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**THE EXAMINATION OF THE COMMITMENT TO SPORTS AND ATHLETE SLEEP
BEHAVIOUR OF E-SPORTS PLAYERS**

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ABSTRACT

The aim of this study is to examine the relationship between amateur and professional esports players' commitment to sports and athlete sleep behaviors in terms of some variables. The sample group of the study was chosen by random sampling and consists of 31 female (20.3%) and 122 male (79.7%) athletes, aged 18 and over, in totals 153 athletes. In the study, "Sport Engagement Scale" was used to determine the sports commitment levels of athletes, "Athlete Sleep Behavior Scale" to determine sleep behaviors, and a personal information form developed by the researcher to determine the demographic information of the athletes were used as a data collection tool. The skewness and kurtosis values of the data were examined and it was assumed that the data showed a normal distribution. Therefore, parametric tests were applied to the data. In the study, all statistical evaluations were made with the SPSS 21.0 program and the significance was taken as $p < 0.05$. As a result of the research, statistical significance was determined between the scores of commitment to sports and the variables of gender, sport type, athlete license category and age. Statistically significant difference in athlete sleep behavior scores is seen according to athlete undergraduate category, education status and monthly income level variables. When the results of the correlation analysis between the scales were examined, a positive and moderately significant relationship was found between sports-relatedness factor scores and sub-dimension scores of commitment to sports. Consequently, it is thought that there will be negatives in their sleep patterns, as the levels of commitment to sports of esports players increases.

Keywords: Sports, Esports, Commitment to Sports, Athlete Sleep Behavior

INTRODUCTION

The game is defined as an activity that arises spontaneously and does not have a specific goal, and brings happiness to the individual (Wood and Attfield, 2005). While games provide individuals with physical activity, opportunities for self-development, opportunities to spend their spare time, and entertainment, they can contribute to revealing their self-identities by discovering the strengths and weaknesses of the individual (Honey and Kanter, 2013).

With the effect of technological developments, the concept of game has started to show its effect on the digital environment day by day. While games that can be played in the digital environment are called video or computer games, they can be used alternately by being influenced by each other (Kirriemuir, 2002). Video or computer games, which can be played both individually and in teams, appeal to the individual's tastes and provide the opportunity to present many activities that they cannot perform in daily life in a fantastic way. In addition, these games, which are beneficial in developing creativity, require mental and physical effort (Can-sabuncu, 2013).

Today, the rapid development of technological possibilities and their easier accessibility have greatly influenced the field of sports, which derive from the game base, and have led to the emergence of the concept of electronic sports (esports). The concept of esports is a sports field that allows people in almost every region of the world to meet each other via the internet and play games (Argan et al., 2006). In other words, esports is defined as a sports branch in which the characteristics of sports are facilitated by electronic systems (Hamari and Sjöblom, 2017).

The concept of esports is a game based on online games, and professional acting is seen as equated with competitive acting (Argan et al, 2006). In addition, esports is voluntary and requires instinctive motivation. As in many sports, players in esports must have the ability to provide team motivation by participating with the right strategy and tactics throughout the competition. Moreover, esports players can make 400 movements in a minute due to the constant and active use of the keyboard and mouse (Schaeperkoetter et al., 2017; Yukcu and Kaplanoglu, 2018).

As in many sports branches, the importance of continuity for sportive success has been emphasized in esports as well. Continuity has revealed the concept of commitment to sports and has become an extremely important dimension (Wann, 1997). On the other hand, commitment to sports includes exhibiting continuous and consistent movements that include pleasure, effort and belief impulses in sports environments (Lonsdale et al. 2007).

Scanlan et al. (1993) argue that the structure of sports commitment is affected by the support of the social environment, opportunities and rates of participation in sports, pleasure from sports and social restrictions. In addition, the concept of commitment to sports is gathered under two headings as being vigorous and devotion. The factor of being vigorous includes having a high level of mental resilience while dealing with a physical activity (Schaufeli et al, 2002). The dedication factor is defined as the loss of the concept of time during the activity by integrating with the work they do (Seligman and Csikszentmihalyi, 2000).

