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THE EFFECT OF MENTAL TRAINING SKILLS ON THE PREDICTION OF ATHLETE STUDENTS' SPORTS COMMITMENT LEVEL

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ABSTRACT

This study was carried out to examine the effect of mental training skills of athlete students, who are studying at the Sport Sciences Faculty, in predicting the level of commitment to sports. In the study, sub-dimensions of the mental training scale in sports were considered as predictive variables and it was purposed to observe the impact of these variables on the level of commitment to sports. The study group was comprised of 240 athlete students, who are interested in different sport branches and pursuing their education in the Sport Sciences Faculty in a State University in Türkiye. In the data collection of the study, the Mental Training Inventory in Sport (MTIS) and Scale of Engagement to Sports (SES) were utilized. In addition, the frequency analysis was used to analyze the dispersion of participants' demographic data. After the scale scores were obtained, their obedience to the normal dispersion was examined with Kolmogorov Smirnov and Shapiro Wilks test and it was found that the scale scores were appropriate for the normal dispersion. In addition, the regression model was utilized to examine the impact of MTIS on commitment to sports. Moreover, the t-test and one-way analysis of variance in independent groups were utilized to analyze whether the scales differed significantly or not, according to demographic information. The analyses were performed with utilizing the SPSS 20.0 software with the confidence level of 95%. By virtue of this study, it was revealed that the level of commitment to sports of national athletes is high, the level of commitment to sports increases with the increase in the age, and the level of commitment to sports is partially high for those who are interested in team sports. In addition, the multivariate regression results showed that sports commitment did not predict the mental training skills in sports. According to the findings of the study, it can be stated that mental training skills in sports do not have an effect on the sports commitment of the participants.

Keywords: Commitment to sport, mental training in sport, sport sciences, athlete, student.

INTRODUCTION

Although the participation of individuals in sports activities differs according to their individual characteristics, they aim to have physical development, experience, determine their own boundaries, individual development, creativity and socialization. The most basic feature that distinguishes an individual from other living things is the ability of thinking. As a thinking creature, so as to exhibit a high-level performance to achieve success in the sport branches, not only the technical and tactical development should be at a high level, but also some mental skills should be used in the sports environment. Undoubtedly, psychological and emotional factors, in addition to physical and tactical factors, also affect the individual's performance. Psychological skills that contribute to the improvement of sports performance in the sports environment constitute the mental dimension in sports. Many coaches, trainers or sports scientists in different sports branches cooperate with sports psychologists by adding psychological skills into their training programs in addition to technical and tactical skills. Because success in sports is the sum of physical performance, mental performance and psychological performance.

Mental training is considered as one of the most fundamental constituent of sportive performance. In addition, the mental training was expressed as the strategies for acquiring psychological skills that contribute to increasing the competition and training performance of athletes by Serena (2014) and expressed as rehearsing a physical activity or movement which are used to enhance the performance of the athlete by Denis (1985) and Singer (1980). Moreover, Hecher and Kaczor (1988) described the mental training as an imagination of a movement to enhance the athlete's performance. According to Cardano (2014), mental training aims to minimize stress with strategies that enable the athlete to gain control individually, as well as controlling cognitive and physical fatigue in sports. Mental training is very crucial for athletes to concentrate on training and competition, reach the goal, control their emotions, create self-confidence and self-esteem, reduce anxiety, manage stress, cooperate with the team and create effective communication, cope with possible injuries, make decisions and develop creative thinking (Konter, 1999). According to Vealey (2007), the self-awareness, multidimensional thinking, self-confidence and maintaining success are the basic mental training skills, which is called as personal resources, to achieve success in sports. In addition, the attention, concentration, sensation and perception are basic mental skills that have significant roles in the sportive performance. Moreover, the skills such as individual relationships, positive emotions and identity formation are also mental skills that serve psychosocial development.

According to the studies in the literature, it was revealed that mental training is a psychological skill that should be added into the training programs, which include technique and tactics, so as to enhance the performance of the athlete (Özdal, Akcan, Abakay & Dağlıoğlu, 2013; Altıntaş & Akalan, 2008; Peluso, Ross, Gfeller & LaVoie, 2005; Weinberg & Williams, 2006). Undoubtedly, there are many studies which explain that mental skills are a decisive element of sportive success and many successful athletes add mental skills development activities in their training programs in addition to physical training activities (Cumming & Williams, 2012; Levy et al., 2015;

Slimani & Cheour, 2016; Shackell & Standing, 2007; Cankurtaran, 2020; Güler & Erhan, 2017; Slimani, Tod, Chaabene, Miarka & Chamari, 2016; Amasiatu, 2013).

