DETERMINATION OF INDIVIDUALS' QUALITY OF LIFE AND EXERCISE HEALTH BELIEF LEVELS

Research article

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Abstract

The aim of this research is to determine the quality of life and exercise health belief levels of individuals residing in Sakarya and to determine the differentiation status of quality of life and exercise health belief levels according to their demographic characteristics. The sample of the study consists of 349 people selected by simple random sampling method from these participants. Personal Information Form, The Health Belief Model Scale for Exercise (HBMS-E) and World Health Organization Quality of Life Scale- Short Form were used as data collection tools. In the analysis of the data, the t-test for pairwise comparisons and the One-Way Anova Test for multiple comparisons were applied to examine the differences between the variables. It was determined that the general averages of the participants' exercise health belief scale did not differ according to variables such as gender, marital status, regular exercise, age and income levels ($p<0.005$). A statistically significant difference was found between the general averages of the quality of life scale and the age variable ($p<0.05$). It was determined that there was a statistically significant difference between the general averages and all sub-dimensions of the exercise health belief scale and the education variable ($p<0.05$). As a result, it has been determined that the educational status of the individuals participating in the research has a positive effect on their exercise health belief levels. As the age of individuals increases, it has been thought that it is an important determining factor in their quality of life.

Keywords: Quality of Life; health belief, individual, sport

1. Introduction

Living conditions, technology and conveniences brought about by modernization, are making people less active on a daily basis. These changes, affect the health status of the people as the level of physical activity gradually decreases and consequently different health problems may occur. Regular exercise is the most effective method of protection from diseases (Egesoy et al., 2021).

Quality of life assessment is considered an important outcome measure in medicine that defines patients' well-being and function, evaluates the effects of treatment intervention, and evaluates the quality and effectiveness of care (Derogatis et al., 1996). According to WHO, it has been defined as the definition of health as a state of physical, mental and social well-being, not in a state of disability or illness. Health-related quality of life terms are perceived by emotional states, diseases, social and behavioral structures, patients, and observers as a multidimensional structure of the body, because of the functions and causes of their occurrence (Bullinger, 1991). According to the literature on various diseases, psychosocial factors affecting quality of life include perceived stress and satisfaction with social activities in women with heart disease (Janz et al., 2001); social support and health behavior in patients with active tuberculosis (Marra et al., 2004); emotional distress, coping, self-esteem, and friend support for people with schizophrenia (Ritsner et al., 2006). Similar predictors were found for patients

with hemophilia: age; quality of life and social environment; and self-esteem, anxiety, social desire, and depression are known to affect many quality of life levels (Bullinger, 1991; Canclini et al., 2004; Trippoli et al., 2001). Since the mid-1980s, patient-filled instruments for the assessment of QoL have been developed (Marra et al., 2004). These questionnaires give patients the opportunity to report their own experiences of functionality and well-being (Bullinger & Von Mackensen, 2003). Quality of life is measured in terms of general and disease-specific assessments using validated instruments. While general tools can be used in patients with different conditions or in the general population, regardless of the particular disease, disease-specific measures are developed for patients with certain health conditions, thus providing a clear model of their symptoms or disorders (Gringeri & von Mackensen, 2008). Since the patient's perspective is important, it is recommended to use self-evaluative measures (Bowling, 2001). In contrast, other graded measures or surrogate measures are used in young children or patients who are unable to respond for themselves. Different tools are available for children and adults, taking into account age and developmental status (Eiser & Morse, 2001).

Today, it is known that the attitude towards the participation of sick individuals in sports has changed and that the individual should be in regular physical activity in order to prevent many diseases and to be healthy for the rest of his life (Koc, 2020). In addition, thanks to sports, it has a positive effect on the personalities of individuals as well as on their appearance (Ece etal., 2022). It also emphasizes that the choice of sport should be made individually (Buzzard, 1996). In other words, the patient should not be forced to do any sport he does not like. Patients should choose an enjoyable sport to get the most benefit from physical activity (Greenan-Fowler et al., 1987).