Another factor for an individual to achieve this success is sleep. Sleep is a member of the basic biological elements for human health at the point of providing sufficient focus. It plays an effective role on many aspects of the individual's mental, physical and social aspects. It covers approximately 1/3 of an individual's life and shows its area of influence (Fuller et al, 2006). In addition, sleep is one of the most important ways to prepare the body for physical performance both in daily life and in sports activities (Aldabal et al. 2011). The significant effect of adequate sleep on sports is emphasized as 'a new issue in the development of sports performance' (Leeder et al. 2012).

Esports competitions are usually held over computer games. Many players train 8-9 hours a day to prepare for these competitions. The time spent in front of the computer for hours is almost unnoticed. So much so that most players say that they do not have the opportunity to eat. Players who spend most of the day playing games need regular sleep for an effective and efficient training. Sleep is very important both for the health of the individual and for the adequacy of his basic skills. In this sense, the aim of the study is to examine the relationship between sports commitment and sleep behaviors of esports players and to contribute to the literature.

METHODS

In this part of the study, the methods used in the research, data collection, data collection tools and data analysis stages are given below.

Research Model

The research is a descriptive study in the survey model. Descriptive studies are statistical operations that allow the collection, description and presentation of numerical data related to the variables in the research (Büyüköztürk, 2010).

Research Group

The universe of the research consists of amateur and professional esports players in Turkey.

The sample of the study consists of a total of 153 esports players, 31 women and 122 men, aged 18 and over, selected by random sampling.

Table 1. Personal Information Distributions of the Research Group

Variable		Category	n	%
Age	a	18-21 years	66	43.1
	b	22-25 years	57	37.3
	c	26-29 years	21	13.7
	d	30 years and older	9	5.9
Gender	a	Female	31	20.3
	b	Male	122	79.7
Marital Status	a	Married	11	7.2
	b	Single	142	92.8
Educational Status	a	Primary/Secondary Education	23	15.1
	b	Associate/Bachelor's	118	77.1
	c	Postgraduate	12	7.8
Monthly Income	a	₺ 1000-3000	105	68.6
	b	₺ 3001-5000	35	22.9
	c	₺ 5001-7000	13	8.5
Sports Type	a	Individual athlete	81	52.9
	b	Team athlete	72	47.1
Athlete's License	a	Amateur	116	75.8
	b	Professional	37	24.2

Data Collection

In the research, first of all, literature information about the study was collected. The information gathered as a result of the literature review was given systematically in accordance with the study. Secondly, the Sports Commitment Scale and the Athlete Sleep Behavior Scale were applied to the athletes through random sampling, using various social media applications. The data obtained from the applied scales were collected via Google Drive.

Data Collection Tools

The data collection tools used to achieve the objectives determined in the study are respectively given below:

Personal Information Form

In the study, a 7-question personal information form was developed by the researcher, aiming to learn the personal information of the participants and determining the independent variables in the research.

Sport Engagement Scale

Guillen and Alvarado (2014) and adapted into Turkish by Kayhan et al. (2020) consists of 2 sub-dimensions (vigorous = 7 items, focus = 3 items) and 10 items. The scale is 7-point Likert type (1=Never...7=Always). In the study; internal consistency (Cronbach α) reliability coefficient of the scales for focus sub-dimension $r=0.926$, $r=0.855$ for the vigorous sub-dimension, and the total Cronbach's α coefficient of the scale was $r=0.931$. As a result of the reliability analysis of Kayhan et al., the Cronbach α reliability coefficients were found as $r=0.916$ for the focus sub-dimension, $r=0.778$ for the vigorous sub-dimension, and the total Cronbach α coefficient of the scale as $r=0.918$ (Kayhan et al., 2020).

Athlete Sleep Behavior Scale

Athlete Sleep Behavior Scale developed by Driller et al. (2018) and adapted into Turkish by Darendeli et al. (2019) consists of 4 sub-dimensions (sport-related factors=5 items, sleep quality factors=5 items, effective sleep habits factors= 4 items, sleep disorder factors = 3 items) and a total of 17 items. The scale consists of "Never, Rarely, Sometimes, Often and Always" statements and is in a 5-point Likert type. In the study; sports-related factors, sleep quality factors, effective sleep habits factors and sleep disturbance factors internal consistency (Cronbach α) reliability coefficients were found to be $\alpha=0.506$, $\alpha=0.588$, $\alpha=0.616$, $\alpha=0.755$ respectively. The total Cronbach α reliability coefficient of the scale was found to be $\alpha=0.744$. Darendeli et al. determined the internal consistency (Cronbach α) reliability coefficients of sports-related factors, sleep quality factors, effective sleep habits factors and sleep disturbance factors as $\alpha=0.89$, $\alpha=0.78$, $\alpha=0.87$, $\alpha=0.67$ and the total Cronbach α reliability coefficient of the scale was found as $\alpha=0.62$ (Tiryaki et al, 1997; Willis, 1982).

