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To cite this article:

Temel, A. S. & Tükel, Y. (2021). Examining the health outcomes and happiness levels that result from engaging in physical recreation: A study on university students. *International Journal of Research in Education and Science (IJRES)*, 7(2), 545-561. <https://doi.org/10.46328/ijres.2244>

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Examining the Health Outcomes and Happiness Levels that Result from Engaging in Physical Recreation: A Study on University Students

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Article Info

Article History

Received:

14 September 2020

Accepted:

23 March 2021

Keywords

Recreation

Happiness

Health outcomes

University students

Income

Abstract

This study aims to examine the relationship between university students' perceived health outcomes and happiness levels that result from engaging in recreational activities. The study evaluates this relationship using certain variables. The data were gathered from 652 students from various universities in Turkey. Appropriate sampling methods were used. The initial findings indicate that the highest score was obtained in the „improvement condition“ of health outcomes among university students. It shows that they are more likely to engage with physical activities for health purposes. Furthermore, all sub-dimensions of PHORS and the happiness scale significantly differed according to income and active-passive participation variables. This study further demonstrates a significant positive relationship between perceived health outcomes sub-scales and happiness among the students.

Introduction

It is widely accepted that practicing exercises regularly greatly improves the health of people and provides many benefits to the human body (Isabelle et al., 2002). Thanks to the advantages and conveniences that technology has provided to individuals, there has been a serious decrease in physical work (Farhud, 2015; Roberts, 2018). This situation has caused individuals to spend more time for themselves (Gürbüz and Henderson, 2014) and has encouraged them to engage in more activities in their free time (Sharaievska, 2017).

Participating in physical activities regularly is associated with enhanced physical condition and health improvement (Isabelle et al., 2002). However, in large cities with limited opportunities to access physical activity, this has led people to remain inactive compared to rural areas (Demirel and Harmandar, 2009). Research has highlighted numerous benefits of participating in recreation activities (Hammer and Sauter, 2013); using recreation time efficiently through physical activities provides many physiological, mental and social benefits to individuals. Deneau et al. (2019) and Isenstark and Ebata (2019) stated that the most obvious benefit of participating in these types of activities is the many positive effects it can have on various aspects of life. The main benefits are on the human body; slowing of the ageing process, improvement of physical appearance, and increasing quality of life (Bangsbo et al., 2019). Further, evidence indicates that participation in physical activity increases an individual's socialisation and prevents them from involving in risky behaviour (Edwards & Casper, 2012). In addition to the many positive health effects of recreational-based physical activities,

government and private organisations also provide subsidies to ensure that individuals continuously benefit from such activities (Nicholsen et al. 2010; Hoekstra et al. 2008).

It is in the nature of people to move constantly and be active, which often encourages them to participate in such activities (Karaküçük and Akgül, 2016). People can turn these types of activities into a lifestyle and use them in their daily lives to achieve better health outcomes (Elkowitz, 1986). Recreation is seen as a subjective experience for every individual (Cockerill, 1995), which may also affect people's happiness level, which is seen as the ultimate goal of life (Alexandrova, 2005). Happiness has a comprehensive meaning and intense relationship with many subjects, such as personality, mental health status, educational level, income level, marital status, physical competence and lifestyle (Bailey and Fernando, 2012). Physical activity strengthens individuals' social relationships in the community and improves the quality of life and this leads to making positive contributions to the person's level of happiness (Merkas, 2011).

Recreation activities are varied and extensive, so can be easily attended as they do not require any special planning and preparation, they can also have cultural or social content (Lathia et al., 2017). Such activities differ according to the individual's needs, social environment, personality structure, skills and abilities (Tekin, 2003). Physical activity is designed to bring enjoyment to people and can be done either very actively and leisurely. Sport is another physical activity, one which involves competition. Walking, climbing stairs, and running are the basic activities that individuals perform in their daily lives. However, sports activities are carried out in an organised structure with a certain framework that includes rules and goals (Fişek, 1998). Therefore, the concepts of physical activity within recreation and sports are quite different from each other according to their purpose. Driver (1998) sees physical activities as a means of evaluating pleasure, health, aesthetics, entertainment, games and leisure, as well as a phenomenon that regulates relationships between individuals and communities. Elkowitz (1986) deal with physical activity as a part of daily life for a healthy lifestyle. A growing body of literature provides evidence that recreational activities bring psychological and physical benefits to the individual throughout their life (Gould et al., 2005; Lee et al., 2011). In our study, the following research questions will be addressed. First, how do university students' perceived health outcomes and happiness levels differ according to certain variables? (gender, age, income level, type of participant). Second, what is the degree of impact of physical activity participation on individuals' health outcomes and happiness?