In many parts of the world, sedentary life leads to the emergence of certain chronic diseases. It is known that sports have a positive effect on health in all ages of human beings. It is known that as a result of irregular sports or an sedentary life, individuals face serious health problems such as many types of cancer, heart diseases and obesity (Chodzko-Zajko et al., 2009; Cotman & Berchtold, 2002; Der, 2006).

Motor skills are considered important for children's physical, social, and psychological development. Pre-school age seems to be decisive for the development of motor skills. Our study's aim was to investigate the effect of 12 weeks game education on the motor development of pre-school children aged 4 to 6 years (Gümüşdağ, 2019).

In 2014, approximately 1.3 billion adults aged 18 years and older worldwide were overweight and 600 million were obese. In many countries, having obesity kills more people than being underweight. Health risks associated with obesity include cardiovascular diseases (leading cause of death in 2012), diabetes, certain cancers and musculoskeletal disorders (Organization, 2016). Exercise can help prevent, slow the progression or manage these obesity-related diseases (Smith et al., 2014). There are also many studies stating that physical exercises are effective in reducing weight and body mass index in obese individuals (García-Hermoso et al., 2016; Kelley & Kelley, 2015; Ruotsalainen et al., 2015; Stoner et al., 2016; Williams et al., 2015). WHO summarizes the most influential models and theories of health promotion and education that are effective in practice, including the Rational Model, the Extended Parallel Process Model, the Transtheoretical Model of Change, The Planned Behavior Theory, and the Activated Health Education Model. Sports activity is any bodily movement produced by skeletal muscles that results in energy expenditure in daily life. However, some studies use the terms physical activity and exercise interchangeably (Caspersen et al., 1985).

The aim of this article is to determine the exercise health belief and quality of life levels of individuals residing in Sakarya and to examine the effect in terms of demographic information.

2. Method

Research Group

The research is a quantitative study and was conducted with the voluntary participation of 349 individuals residing in Sakarya, Turkey. The individuals participating in the research were selected by simple random sampling method.

Data Collection Tools

Personal information form, Exercise Health Belief Model Scale and Quality of Life Scale were used as data collection tools used in the study. The data obtained in the research were transferred to the SPSS 25.0 package program in the computer environment. The research was carried out in accordance with the principles of the declaration of Helsinky.

Exercise Health Belief Model Scale (EHBMS)

Exercise Health Belief Model Scale Esparza-Del Villar, O. A et al. (Esparza-Del Villar et al., 2017). The validity and reliability of the Turkish version was made by Çiftci and Kadıoğlu (Ciftci & Kadioğlu, 2020). The scale consists of 32 items and is of 5-point Likert type. From question 1 to question 26, it is rated as Never (1), A little (2), Not a little bit (3), Quite (4), A lot (5). From question 27 to question 32, it is rated as I never think (1), I don't think (2), I think (3), I think mostly (4), I think all the time (5). The scale consists of 5 sub-dimensions (general health, perception of seriousness, perception of benefit, perception of motivation and sensitivity) and there is no reverse item. The highest score that can be obtained from the scale is 160, and the lowest score is 32. An increase in the score in the evaluation of the scale means an increase in the exercise belief level. The Cronbach's alpha internal consistency coefficient of the scale, which was adapted into Turkish, was found to be 0.87 (Ciftci & KADIOĞLU, 2020).

World Health Organization Quality of Life Scale- Short Form

In our research; Quality of life short form was used. The quality of life scale was developed by the World Health Organization. The original version of the scale consists of 26 items, while the Turkish version consists of 27 items. It was adapted into Turkish by Fidaner et al. (1999). The scale is a 5-point Likert type scale. The total quality of life score can range from a minimum of 27 to a maximum of 135. Scale; It consists of physical health, psychological health, social relations, environmental health sub-dimensions. The Turkish version of the scale consists of 5 fields in this way. The scale also includes two general items, namely quality of life and general health. In the study, it was determined that the internal consistency coefficient of the Turkish version of the scale was high (Eser et al., 1999).

