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Welcome to TOJRAS

Message from the Editor

The Online Journal of Recreation and Sport- TOJRAS was first published in 2012. The article publishes original, qualified and sufficient research papers in the field of physical education and sport, sport management, recreation and education of coaching to contribute to the field of sport both in Turkey and in the world. The publication language of the journal is English. The referees and editors of TOJRAS are field experts and the articles are reviewed by them according to their field expertise. The main goal of TOJRAS is to assure a fruitful and academic platform for the authors, referees, and the members of science and advisory board and the contributors to the enhancement of science in the light of the rules of ethics.

We would like to welcome and thank you for your online journal interest which helped TOJRAS to gain popularity and dignity among academic publications locally and internationally so that we can bring various and profound studies in the field of sport by valuable researchers. In addition to them, teachers, teacher trainers, parents, and students around the world have visited TOJRAS for five years continuously. It means that TOJRAS has contributed to the dissemination of new trends in sport education and research to all over the world for years. We hope that this latest issue will also follow our global educational goal.

TOJRAS provides its readers with the opportunity of meeting different aspects on sport education so that they can expand their study fields. Also, the content is freely accessible without charge to the user or to his/her institution. In addition, any views expressed in this publication are the views of the authors and are not the views of the Editor and TOJRAS.

TOJRAS thanks and appreciates the editorial board and reviewers who have contributed a lot to the submissions of this issue for their valuable contributions.

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TOJRAS invites you for article contribution. Submitted articles can be about all aspects of sport education. The articles should be original, unpublished, and not in consideration for publication elsewhere at the time of submission to TOJRAS. Manuscripts must be submitted in English.

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EXAMINATION OF THE SELF-DIRECTED LEARNING READINESS LEVELS OF PRE-SERVICE TEACHERS BASED ON CERTAIN VARIABLES

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ABSTRACT

The present study aims to examine the self-directed learning readiness levels of pre-service teachers based on certain variables. The population of the study consisted of 163 students randomly selected from the Department of Physical Education and Sports Teaching within the School of Physical Education and Sports at Bingöl University. The "Self-Directed Learning Readiness Scale" and a "Personal Information Form" were used as data collection tools. The statistical analyses of the data obtained from the Personal Information Form and the Self-Directed Learning Readiness Scale were performed using the SPSS 20.0 package program. The participants' personal information, inventory total scores and factor scores were presented by calculating their frequency (f) and percentage (%) values. In order to determine whether the self-directed learning readiness levels of the participants differed by independent variables, the t-test was

performed in comparisons based on gender and the one-way analysis of variance (ANOVA) was performed in comparisons based on age, grade level, weekly study hours and GPA.

As a result of the present study, statistically significant differences were found between self-directed learning readiness levels and the variables age, grade level, weekly study hours and GPA. No statistically significant difference was found in the comparisons based on the gender variable.

In conclusion, it is thought that self-directed learning readiness is an important skill for the acquisition of new knowledge. Pre-service teachers should acquire this skill and convey it to their students in the future. It is thought that this skill will be beneficial for future generations.

Key Words: self-directed learning readiness, pre-service teachers, physical educationll.

INTRODUCTION

Social paradigms, the rapid increase in information and technological developments affect the concepts of cognition and learning and make it imperative for individuals to possess self-directed learning skills today. Individuals today are expected to reach information in line with their needs and adapt to life in this way. At this point, individuals are required to possess self-directed learning skills to be able to establish learning conditions for themselves (Ulusoy, & Karakuş, 2018). In other words, it is very important for individuals to be in possession of self-directed learning skills in order to survive within the global race on developing technology and communication (Francis, & Flanigan, 2012; Guglielmino et al., 1987; Trilling, & Fadel, 2009). It is considered to be a more effective way of learning (Manning, 2007). Pintrich (2000) defines self-directed learning as an effective and constructivist process in which learners go into the effort of observing, managing and monitoring their cognition after they establish their goals, and guided and restricted by these goals and the learning environment they are in. Self-directed learning has personal, social and political aspects and contexts. It is emphasized that establishing a balance between these is important for self-directed learning readiness (Wiley, 1983). Fisher et al. define the concept of self-directed learning readiness as the degree to which individuals possess the dispositions, abilities and personal features necessary to acquire self-directed learning skills (Fisher et al., 2001). In order for self-directed learning readiness to be realized, individuals are required to meet certain cognitive, affective and physical requirements. Individuals who acquire self-directed learning skills also obtain problem-based and lifelong learning skills (Du, 2012).

In the process of self-directed learning, teachers play an important role in establishing the readiness of students and enabling them to internalize the skill. In this process, teachers' level of knowledge, skills, principles, values and sense of understanding are undeniably significant for students to receive better education (Karataş & Başbay, 2014). Additionally, it can be said that teachers with self-directed learning skills will be more successful in reaching information in accordance with changing conditions and internalizing knowledge (Şahin & Erden, 2009). Since learning by researching, experimenting, doing and living is the main output within the educational process, the readiness level of students is very significant in this process of behavioral change and acquisition of desired behavior. For this reason, as stated by Başar, students should possess the cognitive, affective and psychomotor behaviors necessary

for the new information, attitudes and behaviors they will acquire (Aşkın, 2015). Due to the fact that the development of individuals' learning skills forms the basis for the development of lifelong learning skills, individuals should always demonstrate readiness towards learning.

In the literature review conducted by the researchers, previous studies were found on the examination of self-directed learning readiness levels of pre-service teachers (Salas, 2010; Yenilmez, & Şan, 2008) and university students (Sarmaşoğlu, 2009; Haron, 2003; Smedley, 2007; Yuan et al., 2012; Kar et al., 2014; Prabjanee, & Inthachot, 2013; Aşkın, 2015; Sahoo, 2016; Shirke et al., 2016) in various departments. It was observed that there are a limited number of studies examining the self-directed learning readiness levels of physical education and sports teacher candidates (Turan, & Koç, 2018).

When the information above is evaluated as a whole, it is observed that the concept of self-directed learning readiness can be effective in different areas of life to various extents. However, due to the limited number of studies on the self-directed learning readiness levels of university students studying in the field of physical education and sports, it is thought that the present study will provide a different perspective and contribute to the field of physical education and sports. In this context, the present study aims to examine the self-directed learning readiness levels of physical education and sports teacher candidates based on certain variables.

MATERIAL AND METHOD

In the present study, the descriptive survey method, which aims to reveal the present situation, was used. The descriptive survey model is a study approach that aims to describe a past or present situation as it is. It is aimed to describe the events, individuals or objects included in the study as they are and in their own conditions. These elements are not changed or affected in any way (Karasar, 2004).

Selection of Volunteer Groups

163 students selected among 183 students studying in the Department of Physical Education and Sports Teaching at Bingöl University School of Physical Education and Sports using the simple random sampling method (Çıngı, 1994) voluntarily participated in the study.

Data Collection Tools

The Self-Directed Learning Readiness Scale and the Socio-Demographic Information Form were used as data collection tools.

Socio-Demographic Information Form

The Socio-Demographic Information Form includes 5 questions aimed at obtaining information regarding the gender, age, grade level, weekly study hours and GPA of the participants.

Table 1. Socio-Demographic Features of the Participants

	Variables	N	%
Gender	Male	113	69.3
	Female	50	30.7
Age	18-21	85	52.1
	22-25	69	42.3
	26 and older	9	5.5
Grade Level	1st year	51	31.3
	2nd year	58	35.6
	3rd year	54	33.1
Weekly Study Hours	1-10	99	60.7
	11-20	31	19.0
	21-30	20	12.3
	31 and over	13	8.0
GPA	1.25-1.99	9	5.5
	2.00-2.99	110	67.5
	3.00-4.00	44	27.0

Table 1 shows that 69.3% of the participants are male while 30.7% are female, 52.1% are aged 18-21 while 42.3% are aged 22-25 and 5.5% are 26 and older. 31.3% of the participants are 1st-year students while 35.6% are 2nd-year students and 33.1% are 3rd-year students. In terms of weekly study hours, 60.7% study for 1-10 hours a week while 19.0% study for 11-20 hours, 12.3% study for 21-30 hours and 8.0% study for 31 hours and more. 5.5% of the participants have a GPA of 1.25-1.99 while this ratio is 67.5% for the 2.00-2.99 range and 27.0% for the 3.00-4.00 range.

Self-Directed Learning Readiness Scale

The Self-Directed Learning Readiness Scale was used to determine the self-directed learning readiness levels of the participants. The Turkish adaptation of the Self-Directed Learning Readiness Scale (SDLRS) developed by Fisher et al. (2001) was conducted by Şahin

and Erden (2009) with 130 classroom teachers. SDLRS is structured as a 5-point Likert scale (1=Strongly Disagree, 2=Disagree, 3=Unsure, 4=Agree, 5=Strongly Agree). In order to test the reliability of the measurements, the Cronbach Alpha coefficient was calculated for each sub-dimension. It was calculated as .90 for the sub-dimension of "Self-Direction", .89 for "Desire for Learning" and .85 for "Self-Control". Nunally (1978) emphasized that the coefficient for the reliability measurement needs to be over 70. In this context, based on the reliability coefficients obtained, it can be said that the measurement results are reliable.

Data Analysis

The IBM SPSS statistical package program was used in the analysis of the data. It was determined that the skewness and kurtosis values of the scales ranged between -1 and +1 (Table 2). Values in this range indicate that there are no excessive deviations from normality (Büyüköztürk, 2007). In light of this information, the data were considered to be normally distributed. The participants' personal information, inventory total scores and factor scores were presented by calculating their frequency (f) and percentage (%) values. In order to reveal the difference between the scores obtained from the scales, the independent t-test was used for the gender variable and the one-way analysis of variance (ANOVA) was used for the variables of age, grade level, weekly study hours and GPA.

Table 2. The Skewness-Kurtosis Values of the Scale Scores

	N	Skewness	Kurtosis
Self-Direction	163	-.445	-.343
Desire for Learning	163	.302	.934
Self-Control	163	-.111	-.175
Readiness Total	163	-.124	-.625

FINDINGS

Table 3. Descriptive Statistics of the Participants' Answers

	N	Minimum	Maximum	X±SS
Self-Direction	163	55.00	99.00	83.82±9.63
Desire for Learning	163	45.00	92.00	61.92±7.33
Self-Control	163	50.00	85.00	69.82±7.69
Readiness Total	163	160.00	260.00	215.77±21.97

Table 3 shows that the participants had a score average of 83.82±9.63 from the Self-Direction sub-dimension, 61.92±7.33 from the Desire for Learning sub-dimension, 69.82±7.69 from the Self-Control sub-dimension and 215.77±21.97 from the Readiness Total score.

Table 4. T-Test Results by Gender

	Gender	n	X± Ss	t	P
Self-Direction	Male	113	83.56±9.63	-.514	.608
	Female	50	84.40±9.69		
Desire for Learning	Male	113	61.21±6.98	-1.868	.064
	Female	50	63.52±7.89		
Self-Control	Male	113	69.74±7.81	-.181	.857
	Female	50	69.98±7.50		
Readiness Total	Male	113	214.72±22.33	-.914	.362
	Female	50	218.14±21.17		

According to Table 4, it was determined that there was no significant difference in the participants' scores from the Self-Directed Learning Readiness Scale based on the gender variable.