Statistical Analysis

In the study, SPSS 21.0 package program was used for statistical analysis of the data. In order to test the normality distribution of the data collected in the study, Skewness – Kurtosis (skewness-kurtosis) values were examined. At the end of the examination, it was seen that the data were between -2 and +2. According to George and Mallery (2016), it is assumed that the data show a normal distribution when the skewness and kurtosis values are between -2 and +2. Since it was assumed that the data showed a normal distribution, parametric test methods were used. In the study, independent sample T-Test was used for the analysis of two independent variables, and one-way analysis of variance (ANOVA) techniques were used for the analysis of more than two independent variables. The Post Hoc Tukey test was used to determine the relationships in multiple comparisons between groups. Finally, pearson correlation analysis was used to determine the relationship between scales. Internal consistency (Cronbach α) reliability coefficients of the scales were calculated. Significance levels were accepted as $p=0.05$ in the statistics analysis.

RESULTS

Table 2. Descriptive statistics of sports commitment scores and sleep behavior scores of athletes

Independent Variable	Category	n	Sports Commitment						Athlete Sleep Behavior									
			Being Vigorous		Focusing		Total Point		Sports-relatedness		Sleep Quality		Effective Sleep		Sleeping Disorder		Total Point	
			\bar{x}	SD	\bar{x}	SD	\bar{x}	sd	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD
Gender	Female	31	5.53	1.17	4.91	1.24	5.35	1.12	2.71	0.72	2.38	0.50	1.96	0.60	1.38	0.66	2.20	0.46
	Male	122	6.14	1.01	5.40	1.40	5.92	1.04	2.87	0.77	2.44	0.60	2.16	0.75	1.47	0.81	2.33	0.51
Marital Status	Married	11	6.14	1.18	5.21	1.80	5.86	1.31	3.03	1.13	2.61	0.66	2.29	0.66	1.63	1.06	2.49	0.67
	Single	142	6.00	1.06	5.31	1.35	5.80	1.07	2.82	0.73	2.41	0.57	2.11	0.73	1.44	0.75	2.29	0.48
Sports Type	Individual	81	5.86	1.08	5.02	1.44	5.61	1.11	2.84	0.78	2.44	0.60	2.13	0.69	1.51	0.84	2.32	0.53
	Team	72	6.19	1.04	5.62	1.25	6.02	1.01	2.84	0.75	2.41	0.56	2.11	0.77	1.40	0.70	2.29	0.47
Athlete License	Amateur	116	5.83	1.04	5.08	1.37	5.61	1.06	2.72	0.72	2.46	0.57	2.17	0.71	1.40	0.73	2.28	0.49
	Professional	37	6.59	0.97	6.01	1.17	6.41	0.93	3.22	0.77	2.32	0.60	1.97	0.77	1.63	0.89	2.38	0.51

According to Table 2, it is seen that male athletes have higher sports commitment scores than female athletes. In addition, it was determined that male athletes had higher sleep behavior scores than female athletes it has been determined that married athletes are more committed to sports than single athletes. When the sleep behaviors of the athletes were examined according to their marital status, it was concluded that the married athletes had higher sleep behavior scores than the single athletes. When the sports commitment of the participants according to the sports types is examined, it is seen that the sports commitment scores of the athletes who do team sports are higher than the individual athletes. When the sleep behavior scores of the participants were examined, it was determined that the individual athletes had higher sleep behavior scores than the team sports athletes. When their commitment to sports according to the athlete license category is examined, it has been determined that professional athletes have higher sports commitment scores than amateur athletes. In addition, it is seen that professional athletes have higher sleep behavior scores than amateur athletes.

