

Investigation of the knowledge, attitudes and behaviors on active aging of people between 30-40 years: A multi-central cross-sectional study

Sevinç Yılmaz Yeltekin¹  Süleyman Görpeliöğlü¹ 

¹ University of Health Sciences Turkey, Dışkapı Training and Research Hospital, Department of Family Medicine, Ankara, Turkey

Abstract

Background: Aging is a physiological process in every human and causes a decrease in all functions. It is essential to prepare the elderly population for the future as individuals who can care for themselves, have a rare incidence of chronic diseases, and have economic competence. Primary prevention is essential and cost-effective for healthy aging. This study aims to analyze the knowledge, attitudes, and behaviors of people aged 30-40, who are the elderly of the future, about healthy aging.

Methods: This study was conducted face-to-face and over the call with people aged 30-40 who applied to Family Health Centers randomly selected across Turkey between March 2019 and January 2020 for any reason. A questionnaire prepared by researchers, including sociodemographic information, health control, vaccinations, smoking and other addictions, nutrition, sports habits, and hobbies questions prepared by the researchers, was applied to the participants.

Results: 300 people were included in the study. When the medical precautions taken by the participants regarding their health were questioned. 68.0% of participants had their blood pressure measured, 69.3% had their blood sugar levels measured, 65.0% had their blood fats measured, and 70.7% had their vision measured, 79.0% got their teeth examined, 31.7% had their hearing measured, and it was observed that 11.0% of them had stool examinations for occult blood.

Conclusions: The results of our study were for individuals between the ages of 30 and 40; revealed that they do not plan for healthy aging. However preparing for a healthy aging period while still young is extremely important in transforming the protections to be taken into a lifestyle.

Keywords: Family Health Center, Aging, Healthy Aging, Lifestyle.

Cite this article as: Yeltekin Yılmaz S, Görpeliöğlü S. Investigation of the knowledge, attitudes and behaviors on active aging of people between 30-40 years: A multi-central cross-sectional study. Arch Curr Med Res. 2023;4(3):137-145

Corresponding Author:

Sevinç Yılmaz Yeltekin, University of Health Sciences Turkey, Diskapi Training and Research Hospital, Department of Family Medicine, Ankara, Turkey
E-Mail: dr.sevincyilmazyeltekin@gmail.com



Content of this journal is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.

INTRODUCTION

Old age is a definition WHO uses for those aged 65 and over. The aging period includes physiological changes as decreasing all physical and mental functions (1). All over the world, with the decrease in infectious diseases and developments in acute and chronic disease treatments, life expectancy is prolonged, and the elderly population is increasing numerically (2). By 2050, the number of older adults worldwide will be twice that of children (3).

Along with the world, the proportion of the elderly population in our country is increasing rapidly. According to 2022 data, life expectancy at birth in Turkey is generally calculated as 75.6 years for men and 81.2 years for women. According to statistical projections, Turkey is a rapidly aging country and ranks second in the aging rate after South Korea. Between 2008 and 2040, an increase of 201% is expected in the elderly population in Turkey. It is predicted that the proportion of the population aged 65 and over, defined as the elderly population, was 8.7% in 2018 and will be 10.2% in 2023, 16.3% in 2040, 22.6% in 2060, and 25.6% in 2080 (4). 43.9% of the elderly population is male, and 56.1% is female. This rate is approximately the same for almost all provinces (5).

The number of years a person expects to live without a health problem that would limit their activities in daily life is called 'healthy life expectancy' (6). Due to chronic degeneration, diseases, and social status changes, as they get older, individuals may become financially and morally dependent on others. Health policies aim at productive, successful, and independent aging (7). Longevity, biological and mental health, cognitive competence, social competence and productivity, personal control, and enjoyment of life are the most basic indicators of successful aging (8). The successful aging of individuals is closely related to their characteristics and the psychosocial, economic, and physiological support services to be provided to them socially (9).

In the concept of successful aging, one of the essential tasks of the individual is to foresee some processes that will be experienced in old age and to prepare mentally, economically, and physically. Therefore, this study reveals the knowledge, attitudes, and behaviors of individuals aged 30-40 about healthy aging.

MATERIALS AND METHODS

The study type, location, and duration

Our study was planned and conducted as a cross-sectional field study to determine knowledge, attitudes, and behaviors about healthy aging in individuals aged 30-40. Our research was carried out at The Health Sciences University Dışkapı Yıldırım Beyazıt Health Application and Research Center, and the data were collected from Family Health Centers in 20 randomly selected provinces from each geographical region between August 1, 2018 and January 31, 2019. As the criteria for inclusion in the study, the conditions of speaking and understanding Turkish between the ages of 30 and 40 were sought. Individuals with cognitive, neurological, and psychiatric disabilities who could not continue to work were excluded from the study. This study was approved by the clinical research Ethics Committee of the University of Health Sciences Turkey, Dışkapı Education and Research Hospital (Date: 07.01.2019, Number: 58/13).

