had regular medical check-ups.

Of the Romani individuals who were included in the study sample, and had an average age of 66.7±5.3 (min 60, max 85), 51% were males and 49% were females.

Of the participants, 69.4% were illiterate, 8.2% were literate, 69.4% were married and 30.6% were single. Of the Romani citizens, 89.8% had no type of social insurance, 51% had nuclear families, 38.8% had extended families, and 10.2% had fragmented families.

Of the Romani elders, 42.9% had incomes which were lower than their expenses, and 57.1% had incomes which was equal to their expenses (Table 1).

The study found a negative correlation between the ages of the elderly Romanis and the total health-promoting lifestyle scale with its all dimensions.

It was determined that a health-promoting lifestyle was adapted less frequently by the individuals as they aged ($p<0.05$) (Table 2).

This study found that males, primary school graduates, married individuals, participants with social insurance, those coming from nuclear families, participants having incomes equal to their expenses, and overweight participants had a better health-promoting lifestyle than the other participants ($p<0.05$) (Table 2).

Table 2 presents that the study found no correlations between any chronic diseases suffered by the elderly Romanis and their family members, and use of regular medication, and a health-promoting lifestyle ($p>0.05$) (Table 3).

The study found that the elderly Romanis who had regular blood pressure checks obtained higher scores on interpersonal relations, health responsibility, physical activity, stress management and health promoting lifestyle sub-dimensions ($p<0.05$).

There were no correlations between a health-promoting lifestyle and those who had blood sugar monitoring and regular health controls ($p>0.05$) (Table 4).

Table 1. Socio-demographic characteristics of the elderly Romani individuals

Characteristics	**s**	**%**
Age Average age ± Standard deviation	66 .7±5 .3	(min 60 . max 85 age)
60-64	35	35 .7
65-69	39	39 .7
70-74	14	14.4
75 years and older	10	10 .2
Gender		
Female	48	51 .0
Male	50	49 .0
Educational level		
Illiterate	68	69 .4
Literate	8	8 .2
Primary school	22	22 .4
Marital status		
Married	68	69 .4
Single	30	30 .6
Social insurance		
Yes	88	89 .8
No	10	10 .2
Family Type		
Nuclear Families	50	51 .0
Extended Families	38	38 .8
Fragmented Families	10	10 .2
Income status		
Income less than expenses	42	42 .9
Income equal to expenses	56	57 .1

Table 2. the findings indicating the correlation between descriptive information and health-promoting lifestyle

	Min-Max Scores	**Number of Items**	$\bar{X}$	**SD**	**Cronbach's Alpha (Reliability)**
Inter-personal relations	15-76	9	21.65	3.47	0.55
Nutrition	13-34	9	20.28	3.67	0.72
Health responsibility	11-48	9	21.28	3.55	0.72
Physical activity	8-28	8	16.58	2.82	0.68
Stress management	10-32	8	16.24	2.72	0.69
Mental development	16-36	9	20.13	3.11	0.56
Health-promoting lifestyle	89-193	52	115.98	15.82	0.91

Table 3. Health-promoting lifestyle scale and sub dimension scores of the Romanis aged 60 and older by the descriptive variables

Variables	**Inter-personal relations**	**Nutrition**	**Health Responsibility**	**Physical Activity**	**Stress Management**	**Mental Development**	**Health-promoting lifestyle**
	X±SD	X±SD	X±SD	X±SD	X±SD	X±SD	X±SD
Gender							
Female	21.10±0.50	19.88±0.57	20.25±041	15.96±0.38	15.40±0.36	19.88±0.44	112.40±2.20
Male	21.82±0.49	20.72±0.47	22.26±0.55	17.18±0.41	17.06±0.39	20.38±0.45	119.42±2.22
p*	0 .310	0 .222	**0 .004**	**0 .031**	**0 .002**	0 .424	**0 .027**
Education Level							
Illiterate	20.75±0.39	19.76±0.41	20.72±0.41	15.99±0.32	15.76±0.31	19.68±0.36	112.66±1.77
Literate	22.00±1.20	20.75±0.98	21.50±1.50	17.25±0.65	17.25±0.82	21.13±0.91	119.88±4.77
Graduated from primary school	23.50±0.74	21.68±0.95	22.91±0.76	18.18±0.63	17.36±0.64	21.18±0.73	124.82±3.64
P**	**0.004**	0.095	**0.040**	**0.004**	**0.030**	0.090	**0.005**
Marital Status							
Married	22.08±0.42	20.69±0.43	21.89±0.41	17.17±0.33	16.73±0.32	20.48±0.37	119.07±1.89

