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INVESTIGATION OF PHYSICAL ACTIVITY LEVEL IN COVID-19 PANDEMIC PERIOD OF AMATEUR AND PROFESSIONAL SOCCER PLAYERS

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Abstract:
The aim of this study is to examine the physical activity levels of amateur and professional football players during the covid-19 pandemic period. For this purpose, 54 amateur female, 69 amateur male and 36 professional male football players participated in the study. The long version of the international physical activity questionnaire (IPAQ) was used to determine the physical activity levels of the participants. SPSS 22.0 (SPSS Inc., Chicago, Illinois, USA) program was used for statistical processing of the data. Values were presented as minimum, maximum, mean, standard deviation, and standard error. Significance level was accepted as $p<0.05$. Kolmogorov-Smirnov test was used for normality test. One Way Anova and LSD tests were performed to analyze the differences between groups. As a result of the statistical analysis, a significant difference was found in the total MET scores of amateur women and amateur men for home-garden work ($p<0.05$). A significant difference was found in the transportation section bicycle MET scores of the professional male and amateur female groups ($p<0.05$). There was no significant difference between the MET scores of the age and sports age groups of the participants ($p>0.05$). As a result, it can be said that the physical activity levels of amateur women, amateur men and professional men groups are low.

Keywords: physical activity, pandemic, quarantine, soccer

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1. Introduction

Football is one of the most popular sports in the world. Because football is a very entertaining game, it is highly sought after by most people around the world. It is also a game that fascinates millions of people. Every age group is very interested in football, from young to old. The most important factor to be successful in sports is to perform at a high level and to maintain this performance at a high level. Performance level in football is not only determined by physical characteristics. Performance in football is also determined by technical, tactical and mental characteristics. In order to maintain the performance in football throughout the season, training planning should be done correctly and effectively during the season along with the pre-season preparation period. Keeping the performance level high throughout the season provides significant gains in competitions. Having a good talent is not the only determining factor for performance in football. In addition to a good ability, basic motoric features and a high level of tactical ability are the main determining factors for performance in football (1, 2, 15).

The high level of fitness of the athletes is closely related to their success. When we look at the successful athletes, it is seen that their form level is quite high. In order to maintain and increase the fitness levels of the athletes, training programs should be applied twice a week. Training programs should include strength, aerobic and anaerobic endurance, balance, speed, agility, agility and technical-tactical practices (3, 16, 17).

According to this information, the importance of our research is to examine the physical activity levels of amateur and professional football players during the covid-19 pandemic period and to have information about the fitness of the athletes.

The aim of our study is to examine the physical activity levels of amateur and professional football players during the covid-19 pandemic period.

2. Method

In this study, the questionnaire method was used to determine the physical activity levels of amateur and professional football players during the covid-19 period. The questionnaire was prepared in the digital environment and amateur and professional football players were accessed in this way. The long version of the international physical activity questionnaire (IPAQ) was used to determine the physical activity level of amateur and professional football players. The universe of the research is amateur and professional football players who compete in football leagues. The sample consists of 54 female amateur football players, 69 male amateur football players and 36 male professional football players in the amateur and professional leagues in Turkey. SPSS 22.0 (SPSS Inc., Chicago, Illinois, USA) program was used for statistical processing of the data. Values were presented as minimum, maximum, mean, standard deviation, and standard error. Significance level was accepted as $p<0.05$. The Kolmogorov-Smirnov test was used to test for normality. One Way Anova and LSD tests were performed to analyze the differences between groups.

3. Results

The data obtained from this study, which examined the physical activity levels of amateur and professional football players during the covid-19 pandemic period, are presented in tables in this section.

Table 1: Analysis of participants' total MET-minutes/week scores by athlete level

		Mean	Std. D.	Std. E.	f	p	Difference
Work total MET scores	Amateur woman a	3237.40	2429.08	330.56	0.522	0.59	
	Amateur male b	3616.38	2301.34	277.05			
	Professional male c	3236.32	2189.31	364.89			
Transportation total MET scores	Amateur woman a	1062.78	848.04	115.40	0.787	0.45	
	Amateur male b	993.78	994.10	119.68			
	Professional male c	1232.79	913.89	152.32			
Home-gardening total MET scores	Amateur woman a	1954.49	1522.22	207.15	3.367	0.04	**a** - b
	Amateur male b	1227.07	1517.08	182.64			
	Professional male c	1613.33	1646.85	274.47			
Leisure total MET scores	Amateur woman a	2717.57	1952.36	265.68	0.057	0.945	
	Amateur male b	2644.64	2256.97	271.71			
	Professional male c	2786.08	1955.44	325.91			

In Table 1, the analysis of the total MET-minutes/week scores of the participants according to the athlete's level is presented. One Way Anova and LSD test were used to compare total MET-minute/week scores according to athlete level. As a result of the analysis, no significant difference was found between the work total MET scores, transportation total MET scores, and leisure total MET scores of the amateur female, amateur male and professional male groups ($p>0.05$). However, a significant difference was found in favor of amateur women in the analysis of home-gardening total MET scores of amateur women and amateur men groups ($p<0.05$).