Universe and sample

The population of the study consisted of 12.681.788 individuals between the ages of 30 and 40 who were registered to the population in Turkey as of 06.07.2022 (4). The sample size was 385, with a 95% confidence level and a 5% margin of error. Assuming that the genders are approximately evenly distributed and considering the possible data loss, 400 people, approximately 200 men and 200 women, registered to family health centers, which were selected by simple random sampling method from the provinces selected by simple random sampling method after geographical stratification, formed the sample group. After the geographical stratification, 20 provinces were selected (Adana, Adıyaman, Aksaray, Ankara, Antalya, Bitlis, Bursa, Denizli, Erzincan, Gümüşhane, İstanbul, Kocaeli, Mardin, Mersin, Muğla, Niğde, Şırnak, Trabzon, Urfa, Van). Therefore, the total population of the provinces where the research was 42.318.727, covering 51% of Turkey. However, our research had to be terminated with 300 participants because the responses were not at the expected rate during the data collection period.

Data sources and application of the research

The research data was created by the researchers using a form containing 45 questions created by examining the current literature. The participants in the study questioned

the following: sociodemographic data, chronic illness, drug use, regular health checks, vaccination, economic capabilities, whether they can save, whether they have social security, driving status, social relations, hobbies, sociocultural activities, daily living habits, nutrition and water, their drinking status, whether they do sports or not, whether they live with a family member or not, their perception of the elderly, whether there is an elder in need of care, whether they will have income in old age and whether this income will be sufficient, and where they want to spend their old age. A face-to-face or telephone interview technique was used in the implementation of the questionnaire.

Statistical analysis

In the evaluation of the study findings, it was decided to limit the situations that may affect the preparation for old age by the region of residence, gender, marital status, education level, economic situation, and whether there was social security, and it was accepted that these factors should be independent variables. In the questioning of the dependent variables, it was focused on the extent to which the individuals participating in the study fulfilled the biological, psychological, and socioeconomic conditions that will ensure successful aging.

The data were analyzed with IBM SPSS ver. the package program 21 (Statistical Package for Social Sciences). Continuous variables were expressed as mean±standard deviation, median (minimum and maximum values), and categorical variables were expressed as numbers and percentages. The conformity of the data to the normal distribution was examined with the Kolmogorov-Smirnov test. Differences between categorical variables were examined with chi-square analysis, and Fischer's exact test was used where necessary. In all analyses, $p < 0.05$ was considered statistically significant. Since the study was concluded with 300 participants, the G Power 3.1.9.7 program was used for the post hoc power analysis. Type 1 (α) error = 0.05 in the post hoc power analysis performed with the sample number obtained; When Type 2 ($1-\beta$) error = 0.2, the power of the research analyzes was found to be 0.99.

RESULTS

The distribution of the people included in the study according to some demographic characteristics is given in Table 1.

Table 1. Some demographic characteristics of the people included in the study (n=300).

Distribution of participants by region (n, %)	Marmara	20(6.7)
	Aegean	22 (7.3)
	Mediterranean	25 (8.3)
	Inner Anatolia	156 (52.0)
	Blacksea	41 (13.7)
	Eastern Anatolia	18 (6.0)
	Southeastern Anatolia	18 (6.0)
Gender (n, %)	Female	167 (55.7)
	Male	133 (44.3)
Age (Mean±SD)	Female	35.32 ± 3.45
	Male	35.12 ± 3.47
	Total	35.23 ± 3.45
Educational status (n, %)	Illiterate	10 (3.3)
	Primary/secondary school	57 (19.0)
	High school	62 (20.7)
	College	171 (57.0)
Number of children (n, %)	None	29 (9.7)
	1	122 (40.7)
	2	104 (34.7)
	3	32 (10.7)
	4	5 (1.7)
	5+	8 (2.6)
Marital status (n, %)	Married	199 (66.3)
	Single	101 (33.7)
Social security (n, %)	There is.	281 (93.7)
	None	19 (6.3)
Economic situation (n, %)	Financial support	47 (15.7)
	Self-sufficient	150 (50.0)
	Accumulation	103 (34.3)

Analysis was done with the chi-square test.