Table 5. ANOVA Results by Age

	Age	n	X± Ss	F	P	LS D
Self-Direction	18-21 ¹	85	85.31±9.19	4.289	.015	1-2 2-3
	22-25 ²	69	81.41±9.71			
	26 and older ³	9	88.22±9.71			
Desire for Learning	18-21 ¹	85	63.24±7.31	4.186	.017	1-2
	22-25 ²	69	60.03±7.06			
	26 and older ³	9	64.00±6.98			
Self-Control	18-21 ¹	85	70.67±7.43	2.440	.090	-
	22-25 ²	69	68.38±8.05			
	26 and older ³	9	72.78±5.65			
Readiness Total	18-21 ¹	85	219.49±20.22	5.037	.008	1-2 2-3
	22-25 ²	69	209.81±22.93			
	26 and older ³	9	226.33±20.81			

In Table 5, when the participants' Self-Directed Learning Readiness levels are examined based on the age variable, it is observed that the age group of 26 and older had the highest score average in the sub-dimension of Self-Direction with 88.22±9.71 while the age group of 22-25 had the lowest score average with 81.41±9.71. In the sub-dimension of Desire for Learning, the age group of 26 and older had the highest score average with 64.00±6.98 while the age group of 22-25 had the lowest score average with 60.03±7.06. In the sub-dimension of Self-Control, the age group of 26 and older had the highest score average with 72.78±5.65 while the age group of 22-25 had the lowest score average with 68.38±8.05. In Readiness Total, the age group of 26 and older had the highest score average with 226.33±20.81 while the age group of 22-25 had the lowest score average with 209.81±22.93. As a result of the statistical analysis, significant differences were found.

Table 6. ANOVA Results by Grade Level

	Grade Level	n	X± Ss	F	P	LSD
Self-Direction	1st year ¹	51	82.16±9.82	4.656	.011	1-2 2-3
	2nd year ²	58	86.84±8.95			
	3rd year ³	54	82.13±9.52			
Desire for Learning	1st year ¹	51	61.67±8.36	.684	.506	-
	2nd year ²	58	62.79±6.69			
	3rd year ³	54	61.22±6.97			
Self-Control	1st year ¹	51	68.73±7.57	2.729	.068	-
	2nd year ²	58	71.69±6.91			
	3rd year ³	54	68.83±8.34			
Readiness Total	1st year ¹	51	212.78±22.01	3.183	.044	1-2 2-3
	2nd year ²	58	221.53±19.91			
	3rd year ³	54	212.40±23.14			

In Table 6, when the participants' Self-Directed Learning Readiness levels are examined based on the grade level variable, it is observed that the 2nd year students had the highest score

average in the sub-dimension of Self-Direction with 86.84 ± 8.95 while the 3rd year students had the lowest score average with 82.13 ± 9.52 . In the sub-dimension of Desire for Learning, the 2nd year students had the highest score average with 62.79 ± 6.69 while the 3rd year students had the lowest score average with 61.22 ± 6.97 . In the sub-dimension of Self-Control, the 2nd year students had the highest score average with 71.69 ± 6.91 while the 1st year students had the lowest score average with 68.73 ± 7.57 . In Readiness Total, the 2nd year students had the highest score average with 221.53 ± 19.91 while the 3rd year students had the lowest score average with 212.40 ± 23.14 . As a result of the statistical analysis, significant differences were found.

Table 7. ANOVA Results by Weekly Study Hours

	Weekly Study Hours	n	X \pm Ss	F	P	LSD
Self-Direction	1-10 ¹	99	84.61 \pm 9.40	.983	.403	-
	11-20 ²	31	82.81 \pm 8.66			
	21-30 ³	20	80.90 \pm 12.18			
	31 and over ⁴	13	84.62 \pm 9.21			
Desire for Learning	1-10 ¹	99	62.61 \pm 7.64	2.707	.047	1-2 1-4
	11-20 ²	31	58.77 \pm 5.51			
	21-30 ³	20	61.90 \pm 7.45			
	31 and over ⁴	13	64.23 \pm 7.03			
Self-Control	1-10 ¹	99	70.60 \pm 7.60	1.771	.155	-
	11-20 ²	31	67.06 \pm 5.86			
	21-30 ³	20	69.55 \pm 9.44			
	31 and over ⁴	13	70.85 \pm 8.64			
Readiness Total	1-10 ¹	99	217.94 \pm 21.62	1.633	.184	-
	11-20 ²	31	208.65 \pm 17.59			
	21-30 ³	20	213.55 \pm 27.65			
	31 and over ⁴	13	219.69 \pm 22.81			

In Table 7, when the participants' Self-Directed Learning Readiness levels are examined based on the weekly study hours variable, it is observed that the students with 31 and more hours of study per week had the highest score average in the sub-dimension of Self-Direction with 84.62 ± 9.21 while the students with 21-30 hours had the lowest score average with 80.90 ± 12.18 . In the sub-dimension of Desire for Learning, the students with 31 and more hours had the highest score average with 64.23 ± 7.03 while the students with 11-20 hours had the lowest score average with 58.77 ± 5.51 . In the sub-dimension of Self-Control, the students with 31 and more hours had the highest score average with 70.85 ± 8.64 while the students with 11-20 hours had the lowest score average with 67.06 ± 5.86 . In Readiness Total, the students with 31 and more hours had the highest score average with 219.69 ± 22.81 while the students with

11-20 hours had the lowest score average with 208.65 ± 17.59 . As a result of the statistical analysis, significant differences were found.

Table 8. ANOVA Results by GPA

	GPA	n	X \pm Ss	F	P	LSD
Self-Direction	1.25-1.99 ¹	9	78.89 \pm 7.83	3.360	.037	1-3 2-3
	2.00-2.99 ²	110	83.12 \pm 9.87			
	3.00-4.00 ³	44	86.57 \pm 8.76			
Desire for Learning	1.25-1.99 ¹	9	61.78 \pm 3.90	1.148	.320	-
	2.00-2.99 ²	110	61.36 \pm 8.01			
	3.00-4.00 ³	44	63.34 \pm 5.84			
Self-Control	1.25-1.99 ¹	9	67.78 \pm 7.14	.923	.399	-
	2.00-2.99 ²	110	69.51 \pm 7.79			
	3.00-4.00 ³	44	71.00 \pm 7.56			
Readiness Total	1.25-1.99 ¹	9	208.44 \pm 17.42	1,967	,143	-
	2.00-2.99 ²	110	214.31 \pm 22.90			
	3.00-4.00 ³	44	220.91 \pm 19.74			

In Table 8, when the participants' Self-Directed Learning Readiness levels are examined based on the GPA variable, it is observed that the students with a GPA of 3.00-4.00 had the highest score average in the sub-dimension of Self-Direction with 86.57 ± 8.76 while the students with a GPA of 1.25-1.99 had the lowest score average with 78.89 ± 7.83 . In the sub-dimension of Desire for Learning, the students with a GPA of 3.00-4.00 had the highest score average with 63.34 ± 5.84 while the students with a GPA of 2.00-2.99 had the lowest score average with 61.36 ± 8.01 . In the sub-dimension of Self-Control, the students with a GPA of 3.00-4.00 had the highest score average with 71.00 ± 7.56 while the students with a GPA of 1.25-1.99 had the lowest score average with 67.78 ± 7.14 . In Readiness Total, the students with a GPA of 3.00-4.00 had the highest score average with 220.91 ± 19.74 while the students with a GPA of 1.25-1.99 had the lowest score average with 208.44 ± 17.42 . As a result of the statistical analysis, significant differences were found.

DISCUSSION AND CONCLUSION

In the present study, it was determined that there was no statistically significant difference in the Self-Directed Learning Readiness levels of pre-service teachers based on the gender variable. Previous studies in the literature support the findings of the present study (Smedley, 2007; Sahoo, 2016; Pekel, 2016; Reio, 2004; Aydede, & Kesercioğlu, 2012). Although no statistically significant difference was found based on the participants' gender, it

was determined that the female pre-service teachers had higher Self-Directed Learning Readiness levels compared to male pre-service teachers. In line with the present study, Özbek et al. also reported the aforementioned finding (Özbek et al., 2017). In contrast with the present study, other studies in the literature reported that Self-Directed Learning Readiness levels showed significant differences based on the gender variable (Aşkın, 2015; Kılıç, & Sökmen, 2012; Reio, & Davis, 2005). According to Du (2012), the Self-Directed Learning approach enables individuals to discover and develop their own learning strategies and allows for faster and easier learning. Based on this view, it is thought as a result of the present study that the female participants had higher Self-Directed Learning Readiness levels compared to the male participants due to the fact that they had higher awareness towards the aforementioned qualities related to Self-Directed Learning Readiness.

In the present study, a significant difference was found between the participants' Self-Directed Learning Readiness levels and the gender variable in the sub-dimensions of Self-Direction, Desire for Learning and Readiness Total ($p < 0.05$) while no significant difference was found in the sub-dimension of Self-Control ($p > 0.05$). The findings of Reio and Davis are in parallel with the present study (Reio, & Davis, 2005). This is thought to be due to the fact that experience affects learning and that the level of self-learning is positively affected by this. Self-Directed Learning should not be thought of only in terms of lifelong learning, but the necessity of possessing this skill in all learning processes should be understood (Ulusoy, & Karakuş, 2018).

When the participants' Self-Directed Learning Readiness levels were examined in terms of the grade level variable, a significant difference was found in the sub-dimensions of Self-Direction and Readiness Total ($p < 0.05$) while no significant difference was found in the sub-dimensions of Desire for Learning and Self-Control ($p > 0.05$). Certain studies in the literature are in parallel with the present study. Shirke et al. reported that 1st-term students had higher Self-Directed Learning Readiness levels compared to 5th-term students (Shirke et al., 2016). Additionally, Kar et al. (2014) found a significant difference between the grade level variable and Self-Directed Learning Readiness levels (Kar et al., 2014). However, other studies in the literature state that the grade level variable does not create a significant difference (Kılıç, & Sökmen, 2012; Salas, 2010). As a result of the present study, it was found that Self-Directed

Learning Readiness levels increased in direct proportion to grade level. This is thought to be due to the academic experiences of the pre-service teachers.

When the relationship between the participants' Self-Directed Learning Readiness levels and weekly study hours was examined, a significant difference was found in the sub-dimension of Desire for Learning ($p < 0.05$) while no significant difference was found in the sub-dimensions of Self-Direction, Self-Control and Readiness Total ($p > 0.05$). As a result of the present study, it was found that Self-Directed Learning Readiness levels increased in line with study hours (Table 7). In parallel with the present study, Özbek et al. (2017) also reported the aforementioned finding (Özbek et al., 2017). Since increased study hours will improve the knowledge of individuals, it is thought that learning becomes easier as the individual uses this fund of knowledge in acquiring new information. The significant difference in the sub-dimension of Desire for Learning is attributed to the fact that pre-service teachers achieve further success by improving, refreshing and reinforcing their knowledge through studying.

When the relationship between the participants' Self-Directed Learning Readiness levels and GPA was examined, a significant difference was found in the sub-dimension of Self-Direction ($p < 0.05$) while no significant difference was found in the sub-dimensions of Desire for Learning, Self-Control and Readiness Total ($p > 0.05$). It was found that Self-Directed Learning Readiness levels increased in line with academic success (Table 8). Many studies in the literature are in parallel with the present study (Alkan, 2012; Aydede, & Kesercioğlu, 2012; Chou, 2012; Khan et al., 2012; Sarmaşoğlu, 2009; Shinkareva, & Benson, 2007). Reio (2004) and Hsu & Shiue (2005) found that academic success predicted Self-Directed Learning Readiness. On the other hand, in contrast with the present study, Yenilmez & Şan (2008) and Deyo et al. (2011) reported that there was no significant difference between Self-Directed Learning Readiness levels and academic success. The reason why individuals with high academic success also have high Self-Directed Learning Readiness levels is attributed to the fact that these individuals are able to better convey their knowledge to new situations.