Table 2: Analysis of the field-specific MET-minutes/week scores of the participants according to the athlete level

		Mean	Std. D.	Std. E.	f	p	Difference
Work walking MET scores	Amateur woman a	928.28	952.79	129.66	0.155	0.856	
	Amateur male b	922.61	907.45	109.24			
	Professional male c	831.42	738.14	123.02			
Work moderate severity MET scores	Amateur woman a	979.26	919.52	125.13	0.139	0.870	
	Amateur male b	950.14	859.61	103.48			
	Professional male c	882.78	748.27	124.71			
Work high severity MET scores	Amateur woman a	1371.11	1082.40	147.30	1.512	0.224	
	Amateur male b	1743.62	1175.03	141.46			
	Professional male c	1485.00	1452.75	242.12			
Transportation bike MET scores	Amateur woman a	188.89	480.48	65.39	3.537	0.031	**c**-a
	Amateur male b	296.52	717.34	86.36			
	Professional male c	545.83	644.30	107.38			
Transportation	Amateur woman a	873.89	740.83	100.81	1.248	0.290	

walking MET scores	Amateur male b	697.25	670.75	80.75			
	Professional male c	686.96	605.51	100.92			
Gardening severe MET scores	Amateur woman a	451.71	684.90	93.20	1.265	0.285	
	Amateur male b	425.65	710.48	85.53			
	Professional male c	650.83	765.89	127.65			
Gardening moderate MET scores	Amateur woman a	696.67	830.24	112.98	2.776	0.065	
	Amateur male b	402.03	529.80	63.78			
	Professional male c	520.00	724.37	120.73			
Housework moderate severity MET scores	Amateur woman a	806.11	670.77	91.28	7.816	0.001	
	Amateur male b	399.39	538.16	64.79			
	Professional male c	442.50	574.88	95.81			
Leisure walking MET scores	Amateur woman a	592.39	639.07	86.97	0.445	0.642	
	Amateur male b	687.63	687.56	82.77			
	Professional male c	589.42	532.34	88.72			
Leisure severe MET scores	Amateur woman a	1636.30	1519.01	206.71	0.087	0.917	
	Amateur male b	1544.20	1506.00	181.30			
	Professional male c	1515.56	1435.80	239.30			
Leisure moderate intensity MET scores	Amateur woman a	488.89	630.01	85.73	1.460	0.235	
	Amateur male b	438.53	708.25	85.89			
	Professional male c	681.11	775.13	129.19			

In Table 2, the analysis of the field-specific MET-minutes/week scores according to the athlete's level of the participants is presented. One Way Anova and LSD test were used to compare field-specific MET-minute/week scores according to athlete level. As a result of the analysis, no significant difference was found between the division of labor, transportation division (except bicycle), home-gardening division and leisure time division of amateur women, amateur men and professional men groups ($p>0.05$). However, a significant difference was found between the transportation section bicycle MET scores of professional men and amateur women groups in favor of professional men ($p<0.05$).

4. Discussion and Conclusion

As a result of the international physical activity questionnaire applied in our study, the total MET-minute/week scores of the participants and the field-specific MET-minutes/week scores were compared according to the athlete's level. There was no significant difference between the total MET scores of work, total MET scores of transportation, and total MET scores of leisure time according to the athlete level of the participants. However, a significant difference was found between the home-garden total MET scores of amateur women and amateur men groups in favor of amateur women. When comparing the field-specific MET-minute/week scores of the participants according to the athlete's level, no significant difference was found between the work division MET scores, the transportation division walking MET score, the home-gardening division MET scores and the leisure segment MET scores. However, a

significant difference was found between the transportation section bicycle MET scores of professional men and amateur women groups in favor of professional men.

In 2019, Süsler conducted a thesis study on university students' physical activity levels and their desire for excessive food consumption. As a result of the study, it was found that male students' division of labor and physical activity levels were higher than females. In our study, however, no significant difference was found in the comparison of physical activity between the groups of amateur women, amateur men and professional men. The reason for this is thought to be due to the banning of sports competitions and the closed sports fields during the pandemic period. When we look at the other findings in the study of ornaments; It has been determined that sports management students are more active in the home-gardening department compared to the coaching and teaching department. In the comparison of home-garden work in our study, amateur women's total home-garden MET scores were found to be higher than amateur men. The reason for this is that women are generally thought to be quite active in home-garden activities during the pandemic (4, 9, 10).

Genç et al. In 2011, they examined the physical activity levels of medical faculty students. As a result of the research, no significant difference was found between the total MET scores of men and women. When we examined our study, no significant difference was found between the work total MET score, transportation total MET score and leisure total MET score of amateur women, amateur men and professional men (5, 11, 12).
Alricson et al. In a study conducted by Swedish students in 2006, it was stated that men perform more intense activities than women. In our study, however, no significant difference was found in high-intensity activity comparisons between amateur women, amateur men and professional men. The reason for this is thought to be due to the fact that the competitions are not played during the covid-19 pandemic period and the sports fields are closed (6, 13).

Dauty et al. In 2020, he conducted a study called the effect of the covid-19 restriction period on the physical conditions of young elite football players. 25 young elite football players were included in the study. Participants performed cardio training 2 days a week and strength training 2 days a week. The trainings were carried out through distance education. In the study, when the pre- and post-pandemic measurements were examined, it was observed that there was a decrease in the aerobic capacity of the participants in their post-tests. The reason for this is thought to be the effect of the covid-19 epidemic. In our study, however, no significant difference was found between the MET scores of the participants. Dauty et al. It is thought that the low level of physical activity in our study is due to the covid-19 pandemic period (7, 8).

As a result, when we look at the data we obtained from our study, it can be said that the physical activity levels of amateur female, amateur male and professional male football players were low during the covid-19 pandemic period.

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Conflict of Interest Statement

There are no potential conflicts of interest on this article.

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