Single	20.06±0.54	19.33±0.68	19.86±0.62	15.23±0.44	15.16±0.47	19.33±0.54	109.00±2.58
P*	**0.007**	0.091	**0.008**	**0.001**	**0.009**	0.091	**0.003**
Social Insurance							
Yes	21.81±0.36	20.63±0.39	21.55±0.38	16.83±0.29	16.51±0.29	20.24±0.34	117.56±1.66
No	18.50±0.91	17.20±0.80	18.90±0.69	14.40±0.79	13.90±0.53	19.20±0.77	102.10±3.25
P*	**0.004**	**0.005**	**0.025**	**0.009**	**0.004**	0.319	**0.003**
Family Type							
Nuclear family	22.30±0.47	21.10±0.50	22.58±0.50	17.24±0.42	17.04±0.37	17.04±0.37	120.68±2.26
Extended family	20.79±0.55	19.87±0.62	20.21±0.49	16.13±0.43	15.61±0.43	15.61±0.43	112.55±2.37
Fragmented family	19.90±1.20	17.70±0.72	18.80±0.94	15.00±0.60	14.70±0.72	14.70±0.72	105.50±3.73
P**	**0.040**	**0.017**	**0.000**	**0.031**	**0.007**	**0.007**	**0.004**
Income Level							
Income less than expenses	20.43±0.52	18.81±0.51	20.43±0.56	15.50±0.43	15.50±0.41	19.31±0.42	109.98±2.22
Income equal to expenses	22.25±0.45	23.38±0.47	21.91±0.45	17.39±0.35	16.80±0.35	20.75±0.44	120.48±2.06
P*	**0.009**	**0.000**	**0.040**	**0.001**	**0.018**	**0.022**	**0.001**

P* . t test was made; P** . Anova test was made

Table 4: Health-promoting lifestyle scale scores and sub dimension scores of Romani individuals aged 60 and older by having their certain health controls

Variables	**Inter-personal relations**	**Nutrition**	**Health Responsibility**	**Physical Activity**	**Stress Management**	**Mental Development**	**Health-promoting lifestyle**
	X±SD	X±SD	X±SD	X±SD	X±SD	X±SD	X±SD
Blood Pressure Monitoring							
Yes	22.93±0.83	21.64±0.67	22.86±0.65	17.07±0.54	17.14±0.64	21.79±0.77	123.43±2.83
No	21.83±0.44	20.41±0.53	21.90±0.49	17.02±0.39	16.53±0.36	20.00±0.42	117.69±2.15
Sometimes	19.88±0.69	19.23±0.61	19.04±0.49	15.35±0.48	15.12±0.52	19.54±0.57	108.15±2.76
F test	**4.570**	2.119	**8.630**	**3.587**	**3.503**	2.590	**5.548**
P	**0.013**	0.126	**0.000**	**0.031**	**0.034**	0.080	**0.005**
Blood Sugar Monitoring*							
Yes	21.52±0.58	19.90±0.55	21.10±0.59	16.10±0.51	15.84±0.50	19.90±0.53	114.35±2.70
No	21.54±0.51	20.20±0.53	21.56±0.52	16.98±0.41	16.57±0.38	20.41±0.44	117.26±2.32
Sometimes	21.08±0.80	21.46±1.11	20.54±0.88	16.08±0.37	15.85±0.59	19.54±0.84	114.54±3.46
Having Regular Health Controls*							
Yes	21.82±0.84	21.00±0.80	22.35±0.78	16.65±0.61	16.47±0.55	20.88±0.74	119.18±3.45
No	21.31±0.52	20.09±0.58	21.24±0.62	16.69±0.44	16.20±0.42	19.82±0.49	115.36±2.53
Sometimes	21.50±0.59	20.17±0.60	20.81±0.46	16.42±0.48	16.19±0.47	20.17±0.49	115.25±2.54

*(p>0.05)

DISCUSSION

This section is to discussion the frequency of chronic diseases among Romani people who are sixty and older as well as their health-promoting lifestyle.