In conclusion, it was found that the variables of age, grade level, weekly study hours and academic success caused a significant difference in the Self-Directed Learning Readiness levels of the pre-service teachers while the gender variable had no effect. It was concluded that individuals must be well-equipped in order to learn effectively. It is thought that well-equipped

individuals will be able to learn in a quicker and more permanent manner by effectively implementing the concept of readiness when necessary.

SUGGESTIONS

1. Self-Directed Learning Readiness is an important skill for the acquisition of new information. A limited number of variables could be examined in the present study. Broader interpretation can be made by examining the relationships with different variables.
2. Course contents can be programmed with an emphasis on Self-Directed Learning.
3. In the creation of teaching environments, learning environments that positively affect Self-Directed Learning Readiness can be established.
4. Since self-learning will lead to the acquisition of more permanent knowledge, courses on this subject can be featured in undergraduate education for teacher candidates to practice the approach with their students in the future.
5. Activities to raise awareness towards Self-Directed Learning Readiness can be conducted through various courses or in-service training seminars.

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COMPARISON OF SOME PHYSICAL PROPERTIES OF ATHLETES IN DIFFERENT BRANCHES

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ABSTRACT

This study was planned to investigate whether sports have an effect on height, weight and hand grip strength and whether different sports branches such as; volleyball, basketball, football, handball are meaningful in terms of these features, and also how effective the family income levels are in the preferences of the sports branches of the subjects. Totally 100 students with a mean age of 16.55 ± 0.091 were included in the study. Eighty of them are those who play basketball ($n = 20$), football ($n = 20$), volleyball ($n = 20$), and handball ($n = 20$) in sports clubs and school teams. The control group, on the other hand, was taken on a voluntary basis from high school students ($n = 20$) who took only two hours of physical education lessons per week. The height and weight of the subjects were taken. Right and

left-hand grip strengths of them were measured. The higher of the two measurements was evaluated. In addition, subjects were asked about their family income levels. Statistical Package for Social Sciences (SPSS) 16.00 package program was used in the statistical analysis of these data. As a result, there was a significant relationship between the groups who played sports or not in the height variable at $p < 0.05$ and in terms of family income levels at $p < 0.01$. It was determined that the other parameters between these two groups were not significant but there was significance at the level of $p < 0.01$ in terms of height, right-hand grip strength and family income among all groups, and $p < 0.05$ in left-hand grip strength.

Key Words: *Sport, height, weight, hand grip strength, level of family income*

INTRODUCTION

It is known that the individual's growth and maturation process depends on genetic and environmental factors. Physical activity is not only one of the many factors affecting growth and maturation among environmental ones, but it also has a place in regular development (Erkan, 1982: 168; Gökdemir & Koç, 2000: 259). It is stated that the muscle structures of children who do not do sports are underdeveloped, their height is shorter and they have a fat or weak body structure due to excessive or malnutrition (Erkan, 1982). The actions in our daily life and the efficiency in sports movements are realized through the muscles (Bağırhan, 1990). Strength is the ability to apply force and the basic element of sports activities. It both forms the basis of performance in recreational activities and plays an important role in a person's ability to perform daily activities effectively and efficiently (Tamer, 1995). In sports branches, regular and load intensity trainings based on scientific foundations increase muscle strength, durability, speed and flexibility, and regulate body composition (Kartal & Günay, 1994: 24-31). It is stated that the hand grip strength is directly related to the general strength of the body (Aydaş, 2000; Çakmakçı, 2002; Eler, 2002).

Physiological and physical fitness as well as parameters such as technical, tactical and experience, which are mental features in all sports branches, are of great value (Gökdemir & Koç, 2000; Zorba et al., 2000: 23-29). It has been reported that training models and intensities in basketball, which is one of the environmental factors, are closely related to height development of athletes (Akçakaya, 2009). In addition, the anthropometric features of the player in some branches (basketball, football, volleyball and handball) as well as strength, speed, flexibility, jumping ability, endurance and coordination, have been stated to be important factors in the success of the team in terms of performance (Clarke, 1975; Günay et al., 1994: 3-11; Colonel et al., 2008: 13-20).

The aim of this study is to investigate the impact of doing sports in general, and different sports branches in particular, on height, weight and hand grip strength, and how the family income levels of the subjects are effective on preferring sports branches.

MATERIAL AND METHOD

Eighty athletes doing different sports branches (basketball, volleyball, football, handball) and 20 high school students who do not play sports other than two hours of physical education per week were included in the study on a voluntary basis. The control group was randomly selected from Milli Piyango Anatolian High School students. The lengths of the subjects (Nan-IB 150) were measured with a sliding calliper, their body weights were measured with a precision scale (Angel), and GRIP - D hand dynamometer was used to measure the right and left-hand grip strength while subjects were standing and their arms were in the position of 45-degree angle to their bodies. The higher of the two measurements made was evaluated. In addition, a mini survey was conducted to determine family income levels. The obtained data was transferred to the computer and SPSS 15.00 package program was used in the analysis.

FINDINGS

Table 1: Distribution of some variables according to those who sport and non-sport

Variables	Groups	N	Average	SD	P
Height (cm)	Non-sport	20	172.55	9.77	0.017
	Sport	80	177.17	7.01	
Weight (kg)	Non-sport	20	61.35	15.07	0.088
	Sport	80	65.94	9.29	
Right hand grip strength (kg)	Non-sport	20	36.20	9.21	0.169
	Sport	80	38.83	9.21	
Left hand grip strength (kg)	Non-sport	20	33.86	9.14	0.060
	Sport	80	37.45	7.08	

As seen in Table 1, the average heights of those, who sport and do not, are (172.55 ± 9.77 and 177.17 ± 7.01 cm). The average weight of those who sport and do not is (61.35 ± 15.07 and 65.94 ± 9.29 kg). The right-hand grip strength average is 36.20 ± 9.21 kg in playing sport group, while 38.83 ± 9.21 kg in non-sport. Lastly, the left-hand grip average is 33.86 ± 9.14 kg for sport group and 37.45 ± 7.08 kg for non-sport group.

Table 2: Some variables of the groups

Variables	Groups	N	Average	SD	P
Height (cm)	Non-sport	20	172.55	9.77	0.01
	Basketball	20	180.70	7.77	
	Volleyball	20	176.00	5.72	
	Football	20	174.45	6.81	
	Handball	20	177.55	6.50	
Weight (kg)	Non-sport	20	61.35	15.07	0.06
	Basketball	20	70.05	12.58	
	Volleyball	20	64.30	6.65	
	Football	20	62.45	7.64	
	Handball	20	66.95	7.96	
Right hand grip strength (kg)	Non-sport	20	36.20	9.21	0.01
	Basketball	20	41.97	7.72	
	Volleyball	20	39.91	5.32	
	Football	20	34.44	6.81	
	Handball	20	38.99	6.77	
Left hand grip strength (kg)	Non-sport	20	33.86	9.14	0.05
	Basketball	20	39.43	7.80	
	Volleyball	20	38.04	6.33	
	Football	20	34.02	6.26	
	Handball	20	38.28	7.14	

In Table 2, when the average size of the groups is examined, the average height of subjects in non-sport group is 172.55 ± 9.77 cm, while sport groups have these values respectively 180.70 ± 7.77 ; 176.00 ± 5.72 ; 174.45 ± 6.81 and 177.55 ± 6.50 cm in basketball, volleyball, football and handball. Considering the average weight values, it was found that subjects whom: do not play sports are 61.35 ± 15.07 kg, on the other hand, values of sport groups are respectively 70.05 ± 12.58 ; 64.30 ± 6.65 ; 62.45 ± 7.64 and 66.95 ± 7.96 kg in basketball, volleyball, football and handball. The distribution of the right-hand grip strength averages by groups is 36.20 ± 9.21 kg in non-sports players. However, values in sport groups are as following 41.97 ± 7.72 kg in basketball, 39.91 ± 5.32 kg in volleyball, 34.44 ± 6.81 kg in football, and 38.99 ± 6.77 kg in handball players. Left hand grip strength averages are 33.86 ± 9.14 kg for non-sports, and respectively 39.43 ± 7.80 ; 38.04 ± 6.33 ; 34.02 ± 6.26 and 38.28 ± 7.14 kg for basketball, volleyball, football and handball players.

Table 3: Distribution of family income of groups

Groups		Monthly income levels (Turkish Lira)					Total
		100-500	501-1000	1001-1500	1501-2000	2000 >	
Control	N	0	2	10	3	5	20
	%	0	10	50	15	25	100
Basketball	N	1	2	8	5	4	20
	%	5	10	40	25	20	100
Volleyball	N	10	8	1	1	0	20
	%	50	40	5	5	0	100
Football	N	2	9	8	1	0	20
	%	10	45	40	5	0	100
Handball	N	2	8	6	2	2	20
	%	10	40	30	10	10	100
Total	N	15	29	33	12	11	100
	%	15	29	33	12	11	100

Table 3 shows the distribution of the family income levels indicated by the subjects of groups. Accordingly, 50% of those in the control group stated that their income was 1001-1500 TL, while 25% of them had 2001 TL and above. 40% of athletes who play basketball stated that their family income was 1001 - 1500 TL, 25% of 1501-2000 TL, and 20% of them have 2001 TL and above. It is seen that 50% of those who play volleyball have 100-500 TL while 40% of them have 501-1000 TL family income. For those who play football, this distribution is 45% 501-1000 TL, 40% 1001 - 1500 TL, and 40% of handball players' family incomes are 501-1000 TL and 30% 1001 - 1500 TL.

DISCUSSION

In this study, it was investigated whether there is a difference in terms of height, weight, right and left-hand grip strengths and economical level between both sports and non-sports branches.

The overall average of the height variable of the subjects is 176.25 ± 7.80 cm. When this variable was evaluated as those who play sports and non-sports, it was found to be statistically significant at the level of $p < 0.05$. Hamamioğlu and Kaya (2008) stated that height length is significant in favour of basketball players in their studies comparing some physical properties of 7-12-year-old children playing basketball with the same age sedentary. Kürkçü et al. (2001) stated that there was no difference in terms of height in their studies that they investigated the effect of exercise on physical and physiological parameters in 12-14-year-old boys. It is thought that the different data results between the first study and of Kürkçü et al.

may be due to the age difference in both studied groups and the differences in the years of performing sports.

In consequence of statistical comparison of the height variable, the average height values of the sports branches with those who do not play sports, there was a significant relationship between the groups at the level of $p < 0.05$. It was found that those who do not play sports have a significant relationship with basketball players at $p < 0.01$ and handball players at $p < 0.05$, but not with football and volleyball players ($p < 0.05$). Kuter and Öztürk (1992) found that the average height in basketball players was 181.6 ± 6.7 cm. Moreover, Çelenk and Çumralıgil (2005) revealed that volleyball players had a higher average height than footballers did. In his study on university students, Akçakaya (2009) reported that the height average length of basketball players (184.06 ± 8.44 cm) was higher than footballers' average (174.80 ± 6.51 cm). These data support the findings of the study.