The biological readiness of the people included in the study was evaluated according to the regions they lived in, and it was observed that there was a statistical difference between regions in blood glucose measurement ($p=0.008$), fat blood measurement ($p=0.021$), and visual examination (0.035). The most frequent control was a visual examination (70.7%), and the least frequent control

was fecal blood analysis (FBA) (89.0%). The social and economic preparation of the people included in the study were evaluated according to the regions they lived in, and significant differences were found only in the parameters of having an income of one's own in old age ($p=0.017$), driving a vehicle ($p=0.032$), and using the internet ($p<0.001$). It has been observed that the difference in all three variables is due to the high number of participants in the Central Anatolia region.

The biological readiness of the people included in the study was evaluated according to their genders; it was seen that the rate of having FBA was significantly lower in both genders and that women had FBA significantly more than men among the genders ($p=0.010$). In addition, the social and economic preparation of the people included in the study was evaluated according to their gender, and it was found that men used more vehicles ($p<0.001$), women went to the cinema and theater more ($p=0.049$), and regularly read books, magazines, and newspapers ($p=0.048$).

The biological readiness of the subjects included in the study was evaluated according to their marital status, and it was determined that the single subjects used significantly less medication ($p=0.030$) and had a smear ($p=0.035$); they did more sports ($p=0.002$) and received adult vaccines ($p=0.031$). In addition, the social and economic preparation of the participants was evaluated according to their marital status. No significant difference was found, except that the participation in activities such as puzzle solving and cinema/theatre was higher in married people (both $p<0.001$).

The biological readiness of the subjects included in the study was evaluated according to their educational status. As the education level increased, it was determined that the frequency of regular drug use ($p=0.017$), blood pressure monitoring ($p=0.006$), blood sugar and blood lipids ($p=0.002$), vision and oral-dental medical examinations ($p<0.001$), and the number of vaccinations increased significantly ($p<0.001$) in table 2.

Table 2. The distribution of the biological readiness of the people included in the study according to their educational status

		Educational Status				Total (n, %)	p
		Illiterate (n, %)	Primary/secondary school (n, %)	High school (n, %)	College (n, %)		
Is there any medication you use regularly?	Yes	2 (0.7)	25 (8.3)	12 (4.0)	44 (14.7)	83 (27.7)	0.017
	No	8 (2.7)	32 (10.7)	50 (16.7)	157 (52.3)	217 (72.3)	
Have you ever had your blood pressure measured?	Yes	3 (1.0)	32 (10.7)	46 (15.3)	123 (41.0)	204 (68.0)	0.006
	No	7 (1.7)	25 (8.3)	16 (5.3)	48 (12.0)	96 (32.0)	
Have you ever had your blood sugar measured?	Yes	3 (1.0)	34 (11.3)	40 (13.3)	131 (43.7)	208 (69.3)	0.002
	No	7 (1.7)	23 (7.7)	22 (7.3)	40 (13.3)	92 (30.7)	
Have you ever had your blood fats measured?	Yes	3 (1.0)	29 (9.7)	39 (13.0)	124 (41.3)	195 (65.0)	0.002
	No	7 (1.7)	28 (9.3)	23 (7.7)	47 (9.7)	105 (35)	
Have you ever had a vision exam?	Yes	2 (0.7)	29 (9.7)	42 (14)	139 (39.67)	212 (70.7)	<0.001
	No	8 (2.7)	28 (9.3)	20 (6.7)	32 (10.7)	88 (29.3)	
Have you ever had a hearing test?	Yes	2 (0.7)	13 (4.3)	17 (5.7)	63 (21)	95 (31.7)	0.149
	No	8 (2.7)	44 (14.7)	45 (15)	108 (36)	205 (68.3)	
Have you ever had a fecal blood analysis (FBA)?	Yes	1 (0.3)	6 (2.0)	5 (0.7)	21 (7.0)	33 (11.0)	0.236
	No	9 (3.0)	51 (17.0)	57 (19.0)	150 (50.0)	267 (89.0)	
Do you have regular dental check-ups?	Yes	2 (0.7)	36 (12.0)	50 (16.7)	149 (49.7)	237 (79.0)	<0.001
	No	8 (2.7)	21 (7.0)	12 (3.0)	22 (7.3)	63 (21.0)	
Have you ever done or had a breast exam? (n=167)	Yes	1 (0.6)	13 (7.8)	7 (4.2)	22 (13.2)	43 (25.7)	0.520
	No	6 (3.6)	26 (15.6)	28 (16.8)	64 (38.3)	124 (74.3)	
Have you ever had a swab taken from your cervix? (n=167)	Yes	0	18 (10.8)	12 (7.2)	37 (22.2)	67 (40.1)	0.108
	No	7 (4.2)	21 (12.6)	23 (13.8)	49 (29.3)	100 (59.9)	
Have you ever had a prostate exam? (n=133)	Yes	0	3 (2.3)	2 (1.5)	3 (2.3)	8 (6.0)	0.185
	No	3 (2.3)	15 (11.3)	25 (18.8)	82 (61.7)	125 (94.0)	
Have you had any vaccinations in the last 5 years?	Yes	3 (1.0)	33 (11.0)	34 (11.3)	122 (40.7)	192 (64.0)	<0.001
	No	7 (1.7)	24 (8.0)	28 (9.3)	49 (16.3)	108 (36.0)	
Do you exercise / sport regularly?	Yes	7 (2.3)	31 (10.3)	37 (12.3)	113 (37.7)	188 (62.7)	0.449
	No	3 (1.0)	26 (8.7)	25 (8.3)	58 (19.3)	112 (37.3)	

Analysis was done with the chi-square test and Fischer exact test.