It would not be wrong to state that mental training practices in sports are closely related to the commitment to sports as one of the variables that have positive affect to strengthen performance of athletes.

It turns out that the concept of commitment is a decisive factor in the attitudes, feelings, thoughts and behaviors of individuals towards their occupations. The concept of commitment, which is a factor that positively influences the achievement of success, can be expressed as an energy, vitality, determination, competence, positive emotion and a satisfactory mental state towards the goals that the individual wants to achieve (Schaufeli, Martinez, Marques-Pinto, Salanova & Bakker, 2002). As a more specific field, the approach of sports commitment was expressed as a mental and affective process that positively affects the success of the athlete and encourages the athlete to sports. In other words, sports commitment was defined as the continuity, effort and energy that develops against continuing sportive activities (Hodge, Lonsdale, & Jackson, 2009). When the relevant literature was evaluated conceptually, it was noticed that the studies on sports commitment try to express the commitment to sports with joy, confidence, energy, dynamism, continuity and similar dimensions (Hodge et al., 2009; Álvarez, Balaguer, Castillo & Duda, 2009; Lonsdale, Hodge & Jackson 2007).

When the relevant literature was evaluated, it was also noticed that there are studies on sports commitment as well as mental training skills, although there is no study that was examined the impact of mental training skills on the estimation of sports commitment levels of sports science students (Sotoodeh, Talebi, Hemayattalab & Arabameri, 2012; Gross et al., 2018; Çelik & Güngör, 2020; Turgut & Yasar, 2020; Behnke, Tomczak, Kaczmarek, Komar, & Gracz, 2017; Glass, Spears, Perskaudas, Kaufman, 2019; Yildirim, 2021). Thus, it was thought that this study would constitute a reference for the future studies.

METHOD

Research Model

The relational screening model, which is the mostly used screening model, was utilized to design the research model. The studies, which were designed with the relational screening model, were studies that aim to obtain data so as to describe some characteristics of a group (Büyüköztürk, Çakmak, Akgün, Karadeniz & Demirel, 2019; Fraenkel & Wallen, 2009).

Research Group

The research group was consisted of 240 athlete students from different sports branches and was pursuing their education at the Sport Sciences Faculty at a State University in Ankara, Turkey. In addition, the number of participants were determined as ten to fifteen times of the number of items that used in the measurement tools (Pett, Lackey, & Sullivan, 2003). The distribution of demographic information of the participants was

analyzed with utilizing frequency analysis. Moreover, the distributions of the participants according to the gender were obtained as 48.3% and 51.7% for women and men, respectively. In addition, when the distribution by sports age was examined, the rate of those in the 0-5 years group was 11.7%, 6-10-year group was 26.7%, and 11 and over year group was 61.7%. Furthermore, the 31.7% of the participants were national athletes and 68.3% were not national athletes. The rate of those who perform team sports and individual sports were obtained as 46.7% and 53.3%, respectively.

Percentage and frequency dispersions of the Sport Sciences Faculty students participating into the research incompliance with the categorical variables are given in Table 1.

Table 1. Frequency and Percentage Dispersion of Participants

		n	%
Gender	Woman	116	48.3
	Man	124	51.7
	Total	240	100.0
Sports Age	0-5 year	28	11.7
	6-10 year	64	26.7
	11 years and above	148	61.7
	Total	240	100.0
National Athlete	Yes	76	31.7
	No	164	68.3
	Total	240	100.0
Sports Branch	Team Sports	112	46.7
	Individual Sports	128	53.3
	Total	240	100.0

Data Collection Tools

In this study, both "Mental Training Inventory in Sports" and "Scale of Engagement to Sports" data collection tools were utilized to designate the existence of the variation and determine the degree of the variation between at least two variables in relational screening models.

Mental Training Inventory in Sports (MTIS)

Mental Training Inventory in Sports (MTIS) was built up by Behnke, Tomczak, Kaczmarak, Komar, and Gracz (2017) and its Turkish adaption was performed by Yarayan and İlhan (2018). In addition, MTIS comprises of 20 items and 5 sub-dimensions, graded in a 5-point Likert structures which are mental essential skills, mental performance skills, interpersonal skills, talking to yourself, mental visualization. In data analysis, exploratory and confirmatory factor analysises were employed to form validity of the inventory and Cronbach's alpha reliability analysis was employed to determine the internal consistency. The 5-factor structure, which was determined by exploratory factor analysis, explains nearly 70% of the MTIS. In the analysis, the internal consistency coefficients of MTIS were obtained in the range of 0.82 to 0.91.

