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Comparison of Mental Toughness and Rumination States of Football Players Playing in Different Positions

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Abstract
Athletes strive to maximize their athletic performance, therefore mental training is of great importance for the development of performance. It is important to determine the mental endurance and rumination states of athletes in terms of performance and to produce solution suggestions. This research was conducted to compare the mental endurance and rumination states of football players playing in different positions. The research group consisted of 1062 licensed volunteer athletes in the Aegean region who are active in the football branch. In the research, the "Personal Information Form", the "Mental Endurance Scale in Sports" to determine the mental endurance levels of athletes and the "Sports Competition Rumination Scale" to determine the rumination states of athletes were used as data collection tools. The data were analyzed using the SPSS statistical package program. The significance level was accepted as $p<0.05$. According to the findings obtained from the research; it was observed that there was a significant difference between the mental endurance and rumination states of the research group with the variables of championship status, age, education status, income status, sports year, weekly training number and the position they played. It was determined that the average scores of amateur athletes in the research group were higher than professional athletes, non-national athletes were higher than national athletes, and athletes who did not win championships were higher than athletes who won championships. It was observed that as the educational status of the athletes increased, their average scores of mental endurance increased, their average scores of rumination decreased, and as their income status increased, their average scores of mental endurance and rumination decreased. It was determined that as the years of sports in the research group increased, their average scores of mental endurance and rumination decreased, and that athletes who played in the goalkeeper position had lower average scores of mental endurance and rumination than athletes who played in the defense, midfield, and forward positions. It was observed that as the league level in which the athletes played increased, their average scores of mental endurance increased and their average scores of rumination decreased. As a result; it was observed that the mental endurance of the athletes was at a moderate level, their rumination was at a high level, and that the sports degree, education, league and position they played in affected the mental endurance and rumination of the athletes. In line with this information, we believe that adding programs to improve mental endurance and rumination in addition to athletes' training will positively affect athletes' athletic performance.
Keywords: Football, Position, League, Rumination, Mental Toughness

Introduction

Mental toughness is defined as an athlete's ability to cope with pressure, stress, challenges and adverse conditions and has a decisive impact on sports performance. (Clough, Earle and Sewell, 2002). This concept is especially important in highly competitive sports. Mentally tough athletes can remain determined, stay motivated, and continue to strive to achieve their goals, even under difficult conditions. (Jones, Hanton et al., 2007). Athletes with high mental endurance can maximize their performance by maintaining their focus without being affected by negative external factors. In fast-paced and competitive sports such as football, the mental endurance of players stands out as one of the determining factors of performance.

Football is a sport that requires intense mental effort, as well as tactical and physical. Since each position involves different dynamics of the game, it is thought that the mental endurance levels of football players may vary depending on the position they play. Goalkeepers can be under constant pressure because they have to make critical decisions during the match. A

mistake can directly lead to the team conceding a goal and changing the fate of the match (Morris, 2000). Similarly, defenders must be constantly alert to avoid making mistakes under high pressure. Creating a gap in the defense can lead to the opposing team gaining a goal opportunity, so the mental toughness of defenders is of great importance to maintain the integrity of the game. Forwards and attackers, on the other hand, must think strategically in order to overcome the opposing defense and seize opportunities. Therefore, they need the mental toughness to make the right moves under pressure, as well as the ability to make decisions at every moment of the game (Coulter et al., 2010).

The position of the players is an important factor that shapes their mental toughness as well as their physical abilities. Defenders are exposed to constant pressure throughout the match, while midfielders have to balance both defensive and offensive duties. Forwards must develop the skills to cope with failure and pressure while constantly attacking the opponent's goal. Goalkeepers, as the last line of defense for a team, are in a position where mistakes can lead to irreparable consequences (Gucciardi et al., 2009). Therefore, the unique challenges and requirements of each position can directly impact players' levels of mental toughness.

In addition to mental toughness, the concept of rumination also has an important place in sports psychology. Rumination is defined as the state in which an individual repeatedly replays negative events they have experienced and becomes fixated on these events (Nolen-Hoeksema, 1991). Rumination can negatively impact performance in athletes by causing performance anxiety, lack of self-confidence and concentration problems (Smith and Rainey, 2014). When an athlete focuses on a mistake they made in the past and starts to think about it constantly, their future performance will be negatively affected. This situation becomes especially evident in dynamic and ever-changing games like football. It is critical for football players to recover and refocus on the game instead of focusing on the mistakes they made during the match in order to perform successfully.

The negative effects of rumination may also vary depending on the player's position. Goalkeepers are in a position where individual mistakes often result in a goal, so they may think more about these mistakes and tend to ruminate (Anshel, 1990). Defenders, on the other hand, are more alert to potential mistakes because they constantly feel the pressure of the opposing team, which can increase their mental stress levels. Midfielders and attackers, on the other hand, may feel inadequate when faced with situations such as not being able to capitalize on opportunities or not being able to score goals, and may ruminate under the influence of these negative emotions (Moran, 2009). Mental toughness and rumination are two important psychological factors that complement or hinder each other in athletes' performance. A football player with high mental toughness can recover faster and maintain focus in the face of negative situations, while a football player who is prone to rumination may have difficulty overcoming the effects of the mistakes he makes, which can negatively affect his performance (Gucciardi et al., 2009). Comparing the mental toughness and rumination levels of football players playing in different positions is important to better understand the effects of these two psychological variables on football performance. This study aims to compare the mental toughness and rumination levels of football players playing in different positions. The findings of the study will help to reveal the mental toughness strategies and rumination tendencies of football players specific to their positions. At the same time, these results can be a guide for coaches and sports psychologists to improve football players' mental toughness and reduce their rumination tendencies.