3. Findings

Table 1. *Demographic characteristics and descriptive statistics*

Variables		N	%
Gender	Woman	191	54,7
	Male	158	45,3
Marital status	Married	198	56,7
	Single	151	43,3
Age	18-22	95	27,2
	23-27	148	42,4
	28 and Above	106	30,4
Educational Status	Primary school	68	19,5
	Middle School	57	16,3
	High school	121	34,7
	University	103	29,5
Income status	Low	57	16,3
	Middle	248	71,1
	High	44	12,6
Regular Exercise Status	Yes	229	65,6
	No	120	34,4
Total		349	100

When the demographic characteristics of the participants participating in the research are examined in Table 1, 54.7% (n=191) were female, 45.3% (n=158) were male, 56.7 (n=198) were married, 43.3% (n=151) were single, 27.2% (n=95) 18-22, 42.4% (n=148) 23-27, 30.4% (n=106) It was observed that they were aged 28 and over. When their educational status is examined, 19.5% (n=68) is primary school, 16.3% (n=57) is secondary school, 34.7% (n=121) is high school, 29.5% (n=n) =103) has a university education. Income status consists of 16.3% (n=57) low-income, 71.1% (n=248) middle-income, 12.6% (n=44) high-income individuals. It was observed that 65.6% (n=229) answered yes to the question of doing regular sports, and 34.4% (n=120) answered no.

Table 2. T-test analysis results according to the gender variable of the participants

Variables	Gender	N	M	SS	t	p
EHBMS	Woman	191	4,1127	,35203	1,001	,315
	Male	158	4,0738	,36873		
General Health	Woman	191	3,8089	,65805	-,596	,551
	Male	158	3,8513	,66416		
Perception of Seriousness	Woman	191	4,2675	,50090	2,245	,025
	Male	158	4,1355	,59803		
Perception of Benefit	Woman	191	3,3072	,54869	-,798	,425
	Male	158	3,3555	,58044		
Motivation	Woman	191	4,2871	,54989	,140	,888
	Male	158	4,2785	,59242		
Sensitivity Perception	Woman	191	4,6892	,35859	1,183	,238
	Male	158	4,6395	,42697		
Life Quality	Woman	191	3,2809	,48005	1,068	,286
	Male	158	3,2228	,53626		
Total		349				

When Table 2 was examined, it was determined that there was no significant difference between the exercise health belief levels of the individuals participating in the study and the gender variable (p> .05). A statistically significant difference was found between the severity perception sub-dimension of the exercise health belief scale and the gender variable (p>0.05). It was observed that the difference was in favor of female participants. It was determined that there was no statistical difference between the gender variable and the general mean levels of quality of life (p>0.05).

Table 3. *T-test analysis results according to the marital status variable of the participants*

Variables	Marital status	N	M	SS	t	p
EHBMS	Married	198	4,0993	,36910	,249	,804
	Single	151	4,0896	,34811		
General Health	Married	198	3,8182	,67574	-,320	,749
	Single	151	3,8411	,64128		
Perception of Seriousness	Married	198	4,2284	,56388	,803	,422
	Single	151	4,1806	,53226		
Perception of Benefit	Married	198	3,3081	,54976	-,796	,427
	Single	151	3,3565	,58056		
Motivation	Married	198	4,3086	,58405	,955	,340
	Single	151	4,2499	,54811		
Sensitivity Perception	Married	198	4,6572	,40397	-,515	,607
	Single	151	4,6790	,37485		
Life Quality	Married	198	3,2476	,49987	-,296	,768
	Single	151	3,2638	,51626		
Total		349				

When Table 3 was examined, it was determined that there was no significant difference between the exercise health belief levels and all sub-dimensions of the individuals participating in the study and the marital status variable (p>0.05). It was determined that there was no statistical difference between the marital status variable and the general mean levels of quality of life (p>0.05).

