

## **The Relationship of Physical Activity Level, Leisure Motivation and Quality of Life in Candidate Teachers**

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### **Abstract**

The inactivity, defined as the disease of the century, has reduced the quality of life by making a negative impact on the health of human beings and has led governments to take urgent measures on physical activity and scientists to make multidimensional studies on this issue. For this reason, in this study, it was aimed to examine the relationship between physical activity levels, leisure motivations and life quality of candidate teachers who will be a model in the future to the students. A total of 472 candidate teachers (258 male and 214 female) from Afyon Kocatepe University participated in the study. As a data collection tool, in addition to the "Leisure Motivation Scale" (LMS), developed by Pelletier et al. and adapted to Turkish by Mutlu (1991); "World Health Organization Quality of Life Assessment" (WHOQOL-BREF) and "International Physical Activity Evaluation Questionnaire Abbreviated Version" (IPAQ-Short Form) were used. In the analysis of the data, in addition to descriptive statistical methods for personal information, correlation and multiple linear regression analyzes were used. According to research findings, it was determined that 38.6% of the candidate teachers had a low level of physical activity and they had a high leisure motivation levels in the identified/introjected subscale. Moreover, the correlation results showed that there was a positive correlation between the quality of life and physical activity level and all sub-dimensions of leisure motivation. According to the results of multiple linear regression analysis, it was determined that the most important variable to predict the quality of life was the level of physical activity.

**Keywords:** Physical Activity, Leisure Time, Leisure Motivation, Quality of Life

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## Introduction

Physical activity, which is one of the most basic human functions, is seen as a necessary condition for the survival of human beings throughout history. However, with the effects of industrial developments on the point reached today, work life and leisure activities are increasingly inactive. Many health problems caused by inactivity have led to accelerated the studies in this area, especially in recent years. The World Health Organization (WHO) reports that on average, more than 2 million people lose their lives each year due to lack of action. Furthermore, it has been reported that regular and moderate physical activity for a healthy life can be achieved with physical activity of at least 5 days per week, preferably 30 minutes per day (WHO, 2013). It is known that physical and mental health problems caused by inactive life in every part of the world have reached a worrisome level (Korkmaz and Deniz, 2013). It is also known fact that with the physical activity, defined as the whole body movements involving energy expenditure on the basal level (Pitta et al., 2006), early death (Lahart et al., 2015), cardiovascular diseases (Myers et. al., 2015) certain types of cancer can be prevented (Schmid and Leitzmann, 2014). Many different are types depending on the intensity of physical activity. For example, basic mobility skills such as regular walking, dancing, long and brisk walking, cycling, various types of sports, and different structured exercises, active game and leisure activities are also considered physical activity (WHO, 2016). Especially, high level of physical activity during aging process will increase the quality of life (Günaydın, 2018).

The leisure time is called as the remaining time period after having performed the obligatory activities such as eating, sleeping, working (Karaküçük, 2008) and how it is used and consumed is an important factor affecting the quality of life. Using the leisure time effectively and efficiently provide many benefits such as increasing work efficiency, ensuring work order. It is also known that it enables people to escape from their routine work experience and survive in the way they want; thus it provides emerging of developing energy in a cultural sense in society (Nixon and Jewett, 1980). The leisure time that is increased especially by the post-industrialization mechanization was reported to be changed depending on the many factors such as cultural structure (Seo and Lee, 2015) social factors (Chang et al., 2014), economic factors (Kestila et al., 2015), family type, education level (Estaban-Cornejo et al., 2015) and gender (Mansfield et al., 2018). Leisure activities, which aim to meet personal and social needs in the individual, increase motivation. The concept of motivation can be defined as mental and emotional energy that directs the individual to a specific behavior (Altunay and Balcı, 2018). Like many other activities, motivation comes first among the elements that enable people to perform leisure activities (Binbaşıoğlu and Tuna, 2014). Motivation, which is called a kind of force that pushes individuals to do something to achieve a purpose (Harmer, 2001), is divided into two as intrinsic and extrinsic. Deci and Ryan (1985) define intrinsic motivation as the type of motivation that allows any action to perform simply because it is enjoyable or satisfying to the person; extrinsic motivation as the type of motivation in which one's behavior is controlled by external factors such as reward or punishment.