Sports Attachment Scale (SAS)

Sports Attachment Scale (SAS) was built up by Guillén and Martinez Alvarado (2014) and its adaptation into Turkish was performed by Sırgancı, Ilgar, and Cihan (2019). In addition, SAS consists of 3 sub-dimensions and 15 items which are graded in a 5-point Likert structure. The sub-dimensions of the scale evaluate the fitness, dedication as well as internalization of the athletes. In the analysis, the Cronbach Alpha coefficients was obtained as 0.79, 0.80, 0.82 for the sub-dimensions of "vigor", "dedication", "internalization", respectively, while the overall scale is calculated as 0.91. Moreover, the sub-dimension of vitality consists of items 1, 2, 6, 7, 8, the sub-dimension of dedication consists of items 3, 4, 5, 9, 12, and the sub-dimension of internalization consists of items 10, 11, 13, 14, 15.

Analysis of Data

In the data analysis, the inventory and scale forms, which were obtained from the participants of the research, were initially checked by the researcher, and 6 participant forms that were marked as missing were excluded. In addition, the frequency analysis was utilized to analyze the distribution of demographic information of the participants. After the scale scores were obtained, their conformity to the normal dispersion was examined with Kolmogorov Smirnov and Shapiro Wilks tests and it was observed as suitable for the normal dispersion. Moreover, the regression model was utilized to examine the effect of MTIS commitment. In independent groups, t-test and one-way analysis of variance were utilized to examine whether the scales differed significantly incompliance with the demographic information. Furthermore, the SPSS 20.0 software was utilized to perform the analysis at 95% confidence level.

FINDINGS

Determination of the Effect of Mental Training Inventory in Sports on the Scale of Engagement to Sports

A regression model was established and tested, in which the scale of commitment to sports was taken as the dependent variable and the sub-dimensions of the MTIS were taken as independent variables.

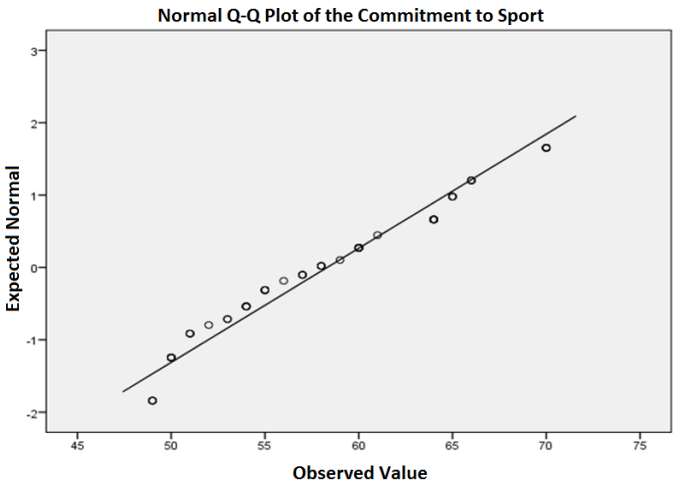

Figure 1. Normal Q-Q Plot of the Commitment to Sport

The Q-Q Plot and histogram graph obtained for the dependent variable and examining the normality assumption show that the data and normal dispersion are in good agreement.

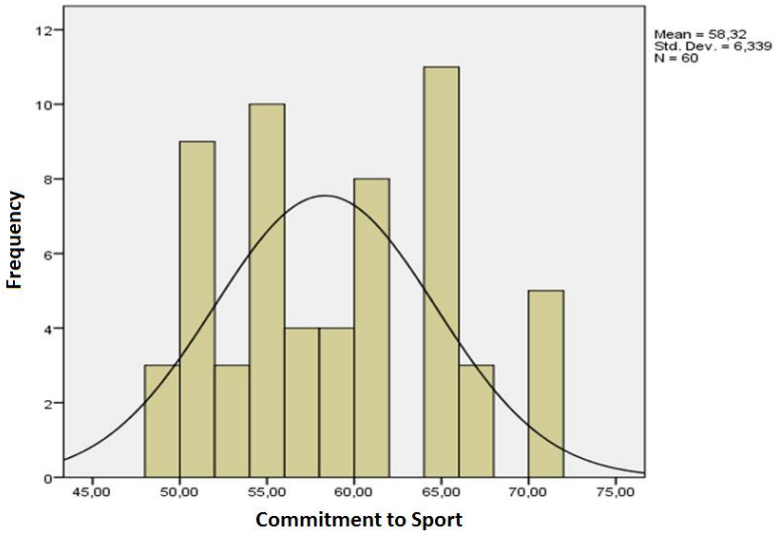

Figure 2. Histogram Graph of the Commitment to Sport

Table 2. Frequency and Percentage Dispersion of Participants by Gender, Sports Age, National Athlete Status and Sports Branch