METHOD

Research Model

In this research, the relational screening model was used, and the relational screening model is expressed as "It refers to the screening arrangements made to determine the relationship between two or more variables and the degree of this relationship" (Karasar, 2012). In this research model, it was used to analyze the relationship between variables and measure the strength of this relationship. The research was approved by Bitlis Eren University Ethical Principles and Ethics Committee (2023/12-22).

Working Group

The research group consisted of 1062 licensed volunteer athletes active in football in the Aegean region.

Data Collection Tools

The "Personal Information Form" prepared by the researchers and the "Mental Toughness Scale in Sports" developed by Sheard et al. (2009), adapted to Turkish by Altıntaş and Bayar-Koruç (2016), and the "Rumination Scale in Sports Competition" developed by Michel-Kröhler et al. (2021), adapted to Turkish by Karafil and Pehlivan (2023), and the validity and reliability of which were performed, were created and applied to the participants.

Personal Information Form

The personal information form prepared by the researcher consists of variables related to the athletes' age, education status, income status, athletic degree, sports year, national athlete status, weekly training number, position played, league played and whether they have won a championship.

Mental Toughness Scale in Sports

Mental Toughness Inventory in Sports: The "Mental Toughness Inventory in Sports", developed by Sheard et al. (2009) to determine the level of mental toughness in sports environments and adapted to Turkish by Altıntaş and Bayar Koruç (2016), consists of a total of 14 items. The scale consists of 3 sub-dimensions, namely Confidence, Continuity and Control, and is a 4-point Likert-type (1=Completely False; 4=Completely True). The internal consistency coefficients for the sub-dimensions of the original scale were determined as 0.81 for the Confidence sub-dimension, 0.74 for the Continuity sub-dimension and 0.71 for the Control sub-dimension (Sheard et al., 2009). The internal consistency coefficients were determined as 0.84 for the Confidence sub-dimension, 0.51 for the Continuity sub-dimension and 0.79 for the Control sub-dimension by Altıntaş and Bayar-Koruç (2016).

Sports Competition Rumination Scale

The "Sports Competition Rumination Scale (SMRÖ)" developed by Michel-Kröhler et al. (2021) for the purpose of measuring participants' sports competition rumination levels was adapted to Turkish by Karafil and Pehlivan (2023) after its validity and reliability were made. The scale consists of a total of six questions, is a 5-point Likert-type, and is graded between 1 and 5 (1 = Strongly Disagree 5 = Strongly Agree). The lowest score from the scale is 6 and the highest is 30. The internal consistency coefficient of the scale was determined as $\alpha = .87$.

Analysis of Data

SPSS statistics program was used in the analysis of the data. Demographic information of the athletes and mental toughness and rumination levels were summarized using descriptive statistics. The skewness and kurtosis values of the data were examined for the normality values of the obtained data. The skewness and kurtosis values between +1 and -1 are considered normal (Leech et al., 2005). Independent Samples T-test and One-Way ANOVA test were used in intra-group comparisons for the data determined to have a normal distribution. "Pearson Correlation and Regression Analysis" was applied to determine the relationship between the variables, its direction and level. The significance level was evaluated as $p<0.05$.

Table 1. Skewness and Kurtosis Values for Scales and Sub-Dimensions

Variables	$\overline{X}$	sd	Skewness	Kurtosis
Confidence	18,73	2,41	,296	-,574
Control	10,50	2,44	-,029	-,409
Continuity	10,18	1,38	,660	,947
Mental Toughness Scale	39,31	3,71	,676	,822
Rumination Scale	22,73	5,01	-,512	-,272

RESULTS

Table 2. Frequency Table of Demographic Variables

Variables		Frequency	Percent (%)
Age	14-18 age	309	29,1
	19-23 age	227	21,4
	24-28 age	160	15,1
	29-33 age	124	11,7
	Ages 34 and above	242	22,8
Educational Status	Primary School	31	2,9
	Middle School	33	3,1
	High School	492	46,3
	Licence	411	38,7
	Postgraduate	95	8,9
Income Status	Low	219	20,6
	Medium	749	70,5
	High	94	8,9
Sports Degree	Amateur	881	83,0
	Professional	181	17,0
Year of Sports	1-5 year	221	20,8
	6-11 year	423	39,8
	12-17 year	241	22,7

	18 years and above	177	16,7
Are you a national athlete?	Yes	69	6,5
	No	993	93,5
Number of Weekly Workouts	1-3	462	43,5
	4-6	547	51,5
	7 and above	53	5,0
Position Played	Goalkeeper	157	14,8
	Defender	375	35,3
	Midfielder	349	32,9
	Forward	181	17,0
League Played In	Amateur	769	72,4
	Regional Amateur	181	17,0
	2nd League	46	4,3
	3rd League	54	5,1
	1st League	12	1,1
Championship Status	Yes	681	64,1
	No	381	35,9

When Table 2 is examined, it was determined that 29.1% of the athletes were 14-18 years old, 22.8% were 34 years old and above, 21.4% were 19-23 years old, 15.1% were 24-28 years old, 11.7% were 29-33 years old, 46.3% had a high school degree, 38.7% had an undergraduate degree, 8.9% had a postgraduate degree, 3.1% had a secondary school degree, 2.9% had a primary school degree, 70.5% had a medium income, 20.6% had a low income, and 8.9% had a high income. It was observed that 39.8% of the research group had 6-11 years, 22.7% had 12-17 years, 20.8% had 1-5 years, 16.7% had 18 or more years of sports experience, 83% were amateur, 17% had a professional sports degree, 51.5% had 4-6 weeks of training, 43.5% had 1-3 weeks of training, 5% had 7 or more weeks of training, and 6.5% were national athletes. It was observed that 35.3% of the athletes played defense, 32.9% played midfield, 17% played forward, 14.8% played goalkeeper, 72.4% were amateur, 17% played regional amateur, 5.1% played in the 3rd League, 4.3% played in the 2nd League, 1.1% played in the 1st League, and 64.1% won the championship.