Recreation, Health Outcomes

In today's society, the meaning of life has differed over time. Formerly, the most important purpose of life was the power to live, but later, it was replaced by social status, economy and lifestyle. These factors paved the way for the individual to increase their living standard, to get more satisfaction from life, to be happier and healthier (Zorba, 2015). Thus, individuals started to maintain an active lifestyle by integrating physical activities into their daily routines. And, this desire to be active has directed individuals to recreational activities (Colwell, 2012). Recreation involves voluntary-based activities (Dinç, 2003) and has a diverse and extensive meaning that often encompasses various kinds of activities which can be performed actively, passively, individually or as a group (Ayar, 2017).

Two theoretical models determine the reasons for individuals to participate in recreational activities. First, the health belief model suggests that practising exercises as health behaviours reduces the negative impact of life and improves life standard (Rosenstock, 1988). However, the cognitive behavioural model focuses on planned behaviours, self-efficacy and leisure theory, which have a direct link to physical activities (Ajzen, 1988). Both models emphasise the important outcomes of participating in recreational activities. From the physical point of view, activities afford many positive results on human musculoskeletal, cardiovascular, respiratory and endocrine systems (Physical Activity and Health, 1996). It helps individuals extend life expectancy (Stewart et al., 2017). Driver (1997) stresses that physical health comes first among all the benefits of recreational activities., later adding that recreation activities have a psychological value that corresponds to a person's recreation experience (Driver,1998; Moore and Driver, 2005; Sullivan, 2006). Further, it has been found that people who anticipated activities have lower stress levels, less boredom, a better mood and more psychological resistance compared to inactive ones (Zawadzki et al., 2013). Previously, especially in developed countries, the main causes of death were mainly related to natural disasters, wars, and various kinds of famines. Today, it has changed into sudden heart attacks, diabetes and a variety of chronic diseases due to sedentary lifestyles (Nesse and Williams, 1996). Sedentary lifestyles seem to be a gradually increasing common public issue in many nations and are related to a different range of chronic health problems. Biswas et al. (2015) found that sitting at home without any movement was directly linked to increased cardiovascular disease, diabetes and different types of cancer. Similarly, on the same subject, Parry et al. (2013) stated that a larger amount of the workforce gathered in offices created many inactive individuals (Parry et al., 2013).

Recreational activities are perceived as a tool to obtain positive health outcomes (Micheal et al. 2019). A framework of the perceived health outcomes in recreation was formed by Driver (1998). He grouped PHORS under three sub-dimensions in his leisure typologies; improvement condition, the realisation of psychological experience, and prevention of a worse situation. Thus, he made the benefits of health outcomes more functional. According to Driver (1997), the first dimension of health outcomes (improving the situation) is the dimension of changing the previous state in the desired direction. However, he stated that this dimension is insufficient to maintain the desired state or eliminate the undesired situation. Thus, he stated that the concept of benefit should be expanded by including the "preventing a worse situation" dimension (keeping fit, maintaining physical health or not getting sick) and the realisation of a psychological experience dimension (Driver, 1998; Sullivan, 2006).

Physical activities are the key to achieving successful social relationships and have a positive impact on the psychological states of individuals and health outcomes obtained from activities (Elçi et al., 2019). It also gives individuals a sense of joy from life (improvement of condition). People's health problems tend to subside as a result of participating in physical activities, slowing deterioration over time (prevention of a worse situation) (Yurcu, 2017). Individuals who get rid of the situations that disturb them may develop good friendships and have a healthy life thanks to these activities (realising psychological experience) (Driver & Bruns, 1999). This situation provides an outcome for individuals to gain more control over their lives when dealing with hereditary or acquired diseases (Nimrod & Hutchinson, 2012). Further, it improves psychosocial wellbeing (Vella et al., 2013) and re-integration and adaptability of individuals within the community (Hawkins et al., 2015).