Model		Non-Standard Coefficients		Standard Coefficients	t	p
		B	Std. Error	Beta		
Commitment to Sport F=0,280; p=0,922 R2=0,025	Fixed Term	48.512	12.567	-	3.860	0.000
	Metal Basic Skills	-0.516	0.738	-0.150	-0.699	0.488
	Mental Performance Skills	0.427	0.491	0.197	0.869	0.389
	Interpersonal Skills	-0.050	0.906	-0.011	-0.055	0.956
	Talk to Yourself	-0.133	1.010	-0.028	-0.132	0.895
	Metal Resuscitation	0.915	1.342	0.149	0.682	0.498

When the established regression model was tested; it was observed that the sub-dimensions of the MTIS did not significantly affect the scale of commitment to sports (F=0.280; p>0.05). The established regression model was meaningless.

The relationships of the independent variable sub-dimensions with the dependent variable, the sports commitment scale, are given with 4 different scatter plots in Figure 3.

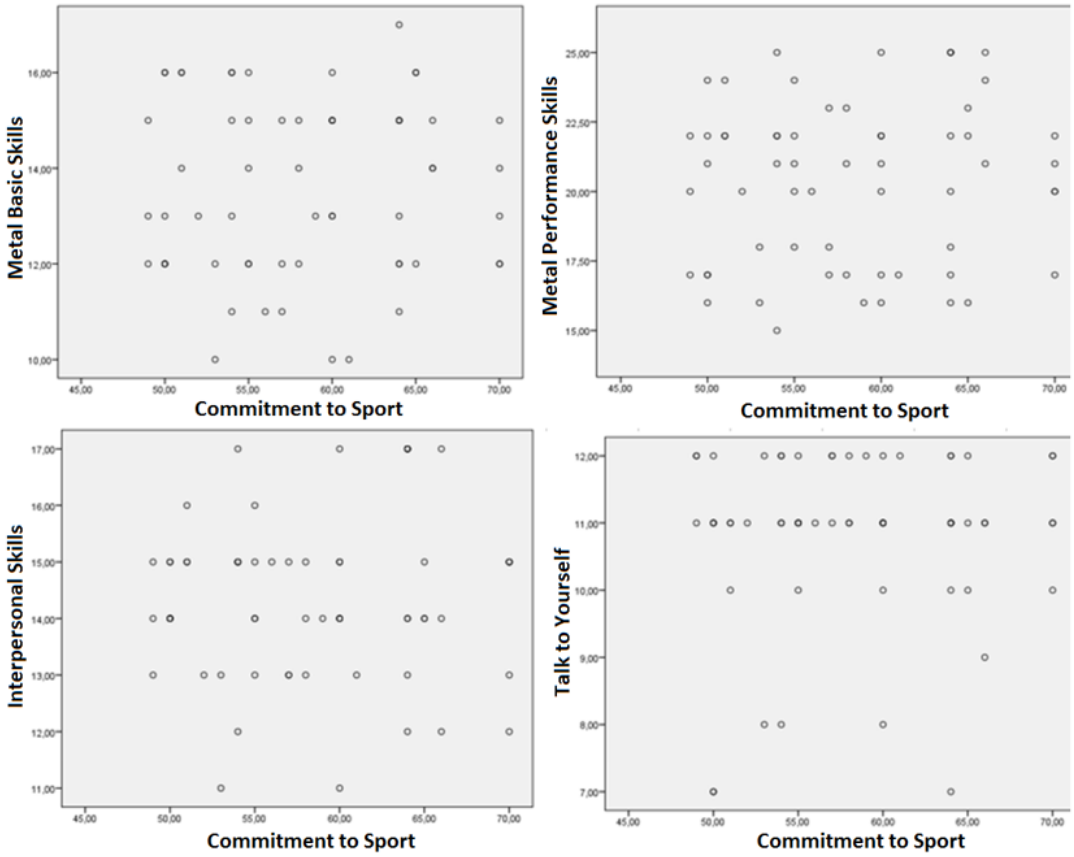

Figure 3. The Scatter Plots of the Relationships of the Independent Variable Sub-Dimensions with the Dependent Variable, the Sports Commitment Scale

Change of Sport Engagement and Mental Training Inventory According to Demographic Information

The variation of sports commitment and mental training inventory incompliance with the demographic information was analyzed by t-test and one-way analysis of variance in independent groups.