Average weight of the subjects is 65.02 ± 10.76 kg. When the weight variable was evaluated as sports and non-sports, it was found that these values were not statistically significant ($p < 0.05$). When the groups were compared exactly, it was seen that only the group playing basketball had a significant relationship with the non-sports group at the level of $p < 0.0$ and the football group at the level of $p < 0.05$, but there was no significant relationship between the other groups. Studies on this subject reveal that basketball players have more body weight average than football players do (Akçakaya, 2009; Çebi et al., 2004; Koç & Büyükipekci, 2010). This situation is thought to be due to the difference in bone structure depending on the height in basketball players.

The average of the right-hand grip strength in all subjects is 38.30 ± 7.62 kg, and the left one 36.73 ± 7.62 kg. As a result of statistical comparison of both the right and left-hand grip strength average values of sport and non-sport group, it was revealed that there was no significant relationship ($p < 0.05$).

When the right-hand grip strength averages of non-sports and other sports branches were statistically compared, it was determined that there was a significant relationship at the level of $p < 0.01$. In comparison of the left-hand grip strength averages, a significance level of $p < 0.05$ was found between the groups. Akçakaya (2009) found that the average of the right-hand grip strength was higher in basketball players, although it was not significant. In addition,

Koç and Büyükkipekci (2010) found that basketball players' hand grip strength average was higher than volleyball players in their study. It is believed that the average of both right and left-hand grip strength higher than football in hand-held sports branches is related to the body region being operated.

When the groups are evaluated according to the family income levels they stated, there was a statistically significant relationship between the groups in terms of monthly income at the level of $p < 0.01$. Based on these data, it can be said that those with high income prefer basketball, however; those with low income prefer football and volleyball. It is thought that the physical opportunities in the environment they live in and the economic revenues in the branches may be effective.

As a result, it can be said that sports is an important factor in the development of young people, but it will not be sufficient alone, so it must be supported with nutrition. It was also observed that those with high income prefer basketball but with low family income prefer football. This result shows that the economic situation, along with environmental factors, is effective in the selection of sports branches. At this point, it may be suggested to provide facilities for different sports branches in each region for the provision of talented athletes. In summary, physical conditions should be created based on abilities, not talent based on physical possibilities.

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DETERMINATION OF LEVELS OF ANXIETY OF PARENTS OF THE INDIVIDUALS WITH DOWN'S SYNDROME PARTICIPATING ATHLETICS CHAMPIONSHIP IN TURKEY

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ABSTRACT

The purpose of this research is to determine the level of continuous anxiety of parents of individuals with Down's syndrome joining in Athletics Championships in Turkey independently from their families after regular athletics trainings. The parents of 10 individuals with Down's syndrome(application group) who are between 10 and 15 years old and attend athletics regularly and The parents of 10 individuals with Down's syndrome(control Group) who didnot participate in any physical activity were included in the study.The first-last questionnaire application was applied to the parents who participated in the research. Athletics work was carried out at the stadium under the control of athletics coaches between 15: 00-17: 00 hours 3 days a week (Monday, Wednesday and Friday) . The individuals in the control group was

made to do no application. The individuals with Down's syndrome who participated in the studies regularly participated in Athletics Championships in Turkey organized by the Federation of Turkish Special Athletes and remained separate from their families 7 days. The questionnaire application was applied to the parents of individuals who participated in athletics studies and who didnot participate in athletics studies before and after the 16-week program. In the statistical evaluation of the data obtained, An significant difference was observed in the anxiety level of the parents of the individuals who continued the athletics sport. This result is due to the expectation of their families.

Key Words: Athletics, Down's syndrome, Anxiety

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INTRODUCTION

Today, an important part of the world's population consists of individuals who are intellectually, physically or emotionally disabled. According to the World Health Organization (WHO) statistics, 12% of developing countries and 10% of the population in developed countries consist of individuals who are disabled (Baykan, 2003). In 2000 in the world, 12% of children aged between 5 and 17 years (about 6.6 million) are estimated to be disabled (Hogan et al., 1997). In Turkey, about 9 million children who are between 0 and 18 years old is estimated to be especially in need of assistance or disabled (Aslan and Senol, 2006). A disabled child is dependent on his parents in varying degrees. This is a very important source of stress for the family (Susan, 2003; Hastings, 2003; Sengul and Baykan, 2013). Studies show that parents who have mental or physical disabled children (especially mothers) are more stressed and have higher levels of depression than the parents who don't have disabled children (De Sousa, 2010). There are studies showing that families with disabled children have more physical and mental problems and have lower quality of life than families with normal children (Laurvick et al., 2006; Kaya et al., 2010; Benzies et al., 2011; Karaduman et al., 2010).

The positive effects of sports on disabled individuals have been determined by many studies. In order to provide the sporting needs of disabled individuals, game-based study programs are implemented by experts for their abilities, interests and sporting skills (Bruininks and Chvat, 1990; Özdemir et al., 2014). It can be said that without gender discrimination. Social adaptation and skills of children with Down's syndrome who participate in regular sportive activities can be better than children with Down's syndrome who do not participate in regular sports activities. and sportive activities can be said to be very important for educable individuals with special needs and especially for the development of social adaptation and skills of children with Down Syndrome (Ilkim et al., 2018a).

Sportive activities do not only improve the physical characteristics of disabled individuals but also contribute to their spiritual and social development and facilitate their integration into society (Eichsteadt and Lavay, 1992; Özdemir et al., 2018). If individuals with mental retardation do not participate in physical activity programs regularly, they are faced with an inactive lifestyle (Özdemir et al., 2018). Athletics sport is a sports branch that should be done regularly due to its feature.

In the researches, it has been stated that the physical fitnesses of the disabled individuals who participate in physical activities regularly develop and the risk factors are reduced (Pitetti and Tan, 1990; Draheim et al., 2003). When the risk factor is taken into consideration, the runnings section of the athletics sport is among the activities that disabled individuals can do without difficulty. Fine and gross motor skills of individuals with Down Syndrome are lower than those of healthy individuals and their development is slower (Altın, 2011). Fine and gross motor skills of these individuals develop with regular athletics. All families experience different concerns for their children without discriminating between healthy and disabled. Families who have disabled individuals have a higher rate of anxiety compared to families who have healthy children. Children's education, having learning disabilities and their health status are among the biggest causes of anxiety of the families (Bailey, 1988). The fun of sporting activities is also important in terms of rehabilitation of individuals with down syndrome and social adaptation skills (Ilkim et al., 2018b). In this case, the families' anxiety in a negative way is going to be reduced. In some studies, it has been determined that there are changes in the anxiety levels of the families who send their children with mental disabilities to physical activities (Ilkim et al., 2017). The high level of anxiety of the families who send their children with Down's syndrome to athletics championships in Turkey is due to have high expectations for their children. It can be counted among the causes of anxiety that there are no family members among the children, the long journey is tiring, negativenesses can occur in the itinerary, the failure to succeed in the competition. In a study, trait level of anxiety of families whose children participate in sportive activities were significantly found higher (Ilkim et al., 2017). The fact that families who do not send their children to physical activity have lower anxiety levels is because they do not have any expectation on behalf of their children.

Considering the data obtained from the researches and similar studies in the related field; The importance of regular physical activities comes to the fore. However, the families of disabled individuals have faced various difficulties while taking their children to physical activity areas. Environmental factors, urban traffic, different perspectives in society, economic structure of the family are some of the challenges. The obstacles which arise from both from the environment and from the system and bureaucracy families of disabled individuals that they encountered during the participation in regular physical activities have caused to increase the

levels of anxiety in families. Despite all these adversities, participation of individuals with disabilities in physical activities should be supported both in terms of their general health and self-confidence, learning, work, gaining courage and responsibility social values (Akyol and Ilkim, 2018).

Material and Method

In our study, 10 individuals with Down-Syndrome ranging from 10-15 years of age participated with special permission from their families. Down-Syndrome individuals participating in the study were prepared to Malatya Silent Steps Sports Club within the Special Sports Federation of Turkey Athletics Championships, which was held for 16 weeks. The preparatory work for the championship was carried out under the supervision of coaches at the facilities of Malatya Youth Services and Sports Provincial Directorate 3 days a week (Monday, Wednesday and Friday). In general, short distance training programs were implemented, 4x30 mt of work, 3x50 mt of work, 2x100 mt. Between the station work is given a 10-minute rest interval, each study is limited to a maximum of 2 hours. Studies have down-syndrome at the end of 10 family members with the condition being separate from the supervision of coaches will be held in Antalya province was taken to Turkey athletics championships. During this period, individuals with Down-Syndrome were allowed to socialize for 7 days, independent of their families. 20 Patients with Down-Syndrome (10 experimental groups, 10 control groups) were given continuous anxiety questionnaire (first questionnaire).

RESULTS

Table 1. Descriptive Statistics for Parents of Athletes with Down's Syndrome

Gender	Experiment		Control		Overall of Sample	
	f	%	f	%	f	%
Female	5	50	4	40	11	55
Male	5	50	6	60	9	45
Total	10	100	10	100	20	100

In Table 1, it is seen that 55% of the parents are women and 45% are men.

Table 2. Comparison of pre-test and post-test scores of the parents in the experimental group

Scale Scores	Tests	N	X	Ss	Paired t testi	
					t	p
State anxiety score	Pre-test	10	48.20	3.39	-4.704	0.001*
	Post-test	10	40.10	4.86		
Trait anxiety score	Pre-test	10	60.20	2.20	-4.869	0.000*
	Post-test	10	50.90	2.68		
Total of anxiety score	Pre-test	10	108.40	4.19	-5.126	0.000*
	Post-test	10	91.00	5.04		

*Significance at 0.05 level

When the table 2 is examined it is seen that there is a significant difference between the pre-test and post-test scores of the parents in the experimental group ($p < 0.05$). According to these results, it can be said that the anxiety levels of the parents whose children deal with athletics and participate in Championships in Turkey are lower

Table 3. Comparison of pre-test and post-test scores of the parents in the control group

Scale Scores	Tests	N	X	Ss	Paired t testi	
					t	p
State anxiety score	Pre-test	10	57.70	1.76	0.000	1.000
	Post-test	10	57.70	2.90		
Trait anxiety score	Pre-test	10	62.80	2.04	-0.335	0.745
	Post-test	10	63.20	3.58		
Total of anxiety score	Pre-test	10	120.50	2.75	-0.267	0.796
	Post-test	10	120.90	3.34		

*Significance at 0.05 level

In Table 3., It is seen that there was no significant difference between the scores obtained from the pre-test and post-test scores which have been done to determine the state anxiety, trait anxiety and general anxiety levels of the parents in the experimental group ($p > 0.05$). The averages of pre-test and post-test of the parents in the control group were similar.

DISCUSSION

In Table 1, it is seen that 55% of the parents participating in the research are women and 45% are men. Sports; It is one of the best methods of adapting the disabled people to society and environment, eliminating their fears of damage from the environment and contributing to having a more independent life (Magill, 1980; O'Conneun, 2000). Parents fear

anxiety and stress when sending their children to the sport with the fear of getting harmed from the environment and at bringing disabled individuals to the society (Ilkim et al., 2017).