Happiness

Many leisure experts find that roughly 50% of a person's happiness is determined by their genetics, and 10% is determined by their psycho-social state (Lyubomirsky, 2007). The remaining 40% is achieved through physical activities. Happiness can be defined as a positive component of cognitive acquisition, usually a subjective state of mind shaped by satisfaction and pleasure that reflects on individual wellbeing as a whole (Veenhoven, 2010). Happiness is one of the most fundamental goals of life that need to be achieved as a part of basic human needs (Diener & Lucas, 2002). Besides its positive effects, there is a strong relationship between physical activity and happiness (Early Hills and Argyle, 1998). Individuals who engage in physical activities as part of social life may have higher levels of subjective happiness (Shea et al., 2016). To support this, recent studies have shown that physical activity reduces depression in human health (Ströhle, 2009) and increases the level of happiness and quality of life (Baker and Palmer, 2006; Iwasaki, 2006). And it helps an individual to create a positive self-image and self-esteem that will reflect a person's personality directly (Diben et al., 2017). Overall, activities aid individuals to recover faster from negative situations that they will come across in their life and help them to manage bad experiences successfully to be a healthy person (Kleiber et al., 2002; Janke et al., 2008).

Method

Research Model

This research was carried out with appropriate sampling methods. It allows the researcher to infer a general judgement about a population based on results from a subset of the population without having to investigate each individual (Cohen & Manion, 1996).

Measurement Instruments

Perceived Health Outcomes of Recreation Scale (PHORS)

In the study, the Perceived Health Outcomes of Recreation Scale was used to measure and evaluate the behaviours of students. The PHORS scale was developed by Gomez et al. (2016) to reveal what are the health outcomes of individuals in recreational activities. The scale was adapted to Turkish by Yerlisu Lapa et al. (2017). PHORS consists of 16 items and three sub-dimensions (realisation of psychological experience, prevention of a condition, improvement of a condition). All PHORS items were measured on a 7-point, Likert-type scale where 1 = never like me, 2 = very much not like me, 3 = moderately not like me, 4 = somewhat not like me, 5 = somewhat like me, 6 = moderately like me, and 7 = very much like me. In the adaptation for the study, internal consistency coefficients are calculated for the sub-dimensions as 0.89, 0.89 and 0.81 consecutively. The internal consistency coefficient calculated for the realisation of psychological experience was 0.548. prevention of a condition, 0.562 and improvement of a condition was 0.582.

Oxford Happiness Scale (OHS)

To assess students' level of happiness, the short form Oxford Happiness Scale (OHS) was used. This scale was

developed by Hills and Argyle (2002) and adapted into Turkish by Doğan and Çötök (2006). The short form of (OHS) has been developed to be of the quintet rating type and having seven items and it has been demonstrated that the scale supports the single-factor model. The internal consistency coefficient for this study was 0.886.

Study Group

The study group of this study consists of 652 university students (68.4% female) and (31.6% male) who study in two selected universities in Turkey; 51.02% (n=334) of the students are aged 17-20, 42.3% (n=276) aged 21-24 and 6.4% (n=142) of students were 25 years old and above. The most popular activities participated by students were mainly climbing, jogging and trekking. As the demographics information suggests, a relatively high proportion of the participants have an above-average income status (n=481, 73.8%).

Statistical Analysis of Data

Percentage and frequency descriptive statistics methods were used to determine the distributions of the participants' personal information. Also, skew and flatness values were checked to determine whether the data showed normal distribution. As a result of the examination, it was seen that the data had a normal distribution. According to Jondeau and Rockinger (2003), when the skew and flatness coefficients of the sub-dimensions vary between +3 and -3, these sub-dimensions have suitable conditions for non-parametric distribution parameters. In addition to descriptive statistical models, independent t-test, ANOVA, Tukey HSD multiple comparison tests, and correlation test analysis methods were used to determine the relationship between happiness level and perceived health outcomes ($\alpha = 0.05$).