Table 3. T Test Analyses of Athletes According to the Sportive Degree Variable

		Sportive Degree			
		$\overline{X}$	**sd**	**t**	**p**
Confidence	Amateur	18,65	2,40	-3,935	0,00*
	Professional	19,42	2,37		
Control	Amateur	10,66	2,48	4,767	0,00*
	Professional	9,72	2,06		
Continuity	Amateur	10,28	1,39	3,487	0,00*
	Professional	9,89	1,26		
Mental Toughness Scale	Amateur	39,60	3,74	1,846	0,06
	Professional	39,04	3,57		
Rumination Scale	Amateur	22,69	5,13	2,551	0,01*
	Professional	21,65	4,27		

***p<0.05**

When Table 3 is evaluated, it is seen that there is a statistically significant difference between the sportsman's sportive degree variable and the mental toughness scale confidence, control, continuity sub-dimensions and rumination scale total score averages ($p<0.05$), while it is determined that there is no statistically significant difference between the mental toughness scale total score averages ($p>0.05$). It was observed that the amateur athletes in the study had higher mental toughness and rumination scale total score averages than the professional athletes.

Table 4. T Test Analyses of Athletes According to National Athlete Status

		National Athlete			
		$\overline{X}$	**sd**	**t**	**p**
Confidence	Yes	20,14	2,17	4,880	0,00*
	No	18,69	2,40		
Control	Yes	9,59	2,57	-3,214	0,00*
	No	10,56	2,42		
Continuity	Yes	9,98	1,54	-1,456	0,14
	No	10,23	1,36		
Mental Toughness Scale	Yes	39,72	3,08	,499	0,61
	No	39,49	3,75		
Rumination Scale	Yes	22,72	4,38	,349	0,72
	No	22,50	5,05		

***p<0.05**

When Table 4 is examined, it is seen that there is a statistically significant difference between the national athlete status of the athletes and the mean scores of the confidence and control sub-dimensions of the mental toughness scale ($p<0.05$), while there is no statistically significant difference between the total score of the mental toughness scale, continuity sub-dimension and rumination scale ($p>0.05$). It was seen that the total score means of the national athletes in the study were higher than the amateur athletes.

Table 5. T Test Analyses According to Athletes' Championship Status

		Championship Status			
		$\overline{X}$	**sd**	**t**	**p**
Confidence	Yes	19,02	2,27	4,380	0,00*
	No	18,35	2,61		
Control	Yes	10,20	2,40	-5,363	0,00*
	No	11,03	2,41		
Continuity	Yes	10,04	1,23	-5,659	0,00*
	No	10,53	1,55		
Mental Toughness Scale	Yes	39,27	3,57	-2,731	0,00*
	No	39,92	3,93		
Rumination Scale	Yes	21,96	5,03	-4,926	0,00*
	No	23,52	4,80		

***p<0.05**

When Table 5 is evaluated, it is determined that there is a statistically significant difference between the championship status of the athletes and the total score averages of the mental toughness scale, scale sub-dimensions and rumination scale ($p<0.05$). It was observed that the total score averages of the mental toughness and rumination scales of the athletes who did not experience championship were higher than the athletes who experienced championship.

Table 6. Analysis of Variance According to Age Variable of Athletes

	Age				
	$\overline{X}$	**ss**	**F**	**Sig**	**Difference**

Confidence	14-18 age (a)	18,22	24,0	12,774	0,00*	a-c, a-d, b-d, d-e
	19-23 age (b)	18,73	2,49			
	24-28 age (c)	19,16	2,37			
	29-33 age (d)	19,93	2,06			
	Ages 34 and above (e)	18,71	2,33			
Control	14-18 age (a)	11,10	2,47	16,809	0,00*	a-d, a-e, b-e, c-e, d-e
	19-23 age (b)	10,82	2,12			
	24-28 age (c)	10,49	2,56			
	29-33 age (d)	10,40	2,35			
	Ages 34 and above (e)	9,50	2,33			
Continuity	14-18 age (a)	10,42	1,47	15,094	0,00*	a-e, b-e, c-e, d-e
	19-23 age (b)	10,49	1,49			
	24-28 age (c)	10,11	0,94			
	29-33 age (d)	10,41	1,50			
	Ages 34 and above (e)	9,66	1,14			
Mental Toughness Scale	14-18 age (a)	39,74	3,48	17,868	0,00*	a-e, b-e, c-e, d-e
	19-23 age (b)	40,05	3,77			
	24-28 age (c)	39,77	3,43			
	29-33 age (d)	40,75	3,86			
	Ages 34 and above (e)	37,88	3,56			
Rumination Scale	14-18 age (a)	23,23	4,75	14,259	0,00*	a-d, a-e, b-e, c-d, c-e
	19-23 age (b)	22,76	44,46			
	24-28 age (c)	24,08	3,46			
	29-33 age (d)	21,56	5,31			
	Ages 34 and above (e)	20,83	5,91			

