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Evaluation of the Factors Affecting Participation in Recreational Court Tennis in Terms of Gender and Age[1]

Neşe AYDEMİR[1], Cem KURT[2], İmran KURT ÖMÜRLÜ[3]
[1]Trakya University, Institute of Social Sciences, Edirne, TURKEY
[2]Trakya University, College of Physical Education and Sports, Edirne, TURKEY
[3]Adnan Menderes University, Faculty of Medicine, Aydın, TURKEY
Email: nese.aydemir2@gmail.com

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Abstract

The aim of this study was to evaluate the factors which affect participation in recreational court tennis in terms of gender and age. 105 males (age: 30.37±11.74 years, height: 178.37±7.36 cm, and mass: 79.05±11.81 kg) and 101 females (age: 27.22±8.70 years, height: 166.59±6.72 cm, and mass: 60.60±9.24 kg), who participated in court tennis recreationally, made up the sample of the study. The factors which affect participation in court tennis recreationally were determined by the Recreational Exercise Motivation Measure which was originally developed by Rogers and Morris (2003) and adapted into Turkish by Gürbüz et al. (2006). The Independent Samples T-Test revealed that the female participants had higher scores in the health and body-appearance subdimensions of the scale than the males ($p<0.05$). No statistically significant differences were found in terms of gender in the other subscales ($p>0.05$). Differences between participants' demographic characteristics (monthly income, marital status and level of education) were assessed by Chi-square test and there was no difference between groups in terms of demographic characteristics ($p>0.05$). Pearson correlation analysis revealed a weak, negative correlation ($r= -0.179$) between age and competition scores of the scale. There was no correlation between age and the other sub-dimensions of the scale ($p>0.05$). Female participants were more involved in tennis for physical appearance than men. In both males and females, as age increased, participation in tennis aiming at competition decreased.

Keywords: Court tennis, Exercise motives, Gender, Age

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Introduction

Physical inactivity is one of the most important health problems of the 21st century (Kruk, 2014). Physical inactivity ranks among the four most important causes of death in the world (Kohl et al., 2012). With regular physical activity, the risk of health problems such as cardiovascular diseases, some types of cancer, type 2 diabetes and osteoporosis is reduced (Özkan et al., 2013). To prevent chronic diseases linked to inactivity, a physical activity and exercise pyramid can be taken as a guide.

The physical activity and exercise pyramid is made up of strength exercise, aerobic exercise and flexibility components (Heyward and Gibson, 2010). Another component of the physical activity and exercise pyramid is recreational activity. Çağlar et al. (2009) stated that activities like football, basketball, volleyball, table tennis and swimming are the main recreational sporting activities. Another of these activities is court tennis.

Tennis is a world-class sporting activity. The Association of Tennis Professionals (ATP) and the Women's Tennis Association (WTA) organize 60-80 tournaments in 40 different countries every year and many people participate in these tournaments both as spectators and as players (Fernandez et al., 2006). The tennis world extends from Wimbledon to Roland Garros, from America to the Olympic Games (http://www.teniskortlari.gen.tr/tenis-tarihi.html). In the 2015 study at the USA Physical Activity Council, it was revealed that the number of tennis players in the USA had reached 17.9 million (http://www.tennisindustry.org/cms/index.cfm/news/tennis-participation-in-the-us-grows-to-179-million-players/).

Although there are no data in our country that determine the exact number of people playing court tennis for recreational purposes, the fact that about 100,000 tennis racquets are sold every year and also that the total number of courts in hotels and clubs, as well as municipal courts, is 2,000 shows that the sport of tennis is popular and developing (Ulagay, 2015). Moreover, according to the statement by the Turkish Tennis Federation, it is reported that the total number of licensed sportsmen and women is 36,900 and that the number of tennis players aged 20 and under is more than 19,000 (http://www.haberturk.com/spor/tenis/haber/1225947-turkiyede-lisansli-tenisci-sayisi-her-yil-katlanarak-artiyor). Therefore, the aim of this study is to evaluate the motivational factors that affect participation in recreational court tennis in terms of gender and age.

Material and Methods

Research group

The study sample consisted of 105 male participants (age: 30.37 ± 11.74 years, height: 178.37 ± 7.36 cm, and body mass: 79.05 ± 11.81 kg) and 101 female participants (age: 27.22 ± 8.70 years, height: 166.59 ± 6.72 cm, and body mass: 60.60 ± 9.24 kg) who took part in recreational court tennis. An age of over 18 was determined as an inclusion criterion of the study. Being a professional tennis player was defined as an exclusion criterion of the study. The convenience sampling method was used for sample selection. Questionnaires were sent by post or cargo to individuals who played tennis recreationally or to their coaches (Public Training Centres or Provincial Directorate of Youth Services and Sports) in the provinces of Istanbul, Edirne, Tekirdağ, Izmir and Kırklareli, and the completed questionnaires were retrieved by the same means.