The high level of happiness of the parents whose children participate in sportive activities has a positive effect on the active lifestyle and regular physical activity, children with disabilities and therefore on families (Ilkim et al., 2017). While participation of individuals with disabilities in regular physical activity, maintaining a healthy and quality life, is similar to the results in table 2 which we have studied, In the study by Calık et al. (2015), it is stated that trait anxiety scores of the parents whose children don't do sports are higher at significant level. This result also differs from the results of our research.

Ersoy (1997), in his study has stated that the low anxiety levels of mothers of individuals with mental inadequacies and the starting recommendations given within the education to be implemented by mothers immediately are effective on getting positive results from children. It is suggested that planned education is effective in coping with both stress and depression at lowering the depression level (Akyol and Ilkim, 2018; Yıldırım and Conk, 2005) in their study have stated that the parents are willing for their children to participate in sportive activities and that mentally retarded individuals see the sportive activities as games affects children's desire to participate in games positively considering age groups. Giving information to the parents about the content of activities to be attended in the participation of disabled individuals in education and sporting activities reduces the state anxiety of parents (Uyaroğlu and Bodur, 2009).

It is stated that trait state anxieties of the parents of the individuals with Down's syndrome and autistic are higher than the parents of the individuals who have normal development (Kuloğlu, 2001). The reason why parents who have disabled children have higher anxiety may be that they cannot control their feelings when it comes to children (Doğru and Arslan, 2008).

In Table 3. It is seen that there was no significant difference between the scores obtained from the pre-test and post-test to determine state anxiety, trait anxiety and general anxiety levels of the parents in the experimental group ($p > 0.05$). The averages of pre-test and post-test of the parents in the control group were similar.

In families sending their children to physical activity, it is possible to think that there is not a high level of trait anxiety and the increase of social life and self-sufficiency of their children.

According to this finding which is also expected, it is possible to say that the level of trait anxiety decreases as the level of social support perception of mothers increases and in other words they feel less trait anxiety when supported and they are not left alone. When the literature is examined, in Sencar's, (Sencar, 2007) master's study it is observed that the trait anxiety levels of mothers who have autistic children are also similar (Coşkun and Akkarak, 2009).

In Ilkim and ark's study, (Ilkim et al., 2017) the trait anxiety levels of the parents whose children participate in sportive activities were found at significant level. This result is different from our study. While children's participation in sportive activities increases parents' happiness levels and it is thought that there is an increase in anxiety levels due to failure.

Low levels of anxiety of families of disabled individuals participating in sportive activity are because that recommendations given within education are implemented immediately by mothers and getting positive results from children are thought to be effective. It is seen that regular and planned training and physical activities are effective in both coping with stress and lowering the level of depression. As Akyol and Ilkim (2018), stated in their work, the willingness of children of parents to participate in sporting activities and that mentally retarded individuals should consider sporting activities as a game and considering age groups affect children's willingness to participate in games positively. Giving information to parents about the content of activities to be done in the participation of disabled people in education and sportive activities decreases the anxiety state of parents.

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AN ANALYSIS ON THE EFFECTS OF TABLE-TENNIS SPORTS ON THE DISTRACTION OF SECONDARY-EDUCATION STUDENTS

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ABSTRACT

In this study we aimed to analyze the effects of table-tennis on the distraction of secondary-education students practicing and not-practicing table-tennis sport. Research sampling consisted of 80 students (n=80) currently studying in Adil Karaağaç Anatolian Technical Vocational High School in Selçuklu district of Konya city and students were within the age range of 14-18. Mean age of students was 15,53±0,80. 40 students (n=40) who regularly practiced table-tennis sports formed the experimental group whereas 40 students (n=40) not-practicing the sports constituted control group. Bourdon (1955) Attention Test was administered to students in both control and experimental groups. In the analysis of data; SPSS 20 (IBM Corp. Released 2011. IBM SPSS Statistics for Windows, Version 20.0. Armonk, NY: IBM Corp.) statistical package program was employed. p<0,05 was the accepted significance level for the conducted tests.

It was then detected in the study that in terms of attention levels there was a statistically significant difference between groups practicing and not-practicing the sports and that the group engaged in sports exhibited higher

values of attention level compared to the group not-practicing the sports (P<0,05). In the research groups, an analysis with respect to gender revealed that among boys and girls practicing the sports, attention levels were higher than girls and boys not-practicing the sports and there was a statistically significant difference in between (P<0,05) analyzed groups. With respect to factors such as having a divorced or united family, a room of his/her own, a history of disease, age, monthly income level of family, number of siblings, how many hours slept in a day; an analysis of attention level showed among the participants of the research that there was not a statistically significant difference between groups (P>0,05).

At the end of this study it was unveiled that practicing table-tennis sports rendered a positive effect on the development of children's attention levels. Within that context it can be argued that table-tennis sports could have a positive effect on the attention levels of children with distraction.

Key Words: Distraction, table-tennis, secondary-education, sports

INTRODUCTION

Currently one of the factors negatively affecting students' success is distraction. Rapid technological changes such as computer games and visual media grabbed students' attention which resulted in the fact that main duties such as sports, painting, music and academic career were pushed into the background by students. Hence this study plays a vital role in determining the underlying cause of the failure measured in education system.

Attention is vital functions of nervous system in accordance with the needs and objectives in response to environmental stimulants (Kolb & Whishaw, 1996; Banich, 1997). Another definition of attention is that it is a phenomenon that can make it easy to react against a certain condition or stimulus thanks to the harmony of sensory organs, (Tunç, 2013). Attention also refers to the process of integrating emotions to what we perceive upon balancing by selecting the essential ones from what we have perceived. Attention and ability to focus on a task upon checking the stages of thought are essential factors to succeed in sports (Williams, 1993). Two types of attention call for attention. The first type is the attention that filters outside world. The mind receives and processes stimulus from the outside world. In this type of attention, any given changes in one's surrounding are aimed to be perceived and comprehended. The other type is selective attention in which the mind focuses on specific stimulants. In another saying, perceptual norms and selective perception take the front stage. In most cases it happens when the person pays attention to specific stimulants in line with dimension, color, frequency and expectations (Baltacı, 2005). To put this differently, attention is a deliberate process of focusing on stimulants (Dereceli, 2011). Sensory organs are stimulated by a variety of external stimulants. An individual cannot perceive all of those stimulants at one time since s/he has a limited perception capacity hence stimulants are selectively received (Bozan & Yasin, 2012).

Sports has been the focal point of studies on selective perception and concentration. Accordingly, to help athletes gain success in psychomotor skills, for an elevated concentration level it is suggested to focus on selective perception while ignoring irrelevant stimuli (Singer et al., 1991). In sports, focusing one's attention on a particular topic, a.k.a concentration, is one of the primary factors for success (Martens 1987; Nideffer & Sagal 1993). The failure of an athlete to gather his/her attention would lower his/her performance which clearly underlines the gravity of attention in sports (Albrecht & Fetz, 1987). Provided that an athlete loses his/her

attention and demonstrates a poor performance it is important to continuously share the attention (Çağlar & Korunç, 2006). That is to say, focusing on multiple points would significantly lower one's performance in a sports activity (Magill & Anderson, 2007). In order to positively impact sports performance, it is essential for athletes to focus on a specific target point that relates to one's objective. Provided that an athlete can maintain his/her attention before and during the competition despite the presence of excitement and psychological stress, s/he could then guarantee success (Tavacıoğlu, 1999).

Human beings cannot continuously focus on one single topic because due to mental and physical lethargy it is likely to shift or lose one's attention to different topics (Alp, 2011). Among the athletes it is aimed to achieve continuous attention on stimulants while spot and select only the data that matter. Attention plays a vital role to reach success in business life, sports and a number of domains in daily life. Attention may differ with respect to conditions and personal interests while attention also heightens motivation among athletes and children (Kumartaşlı & Baştuğ, 2010). Distraction is prevalent among children and most pervasive prior to age seven. In most cases it is perceived with hyperactivity that is not in parallel with the child's age (Çakaloz et al., 2005).

Attention in Sports can be defined as deliberate attention that entails a number of psychological functions related to perception, contemplation and imagination. In concentrated attention it surfaces as a talent fueling deliberate mobilization. In short the perception that we focus on moves towards our consciousness whilst remaining stimulants are unconsciously perceived (Tavacıoğlu, 1999).

Sport activities are organized in a variety of fields within the bounds of possibility in schools. Table-tennis is one of these sport branches. Table-tennis is a game in which 2 or 4 athletes reciprocally throw a small ball over a table that is halved by a file in its center (Erdil et al., 2013). In table-tennis there is intensive anaerobic energy but there is also a ratio of around 30% corresponding to aerobic energy (Bayrak, 2008).

Table-tennis started when grass tennis played in the 1880s was adapted as a game to play on dinner tables at that time. In 1890 on the other hand, it was named in England as Ping Pong or Whiff-Whaff game that followed basic rules. In 1901, Table-Tennis Federation and

rival Ping-Pong associations were founded in England and an instructional booklet was published for the very first game (Bayrak, 2008).

In table-tennis that requires a strong coordination between hand and eyes, it is essential to develop basic motor skills of concentration from early ages (Turhan et al., 2003).

Material And Method

Sampling in this study consists of 80 students ($n=80$) within the age range of 14-18 currently studying in Adil Karaağaç Anatolian Technical Vocational High School in Selçuklu district of Konya city. Mean age of students included in the study is $15,53 \pm 0,80$. 40 students ($n=40$) who regularly practiced table-tennis sports formed the experimental group while 40 students ($n=40$) not-practicing the sports constituted control group. Bourdon (1955) Attention Test was administered to students in both control and experimental groups.

Developed by Bourdon in 1955, this test aimed to measure attention levels of individuals. Prior to administering the test, it is suggested to inform participants on the context of test and ask them to complete the distributed forms to collect personal information. The test in which random letters were placed on a page was then distributed to students. The letters were placed in regular and ordered spaces. On each page there were 20 lines and 407 letters. The number of all letters was known. Bourdon Attention Test is administered to individuals from age 9 to 20. In its test questionnaire, there are 150 (a) letters, 75 (g) letters, 50 (b) letters and 25 (d) letters. Students are asked to complete each part in 5 minutes and instruction is; “while analyzing one line you are expected to underline all of the a, b, d and g letters on the questionnaire; be careful not to underline only one letter but all of the a, b, d and g letters as seen in the line”. At the end of questionnaire practice, assessment is conducted by counting the underlined letters.

Statistical Analysis

In the analysis of obtained data; SPSS 20(IBM Corp. Released 2011. IBM SPSS Statistics for Windows, Version 20.0. Armonk, NY: IBM Corp.) statistical package program was employed. The mean \pm standard deviation, percentage and frequency values of data were harnessed. Variables were tested via ShapiroWilk and Levene Test upon checking their compatibility with prerequisites such as normalcy and homogeneity of variances. While

analyzing the data Independent 2 groups t test (Student's t test) was used in the comparison of two groups, when prerequisites were not met in the comparison of two groups Mann Whitney-U test; in the comparison of three or higher numbers of groups One Way Variance Analysis and when the prerequisites were not met in Tukey HSD test of multiple comparison tests Kruskal Wallis and Bonferroni-Dunn test of multiple comparison tests were executed. $p < 0,05$ was the accepted level of significance for the tests.

Results

Table 1. With respect to students' participation in sports activity, changes in their attention level

Sports activity	n	x	Sd	T	p
Students Practicing sports	40	103,13	6,97	3,745	,000 *
Students Not-practicing sports	40	95,93	9,96		
Total	80	99,53	9,28		

* Intergroup significant difference ($p < 0.05$).

