

*Investigation of Mental Training Status of University Students Interested in Individual and Team Sports

Bireysel ve Takım Sporları ile İlgilenen Üniversite Öğrencilerinin Zihinsel Antrenman Durumlarının İncelenmesi

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ABSTRACT

The aim of this study is to examine the mental training status of students who are interested in individual and team sports at Aksaray University Faculty of Sport Sciences in terms of different variables. In the research, 182 volunteer students studying in the departments of Physical Education and Sports, Coaching Education and Sports Management at Aksaray University Faculty of Sport Sciences were included. Data collection tools in the study; Personal Information Form, Mental Training Inventory in Sports (MTI) was used to determine the mental training status of the students. SPSS 26 package program was used to evaluate the data. According to the data obtained, it was concluded that the mental training levels of the students were high. There was a significant difference in the variables of sport branch and program of study, but no difference was found in the gender variable. As a result, it was seen that the mental training levels of the students studying at the Faculty of Sports Sciences were at a high level. The reason for this is that the Covid-19 period has just ended, and it is thought that the students' inability to train due to this situation may have affected their mental training status.

Keywords: Mental Training, University Students, Individual And Team Sports

ÖZET

Bu çalışmanın amacı, Aksaray Üniversitesi Spor Bilimleri Fakültesinde öğrenim gören bireysel ve takım sporları ile ilgilenen öğrencilerin Zihinsel Antrenman durumlarının farklı değişkenler açısından incelenmesidir. Araştırmayı Aksaray Üniversitesi Spor Bilimleri Fakültesindeki Beden Eğitimi ve Spor, Antrenörlük Eğitimi ve Spor Yöneticiliği bölümlerinde öğrenim gören 182 kişi gönüllü öğrenci oluşturmuştur. Araştırmada veri toplama araçları; Kişisel Bilgi Formu, öğrencilerin zihinsel antrenman durumlarını belirlemek için Sporda Zihinsel Antrenman Envanteri (SZAE) kullanılmıştır. Verilerin değerlendirilmesinde SPSS 26 paket programı kullanıldı. Elde edilen verilere göre, öğrencilerin zihinsel antrenman düzeylerinin yüksek olduğu sonucuna ulaşılmıştır. Spor dalı ve eğitim görülen program değişkenlerinde anlamlı farka rastlanılmış, cinsiyet değişkeninde herhangi bir farka rastlanılmamıştır. Sonuç olarak, Spor Bilimleri Fakültesinde öğrenim gören öğrencilerin zihinsel antrenman seviyelerinin yüksek düzeyde oldukları görülmüştür. Bunun nedeni ise Covid-19 döneminden yeni çıkılmış olunması, öğrencilerin bu durumdan kaynaklı antrenman yapamamalarından dolayı zihinsel antrenman durumlarını etkilemiş olabileceği düşünülmüştür.

Anahtar Kelimeler: Zihinsel Antrenman, Üniversite Öğrencileri, Bireysel Ve Takım Sporları.

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INTRODUCTION

"Mental training" encompasses various techniques and methods utilized by sport psychology researchers and practitioners to assist athletes in optimizing their performance in high-pressure situations, including imagery, pre-performance routines, relaxation, and self-talk (Bertollo et al., 2020). The vital role of mental training in enhancing an athlete's performance is as crucial as physical training and endurance. Human beings develop physically, mentally, and socially, with each dimension having a mutual relationship. Therefore, focusing solely on physical development can be an inadequate and misguided strategy for athletes (Sural et al., 2021).

Mental training involves goal-oriented and planned training to influence athletes' psychological state, behavior, and personality by adopting specialized techniques. Mental training involves goal-oriented and planned training to influence athletes' psychological state, behavior, and personality by adopting specialized techniques. It aims to promote athletes' cognitive processes, emotional regulation, and self-control during sports. Past research focused exclusively on physical training and overlooked the significance of training for athletes' psychological well-being. Since the 1960s, sports have developed rapidly around the world, competition has become more intense, the challenges of winning have increased, athletes are under unprecedented psychological stress, and psychological factors have become an important part of achieving excellence (Xiong, 2012).

Psychological factors have become central to achieving excellent performance, with national team coaches and athletes increasingly recognizing their importance and entering the field of psychology (Xiong, 2012). Mental training enhances athletic performance and mitigates psychological obstacles hindering such performance (Vealey, 2007; Yüksel and Orhan, 2022). Such training programs foster the advancement of motor and psychological skills, and therefore are equivalent in importance to physical, technical, and tactical training, resulting in greater success in sports (Urfa and Asci, 2018).