Table 3. T-Test results regarding the difference between the sports commitment scores of the athletes and the sleep behavior scores of the athletes according to the independent variables

Independent Variable	Sports Commitment						Athlete Sleep Behavior									
	Being Vigorous		Focusing		Total Point		Sports-relatedness		Sleep Quality		Effective Sleep		Sleeping Disorder		Total Point	
	t	p	t	p	t	p	t	p	t	p	t	p	t	p	t	p
Gender	-2.613	.012*	-1.790	.075	-2.659	.009*	-1.043	.299	-.499	.618	-1.364	.175	-.578	.564	-1.265	.208
Marital Status	.713	.692	.089	.810	.182	.855	.593	.565	1.087	.279	.789	.431	.117	.438	1.242	.216
Sports Type	-1.905	.059	-2.750	.007*	-2.372	.019*	.042	.966	.345	.731	.149	.882	.848	.398	.420	.675
Athlete License	-4.024	.001*	-3.716	.001*	-4.419	.001*	-3.564	.001*	1.315	.190	1.414	.159	-1.617	.108	-1.051	.295

*p<0.05

Table 3 shows according to gender variable, there was significant difference in scores being vigorous and commitment to sport of athletes' ($p < 0.05$). According to gender variable, a significant difference was not found in scores sleep behavior of athletes' ($p > 0.05$). According to marital status variable, there was not found significant difference in both commitment to sports and score sleep behavior of athletes' ($p > 0.05$). According to the type of sport variable, there was significant difference in the total scores of participants' focus and commitment to sports ($p < 0.05$). According to the athletes' license category, there was significant difference in being vigorous, focusing and total point ($p < 0.05$). According to the athlete license category, there was significant difference in sports-relatedness as one the scores of lower dimension associated with sleep behavior ($p < 0.05$).

Table 4. Descriptive statistics of sports commitment scores and sleep behavior scores of athletes

Independent Variable	Category	n	Sports Commitment						Athlete Sleep Behavior									
			Being Vigorous		Focusing		Total Point		Sports-relatedness		Sleep Quality		Effective Sleep		Sleeping Disorder		Total Point	
			\bar{x}	SD	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD
Age	18-21 years	66	6.26	0.96	5.47	1.33	6.03	0.98	2.85	0.77	2.38	0.54	2.05	0.81	1.34	0.70	2.26	0.46
	22-25 years	57	5.66	1.23	5.11	1.41	5.49	1.22	2.78	0.67	2.44	0.58	2.14	0.60	1.54	0.69	2.31	0.44
	26-29 years	21	6.15	0.49	5.52	0.85	5.96	0.49	2.97	0.78	2.42	0.67	2.21	0.81	1.46	1.00	2.36	0.66
	30 years and older	9	6.12	1.25	2.26	0.46	5.73	1.46	2.86	1.24	2.73	0.70	2.33	0.73	1.77	1.14	2.50	0.72
	Total	153	6.01	1.07	2.31	0.44	5.80	1.08	2.84	0.76	2.43	0.58	2.12	0.73	1.45	0.78	2.31	0.50
Educational Status	Primary/Secondary Education	23	5.74	1.46	5.23	1.73	5.59	1.50	2.72	0.77	2.26	0.53	2.06	0.89	1.27	0.76	2.17	0.48
	Associate/Bachelor's	118	6.02	1.02	5.29	1.36	5.80	1.03	2.81	0.76	2.44	0.59	2.11	0.70	1.48	0.75	2.30	0.50
	Postgraduate	12	6.52	0.32	5.61	0.72	6.25	0.38	3.41	0.50	2.60	0.48	2.41	0.69	1.61	1.03	2.62	0.47
	Total	153	6.01	1.07	5.30	1.38	5.80	1.08	2.84	0.76	2.43	0.58	2.12	0.73	1.45	0.78	2.31	0.50
Monthly Income (₺)	₺ 1000-3000	105	5.98	1.12	5.37	1.34	5.80	1.10	2.83	0.71	2.36	0.57	2.14	0.80	1.48	0.83	2.29	0.51
	₺ 3001-5000	35	6.05	0.99	5.20	1.40	5.79	1.05	2.87	0.88	2.64	0.56	2.10	0.55	1.41	0.68	2.36	0.48
	₺ 5001-7000	13	6.18	0.83	5.05	1.69	5.84	1.05	2.87	0.87	2.46	0.61	2.03	0.58	1.33	0.57	2.28	0.43
	Total	153	6.01	1.07	5.30	1.38	5.80	1.08	2.84	0.76	2.43	0.58	2.12	0.73	1.45	0.78	2.31	0.50