As seen in Table 1; mean value of students practicing sports is (103, 13±6,97) higher than the mean value of students not-practicing sports (95,93±9,96) and also the difference in between is statistically significant ($p < 0.05$).

Table 2. Attention changes with respect to gender

Sports activity	n	X	Sd	t	p
Girls Practicing sports	15	103,27	5,65	1,934	,047 *
Girls Not-practicing sports	17	98,24	8,56		
Boys Practicing sports	25	103,04	7,76	3,236	,002 *
Boys Not-practicing sports	23	94,22	10,75		

* Intergroup significant difference ($p < 0.05$).

As can be inferred from Table 2 mean value of the attention test of girls practicing sports (103,27±5,65) is higher than the value of girls not-practicing sports (98,24±8,56) and the difference in between is statistically significant ($p < 0.05$). Mean value (103,04±7,76) of the boys practicing sports is higher than the mean value of boys not-practicing sports (94,22±10,75) and the difference in between is statistically significant ($p < 0.05$).

Table 3. Attention test changes with respect to factors such as having a divorced or united family, a room of his/her own, a history of disease

Parents	n	x	Sd	t	P
United	68	99,56	8,92	,064	,939
Divorced	12	99,33	11,55		
Having a room of his/her own	n	x	Sd	t	P
Yes	59	99,86	9,70	,546	,555
No	21	98,57	8,12		
Having a history of disease	n	x	Sd	t	P
Yes	17	99,82	8,83	,149	,878
No	63	99,44	9,46		

As shown in Table 3 there was not any statistical change in students' attention values with respect to factors such as having a divorced or united family, a room of his/her own and a history of disease.

Table 4. Attention test changes with respect to factors such as age, monthly income level of family, number of siblings, how many hours slept in a day

Age	N	x	Sd	F	p
Age 14	6	104,17	7,03	1,977	,125
Age 15	35	96,86	8,91		
Age 16	30	101,03	10,58		
Age 17	9	101,78	3,87		
Monthly income level of family	N	x	Sd	F	p
1500 and below	11	99,91	9,57	1,235	,304
1501-2500	27	101,00	8,16		
2501-3500	24	98,29	7,52		
3501-4500	10	95,00	15,84		
4501 and above	8	103,38	5,07		
Number of siblings	N	x	Sd	F	p
None	4	101,25	3,77	,496	,738
1 sibling	39	100,31	9,59		
2 siblings	24	99,63	8,36		
3 siblings	8	97,38	11,75		

4 siblings and above 5 95,00 11,38

How many hours slept in a day	N	x	Sd	F	p
6 hours	21	99,90	9,12		
7 hours	29	100,52	7,74		
8 hours	18	98,89	11,33	,321	,863
9 hours	7	98,57	11,73		
10 hours and above	5	95,80	9,18		

As shown in Table 4 there was not any statistical change in students' attention values with respect to factors such as age, monthly income level of family, number of siblings, how many hours slept in a day.

DISCUSSION

Among 40 students of the age group 10-12 practicing fencing sports in Fencing Branch of Göztepe Sports Club, Kartal et al., (2016) conducted an analysis to find the effects of sports on participants' attention level. In this study researchers administered Bourdon Attention Test to students in experimental and control groups in order to measure their attention levels. In this study they concluded that students who practiced fencing sports scored higher attention values compared to students not-practicing the sports. They also reported that fencing sports would render remarkable contribution to improve attention capacity of students with distraction issues.

Tunç (2013) conducted a study among 60 students of 14-15 age group studying in Mehmet Halil İbrahim Hekimoğlu Trade Vocational School in Selçuklu district of Konya city. The researcher administered Bourdon Attention Test to students in experimental and control groups in order to measure the effects of golf sports on their attention level and concluded that golf would render remarkable contribution to improve attention capacity of students Asan (2011) administered Bourdon (1955). Attention Test to a sampling group formed of 80 students in 9-13 age group to analyze the effects of table-tennis sports on students' attention level. The researcher concluded that table-tennis exercise had a positive effect in improving children's attention levels and among children in an age group of 9-13, table-tennis exercises positively changed their attention levels.

Akandere et al. (2010) conducted a study among 80 students of 9-13 age-group in Marmaris Bayır village Primary School and investigated the effects of an educational-games program on students' distraction. To collect data, researchers administered Bourdon (1955) Attention Test and concluded that students who participated in educational-games program achieved higher attention scores and they also reported that educational-games program significantly contributed to the attention development among students.

Özdemir (1990) conducted a research among university students of 17-23 age-group practicing and not-practicing sports to measure their attention levels and identified that the group which practiced sports achieved higher scores than the group not-practicing sports.

Adsız (2010) in his research administered Bourdon Attention Test to 30 students of primary education 4th and 5th grades. The study aimed to determine attention levels of students regularly practicing and not-practicing sports. It was then concluded that students regularly practicing sports achieved higher attention levels than non-practitioners and sports generically rendered a positive effect on attention development.

Via administering Benton Visual Memory Test, Yurdakul et al. (2012) conducted a study among 146 primary education students of age 8 studying in Manisa city in order to analyze the effects of 12-week mobility educational program on the attention and memory development. They concluded at the end of this research that a tailor-made mobility educational program positively affected memory and attention development of 8-year old primary school students.

Aydın (2017) examined 263 Boys and 164 Girls aged 12-18 who either practiced or not- practiced sports. In order to measure attention level of 427 students in sum, the researcher administered Bourdon Attention Test which indicated a significant difference in the attention level of students ($P < 0,05$). In contrast the researcher suggested that with respect to factors such as age, educational level of parents, having a room of his/her own there was not a significant difference in their attention level ($P > 0,05$). Thus in the study that aimed to measure the attention levels of 12-18 age group students practicing or not-practicing sports, it surfaced that attention levels of the group practicing were comparatively higher than the group not-practicing sports, which led to concluding that regular exercise positively affected attention level.

As seen above, a vast majority of studies employed Bourdon Attention Test (Adsız 2010, Akandere et al., 2010, Asan 2011, Tunç 2013, Kartal et al., 2016, Aydın 2017). In the same vein we utilized this test in our study proving the reliability and validity of the test which we harnessed as our measurement tool.

An analysis of the findings of the studies above signal that compared to non-practitioners, students who practiced sports scored higher attention levels (Özdemir 1990, Adsız 2010, Akandere et al., 2010, Asan 2011, Yurdakul et al., 2012, Tunç 2013, Kartal et al., 2016, Aydın 2017). Our study concluded that compared to non-practitioners, students who practiced sports scored higher attention levels (Table 1) and there was a statistically significant difference in between ($P<0,05$). Above-listed studies are on the same page with our research. In our study gender-based analyses manifested that girls practicing sports had higher attention levels than girls not-practicing sports (Table 2) and the difference in between was statistically significant ($P<0,05$). It also surfaced that compared to boys not-practicing sports, boys who practiced sports achieved higher attention levels (Table 2) and the difference in between was statistically significant ($P<0,05$).

Aydın (2017) suggested that with respect to factors such as age, educational level of parents, having a room of his/her own there was not a significant difference in the attention level of analyzed students ($P>0,05$). Similarly, in our study as seen in Table 3 and Table 4, factors such as having a divorced or united family, a room of his/her own, a history of disease, age, monthly income level of family, number of siblings, how many hours slept in a day were analyzed factors to measure students' attention level and not a statistically significant difference was measured between groups ($P>0,05$). These findings are compatible with the results of the research above.

Discussion And Conclusion

This study aimed to analyze the effects of table-tennis exercises among children in 14-18 age-group on their distraction levels and it was concluded that table-tennis exercise positively impacted distraction. In light of these findings it is suggested that by motivating children with attention problems to practice table-tennis sports it is feasible to upgrade their attention problems to a positive level.

In relevant literature, an abundance of studies exist to prove the positive effect of sports on distraction. Dewey et al. (1989) reported that attention is a main component of data-processing system and due to its failure to process a whole set of data in one session, humans possessed a limited capacity system. They also emphasized that attention was essential to ensure feeding the limited-capacity processor with inputs. In sport activities, attention factor is not merely bound to domains related to sports; once children applies this feature to all stages of life there is a corresponding rise in their success and self-efficacy levels alike. Abernethy (1993) argued that distraction and confusion of an athlete could negatively impact concentration and that impact would prevent the athlete to perform maximally. Hence the researcher underpinned the gravity of a continuous share between attention and selective attention.

In our research and relevant studies dwelling on the same issue, it surfaced that sports positively affected distraction level. Accordingly it is suggested that motivating children to sport activities would augment the academic success of our children. As seen, there is a limited number of studies on this issue. Hence it is of high importance to conduct more comprehensive studies via administering a myriad of tests.

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The Effects of the Covid-19 Pandemic on Sports, Athletes and Trainers During the Normalization Phase

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ABSTRACT

The Covid-19 virus, which appeared in Wuhan, China in late December 2019 and early January 2020, caused fear and anxiety worldwide. This virus, which causes deaths in all countries where the epidemic occurs, seriously threatens all people. In order to reduce the number of deaths and slow down the spread rate of the virus which has spread to more than 180 countries including Turkey and threatened people from all sectors, serious, fundamental decisions were made by the Turkish Ministry of Health and all other official institutions resulting in various important effects and results in many areas including social, economical, political, financial, administrative, legal, military, religious and cultural, and these decisions were conveyed to the society through all communication channels.

European Championships which were planned to be held in 2020, all kinds of international sports events and organizations, leagues, all kinds of conferences, scientific conferences, organizations and mass religious gatherings were postponed or

canceled. Due to the cancellations, all kinds of businesses have suffered great losses along with the people in the sports tourism industry, businesses in the material supply chain of sports industry. Nevertheless, athletes, businesses, coaches, sports club owners, athletes who did not have the disease and who did not have Covid-19 symptoms, were indirectly faced with loss of work, and thus, were affected deeply by the pandemic due to the trauma caused by the disruption of their financial balance, fear, and uncertainty.

In this qualitative study, the current situation was analyzed to identify the measures taken in order for sports activities to start again, to establish trust in sports organizations, and to protect the health of the sports community and the audience. Based on the findings, recommendations for the future were developed.

Key Words: Covid-19, Pandemic, Sports Industry, Athlete Health, Sports, Athlete

INTRODUCTION:

Novel Coronavirus Disease (COVID-19) is caused by a virus identified on January 13, 2020, as a result of research conducted in a group of patients who developed respiratory tract symptoms (fever, cough, shortness of breath) in late December in the Wuhan province of China. On March 11, 2020, the World Health Organization (WHO) declared this virus-related disease a pandemic (AIS, 2020).

Figure 1: Other Pandemics Seen in the Last 20 Years



Source: (WHO, 2018)

Significant outbreaks that occurred in the past 20 years from 2018 are seen in the timeline. (Budak, F. and Korkmaz, Ş. (2020)). Although there have been pandemics in the past, Covid-19 has become the virus that's more deadly in terms of transmission rate in comparison to previous pandemics.

The outbreak was initially detected in people who had been in the seafood and animal markets in this region. Then, it spread to other cities in the province of Hubei, mainly Wuhan, and other provinces of the People's Republic of China and other countries of the world through human-to-human transmission.