Table 4. *T-test analysis results according to the variable of the participants' doing sports*

Variables	Regular Exercise Status	N	M	SS	t	p
EHBMS	Yes	229	4,1086	,35486	,973	,331
	No	120	4,0692	,36885		
General Health	Yes	229	3,9443	,61408	4,678	,001
	No	120	3,6063	,69032		
Perception of Seriousness	Yes	229	4,2195	,54659	,552	,581
	No	120	4,1853	,55849		
Perception of Benefit	Yes	229	3,2802	,53709	-2,251	,025
	No	120	3,4222	,60071		
Motivation	Yes	229	4,2889	,54037	,260	,795
	No	120	4,2722	,62147		
Sensitivity Perception	Yes	229	4,6841	,36311	1,153	,250
	No	120	4,6333	,43965		
Life Quality	Yes	229	3,2571	,51051	,126	,900
	No	120	3,2499	,50043		
Total		349				

When Table 4 is examined, it has been determined that there is no significant difference between the exercise health belief levels of the individuals participating in the research and the variable of regular sports (p>0.05). A statistically significant difference was found depending on the marital status variable in the general health sub-dimension of the exercise health belief scale (t= 4.678; p<0.05). It has been determined that the difference is in favor of the participants who do sports regularly. A statistically significant difference was found depending on the marital status variable of the perception of benefit sub-dimension of the exercise health belief scale (t= -2.251; p<0.05). It was observed that the difference was in favor of the participants who did not do regular sports. It was determined that there was no statistical difference between the regular sports status variable and the general average level of quality of life (p>0.05).

Table 5. *One-way analysis of variance results in terms of age variable*

Variables	Age	N	M	SS	F	p	
EHBMS	18-22	95	4,0813	,39470	1,033	,357	
	23-27	148	4,1264	,36462			
	28 and Above	106	4,0637	,31726			
General Health	18-22	95	3,8342	,70580	1,060	,348	
	23-27	148	3,8767	,63386			
	28 and Above	106	3,7547	,65373			
Perception of Seriousness	18-22	95	4,2021	,55388	,604	,547	
	23-27	148	4,2418	,56027			
	28 and Above	106	4,1652	,53434			
Perception of Benefit	18-22	95	3,2965	,58608	,228	,796	
	23-27	148	3,3367	,57979			
	28 and Above	106	3,3475	,52054			
Motivation	18-22	95	4,2239	,56482	2,083	,126	
	23-27	148	4,3552	,60149			
	28 and Above	106	4,2358	,51684			
Sensitivity Perception	18-22	95	4,6895	,40286	,277	,758	
	23-27	148	4,6651	,41266			
	28 and Above	106	4,6484	,35042			
Life Quality	18-22	95	3,1891	,48695	4,568	,011	3-1
	23-27	148	3,2092	,50680			3-2
	28 and Above	106	3,3768	,50603			
Total		349					

When Table 5 is examined, it has been determined that there is no significant difference between the exercise health belief levels and all sub-dimensions of the individuals participating in the study and the age variable (p>0.05). It was determined that there was a statistically significant difference between the general averages of the age variable quality of life scale (F=4,568; p<0.05). Tukey multiple analysis test was performed to determine the difference. It has been determined that the participants aged 28 and over have higher quality of life levels than the participants between the ages of 18-22 and 23-27.

Table 6. *One-way analysis of variance results in terms of education status variable*

Variables	Educational Status	N	M	SS	F	p	Difference
EHBMS	Primary school[1]	68	3,9739	,39302			
	Middle School[2]	57	4,2131	,35830			2-1
	High school[3]	121	4,0789	,32101	5,179	,002	4-1
	University[4]	103	4,1287	,35945			
General Health	Primary school[1]	68	3,7022	,70876			4-1
	Middle School[2]	57	3,6798	,69718	2,841	,038	3-2
	High school[3]	121	3,8926	,61983			4-2
	University[4]	103	3,9175	,63438			
Perception of Seriousness	Primary school[1]	68	4,0478	,58985			
	Middle School[2]	57	4,3255	,50088			2-1
	High school[3]	121	4,2018	,51555	3,102	,027	4-1
	University[4]	103	4,2551	,57143			
Perception of Benefit	Primary school[1]	68	3,2819	,53272			
	Middle School[2]	57	3,6287	,76637			2-1
	High school[3]	121	3,2342	,45774	7,099	,000	2-4
	University[4]	103	3,3058	,51296			
Motivation	Primary school[1]	68	4,1593	,62257			
	Middle School[2]	57	4,4561	,58463			2-1
	High school[3]	121	4,2419	,52619	3,234	,022	3-2
	University[4]	103	4,3178	,55259			
Sensitivity Perception	Primary school[1]	68	4,5471	,51624			2-1
	Middle School[2]	57	4,7251	,40763	2,838	,038	3-1
	High school[3]	121	4,6813	,36900			4-1
	University[4]	103	4,6961	,28838			
Life Quality	Primary school[1]	68	3,2797	,46623			
	Middle School[2]	57	3,2360	,54981	1,164	,332	
	High school[3]	121	3,1955	,48404			
	University[4]	103	3,3178	,53066			
Total		349					