According to Table 4, it is seen that the sports commitment scores of the athletes aged 18-21 are higher than the scores of the athletes in the other age categories. When athletes' sleep behavior scores are examined based on age variable scores, it was determined that the athletes aged 30 and over were higher than the scores of the athletes in the other age category. According to the findings, it was concluded that the sports commitment scores of the athletes with a postgraduate education level were higher than the scores of the athletes in the other education level category. In addition, it was determined that the sleep behavior scores of the athletes with postgraduate education were higher than the athletes with other education levels. When athletes' commitment to sport based on their monthly income scores are examined, it is seen that the sports commitment scores of the athletes with a monthly income of ₺5001-7000 are higher than the athletes in the other monthly income category. It is seen that the sleep behavior scores of the athletes with a monthly income of ₺3001-5000 are higher than the athletes in the other monthly income category.

Table 5. One-way analysis of variance results regarding the difference between sports commitment scores and sportsman sleep behavior scores in athletes according to independent variables

	Sub-dimension	Independent Variable								
		Age			Education Status			Monthly Income		
		F	p	Sig. Diff.	F	p	Sig. Diff.	F	p	Sig. Diff.
Sports Commitment	Being Vigorous	3.561	.016*	ab	2.105	.125	-	.223	.801	-
	Focusing	1.276	.285	-	.324	.724	-	.458	.633	-
	Total Point	2.718	.047*	ab	1.461	.235	-	.010	.990	-
Athlete Sleep Behavior	Sports-relatedness	.302	.824	-	3.893	.022*	ab bc	.055	.947	-
	Sleep Quality	.929	.429	-	1.445	.239	-	3.075	.049*	ab
	Effective Sleep	.546	.652	-	1.052	.352	-	.139	.870	-
	Sleeping Disorder	1.208	.309	-	2.105	.125	-	.288	.750	-
	Total Point	.760	.518	-	3.187	.044*	ac	.295	.745	-

*p<0.05 Sig. Diff.= Significant Difference

Age= **ab**: 18-21 years > 22-25 years, Education Status= **ab**: Associate/Bachelor's > Primary/Secondary Education, **ac**: Postgraduate > Primary/Secondary Education, **bc**: Postgraduate > Associate/Bachelor's, Monthly Income= **ab**: ₺ 1000-3000 > ₺ 3001-5000

Table 5. when examined, according to age variable, there was significant difference in being vigorous and commitment to sports of athletes' ($p < 0.05$). As a result of the bilateral comparison between the groups, there was significant difference between athletes aged 18-21 and 22-25 years ($p < 0.05$). According to age variable, there was detected significant difference in the athlete sleep behavior scores ($p > 0.05$). According to the education status variable of the athletes, there was not found significant difference in points of commitment to sports ($p > 0.05$). When athlete sleep behavior scores were examined, there was determined a statistically significant differences in sports-relatedness scores and ab (primary-secondary/associate-undergraduate), bc (associate-undergraduate-postgraduate) scores ($p < 0.05$). Significant difference was found in ac (primary-secondary/graduate) points with total points of commitment to sport ($p < 0.05$). According to athletes' monthly income variable, there was not difference in total points of commitment to sports ($p > 0.05$), significant difference was found in ab (1000/3000 TL-3001/5000 TL) scores with sleep quality scores ($p < 0.05$).