The social and economic readiness of the people included in the study was evaluated according to their educational status; as the level of education increased, a statistically significant increase was observed in having an income of their own in old age ($p < 0.001$), making an economic investment for old age ($p < 0.001$), driving a vehicle ($p < 0.001$), solving puzzles ($p < 0.001$), and participation in activities such as cinema/theatre ($p < 0.001$), using the internet ($p < 0.001$), regularly reading books, magazines, newspapers, etc. ($p < 0.001$) and having a hobby ($p < 0.001$) in table 3.

The biological readiness of the people included in the study was evaluated according to their economic status; a statistically significant increase was observed that their economic status as 'I am self-sufficient' showed in terms of visual examination ($p = 0.037$) and FBA analysis ($p = 0.045$) positively; it was determined that there was no significant difference in other parameters. Furthermore, the social and economic preparation of the people included in the study

was evaluated according to their economic status, and a significant positive difference was found in the parameters of driving ($p = 0.006$), participating in activities such as weddings/engagement ($p = 0.028$), and having a hobby ($p = 0.002$).

The biological readiness of the people included in the study was evaluated according to their social security status; participants with social security had significantly more measuring blood pressure ($p = 0.003$), blood sugar ($p = 0.008$), blood lipids ($p = 0.031$), visual ($p = 0.005$), oral and dental health examinations ($p < 0.001$). Furthermore, the social and economic preparation of the people included in the study was evaluated according to their social security status; participants with social security had significantly more income in old age ($p < 0.001$), driving a vehicle ($p = 0.012$), using the internet ($p < 0.001$), newspapers, books, and journals regularly, etc. ($p = 0.026$) and having a hobby ($p = 0.002$).

Table 3. Distribution of social and economic readiness of the people included in education status.

		Educational Status				Total (n, %)	p
		Illiterate (n, %)	Primary/secondary school (n, %)	High school (n, %)	College (n, %)		
Will you have your own income in old age?	Yes	4 (1.3)	39 (13.0)	41 (13.3)	154(51.3)	238(79.3)	<0.001
	No	6 (2.0)	12 (4.0)	11 (3.7)	6 (2.0)	35 (11.7)	
	May be	0	6 (2.0)	10 (3.3)	11 (3.7)	27 (9.0)	
Are you making an economic investment for your old age?	Yes	6 (2.0)	9 (3.0)	22 (7.3)	104(34.7)	141(47.0)	<0.001
	No	4 (1.3)	48 (16.0)	40 (13.3)	67 (22.3)	159(53.0)	
Can you drive?	Yes	4 (1.3)	21 (7.0)	41 (13.7)	156(52.0)	222(74.0)	<0.001
	No	6 (2.0)	36 (9.0)	21 (7.0)	15 (3.0)	78 (26.0)	
Can you solve the puzzle?	Yes	4 (1.3)	34 (11.3)	57 (19.0)	147(49.0)	242(80.7)	<0.001
	No	6 (2.0)	23 (7.7)	5 (1.7)	24 (8.0)	58 (19.3)	
Do you have friends / friend groups?	Yes	10 (3.3)	52 (17.3)	61 (20.3)	168(56.0)	291(97.0)	0.079
	No	0	5 (1.7)	1 (0.3)	3 (1.0)	9 (3.0)	
Do you work in non-governmental organizations?	Yes	3 (1.0)	3 (1.0)	9 (3.0)	15 (5.0)	30 (10.0)	0.094
	No	7 (2.3)	54 (18.0)	53 (17.7)	156(52.0)	270(90.0)	
Do you go to theater, cinema etc.?	Yes	8 (2.7)	43 (14.3)	58 (19.3)	162 (54)	271(90.3)	<0.001
	No	2 (0.7)	14 (4.7)	4 (1.3)	9 (3.0)	29 (9.7)	
Would you attend a wedding/engagement etc.?	Yes	9 (3.0)	52 (17.3)	61 (20.3)	155(51.7)	277(92.3)	0.253
	No	1 (0.3)	5 (2.7)	1 (0.3)	16 (5.3)	23 (7.7)	
Do you use internet?	Yes	6 (2.0)	43 (14.3)	60 (20)	166(55.3)	275(91.7)	<0.001
	No	4 (1.3)	14 (4.7)	2 (0.7)	5 (1.7)	25 (8.3)	
Do you regularly read books, magazines, newspapers, etc.?	Yes	0	33 (11.0)	49 (16.3)	151(50.3)	233(77.7)	<0.001
	No	10 (3.3)	24 (8.0)	13 (4.3)	20(6.7)	67 (22.3)	
Do you have a hobby?	Yes	4 (1.3)	37 (12.3)	58 (19.3)	160(53.3)	259(86.3)	<0.001
	No	6 (2.0)	20 (6.7)	4 (1.3)	11 (3.7)	41 (13.7)	
Do you watch TV regularly?	Yes	8 (2.7)	48 (16.0)	51 (17.0)	119(39.7)	226(75.3)	0.067
	No	2 (0.7)	9 (3.0)	11 (3.7)	52 (17.3)	74 (24.7)	
Where do you plan to spend your old age?	nursing home	0	2 (0.7)	2 (0.7)	11 (3.7)	15 (5.0)	0.238
	my own home	1 (0.3)	8 (2.7)	6 (2.0)	35 (11.7)	50 (16.7)	
	my children's house	7 (2.3)	37 (12.3)	38 (12.7)	79 (26.3)	161(53.7)	
	Others	2 (0.7)	10 (3.3)	16 (5.3)	46 (15.3)	74 (24.7)	