Of the Romani people in the study sample, 83.7% had a chronic disease, 56.1% had a chronic disease in their family history, and 80.6% used a regular medication. A study of the Romani people found that 42% of them had a chronic disease in UK. It was also found that the average length of life in this group was 10 to 12 ages less than the general population [8]. A study by Özdemir et al. determined that 78.8% of the elder population living in Sivas had chronic diseases [21]. A study by Pappa et al. revealed that the Romani people who had a low education level had a high frequency of chronic diseases [22]. A study by Kosa et al. also determined a correlation between poor health status and low education level [23]. The findings of this study are parallel to the prevalence of chronic disease determi-

ned in the relevant studies. It is estimated that this result was due to the fact that Romani elders in general have a poor health-promoting lifestyle.

Of the Romani citizens in the study sample, 42.9% are slightly overweight and 32.6% are overweight. A study by Zeljko et al. found that 25.22% of the Romanis were overweight and 22.6% were obese [24]. Another study by Kosa et al. determined that 34% of the Romani citizens between 45 and 64 ages old were slightly overweight and 21% were obese [23]. Kosa et al showed that results show that metabolic syndrome strongly contribute to the development of the poor health status of the Roma population [25]. At the study A study by Özdemir et al. conducted in the province of Sivas found that obesity was common, particularly among elderly women, and 64.1% of them were either slightly overweight or obese [21]. Similar to the relevant studies, this study determined a high rate of slightly overweight and overweight Romanis, which indicates that obesity is a serious health issue in Turkey as in the world. This result is consistent with the relevant literature.

Of the Romanis, 31.6% were found to have high blood pressure. The study by Özdemir et al. determined that 23.5% of the Romanis between the ages of 65 and 69 were hypertensive, 24.9% of the Romanis between the ages of 70 and 74 were hypertensive, 26.3% of the Romanis between the ages of 75 and 79 were hypertensive, and 23% of the Romanis older than 80 were hypertensive [21]. According to a study by Jarcuska et al. - 39.5% of the Romani women and 22% of the Romani men are hypertensive [26]. In a study by Zeljko et al.- 26.2% of the Romani people were found to be hypertensive. In this study, 50% of the Romani citizens in the study sample had blood sugar above the normal level [24]. Of the Romanis in the sample of the study by Özdemir et al. - 19.7% had serum glucose levels above the normal limits [21]. The results of that study are consistent with the relevant literature. It is presumed that the general poor health-promoting lifestyle of the Romani people affected their blood pressure and blood sugar levels.

Of the Romanis in the study sample, 34.7% smoke and 8.2% drink alcohol. In the study by Jarcuska et al. - 54.7% of the Romani women and 44.4% of the Romani men smoke [26]. Of the participants in the study by Özdemir et al. conducted in Sivas, 25.9% smoke [21]. Bilir et al. conducted a study of Romanis aged 65 and older in the province of Van, and they found that 31 participants of the study (25%) were still smokers [12]. In this study, the rate of smokers is higher than the other studies on this subject.

Of the Romani people, 14.3% had regular blood pressure checks, 31.6% had regular blood sugar monitoring, and 17.3% had regular medical check-ups. Taking into consideration that the chronic disease rate is high in elderly Romani citizens, and their blood pressure and blood sugar levels are also high, it was determined that they do not attach sufficient importance to engaging in behaviors which can prevent disease. This increases the frequency of chronic diseases.

In this section, the discussion will be limited since there are few studies measuring the health-promoting lifestyle of the Romani people. Health-protective behaviors help individuals stay healthy and well. In this study, the total mean score of the elderly Romanis on the health-promoting lifestyle scale is 115.98 ±15.82. Polat and Kahraman conducted a study with elderly individuals and found that their total score on the health-promoting lifestyle scale was 127.33±18.69 [27]. This may be an indicator that the health-promoting lifestyle of elderly Romanis is poorer than the general population. An analysis of elderly Romani citizens' mean scores on the subgroups of the health-promoting lifestyle scale showed that they obtained their highest scores on the inter-personal relations subgroup, which was followed by health responsibility, nutrition, mental development, physical activity and stress management subgroups. In the study by Polat and Kahraman, the highest score on the health-promoting lifestyle scale was on the self-realization subgroup, while the lowest score was on the inter-personal relations subgroup [21]. Perception, values, culture, emotions and social position play a major role in healthy inter-personal relations. For this reason, the inter-personal score being higher than that of the other study might have resulted from the fact that the Romani individuals live with others of the same ethnic origin. Also, their interactions are more frequent.