While the intrinsic motivations of individuals emerge as an escape in experience impulse (such as people who are relieved from the daily running of life), it emerges as a personal expertise dimension in result impulse (such as individuals who are only interested in increasing own development). Moreover, while the extrinsic motivations emerge as increasing the relationships in experience impulse (such as individuals who like to spend a good time with friends or family), it emerges as a winning in the resulting impulse (as individuals who want to win all the races they participate in) (Binbaşıoğlu and Tuna, 2014).

In recent studies it was seen that the spatial scales focused more on the psychological and sociological causes of participation in leisure activities (Chen and Pang, 2012, Sarol and Cimen, 2015; Gümüş and Özgül, 2017; Isik et al., 2015; Kara et al., 2014; Haworth and Veal, 2004). In the 21<sup>st</sup> century, variously influenced quality of life such as economic, social, health, political and environmental conditions, especially leisure motivation, manifests itself as a new marketing strategy, especially in the urban area. The life quality, a multi-dimensional concept, can change over time and is

directly related to the expectations of the individual. Because, in general terms, quality of life is determined by sociological, psychological, economic and cultural factors in order to define the individual well-being (Tekkanat, 2008). High-quality life is expressed as a healthy life that is adjusted according to basic requirements to produce, to relax, to enjoy, with appropriate time frames. One of the basic requirements of having a high quality of life is the level of physical activity.

Previous studies have shown that the more life quality increases, the level of physical activity increases (Ayhan et. al., 2018; Koçak et. al., 2017; Ayhan et. al., 2017). One of the important factors affecting physical activity is leisure motivation. In this context, the purpose of this study was to examine the relationship between physical activity levels, leisure motivations, and life quality of candidate teachers who will be a model in the future to the students. In particular, the absence of a study in the literature that examined the relationship between physical activity, leisure motivation, and quality of life components reveals the original value of the research.

## Material Method

**Participants:** 566 candidate teachers from Afyon Kocatepe University participated to the research as voluntarily. The 94 scales thought to be missing or inaccurate were not evaluated. Finally, a total of 472 ( $\bar{X}_{age}$ : 23.56±2.49) candidate teachers comprised of 258 males and 214 females were selected by the purposive sampling method.

**Data Collection Tools:** In addition to the "Demographic Information Form" which questioned the demographic characteristics of the candidate teachers in the research, "Leisure Motivation Scale", "World Health Organization Quality of Life Abbreviated Version" and "Short Form of International Physical Activity Questionnaire" were used.

**Leisure Motivation Scale (LMS)** developed by Pelletier et al. (1991) was used in order to determine leisure motivation. The original scale was composed of 28 items. The Turkish adaptation study of the scale was performed by Mutlu (2008). According to the factor analyses; six items were excluded from the Turkish version because factor loads of these six items which were written in the original scale were lower than 0.40. The Turkish version of the scale included a total of 22 items and five subscales. These subscales were motivation, to know and accomplish, experience stimulation, identified regulations, and external regulations. In our study; total internal consistency coefficient of the scale was 0.79. In addition, internal consistency coefficients of the subscales ranged between .71 and .87.

**The World Health Organization Quality of Life Scale (WHOQOL-BREF)**, developed by the World Health Organization (1998), consists of 23 items and 5 sub-dimensions. The Turkish validity and reliability of the scale was performed by Sevil (2015). The Turkish form of the scale supported 14 items and 3 sub-scales structure, and it was determined that the reliability coefficients for the "physical and environmental quality" subscale were 0.786, for the "social quality" sub-dimension was 0.826 and psychological quality subscale was 0.811. The scale was 5 Likert-type scale; "1 = Very Poor, 5 = Very Good". The high score on the scale indicates the high quality of life. For this reason, the quality of life can be evaluated on the total score.