DISCUSSION

When the results of the study are evaluated in general, individuals between the ages of 30 and 40; revealed that they do not plan for healthy aging. However, considering the statistical significance of readiness for old age, it was observed that women, married people, those with a high level of education, those who are economically self-sufficient, and those with have social security are more biologically, socially, and economically prepared for old age.

Healthy aging is a process that includes biopsychosocial and economic preparation. This process includes the environment in which individuals live, their diet, chronic diseases (10), BMI, drugs used, regular health checks and vaccinations if necessary, drug and alcohol addictions, education levels, regular sports habits, hobbies and leisure activities, marital status, and a healthy aging philosophy. In order to be able to spend this process independently, with the least amount of chronic diseases, with economic competence and preserving a social life, it is necessary to start preparations in the youth years. The process of preparing for old age should begin at the age of 30-40. This study investigated the knowledge, attitudes, behaviors, and preparations of individuals between the ages of 30 and 40 about healthy aging.

As our study data is examined in general, the rate of those who stated that they went to the cinema/theatre among the people included in our study was found to be 90.3%. In a study conducted with individuals over the age of 60 in Mersin, the preference rate of cinema as a leisure time activity in this age group was determined as 14.6% (11). We concluded that this significant difference in our study is due to the age difference between the sample groups and that individuals are less willing to go to the movies as they get older. Likewise, although there are studies suggesting that the habit of reading books decreases as we get older, we thought that more detailed studies should be conducted to reveal the reasons for this (12).

Hypertension awareness in Turkey is 58.1% according to TURDEP-II data (13). In this study, it was determined that 68.0% of the participants had their blood pressure measured. With these results, it was thought that society had a similar sensitivity to the prevention of hypertension in all age groups. The fact that hypertension is a common disease in our society and its diagnosis and treatment are possible in family health centers (14) may explain the reason for the high awareness of hypertension.

According to cancer statistics in Turkey, the rate of breast cancer specific to 30-34 and 35-39 age groups in women is 26.1% and 47.8%, respectively (15). In our study, the rate of self-examination by a physician, which is one of the most important steps in preventing breast cancer, was found to be 25.4%. Tent et al. found the rate of breast self-examination (BSE) to be 66% (16). In a study conducted in Gaziantep, 48.5% of the women included in the study did not know how to do BSE; 21.5% of those who do BSE once a month; 13.7% of them performed BSE at the right time; 25.3% of them believed in the necessity of BSE (17). We think that the low rate in our rates is because our case group is relatively young and does not care enough about BSE.

In our study, the rate of cervical swab applied was found to be 47.3%. In another study conducted in Kütahya, the rate of having pap smears in women was found to be 36.0% (18). In a study conducted in Istanbul, women between 31-40 were the group with the highest awareness of Pappanicolaou test screening compared to women in other age ranges: It has been interpreted that awareness of the pap smear screening is associated with physician information (19). According to these, family physicians could take an active role in the healthy aging by increasing the participation of people in screening programs.