Table 3. The Change in the Overall Scale of Commitment to Sports And Its Sub-Dimensions According to Gender

	Gender	N	Average	Std. Deviation	t	p
Commitment to Sports	Woman	29	58.10	5.36	0.062	0.803
	Man	31	58.52	7.22		
	Total	60	58.32	6.34		
Being Fit	Woman	29	19.03	2.64	0.703	0.405
	Man	31	19.58	2.41		
	Total	60	19.32	2.51		
Devotion	Woman	29	18.93	1.44	0.166	0.685
	Man	31	19.13	2.22		
	Total	60	19.03	1.87		
Internalization	Woman	29	20.14	2.25	0.235	0.630
	Man	31	19.81	2.97		
	Total	60	19.97	2.63		

When the change in the overall scale of commitment to sports and its sub-dimensions according to gender was examined, it was observed that the overall scale and its sub-dimensions did not differ significantly in gender variable (p>0.05). In other words, the level of commitment to sports and sub-dimensions of men and women were at the same level.

Table 4. The Change of Mental Training Skills Inventory and Sub-Dimensions in Sports According to Gender

	Gender	N	Average	Std. Deviation	t	p
Mental Basic Skills	Woman	29	13.62	2.16	0.023	0.881
	Man	31	13.55	1.52		
	Total	60	13.58	1.84		
Mental Performance Skills	Woman	29	20.21	2.94	0.165	0.686
	Man	31	20.52	2.95		
	Total	60	20.37	2.93		
Interpersonal Skills	Woman	29	14.24	1.57	0.146	0.704
	Man	31	14.39	1.38		
	Total	60	14.32	1.47		
Talk to Yourself	Woman	29	10.97	1.18	0.723	0.399
	Man	31	10.68	1.42		
	Total	60	10.82	1.31		
Metal Resuscitation	Woman	29	11.31	0.85	0.309	0.580
	Man	31	11.16	1.19		
	Total	60	11.23	1.03		

When the change of mental training skills inventory and sub-dimensions in sports according to gender was examined, it was observed that the overall scale and its sub-dimensions did not significantly differ in gender variable (p>0.05). It was obverved that, the mental basic skills sub-dimensions of men and women were at the same level.

Table 5. The Change in the Scale of Commitment to Sports and its Sub-Dimensions According to Sports Age Group

	Sports Age Group	N	Average	Std. Deviation	F	p
Commitment to Sports	0-5 year	7	55.29	2.93	5.787	0.005
	6-10 year	16	54.94	6.73		
	>11 years	37	60.35	5.87		
	Total	60	58.32	6.34		
Being Fit	0-5 year	7	16.71	3.09	13.002	0.000
	6-10 year	16	18.00	2.10		
	>11 years	37	20.38	1.92		
	Total	60	19.32	2.51		
Devotion	0-5 year	7	18.14	0.69	4.403	0.017
	6-10 year	16	18.19	1.91		
	>11 years	37	19.57	1.83		
	Total	60	19.03	1.87		
Internalization	0-5 year	7	20.43	0.53	2.451	0.095
	6-10 year	16	18.75	2.98		
	>11 years	37	20.41	2.59		
	Total	60	19.97	2.63		

When the change in the scale of commitment to sports and its sub-dimensions according to sports age groups was examined by one-way analysis of variance, it was seen that the overall scale and the sub-dimensions of fitness and dedication differ significantly incompliance with the age groups of sports ($p<0.05$), while the internalization sub-dimension was not significantly differed.

In TUKEY test, which was conducted to determine which group the difference originated from for the overall scale and its sub-dimensions; for the overall scale, the level of dependence on sports of group of 11 years and over was significantly higher than those in the range of 0-5 years and 6-10 years. For the sub-dimension of fitness, the mean of the group of 11 years and over was significantly higher than both the 0-5 and 6-10 years groups, and the 6-10 years group was significantly higher than the 0-5 years group. For the dedication sub-dimension, the mean of people aged 11 years and over was significantly higher than then both groups of 0-5 years and 6-10 years.