Data collection tools

The demographic characteristics of the participants were determined with a data collection form created by the researcher. With the aim of determining the factors affecting participation in recreational court tennis, the Recreational Exercise Motivation Measure (REMM), originally developed by Rogers and Morris (2003) and made valid and reliable for Turkey by Gürbüz et al. (2006), was used. The original scale consists of 73 items. The items numbered 9, 26, 52, 54, 65, 71 and 72 were removed from the Turkish version of the scale since their factor loadings were below 0.40 (Gürbüz et al., 2006). After removal of the seven items, the Turkish version of the Recreational Exercise Motivation Measure consists of a 66-question scale. The scale is a 5-point Likert-type. In the scale, the questions numbered 23, 31, 30, 22, 20, 19, 10, 32, 37, 6, 18, 28, 40, 58, 55, 29, 65, 21, 11, 52, 46 and 36 represent the health sub-dimension, those numbered 47, 45, 48, 42, 66, 44, 27, 56, 33, 15, 57, 4, 25 and 61 reveal the competition sub-dimension, those numbered 12, 26, 14, 60, 34, 49, 59, 41, 8, 13 and 54 show the physical appearance sub-dimension, those numbered 62, 53, 38, 63, 35, 7, 24, 51, 5, 43 and 9 reveal the socialising and enjoyment sub-dimension, and those numbered 2, 3, 1, 16, 50, 39, 17 and 64 represent the skill development sub-dimension. The Cronbach's Alpha values of the scale are 0.93 for health, 0.88 for competition, 0.85 for physical appearance, 0.88 for socialising and enjoyment, and 0.84 for skill development (Gürbüz et al., 2006). The scoring of the sub-dimensions is 1 for "strongly disagree", 2 for "disagree", 3 for "undecided", 4 for "agree" and 5 for "strongly agree", and the mean point value was determined by adding up the points for the participants' answers given for each sub-dimension and dividing this total by the number of questions for that sub-dimension. The scoring of the scale was done in accordance with its guidelines (Gürbüz et al., 2006; Çağlar et al., 2009; Ardahan, 2013).

Statistical analysis

The data were evaluated for normal distribution with the Kolmogorov-Smirnov test. The differences in the demographic characteristics and the sub-dimensions of the scale with regard to gender were evaluated with t test for independent groups. Correlation between age and the sub-dimensions of the scale was measured with the Pearson correlation coefficient. The relationships among the participants' monthly income levels, educational statuses, marital statuses, frequency of playing and time spent playing tennis were assessed with the Chi-square test. Statistical significance level was taken to be $p < 0.05$.

Results

The participants were identified as 51% males (n=105) and 49% females (n=101). The male participants' mean age, height and body mass were determined as 30.37 ± 11.74 years, 178.37 ± 7.36 cm, and 79.05 ± 11.81 kg respectively, while those of the female participants were found to be 27.22 ± 8,70 years, 166.59 ± 6.72 cm, and 60.60 ± 9.24 kg respectively. Statistical differences between male and female participants in terms of age, height and body mass in favour of male participants were determined at levels of $p< 0.05$, $p< 0,001$ and $p< 0,001$ respectively. 11.5% of male participants were postgraduates, 82.7% were university graduates, and 5.8% were high school graduates. 7.9% of female participants were postgraduates, 84.2% were university graduates, and 7.9% were high school graduates. No statistically significant difference was found between male and female participants in terms of educational status ($p>0.05$). As regards marital status, 34.3% of male participants were

married and 65.7% were single, while 26.7% of female participants were married and 73.3% were single. No statistically significant difference was found between male and female participants in terms of marital status (p>0,05).

In Table 1 participants' income levels, in Table 2 their tennis experience, in Table 3 their frequency of playing tennis, and in Table 4 the length of time they spent playing tennis are given. Table 5 shows the scores obtained from the sub-dimensions of the recreational exercise motivation questionnaire, while Table 6 shows the level of correlation between participants' ages and the factors that motivated them to take part in tennis.

Table 1. Participants' Income Levels

Variable	Male	Female	p
1000 TL and under	33 (31.4%)	41 (40.6%)	0.51
1001-2000 TL	12 (11.4%)	11 (10.9%)	
2001-3000 TL	13 (12.4%)	17 (16.8%)	
3001-4000 TL	20 (19.0%)	14 (13.9%)	
4001-5000 TL	12 (11.4%)	8 (7.9%)	
5001 TL and over	15 (14.3%)	10 (9.9%)	

No statistically significant difference was found between participants' income levels (p>0.05).