***p<0.05**

When Table 6 was examined, it was determined that there was a significant difference between the age variable of the research group and the total score averages of the mental toughness scale, scale sub-dimensions and rumination scale ($p<0.05$). It was determined that there was a significant difference between the age variable of the research group and the confidence sub-dimension of the mental toughness scale [$t=12.774$, $p<0.05$]. According to the results of the analysis conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference in favor of the athletes in the 29-33 age range between the score averages of the athletes in the 29-33 age range ($\bar{X}$ =19.93), 24-28 age range ($\bar{X}$ =19.16), 19-23 age range ($\bar{X}$ =18.73), 34 age range and above ($\bar{X}$ =18.71), 14-18 age range ($\bar{X}$ =18.22). It was determined that there was a significant difference between the mental toughness scale sub-dimension control and the age variable of the research group [$t=16.809$ $p<0.05$]. According to the results of the analysis conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference in favor of the athletes in the 14-18 age range between the mean scores of the athletes between the ages of 14-18 ($\bar{X}$ =11.10), 19-23 ages ($\bar{X}$ =10.82), 24-28 ages ($\bar{X}$ =10.49), 29-33 ages ($\bar{X}$ =10.40), 34 years and over ($\bar{X}$ =9.50). It was determined that there was a significant difference between the mental toughness scale sub-dimension continuity of the research group and the age variable [$t=15.094$ $p<0.05$]. According to the analysis results conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference in favor of the athletes between the ages of 19-23 ($\bar{X}$ =10.49), 14-18 ($\bar{X}$ =10.42), 29-33 ($\bar{X}$ =10.41), 24-28 ($\bar{X}$ =10.11), 34 and above ($\bar{X}$ =9.66) and between the average scores of the athletes between the ages of 19-23. It was determined that there was a significant difference between the mental toughness scale of the research group and the age variable [$t=17.868$ $p<.0.05$]. According to the analysis results conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference in favor of the athletes between the ages of 29-33 ($\bar{X}$ =40.75), 19-23 ($\bar{X}$ =40.05), 24-28 ($\bar{X}$ =39.77), 14-18 ($\bar{X}$ =39.74), 34 and above ($\bar{X}$ =37.88) and between the average scores of the athletes between the ages of 29-33. It was determined that there was a significant difference between the rumination scale of the research group and the age variable [$t=14.259$ $p<.0.05$]. According to the analysis results conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference in favor of the athletes in the 29-33 age range between the average scores of the athletes

in the 24-28 age range ($\bar{X}$ =24.08), 14-18 age range ($\bar{X}$ =23.23), 19-23 age range ($\bar{X}$ =22.76), 29-33 age range ($\bar{X}$ =21.56), 34 age range and above ($\bar{X}$ =20.83).

Table 7. Variance Analysis According to the Educational Status of Athletes

		Educational Status				
		$\overline{X}$	sd	F	Sig	Difference
Confidence	Primary School (a)	17,48	2,36	8,813	0,00*	a-d, c-d, d-e
	Middle School (b)	18,51	1,73			
	High School (c)	18,52	2,58			
	Licence (d)	19,28	2,23			
	Postgraduate (e)	18,50	2,12			
Control	Primary School (a)	10,90	3,30	6,562	0,00*	c-d
	Middle School (b)	9,87	1,55			
	High School (c)	10,88	2,34			
	Licence (d)	10,12	2,56			
	Postgraduate (e)	10,24	2,01			
Continuity	Primary School (a)	10,29	0,90	16,925	0,00*	a-b, b-c, b-d, b-e, c-d
	Middle School (b)	8,66	1,02			
	High School (c)	10,45	1,48			
	Licence (d)	10,03	1,26			
	Postgraduate (e)	10,32	1,06			
Mental Toughness Scale	Primary School (a)	38,67	6,07	5,489	0,00*	b-c, b-d
	Middle School (b)	37,06	2,03			
	High School (c)	39,85	3,87			
	Licence (d)	39,45	3,37			
	Postgraduate (e)	39,07	3,37			
Rumination Scale	Primary School (a)	25,25	3,66	5,723	0,00*	a-b, a-d, a-e, c-e
	Middle School (b)	21,24	2,91			
	High School (c)	22,91	4,54			
	Licence (d)	22,25	5,51			
	Postgraduate (e)	21,16	5,42			

***p<0.05**

When Table 7 was evaluated, it was determined that there was a significant difference between the educational status of the research group and the total score averages of the mental toughness scale, scale sub-dimensions and rumination scale ($p<0.05$). It was determined that there was a significant difference between the mental toughness scale sub-dimension confidence and educational status of the research group [$t=8.813$, $p<0.05$]. According to the results of the analysis conducted to determine which groups these differences originated from, it was found that there was a statistically significant difference in favor of the athletes with undergraduate education between the score averages of the athletes with undergraduate education ($\bar{X}$ =19.28), high school ($\bar{X}$ =18.52), secondary school ($\bar{X}$ =18.51), postgraduate ($\bar{X}$ =18.50), primary school ($\bar{X}$ =17.48). It was determined that there was a significant difference between the mental toughness scale sub-dimension control and educational status of the research group [$t=6.562$, $p<0.05$]. According to the analysis results conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference between the average scores of athletes with primary school education ($\bar{X}$ =10.90), high school ($\bar{X}$ =10.88), postgraduate ($\bar{X}$ =10.24), undergraduate ($\bar{X}$ =10.12), secondary school ($\bar{X}$ =9.87) in favor of athletes with primary school education. It was determined that there was a significant difference between the continuity of the mental toughness scale sub-dimension and educational status of the research group [$t=16.925$, $p<.0.05$]. According to the analysis results conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference in favor of the athletes with high school education between the average scores of the athletes with high school education ($\bar{X}$ =10.45), postgraduate ($\bar{X}$ =10.32), primary school ($\bar{X}$ =10.29), undergraduate ($\bar{X}$ =10.03), secondary school ($\bar{X}$ =8.66) education levels. It was determined that there was a significant difference between the mental toughness scale of the research group and the educational status [$t=5.489$, $p<.0.05$]. According to the analysis results

conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference in favor of the athletes with high school education between the average scores of the athletes with high school education ($\bar{X}$ =39.85), undergraduate ($\bar{X}$ =39.45), postgraduate ($\bar{X}$ =39.07), primary school ($\bar{X}$ =38.67), secondary school ($\bar{X}$ =37.06) education levels. It was determined that there was a significant difference between the rumination scale and the education level of the research group [t=5.723, p<.0.05]. According to the analysis results conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference in favor of the athletes with primary school education between the average scores of the athletes with primary school education ($\bar{X}$ =25.25), high school ($\bar{X}$ =22.91), undergraduate ($\bar{X}$ =22.25), secondary school ($\bar{X}$ =21.24), and postgraduate ($\bar{X}$ =21.16) education levels.