Regular physical exercise protects health in advancing age. The secreted serotonin hormone prevents the depression. Chronic diseases are less common in those who do sports regularly (20). In our study, the rate of those who answered yes to the question "Do you exercise/sports regularly?" was found to be 62.7%. According to the Chronic Diseases Risk Factors study conducted in 2011, it was seen that 87% of women and 77% of men in Turkey do not do enough physical activity (21). It has been determined that 14% of the participants in a group with an average age of 40 in Turkey perform regular physical activity (22). Some differences, such as education levels and occupations of the population in which the study was conducted may explain the difference in the results of the study.

In our study, the rate of internet users was found to be 91.7%. According to the Household Information Technologies Usage Survey conducted by the Turkish Statistical Institute, computer and internet use among individuals aged 16-74 increased from 54.9% and 61.2% in 2016 to 56.6% and 66.8% in 2017 (23). In recent years, the fact that individuals meet in socialization areas such as shopping, education, reading news, reading books, and magazines through the internet explains the high internet

usage. Access to the Internet is associated with economic level and education level (24), which explains the fact that more than 50% of our study population has a bachelor's degree.

When the sociodemographic characteristics of the people included in the study were analyzed according to the regions where they lived, it was observed that there was a statistically significant difference between regions in terms of the number of children, education level, and having social security. In a society, education and social security are two important elements that show well-being and are directly related to healthy aging. As shown in other studies, interregional development disparities remain an important structural problem in Turkey, despite partial and limited improvements (25). For this reason, it is seen that healthy aging is closely related to the regional development of the country in its relationship with sociodemographic characteristics.

According to our study, when the number of children was analyzed by region, a significant difference was found in Southeastern Anatolia. Our result agrees with the fact that the Turkish Demographic and Health Survey found the fertility rate to be quite high in Southeastern Anatolia in 2018 (26). According to the 2016 results of the Family Structure Research conducted by the Turkish Statistical Institute, the rate of those who want to spend their old age with their children was found to be 37.6% (27). Traditionally, having more children in old age is seen as a guaranty of economic security and care in Turkey.

In terms of biological readiness for healthy aging, there were differences between geographical regions in terms of blood sugar and blood fat measurement, visual examination, oral-dental control, and regular exercise. According to this difference, the biological preparation for healthy aging is lower in the Eastern and Southeastern Anatolia regions than in other regions. The low participation, the low health literacy, the low level of education, and the low awareness of periodic health examinations may explain this result in the study in these two regions. In relation to the consistency of the data in our study, it has been observed that as the education level increases, the biological readiness for healthy aging also increases.

Our results were evaluated in terms of gender, and one of our biological preparation questions was 'Have you ever had an FBA analysis?'. Although there is a statistically significant difference in female gender, FBA for both

genders was very low (11.0%). In a study conducted with individuals aged 50-70 years in Erzurum, 20.6% of the participants had a FBA test before, 49.3% had a FBA test because the doctor wanted it, and 57.7% had no information about having it done. It was found that 60.9% of the patients without an FBA test for the disease were considering having an FBA test (28). This difference between the two studies was because FBA analysis was performed between the ages of 50 and 70 according to the colorectal cancer screening program, and our study group included individuals aged 30 and 40 (29).

By evaluating their biological readiness according to their marital status, it was determined that being single meant they used significantly less medication, did more sports, were more sensitive about adult vaccination, but less sensitive about having smears taken. According to a study, it was determined that married people aged 70-79 showed more physical activity (30). According to a study conducted in 2021, single people do more physical activity than married people (31). As can be seen from our own study results and literature data, married elderly, and single adults exercise because they have free time, but adult married couples do not exercise because they have more responsibilities. The same was true for solving puzzles and participating in activities such as cinema/theatre. According to our research results, single people are more active in both activities than married ones.

The use of health services is determined by factors such as the purchasing power of the person who will use the service and the possibility of obtaining the services (32). Health insurance of individuals provides this opportunity. It is not expected that the elderly, who have economic problems and are not covered by social security, find solutions to their health problems on their own and meet their health and care expenses (33). Therefore, an important component of healthy aging is having social security in old age. In our study, the fact that people with social security are more ready for old age biologically, socially, and economically is compatible with other studies in the literature (34,35). Consistent with health insurance, increasing income level and its positive effects on health are consistent with other studies in the literature (23-31). In our study, similar results were obtained with other studies, and more positive responses were received from the group receiving support for living in the "I am self-sufficient" and "I am saving" groups in the questions about the biological and socioeconomic preparation processes for old age.

The small population and the fact that the regions of Turkey were not homogeneously included in the study constitute our limitations. The other is that FBA screening is not routine in the 30-40 age group, so low results, and a small number of cases are the limitations of the study.

As a conclusion, being ready for old age biologically, socially, and economically will reduce the frequency of neurodegenerative diseases and the need for care in society by determining how active the aging process will be. In this case, it is especially important to raise awareness of health policies and to raise the education.