The athlete must be in optimal physiological and psychological condition to maximize their potential. Physical fitness is reflected in an athlete's strength and endurance, while mental

well-being directly impacts performance and promotes positive feelings (Karaağaç and Şahan, 2021).

Mental training comprises diverse techniques and practices aimed at enhancing mental performance (Orhan, 2023). The set of exercises and strategies seek to improve cognitive, emotional, and psychological health. Examples of these mental training practices include but are not limited to mindfulness meditation, visualization and imagery, Cognitive Behavioral Therapy (CBT), biofeedback, stress management techniques, and Emotional Intelligence techniques (Turan Ağca, 2019).

Mental training can be categorized into two main types: cognitive and somatic methods. The cognitive methods involve mental rehearsal, mental imagery, visualization, visual motor behavior rehearsal, and cognitive behavior therapies, whereas the somatic methods include biofeedback, advanced deepening relaxation training, and meditation (Behncke, 2004; Turgut and Yaşar, 2020).

According to Orlick and McCaffrey (1991), mental training methods, such as relaxation, mental imagery, and regular breathing exercises, are commonly utilized to help young athletes manage anxiety and stress, cultivate enjoyment of their athletic pursuits, and develop motor skills while having fun. Mental training can incorporate both positive and negative imagery; however, Lee (1990) suggests that positive imagery during mental training can have a positive influence on performance, while negative imagery can negatively affect performance. As an example, Vernon (2009) and Murphy (1994) conducted studies revealing that negative imagery disrupts the athlete's motor program and negatively affects performance. Yüksel (2022) identified commonalities in mental training across multiple disciplines that lead to performance enhancement.

The aim of this study is to examine the mental training status of students who are interested in individual and team sports at Aksaray University Faculty of Sport Sciences in terms of different variables.

MATERIALS and METHODS

Research Model: This study utilized a descriptive research design, which is employed when the researcher aims to uncover the current state of affairs without interfering in any events (Karasar, 2016).

Study Group: The population of the study was the students of Aksaray University, and the sample consisted of a total of 182 volunteer students studying in the departments of Physical Education and Sports, Coaching Education and Sports Management at Aksaray University Faculty of Sport Sciences.

Descriptive statistics about the research group are given in Table 1.

ARIABLES		f	%
Gender	Male	104	57.1
Gender	Female	78	42.9
Snout Duonah	Team Sport	99	54.4
Sport Branch	Individual Sport	83	45.6
	Very Low	8	4.4
	Low	28	15.4
Family Income Level	Middle	101	55.5
	High	37	20.3
	Very High	8	4.4
	1. Classroom	51	28
	2. Classroom	45	24.7
Classroom	3. Classroom	56	30.8
	4. Classroom	30	16.5
	Phy	54	29.7
Castion	Tra	94	51.6
Section	Sy	34	18.7

Phy: Physical Education and Sports, Tra: Coaching Education, Sy: Sport Management

Table 1 provides the distribution of students in the research group based on gender, sport category, family income level, class, and department variables. The data shows that the research group comprised a total of 182 students, with 78 (42.9%) being female and 104 (57.1%) being male. In terms of sports category, 99 (54.4%) participated in team sports, while 83 (45.6%) participated in individual sports. Based on family income level, 8 participants (4.4%) were categorized as very low, 28 participants (15.4%) as low, 101 participants (55.5%) as medium, 37 participants (20.3%) as high, and 8 participants (4.4%) as very high. With regards to grade level, 51 participants (28%) were in 1st grade, 45 participants (24.7%) were in 2nd grade, 56 participants (30.8%) were in 3rd grade, and 30 participants (16.5%) were in 4th grade. The department breakdown was as follows: Physical Education and Sports (54 participants or 29.7%), Coaching Education (94 participants or 51.6%), and Sports Management (34 participants or 18.7%).

Data Collection Tools: In this study, Personal Information Form and Sports Mental Training Inventory (MTI) were used to collect the necessary information.

The Mental Training Inventory, developed by Behnke et al. in 2017, measures mental skills and techniques used in sports environments. Technical term abbreviations are explained upon first use, and the text contains causal connections between

statements. Additionally, the language is objective, balanced, formal, and grammatically correct, with precise technical vocabulary and citations to adhere to proper academic standards. The Sport Mental Training Questionnaire (SMTQ), adapted into Turkish by Yarayan and İlhan in 2018, includes 20 items organized into 5 subscale mental basic skills (4 items), mental performance skills (6 items), interpersonal skills (4 items), self-talk (3 items), and mental animation (3 items). The inventory has a Likert-type structure consisting of five points and is scored on a scale of (1) "Strongly Disagree" to (5) "Strongly Agree". The lowest possible score for the inventory is 20, while the highest is 100.