Table 8. Variance Analysis According to Income Status of Athletes

		Income Status				
		$\overline{X}$	sd	F	Sig	Difference
Confidence	Low (a)	18,52	2,51	1,688	0,18	-
	Medium (b)	18,84	2,36			
	High (c)	18,91	2,57			
Control	Low (a)	11,49	2,52	25,132	0,00*	a-b, a-c
	Medium (b)	10,29	2,36			
	High (c)	9,85	2,26			
Continuity	Low (a)	10,77	1,52	23,537	0,00*	a-b, a-c
	Medium (b)	10,06	1,34			
	High (c)	10,14	0,94			
Mental Toughness Scale	Low (a)	40,49	4,06	17,151	0,00*	a-b, a-c
	Medium (b)	39,20	3,49			
	High (c)	38,91	3,97			
Rumination Scale	Low (a)	24,64	4,19	29,302	0,00*	a-b, a-c, b-c
	Medium (b)	22,12	4,87			
	High (c)	20,76	6,25			

***p<0.05**

When Table 8 was examined, it was determined that there was a significant difference between the income status of the research group and the total mean scores of the mental toughness scale, control, continuity scale sub-dimensions and rumination scale (p<0.05), while it was determined that there was no significant difference between the mean scores of the mental toughness scale confidence sub-dimension (p>0.05). It was determined that there was a significant difference between the control and income status of the mental toughness scale sub-dimension of the research group [t=25.132, p<0.05]. According to the results of the analysis conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference in favor of the low-income athletes between the mean scores of the athletes with low-income status ($\bar{X}$ =11.49), medium ($\bar{X}$ =10.29), high ($\bar{X}$ =10.24) and low-income athletes. It was determined that there was a significant difference between the continuity sub-dimension of the mental toughness scale of the research group and income status [t=23.537, p<0.05]. According to the results of the analysis conducted to determine the groups from which these differences originate, it was found that there was a statistically significant difference in favor of the low-income athletes between the mean scores of the athletes with low income status ($\bar{X}$ =10.77), high ($\bar{X}$ =10.14), medium ($\bar{X}$ =10.06), income status. It was determined that there was a significant difference between the mental toughness scale of the research group and income status [t=17.151, p<.0.05]. According to the results of the analysis conducted to determine the groups from which these differences originate, it was found that there was a statistically significant difference in favor of the low-income athletes between the mean scores of the athletes with low income status ($\bar{X}$ =40.49), medium ($\bar{X}$ =39.20), high ($\bar{X}$ =38.91), income status. It was determined that there was a significant difference between the rumination scale of the research group and income status [t=29.302, p<.0.05]. According to the analysis results conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference in favor of the low-income athletes between the mean scores of the athletes with low income ($\bar{X}$ =24.64), medium ($\bar{X}$ =22.12), and high ($\bar{X}$ =20.76) income statuses.

Table 9. Variance Analysis of Athletes According to Sports Year Variable

	Sports Year

		$\overline{X}$	sd	F	Sig	Difference
Confidence	1-5 years (a)	18,63	2,65	46,246	0,00*	a-c, b-c, c-d
	6-11 years (b)	18,16	2,22			
	12-17 years (c)	20,26	2,08			
	Over 18 years (d)	18,42	2,15			
Control	1-5 years (a)	11,01	2,58	21,708	0,00*	a-c, a-d, b-c, b-d
	6-11 years (b)	10,92	2,10			
	12-17 years (c)	10,05	2,34			
	Over 18 years (d)	9,47	2,72			
Continuity	1-5 years (a)	10,39	1,37	24,917	0,00*	a-c, a-d, b-c, b-d
	6-11 years (b)	10,54	1,45			
	12-17 years (c)	9,92	1,36			
	Over 18 years (d)	9,63	0,85			
Mental Toughness Scale	1-5 years (a)	40,04	4,07	22,765	0,00*	a-d, b-d, c-d
	6-11 years (b)	39,63	3,71			
	12-17 years (c)	40,24	3,01			
	Over 18 years (d)	37,53	3,46			
Rumination Scale	1-5 years (a)	24,23	4,81	15,486	0,00*	a-b, a-c, a-d, b-c, c-d
	6-11 years (b)	21,83	5,23			
	12-17 years (c)	22,97	4,11			
	Over 18 years (d)	21,40	5,22			