In this study, there was a negative correlation between the age of the Romanis and the health-promoting lifestyle scale and its subgroups ($p<0.05$). As people age, they experience many losses. Specific to this age group includes regression in physical and cognitive functioning and decline in health and productivity. Their role in the community changes and they lose status, independence, and friends. They often experience the loss of a spouse and have fewer close relationships. With the loss of friends and close relatives, they suffer a decline in their social life and support system. These losses occur while many elderly people are also struggling with health issues, poor nutrition, filling leisure time, having adequate living accommodation, and finding care when needed [28]. Along with the limited physical power that they experience with aging, this might also have resulted from the fact that the health-promoting lifestyle is mainly weak in this group.

This study also found that gender affected Romani citizens regarding' health responsibility, physical activity and stress management; males obtained higher scores than the females and this result was statistically significant ($p<0.05$) (Table 1).

In addition to being an individual in the society, women perform very hard tasks in the home due to the responsibility of being a mother, a wife and a homemaker. Romani women carry too many responsibilities, which leads them to neglect their own health responsibilities.

It was determined that the education level of Romani citizens had an influence on their inter-personal relationships, health responsibility, physical activity, stress management and health-promoting lifestyle. Moreover, the primary school graduates obtained higher scores, and this result was statistically significant ($p<0.05$). A study by Tambağ found that the change in health-promoting lifestyle was not affected by the education level among the elderly [29]. On the other hand, Owens found that there was a significant correlation between education level and health-promoting lifestyle and its sub-dimensions, which are physical activity, nutrition, mental development and inter-personal relations [30]. Polat and Kahraman also examined health-promoting lifestyle, and determined that the mean scores on self-realization, health responsibility, inter-personal support and nutrition subgroups were significantly high in elderly Romanis who were primary school graduates [27]. Education is important in forming awareness. Thus, receiving an education, even at the basic level, might have affected elderly Romanis' awareness about a health-promoting lifestyle.

The study also found that the marital status of elderly Romani citizens affected the total score on the scale, as well as its inter-personal relations, physical activity and stress management sub dimensions. Married elderly Romanis obtained higher scores ($p<0.05$). The decline of social support may lead to the feeling of loneliness in elders. The social network, consisting of spouse and family and friends can help satisfy the fundamental social needs of the elderly, including love, commitment, self-esteem and the sense of belonging to a group. This network also makes a positive effect on their physical and psychological health. The study results revealed that married elderly Romani individuals obtained high scores, which shows that they have sufficient support systems. Accordingly, this might have increased the likelihood of their having a health-promoting lifestyle.

Regarding Romani citizens' social insurance, it was found that those who had social insurance had better inter-personal relations, nutrition, health responsibility, physical activity and stress management. This result was statistically significant ($p<0.05$). The study by Polat and Kahraman did not determine a significant correlation between having social insurance and the sub-dimensions of the health-promoting lifestyle scale [27]. This may be an indicator that having any kind of social insurance helps the Romani individuals with a low socio-economic status to have healthier lives.

Family type affected Romani citizens' scores on inter-personal relations, nutrition, health responsibility, physical activity and stress management sub-dimensions of the scale. Those coming from nuclear families obtained higher scores than the other groups, and this result was statistically significant ($p<0.05$). Considering the ages of the participants, it was concluded that living in an extended family brought additional responsibilities to the elder Romanis, and those living in nuclear families could take more time for themselves.

In the study, Romani citizens' income levels affected their scores on inter-personal relations, nutrition, health responsibility, physical activity, stress management and mental development sub-dimensions of the scale. The participants whose incomes were equal to their expenses obtained higher scores, and this result was statistically significant ($p<0.05$). Owens also found a significant correlation between economic status and a health-promoting lifestyle [30]. The result of this study is consistent with the relevant literature.

The BMIs of the Romani individuals also affected the nutrition sub dimension and the overweight participants obtained higher scores than the others ($p<0.05$). As people age, their need for energy is reduced yet the need for vitamins and minerals remains the same. For this reason, having a sufficient and balanced diet is also important in old age. People need nourishment to survive. However, unhealthy behaviors and poor nutrition habits can increase certain health problems as people age. The Romani citizens living in the location where the study was conducted have low socio-economic status, and it is probable that low education levels affected the frequency of chronic diseases among Romani citizens.

CONCLUSIONS

The study found that having blood pressure monitoring affected Romani citizens' scores on inter-personal relations, stress management, health responsibility and physical activity sub-dimensions of the health-promoting lifestyle scale. Those who had their blood pressure monitored obtained higher scores than the other groups, and this result is statistically significant. Exhibiting protective behaviors helped manage disease, and contributed to the improvement of the health-promoting lifestyle.