Table 2. Participants' Tennis Experience

Variable	Male	Female	p
Less than 1 year	40 (38.1%)	69 (68.3%)	<0.001*
1-2 years	18 (17.1%)	10 (9.9%)	
2-3 years	8 (7.6%)	7 (6.9%)	
3-4 years	13 (12.4%)	5 (5.0%)	
5 years and over	26 (24.8%)	10 (9.9%)	

*p<0.001

A statistically significant difference (p<0.001) was found between participants' levels of tennis experience (number of years they had played). It was determined that male participants were more experienced than female participants (3-4 years and 5 years and over).

Table 3. Frequency with which Participants Played Tennis

Variable	Male	Female	p
1-2 days	83 (79.0%)	87 (86.1%)	0,22
3-4 days	17 (16.2%)	13 (12.9%)	
5-6 days	5 (4.8%)	1 (1.0%)	

No statistically significant difference was found between participants in terms of the frequency with which they played tennis (number of days per week) ($p>0.05$).

Table 4. Length of Time Participants Spent Playing Tennis (in one Session)

Variable	Male	Female	p
0-20 mins.	4 (3.8%)	5 (5.0%)	0.01*
21-40 mins.	9 (8.6%)	13 (12.9%)	
41-60 mins.	34 (32.4%)	50 (49.5%)	
61 mins. or more	58 (55.2%)	33 (32.7%)	

*$p<0.05$

A statistically significant difference ($p<0.05$) was found between participants in terms of the length of time they spent playing tennis in one session (one tennis training session). It was determined that male participants spent longer periods (61 minutes or more) playing tennis than female participants.

Table 5. Scores Obtained by Participants from Sub-Dimensions of Exercise Motivation Questionnaire

Variable	Male	Female	p
Health	3.83±0.72	4.11±0.62	0.003*
Competition	2.99±0.98	2.99±1.00	0.956
Appearance	3.27±0.92	3.63±0.88	0.005*
Socialising/enjoyment	3.70±0.75	3.77±0.64	0.450
Skill development	3.92±0.82	4.03±0.63	0.284

*$p < 0.001$

A statistically significant difference ($p<0.001$) was found between participants in favour of female participants in the scores they obtained from the health and appearance sub-dimensions of the exercise motivation questionnaire. No statistically significant differences were found between participants for the other sub-dimensions. This finding shows that female participants take part in the sport of tennis more for reasons of health and physical appearance when compared to men.

Table 6. Correlation Levels between Scores Obtained by Participants from Sub-Dimensions of Exercise Motivation Questionnaire and their Ages

	Health	Competition	Appearance	Socialising and Enjoyment	Skill Development
Age (years)	0.075	-0.179*	-0.053	-0.010	-0.013
Health	1	0.309**	0.591**	0.656**	0.677**
Competition/ego		1	0.685**	0.480**	0.388**
Appearance			1	0.566**	0.524**
Socialising/ enjoyment				1	0.600**

* $p<0.05$, ** $p>0.05$

A weak, negative statistical correlation was found between participants' ages and the competition sub-dimension ($r= -0.179$), ($p<0.05$). No correlation was determined between age and the other sub-dimensions. This finding shows that as participants' ages increased, the scores obtained from the competition sub-dimension of the exercise motivation questionnaire decreased.

Discussion and Conclusions

The aim of this study was to evaluate the factors that affect participation in recreational court tennis for the purpose of utilising free time, in terms of gender and age. The main findings obtained from the study are a) that female participants take part in the sport of tennis more for reasons of health and physical appearance when compared to men, and b) that there is a weak, negative correlation between age and the scores obtained from the competition sub-dimension of the scale. This finding shows that as the age of participants increases, the scores obtained from the competition sub-dimension of the exercise motivation questionnaire decrease.

Although studies about the factors that motivate people to take part in recreational tennis are difficult to find, Crespo and Reid (2007) stated that young tennis players play tennis to improve their levels of play, to stay physically fit, to increase their skill levels and to form new friendships. Furthermore, Crespo and Reid (2007) revealed that male tennis players play

tennis more for competition, rivalry, status, enjoyment and winning prizes compared to female tennis players.

From the viewpoint of age, it can be seen that players aged 12 and over play tennis more for reasons like being popular, using new tennis equipment and pleasing their parents when compared to players aged under 12 (Crespo and Reid, 2007). Crespo and Reid (2007) reported that participation in tennis before the age of 12 is related more to internal factors (competition, rivalry, etc.) and that participation in tennis due to external factors (looking good, staying fit, etc.) increases with age.