***p<0.05**

When Table 9 was evaluated, it was found that there was a significant difference between the research group's years of sports and the total score averages of the mental toughness scale, mental toughness scale sub-dimensions and rumination scale ($p<0.05$). It was determined that there was a significant difference between the research group's mental toughness scale sub-dimension confidence and the sports year variable [$t=46.246$, $p<0.05$]. According to the results of the analysis conducted to determine which groups these differences originated from, it was found that there was a statistically significant difference in favor of the athletes with 12-17 years of sports year between the score averages of the athletes with 12-17 years of sports year ($\bar{X}=20.26$), 18 years and above ($\bar{X}=18.42$), 1-5 years ($\bar{X}=18.63$), 6-11 years ($\bar{X}=18.16$). It was determined that there was a significant difference between the research group's mental toughness scale sub-dimension control and the sports year variable [$t=21.708$, $p<0.05$]. According to the analysis results conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference between the average scores of athletes with 1-5 years of sports ($\bar{X}=11.01$), 6-11 ($\bar{X}=10.92$), 12-17 years ($\bar{X}=10.05$), 18 years and above ($\bar{X}=9.47$) in favor of athletes with 1-5 years of sports. It was determined that there was a significant difference between the mental toughness scale sub-dimension continuity and sports year variable of the research group [$t=24.917$, $p<.0.05$]. According to the analysis results conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference in favor of the athletes with 6-11 years of sports experience between the average scores of the athletes with 6-11 years of sports experience ($\bar{X}=10.54$), 1-5 years ($\bar{X}=10.39$), 12-17 years ($\bar{X}=9.92$), 18 years and above ($\bar{X}=9.63$). It was determined that there was a significant difference between the mental toughness scale of the research group and the sports experience variable [$t=22.765$, $p<.0.05$]. According to the analysis results conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference in favor of the athletes with 12-17 years of sports experience between the average scores of the athletes with 12-17 years of sports experience ($\bar{X}=40.24$), 1-5 years ($\bar{X}=40.04$), 6-11 years ($\bar{X}=39.63$), 18 years and above ($\bar{X}=37.53$). It was determined that there was a significant difference between the rumination scale of the research group and the sports experience variable [$t=15.486$, $p<.0.05$]. According to the analysis results conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference in favor of athletes with 1-5 years of sports experience between the average scores of athletes with 1-5 years of sports experience ($\bar{X}=24.23$), 12-17 years ($\bar{X}=22.97$), 6-11 years ($\bar{X}=21.83$), 18 years and above ($\bar{X}=21.40$).

Table 10. Variance Analysis According to Athletes' Weekly Training Number Status

		Number of Weekly Workouts		F	Sig	Difference
		$\overline{X}$	sd			
Confidence	1-3 (a)	18,45	2,53	8,522	0,00*	a-b
	4-6 (b)	19,07	2,23			
	7 and above (c)	18,62	2,88			
Control	1-3 (a)	10,55	2,37	6,410	0,00*	a-c, b-c
	4-6 (b)	10,57	2,43			
	7 and above (c)	9,33	2,75			
Continuity	1-3 (a)	10,45	1,45	12,334	0,00*	a-b,
	4-6 (b)	10,03	1,30			
	7 and above (c)	10,01	1,23			
Mental Toughness Scale	1-3 (a)	39,46	3,82	5,183	0,00*	a-c, b-c
	4-6 (b)	39,68	3,53			
	7 and above (c)	37,98	4,26			
Rumination Scale	1-3 (a)	21,72	5,65	15,486	0,00*	a-b, b-c
	4-6 (b)	23,33	4,20			
	7 and above (c)	21,13	5,28			

***p<0.05**

When Table 10 was examined, it was determined that there was a significant difference between the weekly training number variable of the research group and the total score averages of the mental toughness scale, mental toughness scale sub-dimensions and rumination scale ($p<0.05$). It was determined that there was a significant difference between the mental toughness scale sub-dimension confidence and the weekly training number variable of the research group [$t=8.522$, $p<0.05$]. According to the results of the analysis conducted to determine which groups these differences originated from, it was found that there was a statistically significant difference in favor of the athletes with 4-6 weekly training numbers between the score averages of the athletes with 4-6 weekly training numbers ($\bar{X}$ =19.07), 7 and above ($\bar{X}$ =18.62), 1-3 ($\bar{X}$ =18.45), and the score averages of the athletes with 4-6 weekly training numbers. It was determined that there was a significant difference between the mental toughness scale sub-dimension control and the weekly training number variable of the research group [$t=6.410$, $p<0.05$]. According to the results of the analysis conducted to determine which groups these differences originate from, it was found that there was a statistically significant difference in favor of the athletes with 4-6 weekly training averages ($\bar{X}$ =10.57), 1-3 ($\bar{X}$ =10.55), 7 and above ($\bar{X}$ =9.33) weekly training averages. It was determined that there was a significant difference between the continuity and weekly training number variable of the mental toughness scale sub-dimension of the research group [$t=12.334$, $p<.0.05$]. According to the results of the analysis conducted to determine which groups these differences originate from, it was found that there was a statistically significant difference in favor of the athletes with 1-3 weekly training averages ($\bar{X}$ =10.45), 4-6 ($\bar{X}$ =10.03), 7 and above ($\bar{X}$ =10.01) weekly training averages. It was determined that there was a significant difference between the mental toughness scale and the weekly training number variable of the research group [$t=5.183$, $p<0.05$]. According to the results of the analysis made to determine which groups these differences originated from, it was determined that there was a statistically significant difference in favor of the athletes with 4-6 weekly training numbers between the average scores of the athletes with 4-6 weekly training numbers ($\bar{X}$ =39.68), 1-3 ($\bar{X}$ =39.46), 7 and above ($\bar{X}$ =37.98), and the average scores of the athletes with 4-6 weekly training numbers. It was determined that there was a significant difference between the rumination scale and the weekly training number variable of the research group [$t=15.486$, $p<0.05$]. According to the analysis results conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference in favor of the athletes with 4-6 weekly training sessions between the average scores of the athletes with 4-6 weekly training sessions ($\bar{X}$ =23.33), 1-3 weekly training sessions ($\bar{X}$ =21.72), 7 and above ($\bar{X}$ =21.13).