This study was conducted to examine the prevalence of chronic diseases in elderly Romani citizens as well as their health-promoting lifestyle. It was determined that the elderly Romanis had low education levels, had increased risks for chronic diseases, did not attach sufficient importance to a health-promoting lifestyle, and their health-promoting lifestyle was poor. There was also a

negative correlation between their ages and a health-promoting lifestyle. A majority of the elderly Romanis were obese and had high blood pressure.

Suggestıons

Based on these results, the study suggests that the community health nurses who provided care to elderly Romanis also checked the medication they used regularly, informed them about these medications and their side effects. The Romani individuals are informed that obesity is a serious health issue and that it can lead to other diseases. They are trained in ways to prevent obesity and examined regularly regarding obesity. The Romani citizens should be trained about the management of chronic diseases and protective health services.

The elderly Romani citizens should be trained about having a health-promoting lifestyle. It is also suggested that the health professionals providing care to the elders consider that the elderly will need a stronger support system as they age. The training programs about a health-promoting lifestyle are designed to address the needs of Romani women. The risk group includes the single Romani individuals and those with a low education level. Therefore, the study suggests that certain training programs be implemented, particularly for the risk groups, to improve Romanis' lifestyles. It is also suggested that programs are provided to train Romanis in a health-promoting lifestyle, with priority given to those without social insurance.

Practıce ımplıcatıons

When working with special groups, community health nurses and other health workers should conduct studies to determine the community's characteristics, health habits and health behaviors. Community health nurses and other health workers should address the special needs of the culture and habits of the community, in order to effectively teach a positive health-promoting behavior to the Romani population. The health of the elderly and healthy aging have become more and more important. This is more important for the Romanis compared to the other populations. This group should be tackled first in the relevant studies. There are very limited studies about Romanis elderly people. It is also suggested that similar studies are conducted with the Romani people living in different societies with the purpose of improving Romani elders' health.

Conflicts of interest

The authors have no conflicts of interest.

Ethical approval

Before beginning of the study, the ethics committee of Ondokuz Mayis University Faculty of Medicine was consulted in order to evaluate the ethical suitability of the research and ethical committee approval was obtained Approval No. B.30.2.ODM.0.20.08/ 38. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Financial Disclosure/Funding

The research and the paper were financed the Author's own funds.

REFERENCES

1. Celik K, Yüce Tar Y. Roma (Gypsy) citizens in Samsun: living with limited social rights. J Int Soc Res 2015 8(36):621-35.
2. Koç S, Huntürk M, Üstünel A. Yavuz Selim ve An Inventory of the Romani Citizens Living In 200 Evler District Samsun Special Provincial Administration Report by Head of Research and Development Department. 2011, Samsun.
3. Cin MM, Egercioğlu YA. Critical Analysis of Urban Regeneration Projects in Turkey: Displacement of Romani Settlement Case. Procedia Soc Behav Sci 2016 216:269-78.
4. Çelik K, Tar Y, Kaygusuz C. The Romani people living in the province of Samsun. 2011, Samsun Symposium.
5. O'Hanlon C. The European Struggle to Educate and Include Roma People: A Critique of Differences in Policy and Practice in Western and Eastern EU Countries. Social Inclusion 2016 4(1):1-10.
6. Kolarcik P, Geckova A, Orosova OP, Van Dijk J, Reijneveld S. To what extent does socioeconomic status explain differences in health between Roma and non-Roma adolescents in Slovakia? Soc Sci Med 2009 Apr;68(7):1279-84.
7. Mitchell C, Platt S. Evaluation of user-perceived impact of Edinburgh access practice keep well interventions on the health and wellbeing of gypsy/traveller and homeless service users: a mixed methods approach. J Epidemiol Commun Health. 2015 69:82-A82.
8. Ruston A, Smith, D. Gypsies/Travellers and health: risk categorisation versus being 'at risk'. Health, Risk & Society 2015 15(2):176-93.
9. Kara B, Yıldırım Y, Genç A, Ekizler S. The geriatric house setting and satisfaction of life, and their correlation with the fear of falling. Fizyoterapi Rehabilitasyon 2009 20(3):190-200.
10. Tezcan S, Seçkiner P. Demographic Change In Turkey: The Perspective to Elder Age. Aslan D, Ertem M Editor, Health of the Elderly: Problems and Solutions, 1st Edition, Ankara, Palme Yayıncılık 2012;1- 9.