Findings

As shown in Table 1, the highest average perceived health outcomes scores were obtained in the improvement of a condition's sub-scales (5.45). On the other hand, students who participated in recreational activities experienced an average level of happiness (22.80).

Table 1. Distribution Scores of Oxford Happiness Scale and Perceived Health Outcomes in Recreation

Scale	Item numbers	N	Avg.	Ss	Skewness	Flatness
Oxford Happiness Scale	7	652	22.80	4.67	-0.072	-0.436
Realisation of Psychological Experience	7	652	5.00	1.37	0.694	0.407
Prevention of a Worse Condition	5	652	5.05	1.50	-0.671	0.119
Improvement of a Condition	4	652	5.45	1.47	-1.053	0.830

As seen in Table 2, more than half of participants are female, 68.4% (n=446) and 31.5% (n=206) are male; 51.2% participants in the age range 17-20, 42.3% are aged 21-24 and 6.4% represent 25 and above). Students are from various university departments and engage in recreation activities in their free time. Within those

students, 37.6% of them participate in recreational activities actively whereas 62.4% of students participate in the activities passively. That is, in some way, the majority of the students joined in sport recreational activities either as a spectator or participant. A large proportion of university students (73.8%) have a moderate-income level (n=481), this shows that students have the financial strength and enough budget to participate in these activities. However, their preference to participate in the physical activities in passive form should also be explored for their reasons separately.

Table 2. Demographics Information of Participants

Variables		f	%
Gender	Male	206	31.6
	Female	446	68.4
	Total	652	100.0
Age	17-20 Age	334	51,2
	21-24 Age	276	42.3
	25 and above	42	6.4
	Total	652	100.0
Participation in Sport Recreational Activities	Active	245	37.6
	Passive	407	62.4
	Total	652	100.0
Income Status	Bad	83	12.7
	Average	481	73.8
	Good	88	13.5
	Total	652	100.0

According to t-test result, no significant differences were found in the common demographic, age: $t(0.602) =$, $p= 0.547$ in OHS, $t(-0.629) =$, $p= 0.529$ in realisation of psychological experience, $t(-1.744) =$, $p= 0.082$ in the prevention of a worse condition, $t(-0.840) =$, $p= 0.401$ in Improvement of a condition ($p>0.05$). Based on these results, it was seen that age was not a determining variable among university students (see Table 3).

Table 3. Distribution of Scale Scores by Gender Variable

Scale (Sub-dimension)	Variables	Avg.	Ss	t	p
Oxford Happiness Scale	Male	22.96	4.825	0.602	0.547
	Female	22.72	4.606		
Realisation of psychological experience	Male	4.95	1.512	-0.529	
	Female	5.02	1.300		
Prevention of a worse condition	Male	4.90	1.654	-1.744	0.082
	Female	5.12	1.420		
Improvement of a condition	Male	5.38	1.601	0.840	0.401
	Female	5.49	1.413		

When the Table 4 were analysed, significant statistical difference was found between sub-dimensions of

PHORS ($p < 0.05$) according to active or passive participation in physical recreation activities. As follows; realisation of psychological experience ($t(6.108)$, $p = 0.000$), prevention of a worse condition ($t(3.530)$, $p = 0.000$) and improvement of a condition ($t(3.645)$, $p = 0.000$), than the participants who passively participate in these activities. Furthermore, participants who actively participate in recreation activities have higher scores in the Oxford Happiness Scale ($t(3.154)$, $p = 0.002$).

Table 4. Distribution Scores of Participation in Sports and Recreational Activities

Scale (Sub-dimension)	Variables	Avg.	Ss	t	p
Oxford Happiness Scale	Active	23.54	4.643	3.154	0.002
	Passive	22.35	4.641		
Realisation of Psychological Experience	Active	5.41	1.354	6.108	0.000
	Passive	4.75	1.320		
Prevention of a Worse Condition	Active	5.32	1.476	3.530	0.000
	Passive	4.89	1.494		
Improvement of a Condition	Active	5.72	1.372	3.645	0.000
	Passive	5.29	1.511		

In the ANOVA test, the age variable was hypothesised to mediate the relationship between Oxford Happiness Scale and perceived health outcome scale and its sub-dimensions in the participation of recreation activities (Table 5). The study result indicated that there was only significant difference in the realisation of psychological experience ($p < 0.05$) and this difference mainly occurred due to the university students in the age group of 17-20 in the general age group as a result of HSD multiple comparison tests performed.