Table 6. The Change of Mental Training Skills Inventory and Sub-Dimensions in Sports According to Sports Age Groups

	Sports Age Group	N	Average	Std. Deviation	F	p
Mental Basic Skills	0-5 year	7	12.71	1.60	0.877	0.422
	6-10 year	16	13.69	1.49		
	>11 years	37	13.70	2.01		
	Total	60	13.58	1.84		
Mental Performance Skills	0-5 year	7	19.29	3.55	0.583	0.561
	6-10 year	16	20.31	3.05		
	>11 years	37	20.59	2.79		
	Total	60	20.37	2.93		
Interpersonal Skills	0-5 year	7	13.71	1.89	0.776	0.465
	6-10 year	16	14.25	1.13		
	>11 years	37	14.46	1.52		
	Total	60	14.32	1.47		
Talk to Yourself	0-5 year	7	11.00	1.41	0.147	0.863
	6-10 year	16	10.69	1.62		
	>11 years	37	10.84	1.17		
	Total	60	10.82	1.31		
Metal Resuscitation	0-5 year	7	11.43	0.79	0.142	0.868
	6-10 year	16	11.19	1.47		
	>11 years	37	11.22	0.85		
	Total	60	11.23	1.03		

When the change of mental training skills inventory and sub-dimensions in sports according to sports age groups was analyzed by one-way analysis of variance, no significant difference ($p>0.05$) was obtained. In other words, the mental training skills inventory and sub-dimensions of individuals with different sports ages were at the same level.

Table 7. The Change of the Scale of Commitment to Sports According to the Status of Being A National Athlete or Not

	The status of being a national athlete?	N	Average	Std. Deviation	F	p
Commitment to Sports	Yes	19	60.79	6.44	4.480	0.039
	No	41	57.17	6.03		
	Total	60	58.32	6.34		
Being Fit	Yes	19	20.53	1.98	7.101	0.010
	No	41	18.76	2.56		
	Total	60	19.32	2.51		
Devotion	Yes	19	19.95	2.01	7.374	0.009
	No	41	18.61	1.66		
	Total	60	19.03	1.87		
Internalization	Yes	19	20.32	2.93	0.486	0.489
	No	41	19.80	2.50		
	Total	60	19.97	2.63		

When the change of the scale of commitment to sports incompliance with the status of being a national athlete was analyzed; it was obtained that the overall scale of commitment to sports and the sub-dimension of being fit and dedication differed significantly according to the status of being a national athlete ($p<0.05$), while no significant difference was observed according to the status of being a national athlete. Moreover, the levels of commitment, fitness and dedication to sports of national athletes were obtained as a significantly higher than the non-national athletes.

Table 8. The Change in the Sub-Dimensions of the Inventory of Mental Training Skills in Sports According to The Status of Being A National Athlete

	The status of being a national athlete?	N	Average	Std. Deviation	F	p
Mental Basic Skills	Yes	19	13.79	1.78	0.344	0.560
	No	41	13.49	1.89		
	Total	60	13.58	1.84		
Mental Performance Skills	Yes	19	20.47	2.50	0.037	0.849
	No	41	20.32	3.13		
	Total	60	20.37	2.93		
Interpersonal Skills	Yes	19	14.16	1.46	0.322	0.573
	No	41	14.39	1.48		
	Total	60	14.32	1.47		
Talk to Yourself	Yes	19	10.79	1.18	0.012	0.914
	No	41	10.83	1.38		
	Total	60	10.82	1.31		
Metal Resuscitation	Yes	19	11.26	0.93	0.023	0.880
	No	41	11.22	1.08		
	Total	60	11.23	1.03		

When the change in the sub-dimensions of the inventory of mental training skills in sports was examined with the t test in independent groups according to the status of being a national athlete; it was seen that the sub-dimensions of the scale did not differ significantly according to the status of being a national athlete. In other

words, the sub-dimensions of mental basic skills inventory of national athletes and non-national athletes were at the same level.

Table 9. The Change in the Scale of Commitment to Sports and Its Sub-Dimensions According to the Type of Sport

	The Type of Sport	N	Average	Std. Deviation	F	p
Commitment to Sports	Team Sports	28	59.93	6.54	3.541	0.065
	Individual Sports	32	56.91	5.90		
	Total	60	58.32	6.34		
Being Fit	Team Sports	28	19.61	3.03	0.697	0.407
	Individual Sports	32	19.06	1.97		
	Total	60	19.32	2.51		
Devotion	Team Sports	28	19.43	2.08	2.406	0.126
	Individual Sports	32	18.69	1.62		
	Total	60	19.03	1.87		
Internalization	Team Sports	28	20.89	2.23	7.198	0.009
	Individual Sports	32	19.16	2.71		
	Total	60	19.97	2.63		

When the change in the scale of commitment to sports and its sub-dimensions was analyzed incompliance with the type of sport; it was obtained that the internalization sub-dimension, which is one of the sub-dimensions of the scale, differed significantly according to the type of sport ($p<0.05$), while the overall scale and the sub-dimension of vitality and dedication did not differ significantly. The internalization levels of those who do team sports were significantly higher than those who do individual sports.