Declarations

The authors have no conflicts of interest to declare. The authors declared that this study has received no financial support.

This study was approved by the clinical research Ethics Committee of the University of Health Sciences Turkey, Dışkapı Education and Research Hospital (Date: 07.01.2019, Number: 58/13).

REFERENCES

- Rudnicka E, Napierala P, Podfigurna A, Meczekalski B, Smolarczyk R, Gryowicz M. The World Health Organization (WHO) approach to healthy ageing. *Maturitas* 2020;139: 6-11.
- Galvin AE, Friedman DB, Hébert JR. Focus on disability-free life expectancy: implications for health-related quality of life. *Qual Life Res.* 2021;1-9.
- Gu D, Andreev K, Dupre ME. Major trends in population growth around the world. *China CDC Wkly.* 2021;3(28):604-613.
- Türkiye İstatistik Kurumu. Nüfus Projeksiyonları, Dünya Nüfus Günü, 2022. Available at <https://data.tuik.gov.tr/Bulten/Index?p=Dunya-Nufus-Gunu-2022-45552> Accessed March 05, 2023.
- Karakuş B. Yaşlılara yönelik hizmetler, kurumsal yaşlı bakımı ve kurumsal yaşlı bakımında illerin durumu. Ankara: Aile ve Sosyal Politikalar Bakanlığı; 2018. p. 24-27.
- Saito Y, Robine JM, Crimmins EM. The methods and materials of health expectancy. *Stat J IAOS.* 2014;30(3):209-223.
- Teater B, Chonody JM. How do older adults define successful aging? A scoping review. *Int J Aging Hum Dev.* 2020;91(4): 599-625.
- Wu R, Zhao J, Cheung C, Natsuaki MN, Rebok GW, Strickland-Hughes CM. Learning as an Important Privilege: A Life Span Perspective with Implications for Successful Aging. *Hum Dev.* 2021; 65(1): 51-64.
- Martinson M, Berridge C. Successful aging and its discontents: a systematic review of the social gerontology literature. *Gerontologist.* 2015;55(1):58-69.
- Gökçe Kutsal Y, Biberoglu K, Atlı T, Arslan D, Çınal A, Buzgan T, et al. Sağlık Bakanlığı, Yaşlılık döneminde erken tanı. Birinci basamak sağlık hizmetlerinde çalışan hekimler için yaşlı sağlığı tanı ve tedavi rehberi. Ankara: Koza Yayınevi; 2010; p. 44.
- Türkiye İstatistik Kurumu. Hayat Tabloları, 2016-2018. 2019. Available at <https://data.tuik.gov.tr/Bulten/Index?p=Hayat-Tabloları-2016-2018-30712> Accessed March 05, 2023.
- Miroğlu C. Ankara'da bir huzurevi incelemesi [dissertation]. Ankara: Ankara Üniversitesi Sosyal Bilimler Enstitüsü; 2009, p. 84-85.
- Satman I, Yılmaz T, Sengul A, Salman S, Salman F, Uygur S, et al. Population-based study of diabetes and risk characteristics in Turkey: results of the Turkish diabetes epidemiology study (TURDEP). *Diabetes Care.* 2002;25(9): 1551-1556.
- Sengul S, Akpolat T, Erdem Y, Derici U, Arici M, Sindel S, et al. Changes in hypertension prevalence, awareness, treatment, and control rates in Turkey from 2003 to 2012. *J Hypertens.* 2016;34(6):1208-17.
- Kara F, Keskinçilç B, Türkyılmaz M, Baran Deniz E, Dündar S, Aysun Kavak Ergün A, et al. Türkiye kanser istatistikleri. Ankara: Sağlık Bakanlığı; 2016; p. 20.
- Altun B, Arıcı M, Nergizoğlu G, Derici Ü, Karatan O, Çetin T, et al. Prevalence, awareness, treatment and control of hypertension in Turkey (the Patent Study) in 2003. *J Hypertens.* 2005;23: 1817-1823.
- Sohbet R, Karasu F. Kadınların meme kanserine yönelik bilgi, davranış ve uygulamalarının incelenmesi. *GÜSBBD.* 2017;6(4): 113-121.
- Şen S, Başar FK. Kütahya bölgesinde yaşayan kadınların pap smear testi konusundaki farkındalıkları. *STED.* 2019;28(1): 28-36.
- Aydın DS, Ekmez M, Göksedef BP, Hasanova M, Aşık H, Çetin A. Polikliniğe başvuran kadınlarda smear farkındalığı ve yaptırma sıklığı. *Türk Jinekolojik Onkoloji Dergisi.* 2015;18(4): 127-130.
- Çifçili S. Aktif yaşlanma: Fiziksel boyut. *Türk Fam Physician* 2012;3(1):6-12.
- Sain Güven G, Öz ŞG, Ergun N. Erişkin için kronik hastalıklarda fiziksel aktivite rehberi. Ankara: Sağlık Bakanlığı; 2018.
- Aktaş H, Şaşmaz CT, Kılıçer A, Mert E, Gülbol S, Külekçioglu D, et al. Yetişkinlerde fiziksel aktivite düzeyi ve uyku kalitesi ile ilişkili faktörlerin araştırılması. *Mersin Üniversitesi Sağlık Bilimleri Dergisi.* 2015;8(2):60-70.
- Türkiye İstatistik Kurumu. Hanehalkı Bilişim Teknolojileri Kullanım Araştırması, 2017. 2017. Available at [https://data.tuik.gov.tr/Bulten/Index?p=Hanehalki-Bilisim-Teknolojileri-\(BT\)-Kullanim-Arastirmasi-2017-24862](https://data.tuik.gov.tr/Bulten/Index?p=Hanehalki-Bilisim-Teknolojileri-(BT)-Kullanim-Arastirmasi-2017-24862) Accessed March 05, 2023.
- Anıl B, Köksal E. Türkiye'de interneti kimler, ne için kullanıyor? Marmara Üniversitesi İktisadi ve İdari Bilimler Dergisi. 2016;38(1):1-13.
- Çelik N. Bölgelerarası gelişmişlik farklılıklarının çözümünde teşvik politikalarının etkinliği: Türkiye İBBS-II örneği. *AÜSBDD.* 2019;19(3): 39-58.
- Hacettepe Üniversitesi Nüfus Etüdüleri Enstitüsü. Türkiye 2018 Nüfus ve Sağlık Araştırması. Available at https://openaccess.hacettepe.edu.tr/xmlui/bitstream/handle/11655/23356/2018_TNSA_Ozet_Rapor.pdf?sequence=1&isAllowed=y Accessed March 06, 2023.
- Türkiye İstatistik Kurumu. Aile Yapısı Araştırması, 2016. 2017. Available at <https://data.tuik.gov.tr/Bulten/Index?p=Aile-Yapisi-Arastirmasi-2016-21869> Accessed March 06, 2023.