**International Physical Activity Assessment Questionnaire-Short Form:** The International Physical Activity Questionnaire (IPAQ) short form developed by Craig et al., (2003) and Turkish validity and reliability of the scale was performed by Öztürk (2005). In IPAQ, physical activity is measured at least once every 10 minutes. IPAQ questions the duration of severe physical activity (such as football, basketball, aerobics, fast bike turning, weight lifting, cargo handling etc.), moderate physical activity time (light load handling, cycling at normal speed, folk dancing, ), walking and one-day sitting time of the individuals within the last 7 days in minutes. The total physical activity score (MET-minute /week) is calculated by converting severe activity, moderate activity, and walking times

to MET, which corresponds to the basal metabolic rate. The following formula was used to calculate the MET value:

$$\text{Walking score (MET- minute/week)} = 3.3 * \text{walking time} * \text{walking day}$$

$$\text{Medium intensity activity score (MET- minute/week)} = 4.0 * \text{medium intensity activity duration} * \text{medium intensity activity day}$$

$$\text{Severe activity score (MET- minute/week)} = 8.0 * \text{severe activity duration} * \text{severe activity day}$$

Total Physical Activity Score (MET- minute/week) = Walking + Moderate activity + Severe activity scores.

According to total physical activity score, participants are classified as "Low" if the physical activity levels are below 600 MET- minute/week, "Medium" if 600-3000 MET- minute/week and "High" if above 3000 MET- minute/week (Craig et al., 2003).

### Collection of Data:

"Demographic Information Form", "Leisure Motivation Scale", "Quality of Life Scale", and "International Physical Activity Questionnaire" were applied in the academic year of 2015-2016 to the volunteers who were studying at Afyon Kocatepe University, Faculty of Education, Faculty of Arts and Sciences, Faculty of Fine Arts and School of Physical Education and Sports and the candidate teachers who have no obstacles in their appointment as a teacher (who has a Pedagogical formation education). Prior to the application of the scales, the candidate teachers were informed about the data collection tools and the importance of responding sincerely to the questions was explained. The scales took an average of 9 minutes to complete.

### Data Analysis:

In the analysis of the obtained data; besides the descriptive statistical methods for personal information, person correlation coefficient was used to determine the relationship between the physical activity level, quality of life and leisure motivation of the research group. Multiple Linear Regression analysis was used to explain the relationship between variables. Significance were set at  $p < 0.05$  and  $p < 0.01$ .

## Results

**Table 1.** Quality of Life and Leisure Motivation Levels of Candidate Teachers

Variables	$\bar{x}$	S.D
Quality of Life	3.58	0.57
Leisure Motivation	Amotivation	2.34
	To know and accomplish	3.35
	To experience stimulation	3.46
	Identified/introjected	3.49
	External regulation	3.42

When the analysis results were examined, it was determined that the average score of life quality was 4.05. In addition, when the subscales of the leisure motivation scale were examined, it was observed that the average of the highest score was in the know and accomplish ( $\bar{x}=3,86$ ), followed by

Identified/introjected ( $\bar{x}$ = 3.06), experience stimulation ( $\bar{x}$ = 2.98), external regulation ( $\bar{x}$ =2.94), and amotivation sub-dimensions ( $\bar{x}$ = 2.74).

**Table 2.** Level of Physical Activity of Candidate Teachers

Physical Activity Level	F	%
Low (<600 METmin/week)	182	38.6
Moderate (600-3000 METmin/week)	170	36.0
Hihg (>3000 METmin/week)	120	25.4
Total	472	100.0

When the results of the participants' physical activity levels were examined, it was observed that 38.6% of them had a high level of physical activity, 36% of them had a medium level, and 25.4% had a high level of physical activity.

**Table 3.** The Relationship of Candidate Teachers' Quality of Life, Physical Activity, and Leisure Motivation Levels

Scales/Subscales		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
<b>Physical Activity Level (1)</b>											
<b>Quality of Life</b>	Total Quality of Life (2)	r	.572**								
		p	.000								
	Physical and Environmental Quality (3)	r	.352**	.512**							
		p	.000	.000							
	Social Quality (4)	r	.378**	.478**	.138**						
	p	.000	.000	.003							
Psychological quality (5)	r	.421**	.490**	.230**	.140**						
	p	.000	.000	.000	.002						
<b>Leisure Motivation</b>	Amotivation (6)	r	.279**	.361**	.154**	.274**	.183**				
		p	.000	.000	.001	.000	.000				
	To know and accomplish (7)	r	.353**	.409**	.242**	.198**	.158**	.496**			
		p	.000	.000	.000	.000	.001	.000			
	To experience stimulation (8)	r	.211**	.273**	.181**	.169**	.134**	.357**	.352**		
		p	.000	.000	.000	.000	.004	.000	.000		
	Identified/introjected (9)	r	.339**	.371**	.234**	.160**	.158**	.395**	.503**	.295**	
		p	.000	.000	.000	.000	.001	.000	.000	.000	
	External regulation (10)	r	.309**	.382**	.198**	.172**	.174**	.391**	.434**	.355**	.353**
		p	.000	.000	.000	.000	.000	.000	.000	.000	.000