Coronaviruses are a large family of virus that can cause disease in animals or humans. In humans, several coronaviruses are known to cause respiratory infections, from common cold to more severe diseases such as the Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). SAR-CoV-2 virus causes the Novel Coronavirus

Disease. Although it has been reported that there may be asymptomatic cases, their rate is unknown. The most common symptoms are fever, cough and shortness of breath. In severe cases, pneumonia, severe respiratory failure, kidney failure and death may develop. (Turkish Ministry of Health, 2020)

Globally, we face a serious virus with a lethal effect that does not distinguish race, language, religion and sex globally. The world became aware of the Covid-19 outbreak for the first time when China reported to the World Health Organization on December 31, 2019 that a mysterious respiratory disease emerged in the city of Wuhan in the Hubei province, with unknown causes. (Euronews, 2020)

This virus first seen in China crossed the borders and threatens all humanity in terms of both economic and lethal effects on a global scale. Due to the Covid-19 virus, which has a high mortality rate, all of the world has turned to conduct laboratory researches and scientific studies focusing on finding solutions to the problems experienced. Economic, political, financial, administrative, legal, military, religious and cultural measures constituted the main agenda of all countries where the pandemic occurred by making simulations and analyses aimed at controlling and preventing the epidemic while the studies are going on. (Wikipedia, 2020).

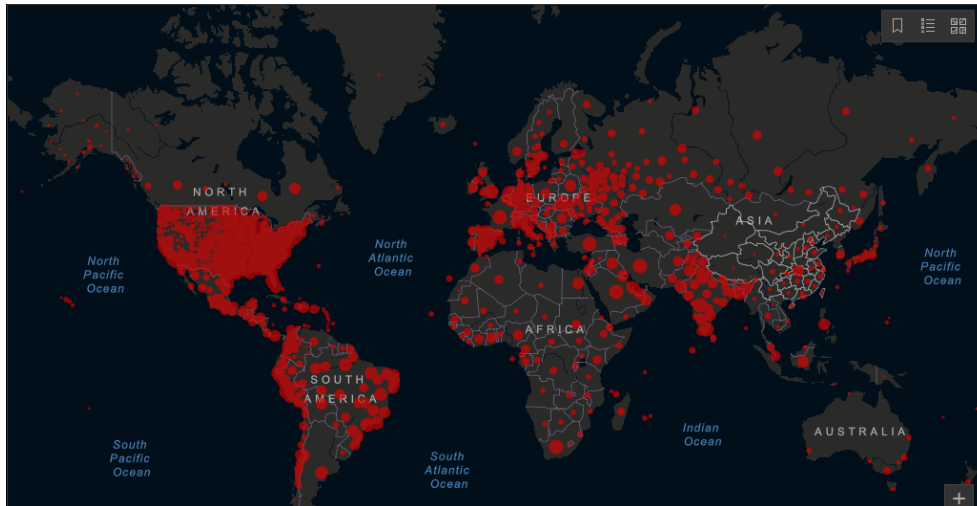
Globally, 40% of COVID-19 cases are on the European Continent and 36% are on the North American Continent. Nearly 150 thousand of more than 1.5 million cases died in Europe. (TTB, 2020). The World Health Organization announced on March 13 that "Europe has become the epicenter of the coronavirus (Covid-19) pandemic." (Euronews, 2020).

Table 2.: Current Status of COVID-19 Cases by Continents

	Total Cases	Total Deaths
Europe	2645190	198621
North America	4414364	194302
Asia	3260218	76564
South America	3174230	115082
Africa	686889	14714
Australia	13114	140
Total	14194005	599423

Source (Worldometer, 2020)

Social distancing and wearing masks are among the measures taken in many countries in order to reduce deaths, to slow down the spread, and to gain time for treatment studies (Gonca Telli Yamamoto et al., 2020)



Source: Johns Hopkins University, local officials. (Case Map)

Measures Taken in Sports Competitions Due to Covid-19

Sports is perhaps one of the areas that coronavirus pandemics affected the most. During this pandemic we're going through as the whole world, sports industry has been greatly affected by the COVID-19 pandemic like all other industry areas. 2020 Tokyo Olympic Games, (IOC, 2020) EURO 2020, Champions League, UEFA Europa League, Copa America, NBA, 2020 Asian Cup, Formula 1, CEV organizations are some of the sports events postponed or canceled due to COVID-19.

Massive communities gathering for large sporting events, international visitors and millions of host country residents are at risk of infectious diseases, including endemic diseases. (Petersen et al., 2016; Yanagisawa et al., 2018). It will be inevitable for athletes or spectators to spread the virus to a wider audience (Halabchi et al., 2020).

In many countries where the pandemic could not be brought under control and the increase in the number of cases is high, competitions were stopped, international events were postponed and activities were canceled. The sports institution, which has become an organic part of our social life, is now under the influence of the covid-19 virus that affected the whole

world. (Türkmen, 2020). It has been observed that all activities with crowded audience have negative effects on the transmission speed. Organized competitions take place in large sports stadiums with a large number of spectators, which creates a favorable environment for the spread of viruses (Halabchi et al., 2020). Therefore, such activities that bring communities together are closely related to important human health problems (Memish et al., 2019).

The Turkish Ministry of Youth and Sports announced that competitions in football, basketball, volleyball and handball leagues have been stopped and the decisions would be effective as of March 19, 2020. It is also necessary to take measures for COVID-19 in the sports community (Toresdahl & Asif, 2020).

Previously, the decision to play Leagues without spectators was made when there was only one case in our country. Turkey is the country that made this decision the earliest in Europe based on the case numbers. In the context of the pandemic, the world of sports has faced an unprecedented crisis. (Türkmen, 2020). Businesses, amateur sports clubs, professional athletes in our country have been deeply affected by all the measures taken. All these postponement and cancellation decisions not only lead to consequences related to sports, but also trigger multi-dimensional and serious economic and social problems as a chain. (Türkmen, 2020).

Although the normalization phase started in Turkey as of June 1, 2020, it is seen that companies producing supplies for sports clubs that have been closed during the pandemic and people working in the sports sector both in Turkey and the world are facing unemployment.

Organized competitions take place in large sports stadiums with a large number of spectators, which creates a favorable environment for the spread of viruses (Halabchi et al., 2020). Although the normalization steps are taken, the ongoing global epidemic will impact clubs, athletes or broadcasters significantly.

Effects of Covid-19 on Coaches

According to the 2018 data of our country's General Directorate of Sports Services, there are a total of 15,197 coaches affiliated with independent federations. It was seen that the coaches working in sports clubs worldwide did suffer great job losses due to not having the opportunity to work during the pandemic.

Table 3: Number of Coaches

Number of Coaches by Ranks as of 31.12.2018										
	1. Rank	1. Rank Equivalent	2. Rank	2. Rank Equivalent	3. Rank	3. Rank Equivalent	4. Rank	4. Rank Equivalent	5. Rank	Grand Total
TOTAL	9.559	788	2.213	650	306	1.523	74	40	44	15.197

Source: 31/12/2018 General Directorate of Sports Services

As a result of stay home decisions to slow down the spread, it was announced that education in the Spring 2020 semester would be online (YÖK, 2020). During the pandemic, some coaches in various branches stated that they switched to online training model. The orientation towards distance education has become an inevitable necessity due to the constraints of physical and material conditions. (Kırık, 2014). As a result of reductions experienced due to amateur branches not having the opportunity to train online, coaches faced economic losses in this process.

Many citizens who started to spend time at home with the call for "stay at home" turned to sports. Sports performed at home should be done consciously to avoid injuries in the body. At the end of the process, the demand for fitness, pilates, step-aerobics and trainers will increase with the interest in the e-sports field.

Effects of Covid-19 on Athletes

The fact that athletes caught COVID-19 since the first day of the pandemic created concerns in terms of athlete health. COVID-19 not only causes delays in training and competition schedules, but also causes important health problems. (Chen et al., 2020; Zheng, Ma, Zhang, & Xie, 2020). Lack of training and decrease in performance will also have important implications for athletes in the future. Performance loss of athletes occurs in 2-4 weeks in isolation (Umut Ziya Koçak et al. 2020). Athletes who exceed the critical loss period will inevitably have a more difficult process to recover.

Maintaining the harmony developed with training and ensuring improvement require training stimuli of optimal intensity. When such stimuli are interrupted, the athlete is affected by functional or even psychic disruptions. This condition (detraining) is called the reduction of the status achieved in training. (Eniseler, 2017). There are many reasons for this reduction. Factors including being injured, end-of-season transition, and excessive training causes

detraining syndrome in athletes. With the Covid-19 period, many elite and non-elite athletes have faced the reduction of the status (detraining) syndrome achieved in training in many countries of the world and regardless of the branch. Changes occurring in athletes with this syndrome occur in max VO₂ reduction, general endurance levels, and the greatest losses occur in special condition and coordination levels. (Jukic, Calleja-González, et al., 2020). As the time spent by the athletes without training during the pandemic increases, the severity of all the effects that may occur within the athletes will increase.

In this syndrome, changes in the mood of the athlete, changes in psychological factors, headaches, anorexia, insomnia, fatigue and psychological disorders begin to appear in athletes who have stopped training for a long time due to Covid-19. As the time without training increases, uncertainty and unwillingness of athletes to return to their previous performances will cause great losses. In order to minimize these losses, training programs should be planned carefully for athletes. These plans should relatively reduce the number, intensity and scope of training during the Covid-19 period so that athletes can overcome this syndrome with minimal negative impact. In order not to be exposed to this syndrome, athletes can do exercises outside of the sport in which they specialize. During this transition period, athletes must do sports with recreational sports activities. (Eniseler, 2017).

The time spent without exercise will have consequences in all aspects of the athlete. Since it is not known when the outbreak will disappear completely, and the stage of treatment and vaccination methods, athletes must make efforts to maintain their own quality of life. Due to the negative effects that will occur in elite athletes, transfer fees will also negatively impact them.

In addition to the fact that COVID-19 negatively affects athlete's health, professional transfer policies of elite athletes have been affected by this situation. Just as there are athletes with falling market prices, there will also be athletes whose market value is rising. Although athletes do not get sick, they are affected by pandemic due to the cancellation of competitions and therefore, loss of income (Koçak et al. 2020).

Table 4: Number of Athletes in Turkey by Cities

*	Licensed			Active			Licence Ranked	Active Ranked
	Men	Women	Total	Men	Women	Total		
Total	3.261.853	1.646.102	4.907.955	433.849	261.849	695.698	4.907.955	695.698

Source: 31/12/2018 General Directorate of Sports Services

Table 4. The active athlete numbers in all braches are presented according to the 2018 data of the General Directorate of Sports Services.

As of 31.12.2018, the number of registered athletes in all branches throughout our country has been recorded as 4,907.955 and the number of active athletes as 695,698. Studies on how many athletes are affected by covid-19 during the pandemic would be useful when the updated data of 2019 are taken into account.

Table 5: Approved COVID-19 deaths by gender and age group (including cases of 28/06/2020).

	Age Group							
	< 2	2-4	5-14	15-24	25-49	50-64	65-79	80+
Male	2	1	2	2	237	857	1,381	701
Female	2	0	3	6	97	315	787	704
Total	4	1	5	8	334	1,172	2,168	1,405

Number of notified COVID-19 deaths by age group and sex including 28/06/2020

Source: Turkish Ministry of Health Data

Out of 5,097 people who died due to COVID-19, 3,183 (62%) were male and 1,914 (38%) were female. The median age is 71. Although 3,573 (70%) of deaths occurred in people aged 65 and over, only 11% of cases are in this age group. So far, 10 deaths due to COVID-19 have been reported in children aged 15 and under and have been approved by the Ministry of Health (Table 5).