11. Turkish Republic Ministry of Health, Turkey Community Health Organization Turkish Study of Chronic Diseases and Risk Factors Frequency Anıl Matbaa, 2013, Ankara.
12. Bilir N. The role of community health professionals in the shifting health patterns: chronic diseases and elderly age problems, controlling non-infectious diseases and elder age problems, Toplum Hekimliği Bülteni. 2006 25(3):1-6.
13. Alwan A. Monitoring and urveillance of chronic noncommunicable diseases: Progress And Capacity İn High-Burden Countries. The Lancet, 2010 Nov;376(9755):1861-68.
14. The global burden of disease: 2004 update. Geneva, World Health Organization, 2008.
15. Turkey Statistic Institute. The Results of the Address-based Population Registration System. 2014, [Internet] www.tuik.gov.tr/VeriTabanlari.do?ust_id=109&vt_id=28 [cited, 17 Sep 2015).
16. Strong K, Mathers C, Leeder S, Beaglehole R. Preventing chronic diseases: How many lives can we save? Lancet 2005 Oct 29-Nov 4;366(9496): 1578-82.
17. Yorulmaz H, Özdilli K, Küçükberber N. An analysis of health-promoting lifestyle in cardiac patients and the factors than influence the quality of life. Anadolu Kardiyoloji Dergisi 2011 11:619-26 .
18. Ünaldı H. A cultural variety living in Turkey; Gypsies. J Life Sci 2012 1(1):615-26.
19. Walker SN, Hill-Polrecky D. Psychometric Evaluation of The Health-Promoting Lifestyle Profile-II. Proceedings of the 1996 Scientific Session of the American Nurse Association's Council of Nurse Researchers. 1996, June 13-14.
20. Bahar Z, Beşer A, Gördes N, Ersin F, Kısal A. The Validity and Reliability Study of the Health-Promoting Lifestyle II. C.U. Hemşirelik Yüksek Okulu Dergisi 2008 12(1):1-13.
21. Özdemir L, Koçoğlu G, Sümer H, Nur N, Polat H, Aker A, Bakıcı Z. The prevalence and risk factors of certain chronic diseases in the elderly population living in the province of Sivas. Cumhuriyet Üniversitesi Tıp Fakültesi Dergisi 2005 27(3):89 – 94.
22. Pappa E, Chatzikonstantinidou S, Chalkiopoulos G, Papadopoulos A, Niakas D. Health-related quality of life of the Roma in Greece: The role of socio-economic characteristics and housing conditions. Int J Environ Res Pub Health 201:12; 6669-81;
23. Kosa Z, Zseles G,Laszlo K, Karolina K. A Comparative health survey of the inhabitants of Roma settlements in Hungary. Am J Public Health, 2007 May;97(5):853-8.
24. Zeljko H, Skaric-Juric T, Narancic N, Baresic A, Tomas Z, Petranovic M, Milicic J,Salihovic M, Janicijevic B. Age Trends İn Prevalence Of Cardiovascular Risk Factors In Roma Minority Population Of Croatia. Econ Hum Biol 2013 Jul;11(3):326–36.
25. Kósa Z, Moravcsik-Kornyicki Á, Diószegi J, Roberts B, Szabó Z, Sándor J, Ádány R. Prevalence of metabolic syndrome among Roma: a comparative health examination survey in Hungary. Eur J Public Health 2015 Apr;25(2): 299-304
26. Jarcuska P, Bobakova D, Uhrin J, Bobak L, Jarcuska I,Kolarcik P, Veselska Z, Geckova A. Are barriers in accessing health services in the Roma population associated with worse health status among Roma? Int J Public Health, 2013 Jun;58(3)8:427–34.
27. Polat Ü, Kahraman B. The Correlation Between Elder Individuals' Health-promoting Lifestyle and Perceived Social Support. Fırat Tıp Dergisi 2013; 18(4):213-18.
28. Danış MZ, Onat Ü, Danış Y. Poverty and Social Services in Elder Age. Social Services Symposium 2003: Yoksulluk ve Sosyal Hizmetler Bildiri Kitabı, 2nd Volume, Ankara: Hacettepe University, Social Services College Publishing 2006:217-26.
29. Tambağ H. Health-promoting lifestyle and satisfaction with life in elders. Mustafa Kemal Üniversitesi.Tıp Dergisi 2013:4(16).
30. Owens L. The relationship of health locus of control, self-efficacy, health literacy, and health promoting behaviors in older adults. The Degree of Doctor of Philosophy, University of Memphis, United States, 2006.