When Table 6 is examined, a statistically significant difference was found between the general averages of the exercise health belief scale and the educational status variable of the individuals participating in the study (F= 5.179; p<0.05). As a result of the Tukey multiple analysis conducted to determine the difference, it was determined that the exercise health belief levels of secondary school and university graduates were higher than the participants with primary school education. It was determined that there was a significant difference between the general health sub-dimension of the exercise health belief scale and the educational status variable (F= 2.841; p<0.05). The difference was found that the participants with university education had higher general health levels than the participants with primary and secondary education, and the participants with high school education compared to the participants with secondary education.

It was determined that there was a significant difference between the severity perception sub-dimension of the exercise health belief scale and the educational status variable (F= 3.102; p<0.05). The difference was that the participants with university and secondary education level had higher levels of seriousness perception than those with primary school education. It was determined that there was a significant difference between the benefit perception sub-dimension of the exercise health belief scale and the educational status variable (F= 7.099; p<0.05). It was seen that the difference was higher for the participants with secondary education level than the participants with primary school and university education level. It was determined that there was a significant difference between the motivation sub-dimension and the educational status variable (F= 3.234; p<0.05). The difference was that the participants with high school education level had higher motivation levels than the participants with secondary education level, and the participants with secondary education level were higher than the participants with primary education level. It was determined that there was a significant difference between the perception of sensitivity sub-dimension and the variable of educational status (F= 2.838; p<0.05). It was determined that there was no statistically significant difference between the general mean scores of quality of life and the variable of educational status (p>0.05).

Table 7. *One-way analysis of variance results in terms of income status variable*

Variables	Income status	N	M	SS	F	
ESİMÖ	Low	57	4,0593	,39151	,804	,448
	Middle	248	4,1106	,35526		
	High	44	4,0537	,34293		
General Health	Low	57	3,7368	,56777	2,382	,094
	Middle	248	3,8760	,64654		
	High	44	3,6761	,81158		
Perception of Seriousness	Low	57	4,1526	,59765	,344	,709
	Middle	248	4,2174	,54820		
	High	44	4,2247	,50319		

Perception of Benefit	Low	57	3,3918	,58967	2,282	,104
	Middle	248	3,3434	,58105		
	High	44	3,1667	,37354		
Motivation	Low	57	4,2602	,59680	,278	,758
	Middle	248	4,2970	,56444		
	High	44	4,2348	,56527		
Sensitivity Perception	Low	57	4,5871	,48798	1,714	,182
	Middle	248	4,6747	,37705		
	High	44	4,7242	,31601		
Life Quality	Low	57	3,2047	,52309	1,364	,257
	Middle	248	3,2465	,49363		
	High	44	3,3653	,55025		
Total		349				

When Table 7 is examined, it has been determined that there is no significant difference between the exercise health belief levels and all sub-dimensions of the individuals participating in the research and the income status variable (p>0.05). It was determined that there was no statistical difference between the income status variable and the general average scores of quality of life (p>0.05).

4. Conclusion and Discussion

In this section, it is aimed to examine the exercise health belief and quality of life levels of individuals residing in Sakarya provinces in terms of many variables.