Garyfallos et al. (2013) stated that children aged 8-9 participate in tennis more for skill development, whereas in the adolescent period, participation in tennis is aimed more at being social and spending energy.

Pauline and Pauline (2009) stated that there are no age or gender differences with regard to factors that motivate participation in tennis for recreation, and that individuals aged 35-65 take part in tennis tournaments for material gains (winning tournament t-shirts, coupons, parking vouchers, meal tickets, etc.)

Aaltonen et al. (2014) identified the factors that motivate individuals towards physical activity as physical fitness, expertise, the social aspect of physical activity, psychological state, enjoyment, willingness and being/appearing better than others. Moreover, Aaltonen et al. (2014) state that health is the most important reason for doing exercise, independently of age and gender.

Examining the studies conducted in this field, it is striking that different findings have been obtained. The reason for this is that in our study, the physical appearance and health factors were more important for women's participation in recreational court tennis than they were for men. Molanorouzi et al. (2015) stated that the factors motivating people to do exercise change according to age and gender and that women are more motivated by appearance and physical state than men are. Considering the findings obtained from our study, these show similarity with Molanorozi et al.'s (2015) study with regard to physical appearance.

It is determined that women who do regular exercise mostly do so to be healthy (34.8%), and to look beautiful and strong (13.3%) (Polat, 2014). In another study, it is stated that in the health sub-dimension, female participants had higher scores than male participants (Güngörmüş et al., 2014). Similarly, according to Çağlar et al. (2009), it was observed that in the health sub-dimension, women's scores were higher than those of men. In our study, it was determined that the most important factors for female participants' playing court tennis were physical appearance and health.

At the same time, according to Molanorouzi et al. (2015), the most important factor motivating females to take part in exercise is health, whereas competition is the least important factor. Koivula (1999) stated that men take part in exercise more for competition compared to women, while the most important reason for women to participate is appearance. Similarly, in another study, it was determined that women are motivated towards exercise more for appearance and for psychological reasons, whereas for men, expertise and competition motivated them towards exercise (Molanorouzi et al., 2015). When the results obtained from our study are compared with the study of Molanorouzi et al. (2015), it can be understood that similar results were obtained with regard to appearance.

Karakaş et al. (2015) stated that the factors that affect women's participation in swimming exercise are health, skill development, physical appearance, socialising-enjoyment and

competition in that order. Çağlar et al. (2009) revealed that the scores obtained from the REMM scale differed according to age, that the scores obtained from the health sub-dimension among individuals aged 21-24 were higher than those obtained by individuals in the 15-17 age group, and that this case was also true for the socialising and enjoyment sub-dimension. When the results obtained from our study are compared with the study of Çağlar et al. (2009), it is seen that different results were obtained. The reason for this difference is the single difference in our study in which competition decreases as age increases. There is no difference in the other sub-dimensions.

In one study, it was determined that there is a linear relationship between age and the competition, physical appearance, socialising/enjoyment and skill development sub-dimensions, and that as age increases, participation in recreational sports decreases in relation with the desire for competition, physical appearance, socialising/enjoyment and skill development (Ardahan, 2013). Similarly, Karakaş et al. (2015) stated that as age increases, the skill development, competition and physical appearance participation factors decrease, while the participation factor for health increases.

According to Biddle and Mutrie (2007), the two most influential factors for participation in exercise among individuals aged 16-74 were looking good and protecting their health. It was determined that the most motivating factors for physical activity among young adults are health benefits together with bodily image and appearance (Aaltonen et al., 2014). When the results obtained from our study are compared with the study of Biddle and Mutrie (2007), it can be seen that different results were obtained. The reason for this is that in our study, the age factor is effective only in the competition sub-dimension and that as age increases, competition decreases.

In conclusion, it can be understood that the factors that motivate physical activity show differences according to age and gender. In our study, it was determined that compared to men, women participate in recreational court tennis more for reasons of physical appearance and health. At the same time, it was determined that as age increases, competition decreases, and that there is a weak correlation between age and competition. Nowadays, when chronic illnesses are rapidly increasing in number due to inactivity, research into factors that motivate individuals towards exercise with larger samples may be beneficial for competent and effective trainers, physical education teachers, doctors and politicians in directing people towards physical activity.

Corresponding Author

Neşe AYDEMİR
Address: Trakya University, Institute of Social Sciences, Edirne, TURKEY
Email: nese.aydemir2@gmail.com

Conflict of Interest

The authors have not declared any conflicts of interest.

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