Data Analysis: The data was analyzed using the SPSS 26.0 package program and a margin of error of 0.05 was accepted. Descriptive statistical methods, including percentages, numbers, standard deviations, and means were utilized in the data evaluation. To assess normality, the skewness and kurtosis values were within the range of -1.5 to +1.5, indicating the assumption that the data collected from the scales were normally distributed. The study recalculated the internal consistency coefficient of the inventory and found a Cronbach's alpha value of .95. The analysis included descriptive statistics, t-tests to compare averages between independent groups based on gender and sport branch, and one-way analysis of variance (ANOVA) to identify the mental training status by family income level, class, and department.

Ethics Committee Permission: The ethical approval of this research, which was conducted to examine the mental training status of university students interested in Individual and Team Sports, was obtained from Aksaray University / Human Research Ethics Committee with the protocol number 2022/04-10 and meeting number E-34183927-000-00000731617 held on 24.06.2022.

RESULTS

Table 2. Arithmetic Averages of Mental Training Scores

VARIABLES	n	\overline{X}	SS
Mental basic skills		3,7390	,81628
Mental performance skills		3,6822	,71888
Interpersonal skills		3,7692	,83825
Don't talk to yourself	162	3,6465	,81286
Mental animation		3,7125	,83786
Scale total score		3,7062	,68815

Based on the findings presented in Table 2, the results indicate that both the overall mental training level and its subscale among the research group were high.

Table 3. T-test Results for Comparison of Mental Training Levels in Terms of Gender

VARIABLES							
	Gender	n	\overline{X}	SS	sd	t	p
Mental basic skills	Female	78	3.7308	.84397		110	006
·	Male	104	3.7452	.79895		118	.906
Mental performance skills	Female	78	3.6261	.77626		912	.363
	Male	104	3.7244	.67342			
Interpersonal skills	Female	78	3.6474	.93057	102	-1.706	.090
	Male	104	3.8606	.75349			
Don't talk to yourself	Female	78	3.5726	.86773	182		
	Male	104	3.7019	.76875		-1.044	.290
Mental animation	Female	78	3.5897	.93655	•	1.720	007
	Male	104	3.8045	.74696		-1.720	.087
Scale total score	Female	78	3.6378	.76427		1.004	.219
	Male	104	3.7644	.62851		-1.234	

Based on the findings shown in Table 3 and the t-test results regarding the mental training levels of university students by gender, no significant difference was observed in the sub-dimensions of the scale between genders (p<0.05).

Table 4. T-test Results for Comparison of Mental Training Levels by Sport Branch

VARIABLES							
	Sport Branch	n	\overline{X}	SS	sd	t	p
Mental basic skills	Individual	83	3.5783	.82540			01.5
	Team	99	3.8737	.78764		-2.466	.015
Mental performance skills	Individual	83	3.5703	.69118		1.020	054
	Team	99	3.7761	.73160		-1.938	.054
Interpersonal skills	Individual	83	3.6988	.83535			201
	Team	99	3.8283	.84035	100	-1.038	.301
Don't talk to yourself	Individual	83	3.6345	.83393	182	.353	.856
	Team	99	3.6566	.79889			
Mental animation	Individual	83	3.5823	.82778			0.7.7
	Team	99	3.8215	.83478		.897	.055
Scale total score	Individual	83	3.6090	.66905		-1.834	.068
	Team	99	3.7949	.69682			

Table 4 indicates a significant difference was found between the mental basic skills sub-dimension and the sports branch variable in the t-test conducted on the mental training levels of university students. Additionally, there was no significant difference found between the other sub-dimensions and the total scale score (p<0.05).