In our study, it was determined that there was no significant difference between the gender variable and exercise health belief levels and general quality of life scores. As a result of the literature review in terms of the relevant variable; Güllü and Çiftçi (2016) found no difference between the gender variable and the quality of life of individuals who do sports in gyms (Güllü & Çiftçi, 2016). In a study conducted on individuals who went to the gym in 2016, it was stated that the gender variable did not have a decisive difference on the quality of life. A similar conclusion was reached in a study by Avcı et al (2004) (Kadriye & Kayihan, 2004). In their study on adults in 2015, Measurecu et al. Found that there was no relationship between the sub-dimensions of the scale of quality of life (Ölçücü et al., 2015). These results show parallelism with the results obtained from our study.

In this study, there is no difference in terms of quality of life and exercise levels in terms of marital status variable (p>0.05). When the studies in the literature were examined, it was stated in the study conducted by Aktas (2021), that there was no difference between the marital status variable of the individuals participating in the research and the general average score of the exercise health belief scale (Aktas, 2021). In another study, it was determined that there was no significant relationship between marital status and quality of life as a result of data

obtained from individuals (Vatansever & Gezen, 2019). As a result of the research, Şekeroğlu (2018) stated that there is no relationship between marital status and general averages of quality of life (Şekeroğlu, 2018). The results are in line with our study findings.

According to our study, no significant difference was found between the variable of doing sports and exercise health belief ($p > 0.05$). There was no significant difference between the state of doing sports and the general averages of the quality of life scale ($p > 0.05$). It is thought that the variable of doing sports in the individuals within the scope of the research is not an important determining factor on exercise health belief and quality of life. There is a difference in the general health sub-parameter of the exercise health belief scale in terms of the variable of doing sports ($p < 0.05$). The difference was found to be in favor of the individuals who do sports. Regular exercise is thought to be an important determinant of general health levels. As a result of the data obtained from 350 individuals in 2019, Yılmaz (2019) determined that the frequency of doing sports has a significant effect on the general health levels of individuals (Yilmaz, 2019). This result supports our study.

As a result of the analysis, it was determined that there was no statistically significant difference between the monthly income level of the families of the students and their attitudes towards physical education and sports lessons. It has been observed that there are many studies supporting this result (Bastik & Gumusdag, 2022).

In this study, there is no difference in the exercise health belief levels of the age variable ($p > 0.05$). There was no difference between the age variable and the overall mean quality of life ($p < 0.05$). The difference was that the participants aged 28 and over had higher quality of life levels than the participants younger than themselves. It can be said that as the age of the individual increases, the quality of life increases. The age variable is considered to be an important determinant of quality of life levels. When the literature is examined, there is a difference between the quality of life and the age variable in Koltarla's (2008) study on hospital workers (Koltarla, 2008). In another study, there is a difference between the age variable and the quality of life (Kocoglu & Akin, 2009). Studies in the literature show parallelism with our findings.

In our working, there is no significant difference between the mean quality of life general score and the educational status variable ($p > 0.05$). There was no difference between exercise health belief general score averages and all sub-dimensions, and educational status variable ($p < 0.05$). It has been determined that the participants with university and secondary school education have higher exercise health belief levels than the participants with primary school education. In the study conducted by Koc (2020) on disabled individuals, no difference was found between quality of life and educational status (Koc, 2020).

Discuss the table 7, no difference was found between income status and exercise health belief levels ($p > 0.05$). It was found that there was no statistically significant difference in terms of quality of life and income status ($p > 0.05$).

It is thought that the psychological levels of primary school students are more imaginative than real life, which greatly affects the students. It is seen that the athletes, who are affected by the coldness of the cartoons they watch, approach sports branches in this way in their general lives (Ilhan & Gumusdag, 2022).

As a result, it has been determined that there is a relationship between the exercise health belief levels of the individuals within the scope of the research and gender, marital status, age, sports status and income status, while there is a relationship between the education status variable. While there was no significant determinant factor on quality of life and gender, marital status, educational status, sports status and income status, it was found that there was a relationship between the age variable.

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