Table6. Pearson correlation analysis results of the relationship between athlete sleep behavior scale and sports commitment scale scores

	Athlete Sleep Behavior Scale					Sport Engagement Scale		
	Sports-relatedness	Sleep Quality	Effective Sleep	Sleeping Disorder	Total Point	Being Vigorous	Focusing	Total Point
\bar{x}	2.84	2.43	2.12	1.45	2.31	6.01	5.30	5.80
SD	.767	.583	.732	.781	.503	1.073	1.387	1.086
						Sport Engagement Scale Scores		
						Being Vigorous	Focusing	Total Point
Athlete Sleep Behavior Scale Points	Sports-relatedness	r				.352	.422	.405
		p				.001*	.001*	.001*
	Sleep Quality	r				.045	.000	.031
		p				.577	.999	.700
	Effective Sleep Habits	r				-.031	-.054	-.042
		p				.708	.506	.607
	Sleeping Disorder	r				-.110	-.059	-.098
		p				.177	.472	.227
	Total Point	r				.133	.154	.151
		p				.102	.057	.062

* p<0.01 significant level

In Table 6, Pearson correlation analysis results of the relationship between athlete sleep behavior scale scores and sport engagement scale scores are given. Köklü ve ark. (2006), indicates correlation coefficients as 0-0.29 low, 0.30-0.70 moderately, 0.71-0.99 high-level relationship. According to the findings, sports-related sub-dimension scores and total scores of being vigorous ($r=.352$, $p=.000$), focus ($r=.422$, $p=.000$) and commitment to sports ($r=.405$, $p=.000$). 000) was found to have a positive and moderately level significant relationship ($p<0.01$). No statistically significant difference was found between sleep quality, effective sleep habits, sleep disorder and athlete sleep behavior total scores, and total scores of vigor, focus, and sports commitment ($p>0.05$).

DISCUSSION AND CONCLUSION

The aim of this study is to examine the relationship between amateur and professional esports players' sports commitment and their sleep behaviors in terms of some variables. While statistically significantness was determined in athletes' commitment to sports according to gender, sports type, athlete license category and age variables ($p<0.05$), there was not significant difference in commitment to sports according to marital status, educational status and monthly income status variables ($p>0.05$). While there was significant difference in athlete sleep behavior scores according to athletes' athlete license category, educational status and monthly income status variables ($p<0.05$), according to age, gender, marital status and sports types there was not significant difference in athlete sleep behavior scores ($p>0.05$). Finally, when the results of the correlation analysis between the scales were examined, a positive and moderately significant relationship was found between

sports-relatedness factor scores and sub-dimension scores of commitment to sports. ($p < 0.05$).

According to the age variable of the athletes, there was significant difference in their being vigorous and total scores, which is the lower dimension of commitment to sports ($p < 0.05$). It has been determined that there is a differentiation between athletes aged 18-21 and athletes aged 22-25. Uzgur et al. (2021) When examining their work with recreational runners, according to age variable there was a significant difference in athletes' scores of commitment to sports ($p < 0.05$), but difference was not found between the groups. On the other hand, Peke (2020), Gulen et al. (2021), according to age variable in his study was not found significant difference in scores of commitment to sports ($p > 0.05$). The fact that the esports branch is game-themed and individuals move away from games as they get older can be an important factor in detecting different findings among the studies.

According to the gender variable of the athletes, the lower dimension of commitment to sports, vigor and total scores were determined to be significant ($p < 0.05$). When the findings are examined, it is seen that male athletes ($\bar{x} = 5.92$) are more committed to sports than female athletes ($\bar{x} = 5.35$). When the study of Ozgun et al. (2021) examined, it was found that male athletes had higher scores on sports commitment than female athletes. Again, Gulen et al. (2021), when examining the study of taekwondo athletes, it was determined that male athletes had higher scores on sports commitment than female athletes. It can be said that the studies obtained from the literature show parallelism with the findings of this study. Considering that esports is very popular and widespread globally, it can be considered as one of the newly developing sports branches in our country. It can be said that the low number of female athletes is an important factor in the higher scores of commitment to sports of male athletes.

According to the age and gender variables of the athletes, a significant difference was not detected in the athlete's sleep behavior scores ($p > 0.05$). When examined the study of Eliöz et al. (2018), according to gender variable, a significant difference was not found in the sleep quality scores of athletes ($p > 0.05$). It is seen that the findings of this study are similar to the findings obtained in the study. It can be said that the main factor in achieving this result is that sleep is a compulsory need for individuals to continue sports and maintain their lives.