Table 5. Comparison of Mental Training Levels According to the Program of Study

VARIABLES	Program	n	\overline{X}	SS	sd	F	р
Mental basic skills	Phy	54	3.4583	1.03449			
	Tra	94	3.7793	.71171		6.539	.002
	Sy	34	4.0735	.50949			
	Tot	182	3.7390	.81628			
Mental performance	Phy	54	3.4758	.91849	-	-	
skills	Tra	94	3.7429	.62965		4.500	000
	Sy	34	3.8873	.46732		4.788	.009
	Tot	182	3.6822	.71888			
Interpersonal skills	Phy	54	3.4722	1.08665			
	Tra	94	3.8324	.67838		5.440	.003
	Sy	34	4.0662	.64347		6.118	
	Tot	182	3.7692	.83825	182		
Don't talk to yourself	Phy	54	3.3519	.93256		7.370	.001
	Tra	94	3.6879	.76327			
	Sy	34	4.0000	.55656			
	Tot	182	3.6465	.81286			
Mental animation	Phy	54	3.4753	1.02506			
	Tra	94	3.7589	.77968	,	3.923	.021
	Sy	34	3.9608	.53664		3.923	
	Tot	182	3.7125	.83786			
Scale total score	Phy	54	3.4444	.91227			
	Tra	94	3.7622	.56123		7.645	.001
	Sy	34	3.9882	.38907			
	Tot	182	3.7102	.68566			

^{*}p<0.05; Phy: Physical Education and Sports, Tra: Coaching Education, Sy: Sport Management

According to Table 5, significant differences were observed across all sub-dimensions and total scores of the scale (p>0.05).

DISCUSSION and CONCLUSION

According to the results of this study, which was conducted to examine the mental training status of university students interested in individual and team sports in terms of different variables, it was found that the mean scores of the participants obtained from the SZAE scale were generally high. It was found that the sub-dimension with the highest mean = 3.7692 was the interpersonal skills sub-dimension, and the sub-dimension with the lowest mean = 3.6465 was the self-talk sub-dimension. Turgut and Yaşar (2020), Kozak et al., (2021) found that the mental training skills of athletes were at a high level in studies conducted for athletes. They found that the highest average was for interpersonal skills. The results of the present study are in parallel with these studies.

There was no statistically significant difference between the subdimensions of the scale according to the gender variable of the students participating in the study. Erdoğan et al, (2020), in their study on athletes studying at the Faculty of Physical Education, found no significant difference in the mental training level of athletes according to the gender variable. Karaca and Gündüz, (2021), Erdoğan and Gülşen, (2020) and Aksoy, (2021) found no significant difference between mental training level and gender variable. These results support the findings of this study. In the study conducted by Nicholls et al. (2009), it was found that the mental training scores of male athletes were higher than those of female athletes. Yüksel and Orhan, (2021), Turgut and Yaşar, (2020) and Habacha, (2014) reported that there were significant differences in mental training status in terms of gender. These studies are not similar to the findings of this study.

According to the sport branch variable of the students participating in the study, a significant difference was found between the mental basic skills sub-dimension and the sport branch variable. There was no significant difference between the other sub-dimensions and the total score of the scale. In the sub-dimension of mental basic skills, students interested in team sports had higher scores than students interested in individual sports. Koç, (2023) examined the mental training status of elite athletes and found a significant difference between the sport branch variable and mental training status. Çelik and Güngör, (2020) examined the mental training status of sports science students and found statistically significant differences between the sport branch variable and mental training status. This research are parallel to the results of the study. There are also studies in the literature that do not support the data of the study. In the studies conducted by Erdoğan et al., (2020), Ateş, (2022), Erman et al., (2023), Karaağaç and Şahan, (2023) and Açık, (2023), no statistically significant differences were found when mental training skills and techniques were examined according to the sport type variable.

There are statistical differences between all sub-dimensions of the scale and the total scale scores of the students participating in the study according to the programme variable. According to the results of the study, it was found that in all sub-dimensions of the scale, students studying in the Sports Management department had a better mental training status than students studying in other departments. Açık, (2023) found significant differences between the mental training levels of athletes studying in secondary education according to the variable of type of high school. He suggested that these differences were due to the academic differences of students studying in high schools (sports high school, imam hatip high school, science high school, and social science high school) according to the type of school. In his study, Erman (2021) found statistically significant differences between the variable of type of high school and the level of mental training. These studies support the findings of this study.

It was found that the mental training level of the students studying at the Faculty of Sport was at a high level. The reason for this is that the Covid-19 period had just ended, and it is thought that the students' inability to train due to this situation may have affected their mental training status. It was found that the gender of the students did not affect their mental training status. The COVID-19 pandemic has had a profound impact on the lives of people around the world. The pandemic has affected people's physical health, social relationships and mental wellbeing. A significant difference was found in relation to the sport branch variable of mental training level. It was found that individual sports were superior to team sports in terms of basic mental skills. The reason for this may be that team sport athletes cannot train together during the pandemic period, which may negatively affect their mental training status. Significant differences were found between levels of mental training according to study programme. It was found that the scores of students studying sport management were higher than those of students studying other subjects. The reason for this is thought to be that there may be differences in academic and sporting participation between the departments within the Faculty of Sport.

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