Table 10. The Change of Mental Training Skills Inventory and Sub-Dimensions in Sports According to the Type of Sport

	The Type of Sport	N	Average	Std. Deviation	F	p
Mental Basic Skills	Team Sports	28	13.43	1.93	0.366	0.548
	Individual Sports	32	13.72	1.78		
	Total	60	13.58	1.84		
Mental Performance Skills	Team Sports	28	20.29	2.80	0.039	0.843
	Individual Sports	32	20.44	3.08		
	Total	60	20.37	2.93		
Interpersonal Skills	Team Sports	28	14.36	1.68	0.039	0.844
	Individual Sports	32	14.28	1.28		
	Total	60	14.32	1.47		
Talk to Yourself	Team Sports	28	11.04	1.04	1.484	0.228
	Individual Sports	32	10.63	1.50		
	Total	60	10.82	1.31		
Metal Resuscitation	Team Sports	28	11.25	0.89	0.013	0.908
	Individual Sports	32	11.22	1.16		
	Total	60	11.23	1.03		

When the change of mental training skills inventory and sub-dimensions in sports is analyzed incompliance with the type of sport, no significant difference was obtained in the sub-dimensons of the scale according to the type of sport ($p>0.05$). In other words, it could be expressed that the levels of mental basic skills of team sports and individual sports were at the same level.

CONCLUSION and DISCUSSION

In the study, it was purposed to designate the impact of these variables on the level of commitment to sports by considering the sub-dimensions of the MTIS as predictive variables so as to predict the level of commitment to sports of the athlete students who continue their education at Sport Sciences Faculty. In addition, the research was examined in compliance with the variables of gender, sport age, being a national athlete as well as sports branch. When the change in the overall scale of commitment to sports and its sub-dimensions was examined in compliance with gender, it was no significant difference was obtained between the overall scale and its sub-dimensions in compliance with gender ($p>0.05$). In other words, the level of commitment to sports and sub-dimensions of male and female athletes were at the same level. In addition, it can be stated that men and women from all over the world have equal opportunities to do sports. When the literature was examined, Babić, Šarac, Missoni and Sindik (2015) have a study that support this finding with stating that no significant difference was observed in the sub-dimensions of the sports commitment scale of the athletes in compliance with the gender variable. However, some studies were found that the level of commitment to sports varies in compliance with gender in favor of female athletes (Sivrikaya & Biricik, 2019; Kelecek & Göktürk, 2017). When the change of mental training skills inventory and sub-dimensions in sports was examined in compliance with gender, no significant difference was observed between the overall scale and its sub-dimensions in compliance with gender ($p>0.05$). In other words, it can be stated that the mental basic skills and sub-dimensions were at the same level for both female and male athletes. As studies supporting this finding, Behnke et al. (2017), Buhrow, Digmann & Waldron (2017) and Newland, Newton, Finch, Harbke and Podlog (2013) was found in their studies that there was no significant difference between the variables of mental toughness and gender in sports. Unlike this result, some studies was obtained a significant difference in favor of men between mental training skills and gender in sports (Yüksel & Orhan, 2021; Sotoodeh et al., 2012; Nicholls, Polman, Levy, & Backhouse, 2009).

When the change in the overall sports commitment scale and its sub-dimensions was examined in compliance with the sports age groups, it was found that the sports dependency levels of the individuals sport aged 11 years and above in all sub-dimensions were significantly higher than the athletes who are in the sport age group of 0-5 years and 6-10 years. This situation can be explained as the individual's intense desire to carry out that occupation in the explanation of his attitudes, feelings and behaviors towards the occupation that he has done and enjoyed for a long time. When the relevant literature was examined, Uluç and Akçakoyun (2021), were examined the level of commitment to sports of bocce athletes, it was seen that a significant difference emerges in the general and sub-dimensions of the scale of commitment to sports as the sports age of the

athletes increases. In the study conducted by Peke (2020) with orienteering athletes, as the sports age of the athletes increases, there was an increase in the scale of commitment to sports and its sub-dimensions. Similarly, in the study conducted by Fawver et al. (2020) with alpine skiers, a positive and significant relationship was found between the sports age of the athletes and their commitment to sports.