\*p<0,05

When the correlation analysis results related to Quality of Life were examined, it was determined that there was a low and moderate positive correlation between the quality of life and physical activity level and the subscales of leisure motivation scale (p <0,05). Therefore, it is possible to say that the increase in the level of physical activity and/or leisure motivation will increase the quality of life.

**Table 4.** The results of multiple regression analysis related to the prediction of life quality by the subscales of physical activity level and leisure motivation

Variables	$\beta$	Standard Error $_{\beta}$	Standardized $\beta$ Coefficient	t
Constant	.946	.158	-	6.018**
Physical Activity Level (PA)	.330	.030	.437	11.108**
Amotivation (A)	.085	.038	.095	2.197*
To know and accomplish (KA)	.102	.048	.098	2.117*
To experience stimulation (ES)	.034	.030	.045	1.0131
Identified/introjected (II)	.065	.035	.079	1.844
External regulation (ER)	.105	.036	.123	2.938**
	R=0.643	R <sup>2</sup> =0.413	F=54.558**	

n=472; \*p<0.05; \*\*p<0.01.

When the parameters related to the regression model were examined, according to the standardized regression coefficient ( $\beta$ ), the order of importance of the predictive variables on the quality of life was; Level of Physical Activity, External Regulation, To know and accomplish, Amotivation, Identified/introjected, To experience stimulation. When the results of the t-test on the significance of the regression coefficients were examined, it was observed that only the experience stimulation and the Identified/introjected sub-dimensions were not significant predictors of quality of life. Other variables had a significant effect on the quality of life.

The regression equation (mathematical model) related to the quality of life according to the results of regression analysis were given below.

$$\text{The quality of Life} = 0.946 + (0.330 \times \text{PA}) + (0.85 \times \text{A}) + (0.102 \times \text{KA}) + (0.034 \times \text{ES}) + (0.65 \times \text{II}) + (0.105 \times \text{ER})$$

### Discussion and Conclusion

In this study which was aimed to investigate the relationship between the quality of life, physical activity levels and leisure motivation of the candidate teachers, it was determined that 38.6% of the teachers had low physical activity levels. The most important factor in the formation of this result was thought as the existence of a difficult exam, which the candidate teachers have to accomplish in order to be appointed, and the serious working hours spent to accomplish it. As a matter of fact, researches on university students reported that the level of physical activity was affected not only by factors such as the education department, gender but also by class ratings, and that the students in the last class had lower levels of physical activity than the other students (Oguz et al., 2018; Kurtipek and Sonmezoglu, 2018; Kyoutova and Sigmund, 2016; Bozkuş et al., 2014; Aslan et al., 2007; Zhao et al., 2007). Güven and Öncü (2006), who emphasize the family factor in participating to the physical activity indicated that the participation of individuals in physical activity from a young age was largely related to the perspective of the parents' viewpoints. The approach of the parents in this regard was the most determining factor. While some parents are aware of the positive effect of physical activity on the development and socialization of people and support their children's participation in these activities, most families recently have not particularly concerned about their children's participation in these activities. Especially in recent years, social media usage, which has become widespread due to technological developments, has blocked the individuals on smart phones and computers, and the frequent changes in the education system and imposition of the examination system are the biggest obstacles to physical activity. As another reason for the low physical activity of candidate teachers, the inadequacy of physical activity areas can be argued. It is known that the

diversity of physical activity areas has a significant effect on the participation of people and the time they have spent in these areas (Işıköz et al., 2018; Honca and Çetinkaya, 2017; Gümüş and Özgül, 2017).