Table 6: Number and incidence per 100,000 population of laboratory-confirmed COVID-19 deaths by NUTS-1, Turkey

NUTS-1	Total number of deaths*	Number of deaths/ 100,000 population
Istanbul	2,687	17.3
Western Marmara	152	4.2
Aegean	490	4.6
Eastern Marmara	534	6.6
Western Anatolia	336	4.1
Mediterranean	124	1.2
Central Anatolia	84	2.1
Western Blacksea	182	3.9
Eastern Blacksea	89	3.3
Northeastern Anatolia	63	2.9
Mideastern Anatolia	53	1.3
Southeastern Anatolia	303	3.4
Turkey	5,097	6.1

* Total number of deaths including 28/06/2020

Source: Turkish Ministry of Health Data

Table 7: Number of Athletes in Turkey by Cities

Cities	LICENSED			Active			licensed	Active
	MALE	WOMEN	TOTAL	MALE	WOMEN	TOTAL		
TOTAL	3.261.853	1.646.102	4.907.955	433.849	261.849	695.698	4.907.955	695.698
ADANA	84.964	42.373	127.337	12.222	8.179	20.401	127.337	20.401
ADYAMAN	36.741	13.537	50.278	3.526	2.027	5.553	50.278	5.553
AFYONKARAHİSAR	27.459	15.011	42.470	1.848	1.304	3.152	42.470	3.152
AĞRI	21.670	10.017	31.687	2.490	1.120	3.610	31.687	3.610
AKSARAY	15.841	8.403	24.244	1.750	1.263	3.013	24.244	3.013
AMASYA	21.860	11.846	33.706	2.877	2.195	5.072	33.706	5.072
ANKARA	207.601	97.970	305.571	30.962	20.484	51.446	305.571	51.446
ANTALYA	96.014	55.981	151.995	10.812	8.143	18.955	151.995	18.955
ARDAHAN	7.836	3.934	11.770	1.564	953	2.517	11.770	2.517
ARTVİN	13.673	7.329	21.002	1.229	724	1.953	21.002	1.953
AYDIN	39.860	23.252	63.112	4.786	3.515	8.301	63.112	8.301
BALIKESİR	39.631	21.766	61.397	5.093	3.636	8.729	61.397	8.729
BARTIN	15.378	6.315	21.693	1.626	1.066	2.692	21.693	2.692
BATMAN	26.343	12.829	39.172	2.422	1.033	3.455	39.172	3.455
BAYBURT	6.715	1.373	8.088	768	228	996	8.088	996
BİLECİK	10.657	6.753	17.410	1.022	801	1.823	17.410	1.823
BİNGÖL	12.217	4.473	16.690	1.079	401	1.480	16.690	1.480
BİTLİS	27.602	13.637	41.239	2.838	1.272	4.110	41.239	4.110
BOLU	17.922	9.500	27.422	2.073	1.416	3.489	27.422	3.489
BURDUR	18.340	10.501	28.841	1.489	1.278	2.767	28.841	2.767
BURSA	147.702	70.976	218.678	19.041	10.281	29.322	218.678	29.322
ÇANAKKALE	20.149	13.026	33.175	2.435	1.796	4.231	33.175	4.231
ÇANKIRI	10.761	5.886	16.647	953	675	1.628	16.647	1.628
ÇORUM	27.134	11.717	38.851	2.522	1.519	4.041	38.851	4.041
DENİZLİ	46.319	28.630	74.949	3.943	2.434	6.377	74.949	6.377
DIYARBAKIR	46.473	27.455	73.928	6.115	3.567	9.682	73.928	9.682
DÜZCE	16.849	8.568	25.417	1.868	1.023	2.891	25.417	2.891
EDİRNE	18.312	11.864	30.176	1.711	1.233	2.944	30.176	2.944
ELAZIĞ	23.584	8.576	32.160	2.856	1.273	4.129	32.160	4.129
ERZİNCAN	16.632	6.860	23.492	1.746	911	2.657	23.492	2.657
ERZURUM	44.201	16.451	60.652	7.859	3.005	10.864	60.652	10.864
ESKİŞEHİR	46.669	28.812	75.481	4.552	3.340	7.892	75.481	7.892
GAZİANTEP	74.529	44.119	118.648	5.872	3.065	8.937	118.648	8.937
GİRESUN	17.013	8.130	25.143	2.052	1.386	3.438	25.143	3.438
GÜMÜŞHANE	9.712	4.340	14.052	603	348	951	14.052	951
HAKKARİ	9.997	4.404	14.401	681	478	1.159	14.401	1.159
HATAY	60.248	30.716	90.964	5.295	2.528	7.823	90.964	7.823
IĞDIR	12.085	5.220	17.305	1.352	603	1.955	17.305	1.955
ISPARTA	18.670	10.664	29.334	2.405	1.527	3.932	29.334	3.932
İSTANBUL	448.149	207.103	655.252	88.704	53.245	141.949	655.252	141.949
İZMİR	138.731	73.886	212.617	18.266	13.407	31.673	212.617	31.673
KAHRAMANMARAŞ	52.030	19.518	71.548	6.965	3.025	9.990	71.548	9.990
KARABÜK	15.420	8.919	24.339	1.424	966	2.390	24.339	2.390
KARAMAN	15.094	9.718	24.812	2.135	1.518	3.653	24.812	3.653
KARS	9.477	4.088	13.565	715	365	1.080	13.565	1.080
KASTAMONU	17.095	9.126	26.221	1.179	927	2.106	26.221	2.106
KAYSERİ	68.488	32.830	101.318	10.819	5.007	15.826	101.318	15.826
KIRIKKALE	20.849	10.198	31.047	1.903	1.246	3.149	31.047	3.149

KIRKLARELİ	12.228	8.355	20.583	1.210	1.071	2.281	20.583	2.281
KIRŞEHİR	23.292	16.335	39.627	3.672	3.357	7.029	39.627	7.029
KİLİS	9.826	6.014	15.840	812	373	1.185	15.840	1.185
KOCAELİ	111.143	70.270	181.413	14.425	8.421	22.846	181.413	22.846
KONYA	79.328	41.807	121.135	11.612	6.805	18.417	121.135	18.417
KÜTAHYA	20.529	10.677	31.206	2.979	2.043	5.022	31.206	5.022
MALATYA	41.247	19.211	60.458	5.178	2.637	7.815	60.458	7.815
MANİSA	53.121	29.634	82.755	5.425	3.671	9.096	82.755	9.096
MARDİN	27.010	12.010	39.020	2.364	1.044	3.408	39.020	3.408
MERSİN	65.473	33.994	99.467	6.547	4.180	10.727	99.467	10.727
MUĞLA	45.371	25.514	70.885	6.426	5.069	11.495	70.885	11.495
MUŞ	12.782	4.656	17.438	964	341	1.305	17.438	1.305
NEVŞEHİR	11.400	7.085	18.485	1.109	908	2.017	18.485	2.017
NİĞDE	16.900	9.101	26.001	2.155	1.517	3.672	26.001	3.672
ORDU	37.823	19.394	57.217	5.222	3.265	8.487	57.217	8.487
OSMANİYE	37.109	16.095	53.204	4.381	1.850	6.231	53.204	6.231
RİZE	21.871	11.649	33.520	2.075	1.077	3.152	33.520	3.152
SAKARYA	34.880	16.794	51.674	4.863	2.552	7.415	51.674	7.415
SAMSUN	63.595	31.479	95.074	10.189	6.116	16.305	95.074	16.305
SİİRT	18.434	6.813	25.247	1.926	655	2.581	25.247	2.581
SİNOP	19.212	10.476	29.688	2.262	1.766	4.028	29.688	4.028
SİVAS	30.409	13.582	43.991	3.254	1.514	4.768	43.991	4.768
ŞANLIURFA	47.552	19.338	66.890	7.693	3.081	10.774	66.890	10.774
ŞIRNAK	17.918	8.914	26.832	1.346	742	2.088	26.832	2.088
TEKİRDAĞ	31.362	16.734	48.096	4.098	2.876	6.974	48.096	6.974
TOKAT	26.132	12.140	38.272	5.513	2.717	8.230	38.272	8.230
TRABZON	32.072	15.247	47.319	3.440	2.241	5.681	47.319	5.681
TUNCELİ	8.433	5.260	13.693	891	706	1.597	13.693	1.597
UŞAK	13.392	6.575	19.967	1.657	946	2.603	19.967	2.603
VAN	31.946	10.772	42.718	4.646	1.764	6.410	42.718	6.410
YALOVA	16.305	8.296	24.601	2.286	1.514	3.800	24.601	3.800
YOZGAT	21.602	11.199	32.801	2.265	1.472	3.737	32.801	3.737
ZONGULDAK	21.460	12.082	33.542	2.517	1.822	4.339	33.542	4.339
Total	3.261.853	1.646.102	4.907.955	433.849	261.849	695.698	4.907.955	695.698

Source: 31/12/2018 General Directorate of Sports Services

According to this table, determining the data of whether there are athletes among the deceased should also be considered as an important finding.

Effects of Covid-19 on Clubs

Many clubs faced financial losses within the scope of the measures determined by the federations regarding health and safety in club facilities, training fields, stadiums, private club sports areas. Professional clubs experience many problems in terms of advertising and sponsorship agreements, and they encounter game broadcasts and loss of spectator income. The risk of cancellation of advertising and sponsorship agreements is also high.

Table 8: Number of Clubs

Number of Clubs by Types as of 31/12/2018						
	Military	Organization	School	Gyms	Specialized	Total
Grand Total	5	1.052	896	13.399	476	15.828

Source: 31/12/2018 General Directorate of Sports Services

According to the 2018 data of the General Directorate of Sports Services, there are a total of 15,228 active clubs. Covid-19, which is a globally important public health problem, has reduced the demand for gyms with membership systems such as Taekwondo, Karate, Gymnastics, Fitness halls due to health concerns and many of these gyms have closed down. Many of the clubs suffered financial losses to the level of not being able to cover their current rent, staff and fixed expenses. The economic losses experienced forced many clubs to downsize or end their operations.

Conclusion and Recommendations

It seems that there is no other solution at this point during the pandemic and the normalization process other than following the measures and waiting patiently. After this process, it is necessary to conduct studies on the possible economic, social, psychological and performance effects that occur in sports, athletes, coaches, and the sports industry.

In the coming period, solutions for the effects resulting from people in the sports business facing the risk of unemployment should be identified. In general, it is necessary for the athletes and everyone to keep the morale as high as possible in such outbreaks and to keep the psychology of the children high. Our world is going through unusual days to be seen once in a century. When the pandemic ends, a trust should be established in the society in order to continue the interest in sports facilities, and attending sports activities in stadiums.

The uncertainty about how to shape physically safe close-contact workouts continue. Efforts should be made to remove this uncertainty. From the moment of the Covid-19 outbreak, it caused economic and psycho-social disruption until the normalization process started in all countries. The cancellation of sports competitions with crowded masses has been an important decision in protecting public health and reducing the spread of the epidemic.

After the pandemic, it will be useful to determine how many clubs have been closed and to conduct studies and plan for the future. Even those who have survived Covid 19 with slight effects and those who have never been hospitalized should be identified and the training methods to be performed in the next period should be determined again.

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