When the change of mental training skills inventory and sub-dimensions in sports was examined in compliance with sports age groups, no significant difference ($p>0.05$) was observed. In other words, the mental training skills inventory and sub-dimensions averages of individuals with different sports ages were at the same level. Similarly, studies conducted by Çakmak (2019) found that there was no significant relationship between the sports age variable and mental training skills in sports. On the other hand, there were studies in the literature that found a significant difference between sports age and mental training skills in sports, it was found that the mental training skills increase with the increase in time spent in sports (Çelik & Güngör, 2020; Karaca & Gündüz, 2021; Karaağaç & Şahan, 2021).

When the change of the scale of commitment to sports was examined in compliance with the status of being a national athlete, it was found that the overall scale of commitment to sports and the sub-dimension of vitality and dedication differed significantly in compliance with the status of being a national athlete ($p<0.05$), while a significant difference emerged in compliance with the status of being a national athlete in the internalization sub-dimension. In other words, it was revealed that the levels of commitment, fitness and dedication to sports of national athletes were significantly higher than non-national athletes. Supporting this mist, Madak, Kumartaşlı, Gülen and Sönmez (2021), in a study in which Taekwondo athletes' levels of commitment to sports were examined in terms of some variables, no significant difference was found between nationality and commitment to sports. On the other hand, when the literature was examined, a limited number of studies have been observed on the status of being a national athlete and commitment to sports.

When the change of mental training skills inventory and sub-dimensions in sports was examined in compliance with the status of being a national athlete, it was found that the sub-dimensions of the scale did not differ significantly in compliance with the status of being a national athlete. In other words, the mental training skills inventory and sub-dimensions levels of national athletes and non-athletes were at the same level. When the literature was examined, no study supporting this finding was found. However, Grushko et al. (2016), it was determined that elite athletes have more mental training skills than amateur athletes. Again, when the literature was evaluated, it was found that there was a significant difference in favor of professional athletes and national athletes (Erdoğan & Gülşen, 2020; Sural, Güler & Çar, 2021).

When the change in the overall scale of commitment to sports and its sub-dimensions in compliance with the type of sport is examined; While it was determined that the internalization sub-dimension, which is one of the sub-dimensions of the scale, made a significant difference in compliance with the type of sport ($p<0.05$), it was found that the overall scale and the sub-dimension of vitality and dedication did not make a significant

difference in compliance with the type of sport. In other words, internalization levels of those who do team sports are significantly higher than those who do individual sports. When the literature is examined, in contrast to this finding, in the study conducted by Siyahtaş, Tükenmez, Avcı, Yalçınkaya, and Çavuşoğlu (2020), it was found that the sports commitment of the athletes engaged in individual sports is higher than the athletes involved in team sports. When the change of mental training skills inventory and sub-dimensions in sports in compliance with the type of sport is examined; it was seen that the sub-dimensions of the scale did not differ significantly in compliance with the type of sport ($p>0.05$). In other words, it can be stated that the mental training skills of team sports and individual sports are at the same level. In parallel with this result, in the study conducted by Karaağaç and Şahan (2021), it was found that the mental training levels of the athletes did not differ in compliance with the team or individual sports variable.

So as to determine the effect of the mental training inventory in sports on the scale of commitment to sports, a regression model was established and tested, in which the scale of commitment to sports was taken as the dependent variable and the sub-dimensions of the inventory of mental training in sports were taken as independent variables. When the established regression model was tested; it was observed that the sub-dimensions of the mental training inventory in sports did not significantly affect the scale of commitment to sports ($F=0.280$; $p>0.05$). The established regression model was meaningless. Multivariate regression results showed that sports commitment did not predict mental training skills in sports. According to the findings, it can be expressed that mental training skills in sports did not have an effect on the sports commitment of the participants in the study.

RECOMMENDATIONS

The research was created by establishing a multivariate regression model and it was tried to analyze the predictive status of sports commitment to mental training skills in sports. In this study, in which the existence and degree of change between the two variables is tried to be determined, it is thought that the data can be collected through the semi-structured interview form from the athlete students in addition to the measurement tools utilized in the study will also strengthen the research qualitatively. Moreover, the study can be reconstructed on the athlete students who are interested in a certain branch, in addition to the athlete students who are engaged in team and individual sports.

ETHICAL TEXT

In this article, the journal writing rules, publication principles, research and publication ethics, and journal ethical rules were followed. The responsibility belongs to the author (s) for any violations that may arise regarding the article. Compliance of the study with ethical principles was approved by Gazi University Ethics Commission's decision no: E-77082166-604.01.02-263488/ 11.01.2022 and numbered 01.

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