According to another finding obtained from the findings of the research, the mean scores of leisure motivation levels were high in the Identified/introjected ( $\bar{x}=3,49$ ) and experience stimulation ( $\bar{x}=3,46$ ) subscales. On the other hand, the lowest mean scores was in the sub-dimension of amotivation ( $\bar{x} = 2.34$ ). According to these results, it can be said that the most important factors that motivate the candidate teachers to leisure activities were subdimensions of Identified/introjected and experience stimulation. It was believed that the city and the campus which had limited opportunities in the recreational sense were the factors affecting the low scores related to motivating the candidate teachers to leisure activities. As a matter of fact, Torkildsen (2012) stated that the most important factor motivating the leisure time activities of the individuals was the range of recreational opportunities. Chan et al. (2013) noted that leisure motivation influences leisure time participation and relationships more than leisure time satisfaction, while Kim et al. (2015) indicate that individuals are directly related to the motivation levels of their chosen activities. On the other hand, while Clark and Stankey (1979) stated that the unique requirement of providing maximum satisfaction with the activities they participate in leisure time was the creation of a sense of winning something, Ragheb and Tate (1993) emphasizes that having an advance knowledge of the details of the leisure activities before they participated increases the motivation and satisfaction levels of the individuals. It should not be forgotten that the candidates who will serve in different regions of the country with the central appointment system may have much more limited recreational opportunities in the regions they are assigned to. In this respect, it is important for giving lessons to the candidate teachers such as time management, leisure education and creative thinking style in terms of providing different recreation opportunities to their students in future school.

In the correlation analysis, Pearson correlation coefficients representing the relationship between quality of life, physical activity level, and leisure motivation sub-dimensions were calculated. The results of the analysis showed that the dimension of physical activity level ( $r = 0.572$ ) had the strongest correlation with quality of life. When the correlation coefficients between the other variables and quality of life were examined, it was determined that the dimensions of amotivation ( $r = 0,279$ ), To know and accomplish ( $r = 0,353$ ), To experience stimulation ( $r = 0,211$ ), Identified/introjected ( $r = 0,339$ ), and external regulation ( $r = 0,309$ ) statistically significant ( $p < 0.01$ ) and a positive relationships. It is, therefore, possible to say that an increase in the level of physical activity and/or subscales related to leisure motivation will increase the quality of life.

The F-score of the regression model which formed in order to demonstrate the effect of dimensions and physical activity level on leisure quality that constitutes leisure motivation was 54,558 and the level of significance was  $p < 0,01$ . All of the dimensions explain the quality of life as 41.3%. According to the analysis results, the level of physical activity ( $\beta = 0,330$ ,  $p < 0,01$ ) was the independent variable that has the strongest influence on the quality of life. Although some research has shown that a good quality of life does not necessarily lead to positive living conditions (Tesfazghi et al., 2010; McCrea et al., 2011), most research suggests that psychological positive attitudes towards physical activity and recreational activities and subjective well-being had a positive results on life quality (Kırtepe, Çetinkaya, and Uğurlu, 2018; Cini et al., 2013; Diener 2000; Pi et al., 2014). Candidates teachers with low quality of life for various reasons should adopt a physically active life model and create recreational opportunities for themselves will contribute to their quality of life. Teachers who are a model figure will be able to serve their students better with the high quality of life. For this reason, improving all kinds of infrastructure activities affecting the quality of life of teachers who will train the new generations of the society is important for educating healthy generations.

According to the results of this study, it is possible to increase the number of on-campus recreational areas and activities where candidate teachers can evaluate their leisure time, thereby increasing the adoption of an active lifestyle and quality of life. It is possible to encourage the students to direct their students accordingly. Universities can organize a variety of recreational activities in

cooperation with other public institutions, non-governmental organizations and private businesses in order to increase their leisure motivation. It is recommended that policy-makers, who are obliged to increase the quality of life of the individual, should develop policies for the leisure of the individual, taking into account these consequences. Examining the leisure motivation in our country culture and the concepts related to it (such as the quality of life, leisure time, leisure time physical activity constraints, coping with leisure time obstacles) in different groups of samples with different qualifications may provide generalizable results.

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