According to athletes' marital status, a significant difference was not found in scores of commitment to sports and athlete sleep behavior scores ($p > 0.05$). When Kangotan (2020) and Uzgur (2020) studies were examined, according to their marital status, a significant difference was not found in the athletes' scores of commitment to sports ($p > 0.05$). On the other hand Peke (2020), according to marital status there was significant difference in scores of commitment to sports ($p < 0.05$). According to the marital status of the athletes, was not determined significant difference in athlete sleep behavior scores ($p > 0.05$). As a result of the findings obtained in the study, it can be said that whether the athletes are married or single does not affect their commitment to sports and their sleep behaviors. Considering why sleep and sports are important for individuals to lead a quality life today, it can be said that there is no relationship between marital status variable and commitment to sports and sleep behavior.

According to athletes' training status, a significant difference was not found in scores of commitment to sports ($p > 0.05$). Özgün et al. (2021) found that there was not statistically significant difference in athletes' commitment to sports based on their educational status ($p > 0.05$). When Peke (2020), Uzgur (2020) studies

were examined, according to their educational status, a statistically significant difference was not found in the total scores of athletes' commitment to sports ($p>0.05$). It is seen that the findings obtained in the research are similar to these studies. Considering that esports, which adds a new dimension to field of sports, appeals to different age groups, it can be said that the educational status of the athletes is an important factor in not reflecting this difference.

According to the training status of the athletes, there was significant difference in sports-related factors and total scores ($p<0.05$). It is seen that the source of the difference is the athletes who are in primary/secondary education and associate/undergraduate and associate/undergraduate and postgraduate education. Athletes continue their university education in cities other than their residence. The resulting change in order and adaptation problems are thought to be an effective factor in this relationship.

According to the monthly income of the athletes, a significant difference was not found in scores of commitment to sports ($p>0.05$). Uzgur (2020), Gulen et al. (2021) study shows, no statistically significant difference in scores of commitment to sports based on athletes' monthly income ($p>0.05$). Sports is an important factor for the individual to maintain his health and stay fit. As a result of the findings, it can be interpreted that sports are made for health, not income, and the monthly income level has no effect in this sense. According to athletes' monthly income, there was significant difference in sleep quality scores ($p<0.05$). The difference is thought to be related to the sleep patterns of professional athletes and non-professional athletes.

According to sports types, there was a statistically significant difference in athletes' scores of commitment to sports ($p<0.05$). In addition, when the findings are examined, it is seen that the scores of commitment to sports of the athletes who do team sports ($\bar{x}=6.02$) are higher than individual athletes ($\bar{x}=5.61$). While success and failure are experienced by a single person in individual athletes, it is shared with all team members in team sports. The team is seen and embraced as a family. Therefore, it can be said that team athletes have a high level of commitment to sports. According to athletes' sports types, a statistically significant difference was not found in athlete sleep behavior scores ($p>0.05$). When the findings were examined, the average values of sleep behavior of individual athletes ($\bar{x}=2.32$) and team athletes ($\bar{x}=2.29$) were found to be close to each other. Quality sleep is an important factor for sportive performance. In this sense, it is thought that there is no difference between the two groups.

According to the undergraduate category, there was found significant difference in athletes' scores of commitment to sport ($p<0.05$). As a result of the findings, the average values of professional athletes ($\bar{x}=6.41$) were found to be higher than amateur athletes ($\bar{x}=5.61$). When the findings of Peke (2020)'s study with orienteering athletes were examined, it was determined that licensed athletes were more committed to sports than those who did leisure activities. Maintaining the sport in the professional category requires continuity and perseverance. Amateur athletes, on the other hand, often continue their esports competitions as a free time activity. It is thought that this is the source of the differentiation between them. Significant difference in sports-related subdivision of sleep behavior scores was found according to athletes' undergraduate category ($p<0.05$). It is known that sleep plays an important role in providing an efficient continuity for sports. Contrary to other sub-dimensions, the reason for the significant difference in the sport-related sub-dimension is thought to be the maintenance of sportive performance.

Finally, when the results of the Pearson correlation analysis of the relationship between the scores of athlete sleep behavior scale and the sports commitment scale were examined, a positive and moderately significant relationship was found between the sports-relatedness factor, which is the athlete sleep behavior sub-factor, and all the sub-dimensions of commitment to sports ($p<0.05$). In this context, it is thought that as esports players' levels of commitment to sports increase, their sports-related factors (caffeine use, night exercise, night mental training, etc.) will increase.

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