Table 11. Variance Analysis According to the Positions Played by the Athletes

		The Position They Play		F	Sig	Difference
		$\overline{X}$	sd			
Confidence	Goalkeeper (a)	18,78	1,94			
	Defender (b)	18,44	2,32			

	Midfielder (c)	19,12	2,39	4,854	0,00*	b-c
	Forward (d)	18,83	2,90			
Control	Goalkeeper (a)	9,26	2,70	18,382	0,00*	a-b, a-c, a-d
	Defender (b)	10,90	2,52			
	Midfielder (c)	10,67	2,11			
	Forward (d)	10,40	2,27			
Continuity	Goalkeeper (a)	9,92	0,95	3,037	0,02*	a-c
	Defender (b)	10,24	1,45			
	Midfielder (c)	10,31	1,50			
	Forward (d)	10,23	1,24			
Mental Toughness Scale	Goalkeeper (a)	37,97	3,48	12,535	0,00*	a-b, a-c, a-d
	Defender (b)	39,60	3,50			
	Midfielder (c)	40,12	3,56			
	Forward (d)	39,46	4,24			
Rumination Scale	Goalkeeper (a)	20,63	5,62	12,068	0,00*	a-b, a-c, a-d, c-d
	Defender (b)	20,77	5,26			
	Midfielder (c)	22,43	4,59			
	Forward (d)	23,79	4,16			

***p<0.05**

When Table 11 was evaluated, it was determined that there was a significant difference between the research group's played position variable and the total score averages of mental toughness scale, mental toughness scale sub-dimensions and rumination scale ($p<0.05$). It was determined that there was a significant difference between the research group's mental toughness scale sub-dimension confidence and the position variable [$t=4.854$, $p<0.05$]. According to the results of the analysis conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference in favor of the athletes playing in the midfield position between the score averages of the athletes playing in the midfield position ($\bar{X}$ =19.12), forward ($\bar{X}$ =18.83), goalkeeper ($\bar{X}$ =18.78), and defender ($\bar{X}$ =18.44). It was determined that there was a significant difference between the research group's mental toughness scale sub-dimension control and the position variable [$t=18.382$, $p<0.05$]. According to the analysis results conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference in favor of the athletes playing in the defense position between the average scores of the athletes playing in the defense position ($\bar{X}$ =10.90), midfielder ($\bar{X}$ =10.67), forward ($\bar{X}$ =10.40), and goalkeeper ($\bar{X}$ =9.26). It was determined that there was a significant difference between the mental toughness scale sub-dimension continuity of the research group and the position variable [$t=3.037$, $p<.0.05$]. According to the analysis results conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference in favor of the athletes playing in the midfield position between the average scores of the athletes playing in the midfield position ($\bar{X}$ =10.31), defense ($\bar{X}$ =10.24), forward ($\bar{X}$ =10.23), and goalkeeper ($\bar{X}$ =9.92). It was determined that there was a significant difference between the mental toughness scale of the research group and the variable of the position they played [$t=12.535$, $p<.0.05$]. According to the analysis results conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference in favor of the athletes playing in the midfield position between the average scores of the athletes playing in the midfield position ($\bar{X}$ =40.12), defense ($\bar{X}$ =39.60), forward ($\bar{X}$ =39.46), and goalkeeper ($\bar{X}$ =37.97). It was determined that there was a significant difference between the rumination scale of the research group and the variable of the position they played [$t=12.068$, $p<.0.05$]. According to the analysis results conducted to determine which groups these differences originate from, it was determined that there was a statistically significant difference in favor of the athletes playing in the forward position between the average points of the athletes playing in the forward position ($\bar{X}$ =23.79), midfielder ($\bar{X}$ =22.43), defender ($\bar{X}$ =20.77), and goalkeeper ($\bar{X}$ =20.63) positions.

Table 12. Variance Analysis According to the League Status of the Athletes

		League They Play In				
		$\overline{X}$	sd	F	Sig	Difference
Confidence	Amateur (a)	18,62	2,37	7,028	0,00*	a-c, b-c
	Regional Amateur (b)	18,91	2,56			
	2nd League (c)	20,28	1,70			
	3rd League (d)	19,01	2,49			
	1st League (e)	20,41	2,27			
Control	Amateur (a)	10,53	2,51	4,848	0,00*	a-c, b-c, c-d
	Regional Amateur (b)	10,70	2,14			
	2nd League (c)	9,21	2,22			
	3rd League (d)	10,83	1,83			
	1st League (e)	9,08	3,20			
Continuity	Amateur (a)	10,30	1,43	3,409	0,00*	a-b
	Regional Amateur (b)	9,89	1,27			
	2nd League (c)	10,10	1,19			
	3rd League (d)	10,18	0,99			
	1st League (e)	10,08	0,90			
Mental Toughness Scale	Amateur (a)	39,46	3,80	,309	0,87	-
	Regional Amateur (b)	39,50	3,69			
	2nd League (c)	39,60	3,10			
	3rd League (d)	40,03	3,16			
	1st League (e)	39,58	2,71			
Rumination Scale	Amateur (a)	22,28	5,14	7,471	0,00*	a-b, b-c, b-d, b-e
	Regional Amateur (b)	24,14	4,12			
	2nd League (c)	21,58	4,21			
	3rd League (d)	22,01	4,96			
	1st League (e)	18,91	6,30			

***p<0.05**

When Table 12 was examined, it was determined that there was a significant difference between the league variable played by the research group and the mental toughness scale sub-dimensions and rumination scale total score averages (p<0.05). It was seen that there was no significant difference between the mental toughness scale total score average (p>0.05). It was determined that there was a significant difference between the mental toughness scale sub-dimension confidence of the research group and the league variable played [t=7.028, p<.0.05]. According to the analysis results conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference in favor of the athletes playing in the 1st League between the score averages of the athletes playing in the 1st League ($\bar{X}$ =20.41), 2nd League ($\bar{X}$ =20.28), 3rd League ($\bar{X}$ =19.01), Regional Amateur ($\bar{X}$ =18.91), Amateur ($\bar{X}$ =18.62). It was determined that there was a significant difference between the sub-dimension of mental toughness scale of the research group and the variable of league played [t=4.848, p<0.05]. According to the results of the analysis made to determine which groups these differences originated from, it was determined that there was a statistically significant difference in favor of the athletes playing in the 3rd League between the average scores of the athletes playing in the 3rd League ($\bar{X}$ =10.83), Regional Amateur ($\bar{X}$ =10.70), Amateur ($\bar{X}$ =10.53), 2nd League ($\bar{X}$ =9.21), 1st League ($\bar{X}$ =9.08). It was determined that there was a significant difference between the sub-dimension of mental toughness scale of the research group and the variable of league played [t=3.409, p<0.05]. According to the analysis results conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference in favor of the athletes playing in the Amateur League between the average scores of the athletes playing in the Amateur League ($\bar{X}$ =10.30), 3rd League ($\bar{X}$ =10.18), 2nd League ($\bar{X}$ =10.10), 1st League ($\bar{X}$ =10.08), Regional Amateur ($\bar{X}$ =9.08). It was determined that there was a significant difference between the rumination scale of the research group and the league variable [t=7.471, p<.0.05]. According to the analysis results conducted to determine which groups these differences originate from, it was determined that there was a statistically significant difference in favor of the athletes