28. Genç Z, Yalçınöz Baysal H. Birinci basamağa başvuran bireylerin kolorektal kansere yönelik sağlık inançlarının gaitada gizli kan testi yapma durumlarına etkisi Sağlık ve Toplum. 2020;30(2):90-97.
29. Sağlık Bakanlığı Halk Sağlığı Genel Müdürlüğü Kanser Dairesi Başkanlığı. Kolorektal kanser tarama programı ulusal standartları. Available at <https://hsgm.saglik.gov.tr/tr/kanser-taramastandartlari/listesi/kolorektal-kanser-tarama-program%C4%B1-ulusal-standartlar%C4%B1.html> Accessed March 06, 2023.
30. Pettee KK, Brach JS, Kriska AM, Boudreau R, Richardson CR, Colbert LH, Satterfield S, Visser M, Harris TB, Ayonayon HN, Newman AB. Influence of marital status on physical activity levels among older adults. *Med Sci Sports Exerc.* 2006 ;38(3):541-6.
31. Puciato D, Rozpara M. Physical activity and socio-economic status of single and married urban adults: a cross-sectional study. *PeerJ.* 2021;9(9):e12466.
32. Ertaş H, Çiftçi Kıracı F. Hastaların sağlık hizmeti kullanım durumlarının incelenmesi. In: Kuşpınar B, Leat D, Yılmaz E, Tutaş N, İzgar H, editors. 2nd International Social and Educational Sciences Symposium; 2018 Oct 22-24; Konya, Turkey. Full Paper Proceeding Book; 2018; p. 635.
33. Camkurt MZ. Yaşlılık ve yaşlıların sosyal güvenliği kapsamında 65 yaş aylığı bağlanması işlemleri. *Kamu-iş.* 2014;13(3):70-106.
34. Türkiye İstatistik Kurumu. Sinema ve Tiyatro İstatistikleri, 2019. Available at <https://data.tuik.gov.tr/Bulten/Index?p=Sinema-ve-Tiyatro-Istatistikleri-2019-33622#:~:text=Sinema%20seyirci%20say%C4%B1s%C4%B1%20%12%2C8,147%20bin%20445%20ki%C5%9Fi%20oldu> Accessed March 07, 2023.
35. Türkiye İstatistik Kurumu. İstatistikler ile Yaşlılar, 2019. Available at <https://data.tuik.gov.tr/Bulten/Index?p=Istatistiklerle-Yaslilar-2019-33712> Accessed March 07, 2023.