Table 5. ANOVA Test Results by Age of Participants

Scale	Variables	Avg.	Ss	F	p	Difference Tukey
Oxford Happiness Scale	17-20	22.62	4.588	0.506	0.603	
	21-24	22.96	4.722			
	25 and above	23.14	5.072			
Realisation of Psychological Experience	17-20	5.11	1.324	3.499	0.031	3-1*
	21-24	4.94	1.406			
	25 and above	4.56	1.406			
Prevention of a Worse Condition	17-20	5.13	1.416	0.883	0.414	
	21-24	4.99	1.583			
	25 and above	4.90	1.593			
Improvement of a Condition	17-20	5.53	1.379	0.988	0.373	
	21-24	5.37	1.589			
	25 and above	5.38	1.423			

According to Table 6, ANOVA variance test modelling demonstrated that there were significant differences between happiness levels and all sub-dimension of PHORS ($p < 0.05$) in income variables. This significant difference was because university students with low-income levels were included in the sample group.

Respectively, the scores are for Oxford Happiness Scale (21.57%), realisation of psychological experience (5.08%), prevention of a condition (4.98%), improvement of a condition (5.41%). All results indicate significant difference between those scales according to this income variable. These results were obtained via Tukey HSD multiple comparison tests.

Table 6. ANOVA Test Results Based on Participants' Income Levels

Scale	Variables	Avg.	Ss	F	p	Difference Tukey
Oxford Happiness Scale	Bad	21.57	5.428	7.020	0.001	2-1*
	Average	22.75	4.533			3-1*
	Good	24.21	4.342			
Realisation of Psychological Experience	Bad	5.08	1.577	5.365	0.005	3-2*
	Average	4.91	1.295			
	Good	5.42	1.487			
Prevention of A Condition	Bad	4.98	1.769	4.289	0.014	3-1*
	Average	4.99	1.446			
	Good	5.49	1.464			
Improvement of Condition	Bad	5.41	1.729	4.425	0.012	3-1*
	Average	5.38	1.422			
	Good	5.89	1.442			

Pearson correlation analysis was used to examine the relationships between scores obtained from the Oxford Happiness Scale and Perceived Health Outcomes scale of sub-dimensions. As shown in Table 7, happiness scale positively correlated with sub-dimensions of PHORS 1 ($r = 0.295$; $p < 0.00$), PHORS 1 ($r = 0.278$ $p < 0.00$), PHORS 1 ($r = 0.281$; $p < 0.00$). Specially, university students who frequently participated in recreational activities achieved higher health outcomes and happiness than t those who did not participate (see Table 7).

Table 7. Correlation Test Results for the Analysis of the between PHORS and OHS

Scale		Ohs	Phors 1	Phors 2	Phors 3
OHS	R	1			
	p				
	N	652			
PHORS 1	R	0.295**	1		
	p	0.000			
	N	652	652		
PHORS 1	R	0.278**	0.639**	1	
	p	0.000	0.000		
	N	652	652	652	
PHORS 1	R	0.281**	0.696**	0.824**	1
	p	0.000	0.000	0.000	
	N	652	652	652	652

***p<0.01

Discussion

The purpose of this study was to examine individuals' perceived health outcomes and happiness level as a result of participating in physical activities in their free time. A total 652 university students who studied at the two major universities in Turkey were included in this study. Initial findings showed that individuals have higher perception level on the improvement condition (IMPV) sub-scale as a result of participating in recreational activities (Table 1). Our findings contribute to Driver et al.'s (1991) study that focuses on the meaning of improvement of condition that is beneficial for an individual health condition as well as community and environment. Our findings deliver practical evidence that engaging with such activities not only improves health status, but also physiological and psychological conditions of individuals in the sample of university students. In the relevant literature, our research finding is consistent with other studies carried out by many researchers (Bammel and Burrus-Bammel, 1996; Driver, 1997; Wu, 2007). Other findings of our study point out that the individuals who participated in recreational activity have an average level of happiness. This result is similar to a study performed by Moor, Boomsma, and de Geus (2007) which found that individuals who exercise during leisure have higher levels of happiness compared to those who do not practise exercise. According to these results, it could be foreseen that those students who participated in activities tend to develop positive feelings.