playing in the Regional Amateur League between the average points of the athletes playing in the Regional Amateur League ($\bar{X}$ =24.14), Amateur ($\bar{X}$ =22.28), 3rd League ($\bar{X}$ =22.01), 2nd League ($\bar{X}$ =21.58), 1st League ($\bar{X}$ =18.91).

Table 13. Pearson Correlation Analysis Between Mental Toughness and Rumination States of the Research Group

		Rumination
Mental Toughness	**r**	,356**
	p	,000
	N	1062

*p<0.05

When Table 13 was evaluated, it was determined that there was a low level positive relationship between mental toughness and rumination states according to the correlation analysis results.

Table 14. Regression Analysis for Predicting Mental Toughness and Rumination

Independent Variable	**Dependent Variable**	**B**	**Std. Error**	**β**	**t**	**p**	**R**	**R^2**	**F**	***P***
Mental Toughness	**Rumination**	33,562	,491	,356	68,292	0,00	,356	,127	153,618	*0,00*

p<0,05*

When Table 14 was evaluated, it was determined that there was a positive and low-level significant effect between the mental endurance and rumination states of the athletes (R=,356;R^2=,127; p>0,05).

DISCUSSION AND CONCLUSION

Rumination, which is expressed as constantly recurring and disturbing thoughts in the minds of athletes, can direct football players to different cognitive processes and has the potential to negatively affect their performance and psychological state (Michel-Kröhler et al.,2023) In this respect, it can create pressure and stress in athletes in terms of performance and cause a sense of failure. In order for athletes to achieve success, it is important for them to have appropriate mechanisms in place to cope with emotional difficulties. In this respect, mental endurance is known as a method for athletes to get rid of stress and negative emotional states. In line with this information, rumination and mental endurance are extremely important, especially for athletes to show high-level performance (Wilson et al., 2019). In this context, the mental endurance and rumination states of football players playing in different positions were compared in the study.

According to the research results; it was observed that there was a significant difference between the athletes' championship status, age, education status, income status, sports year, weekly training number and position variables and mental endurance and rumination status. It was determined that the amateur athletes in the research group had higher mental endurance and rumination status average scores than professional athletes, non-national athletes had higher mental endurance and rumination status average scores than national athletes and non-championship athletes had higher mental endurance and rumination status average scores than champion athletes. It was observed that as the education status of the athletes increased, their mental endurance score averages increased, their rumination score averages decreased and their income status increased, their mental endurance and rumination status average scores decreased. It was determined that as the sports year of the research group increased, the mental endurance and rumination status average scores decreased and the athletes playing in the goalkeeper position had lower mental endurance and rumination status average scores compared to the athletes playing in the defense, midfield and forward positions. It was observed that as the league level of the athletes increased, their mental endurance score averages increased and their rumination score averages decreased. When the research conducted is examined; In their study determining the relationship between mental training and competition rumination in athletes, Cevahircioğlu et al. (2023) determined that there was a significant relationship between the participants' age, gender, department and sport type category and their mental endurance and rumination status, and that there was a low-level positive relationship between the level of mental training and rumination levels. Kara and Ustaoğlu Hoşver (2019) stated in their study that increasing age, sports year and experience of playing in play-offs

positively affect mental training levels. Cowden and Meyer-Weitz (2016) stated that mental endurance status is related to the age and sports year of athletes, that it is not related to gender, ethnicity and competition level and that mental endurance levels increase as age, sports year increases. In their study where Yılmaz et al. (2024) determined the relationship between rumination and cognitive flexibility in athletes, they determined that there is a low level negative relationship between the age variable and competition rumination status of athletes and a low level positive relationship between sports year and competition rumination. Eroğlu et al. (2020) stated in their study that sports year and gender have an effect on mental endurance. In a different study, Yüksel et al. (2020) stated that as the rumination values of the participants increase, it affects their academic status. In a different study, Yamakoshi and Tsuchiya (2016) stated that rumination and reflection have an effect on mental health in athletes and that rumination has a positive relationship with the stress response. Koç and Gençay (2021) stated in their study that age, gender, years of sports and mile status have an effect on the mental endurance of athletes. In another study, Belli and Başoğlu (2024) stated that non-exercising participants had higher rumination levels than exercising participants, and female participants had higher rumination levels than male participants. Kalkavan et al. (2020) determined in their study that athletes' age, years of sports and gender variables have an effect on mental endurance and that athletes' sense of self-confidence increases as age increases. Okan et al. (2023) found that football players experience problems in controlling their emotion regulation skills as their ruminative thought levels increase.

As a result, it was observed that the mental endurance of the athletes was at a medium level and their rumination was at a high level, and that the athletic degree, education, league and position they played in affected the mental endurance and rumination of the athletes. In line with this information, we believe that in addition to their training, athletes should do work to develop their mental endurance and rumination, contributing to the mental training dimension of football teams and technical teams, and thus positively affecting the sporting success of both teams and athletes.

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