The concept of gender begins to gain meaning as a social category for individuals. Therefore, it can be effective in guiding behaviours and activity preferences (Wearing, 1998). In this study, there is no significant difference found in the health outcomes and happiness level scores of the participants according to the „gender“ variable (Table 3). Studies conducted by Hampton and Marshall, (2000); Huebner, (2004); Chow, (2005); Gomes, (2016) and Elçi et al. (2019) found a similar result. In other studies, unlike our result, Hill and Gomes (2019) found that females had significantly higher scores on PSYC (realisation of a psychological experience) than males and on PREV (prevention of a worse condition) males had significantly higher scores than females. In terms of OHS scale, our results are not significant according to the age variable. Similarly, in the studies of Fugl-Meyer (2002) and Katja and Paivi (2009), did not find and significant differences between happiness and gender variable.

Based on the research and discussions in the literature, it was suggested that students who actively involve recreational activities have higher perceived health outcomes compared to passive participants as a result of T-test values (Table 4). This result showed that students have a positive tendency towards active participation in physical activities. According to Yeow (2016), active and passive participants differ significantly. Active participation in these activities has broader and greater benefits on health compared with passive participation by far. In the literature, similar evidence indicates that active participation contributes to individuals' social and psychological health level, positively (Buchanan, 1985; Iwasaki et al., 2001). Therefore, our study suggests that encouraging people to implement activities in their daily routine should be a priority for everyone as well as public health professionals (Rosenberg et al., 2009). In this part of the article, we also tried to focus on the relationship of an active participant in the line of happiness. The results revealed that there was a significant difference between active-passive participation variables; this showed that active participants have a higher level of happiness than passive participants. Some studies in the literature point to the similarity and consistency with

our result that active participation in recreational activities positively affects the level of happiness and increases the level of social interaction within the community (Freudenberg and Arlinghaus, 2009). Similarly, Diener et al. (2012) suggest that there is a positive correlation between physical activity and happiness.

One of the other findings obtained in the study is that students' age variables did not differ in the sub-scales of prevention of a worse condition, improvement conditions and happiness scale scores in the study. However, the realisation of psychological experience dimension scores differ significantly (Table 5) and this is occurred due to the students within the 17-20 age group. Individuals may tend to participate in activities for different purposes in certain periods of their life span to feel psychologically different and comfortable. In the related literature, many studies suggest that age is a key variable that determines the type and intensity of activity (Schuett, 1993; Havitz et al., 2013). Especially, people in the younger age group have expectations from physical activities such as fun, learning new things, gaining social status and excitement; however, older people may be interested in physical activities for health purposes, for instance, to protect general body health, reducing the ageing process, to be mentally vigorous (Barber et al., 1999), and more, importantly, to minimise the feeling of loneliness (Prieto-Flores et al., 2011) that emerges at later ages (Toepoel, 2012; Broughton et al., 2017). In our findings, there are no significant differences found in the happiness scale among the students ($p>0.05$) according to age variables. It was determined that the highest average for the age variable of the participants was in the 25 age and above, whereas the lowest was in the 17-20 age group. Similar to studies conducted by Barreto (2014) and Lera-López et al. (2016), no significant relationship was found between the age and happiness scale in their studies. Due to the busy and difficult urban life and conditions, people are assumed to be exposed high levels of stress. As a consequence, this affects their health and morale negatively. During this time, participation in recreation activities in leisure time impacts an individual's psychological wellbeing (Iwasaki, 2003; Patry et al., 2007). Supporting this, Stodolska et al. (2011) state that even walking in the park as a physical activity escape can reduce stress levels of person and create a sense of psychological relaxation. Considering that individuals are commonly exposed to stress in their daily life, it is remarkably expected that the health level to be perceived as a result of participating in such activities will be certainly high for psychological relief (Patterson and Carpenter, 1994). Therefore, active participation in physical recreational activities is important for all age groups in terms of health and relaxation (Zuzanek et al., 1998).

As a meaningful result, we found that income level significantly differentiated in terms of all sub-dimensions of PHORS ($p<0.05$). It is recognised that this difference is mainly occurred due to participation of poor income students. This situation shows that the income variable is a decisive criterion determining participation in recreational activity. It is commonly thought that income level impacts on people's purchasing behaviour (Zhao et al., 2014). Voluntariness is essential in participating in activities, but sometimes participation can cost, and it directly affects the frequency of participation in the activities (Higgins and Rickert, 2005). High-income level creates a situation of high health expectations (Smith et al., 2020). Income also may set off social ranking in society. Previous studies have found that there is a positive and significant relationship between income level and health outcomes (Randall & Rosenberger, 2018). Therefore, our findings suggest that income level may function as an important factor for increasing participations in activities among university students. Another variable associated with income level is happiness. One of the other important outcomes measured in this study

was the relation between income and happiness. Higher or lower-income level impacts students' happiness level. Our findings show that there is a significant difference ($p < 0.05$). The study conducted by Easterlin (1974) states that the income level is an important determinant of happiness and inequality within people and impacts individuals' happiness level as positive or negative. In our research, overall, it was seen that the students had a good income level and they are likely to be happy as a result of participation.

According to correlation analysis, there is a positive and significant correlation between the sub-dimension of perceived health outcomes and happiness scale ($p < 0.01$). Findings show that engaging in more physical activity is associated with an increased likelihood of achieving health-related outcomes and happiness. Being healthy is a prerequisite for a quality life. Thus, people design their lives to be healthy and happy. In literature, few studies, however, have been performed on PHORS and happiness within the context of recreational activities. Despite this situation and relying on our results there is a sure tight relationship between activities health and happiness. Lu and Hu, (2005) and Lundberg et al. (2011) conducted studies involving similar results matching our study findings. In general, our findings provide a further contribution in today's literature stating that there is a positive relationship between the concept of happiness and health outcomes within the scope of the recreational activity.

Conclusion

We address two main research questions in the study. Does participation in physical activity differ according to gender, age, income and form of participation and if so what is the effect on health and happiness? In this study, we have found the positive and practical consequences (health, happiness) of participating in physical activity. In addition, income level and active-passive participation are the main parameters in determining health and happiness. More specifically, young groups of students aged 17-20 have a higher perception on Realising Psychological Experience and prefer to take in part actively in these recreational activities. Moreover, the high scores obtained from the "Improvement of the Condition sub-scale of PHORS indicated that students desire to protect their current health status or improve it. The second question asked whether participating in recreational physical activities has a positive effect on health outcomes and happiness. Correlation analysis showed that there was a positive and significant relationship between the level of happiness and perceived health outcomes in recreational activities.

This article provides theoretical evidence as to why physical activity is important for recreational activities. Accordingly, different parameters were used to add value in the research, also brought a different perspective. It is believed that similar studies are carried out by many researchers in the literature, emphasise the positive effect of physical activity on health and happiness; however, a comprehensive study has not been delivered to evaluate perceived health outcomes and happiness levels together within the scope of recreational activities among university students. Based on that, this study provides information that can be useful for teaching purpose or practical implementation for recreation specialists and leisure planners to create a specific programme for their target audiences. As a result, it can be concluded that engaging with recreational physical activities makes a substantial contribution to the university students' health and level of happiness.

Limitations of Research and Recommendations

This study had some limitations. Primarily, this study employed a cross-sectional observation. A cross-sectional limitation provides findings based on a specific time and a certain sample group. However, happiness, health outcomes, and participation in recreational activities may alter or occur in different periods of time with different sample groups. Secondly, our study group was only students in a certain age group, and we did not include individuals from different age and social groups in our study population. In the future, such physical activities can be varied and evaluated together with adults or elderly, which will make different contributions to the relevant literature. A key strength of this study is that the concepts of health outcomes and happiness are explored simultaneously in recreation activities, which will bring a variety of knowledge and understanding, especially for recreation planners and experts in their fields.

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