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Examination of Wrestling Referees' Self-Efficacy Levels

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Abstract

The aim of the study is to examine the relationship between the mental toughness of national and non-national cyclists and the rankings they achieved. A total of 100 athletes, 50 national and 50 non-national, participated in the study in which the quantitative research model was used. In the study, the Scale of Mental toughness in Sports was used as a data collection tool. In the study, t-test, anova test and tukey tests were used. It was determined that the mental toughness of the older athletes was higher than the younger athletes. In addition, while a significant difference was found between the mental toughness scores of non-national athletes, no significant difference was found in the scores of national athletes. As a result, it can be said that athletes with a certain level of experience have more mental toughness, and cyclists with higher self-confidence achieve better results in national competitions.

Keywords: Cyclist, National cyclist, Mental toughness

INTRODUCTION

Cycling races have started with the gradual development and modernization of the two-wheeled bicycle, forming their spectators over time. The first cycling race, "Amiens Road Race", was held at a distance of 17 km in France in 1865. Another trial cycling race was held in Saint Cloud in 1868. This race was won by the English James Moore (2). Bicycle production started in 1869 in the United States, another country where bicycles became widespread. It was determined that more than 1 million bicycles produced by 300 different companies were used in this country until 1896. Cycling races in the USA began to be organized in 1878. Cycling races became the most popular summer sport in many European countries in the 1890s (28). The first resistance race suitable for contemporary conditions was held in France in 1890. In 1891, the Bordeaux-Paris race, which was the first example of long-stage tours, was held, followed by the Paris-Brest-Paris race (2).

Mental toughness , which is generally defined as a process of success or adaptation (14), is a factor that reduces the negative effects of stress and supports compliance (15). It is also possible to define mental toughness as the strength of one's recovery in the face of difficult life experiences (10) or the ability to overcome change or disasters (32). Although human beings initially experience negative emotional states in negative situations, over time, they can adapt to stressful events and situations that can change their lives. The most basic factor in ensuring this adaptation is the phenomenon of mental toughness, which is a continuous process that requires effort and time, and which makes it necessary for people to take some steps (10,22,23,24,33).

Mental toughness, which is one of the issues that sports psychologists have focused on in recent years, is of great importance for athletes and coaches, especially during competition periods (5,18,19,30). Mental toughness, which has many definitions in the literature, includes concepts such as coping effectively with pressure, being psychologically strong, being commited, high concentration ability, high level of determination and strong self structure (9,12,13,27,30).

Today, it is an accepted fact that psychological competence of the athlete, in addition to the physical competence, is important in order to achieve high performance in the sports (16). The concept of mental toughness, which was initially accepted as a part of

personality (4,21), has started to be considered as a psychological performance indicator for athletes over time (5,17,18,19).

In this context, it was aimed to examine the relationship between gender, age and mental toughness scores of national and non-national athletes engaged in cycling.

METHOD

Research Model

Relational screening model, which is a quantitative model, was used in the study. Quantitative model is a research approach that enables to reveal a situation, object, case encountered in the past or present in line with certain criteria (20). Relational screening is a method which detects the change shown by two or more variables at the same time (3).

Research Group

A total of 100 cyclists, 50 national and 50 non-national, actively engaged in sports in their own federations, were included in the study. The criteria determined by the researchers are related to the research problem and represent the qualifications of the people to be included in the study (20). After necessary information was given to the athletes, the questionnaire form was applied personally by the researcher. Athletes participated in the study voluntarily. With the Ethics Committee Decision of Selçuk University, Faculty of Sport Sciences, dated 14/01/2019 and numbered 2019/09, it was unanimously decided that the study is in compliance with the Ethics Committee Directive. Demographic variables of the athletes participating in the study are given in Table 1.

Table 1. Demographic variables of the athletes

		f	%
Gender	Female	13	13,0
	Male	87	87,0
Age	20 and younger	39	39,0
	Between 21-30	36	36,0
	31 and older	25	25,0
National classification	National classification	50	50,0
	Classification A	9	9,0
	Classification B	22	22,0
	Classification C	19	19,0
National Ranking	Doesn't have a ranking	15	15,0
	Has a rank	85	85,0
International Ranking	Doesn't have a ranking	53	53,0
	Has a rank	47	47,0

As seen in Table 1, a total of 100 athletes, mostly male athletes, participated in the study. While a significant number of the participants are under the age of 30, those who have ranked in national competitions are the majority. The number of athletes who have ranked in international competitions is almost equal.

Data Collection Tools

The Personal Information Form developed by the researcher to reach the demographic information of the cyclists participating in the study and the 14-item Scale of Mental toughness in Sport were used in the study. Detailed information about the scale is given below.

Scale of Mental toughness in Sport: The scale (SportMentalToughness Questionnaire-SMTQ-14) developed by Sheard et al. (29) was adapted into Turkish by Altıntaş and Kuruç in 2016 (1) to examine the mental toughness in training and competitions. This is a 4-point Likert-type scale consisting of three sub-dimensions (Confidence, Continuity and Control) and general mental toughness (1=Totally False; 4=Totally True). The Cronbach Alpha values determined for the sub-dimensions of the original scale were 0.81 for the confidence sub-dimension, 0.74 for the continuity sub-dimension and 0.71 for the control sub-dimension (30).

The explanation of the three sub-dimensions in the Inventory of Mental Toughness in Sports is given below (Sheard 2013).

Confidence: Believing in your abilities and thinking that you are better than your opponents to achieve the goal in difficult situations that require struggle (Items 1, 5, 6, 11, 13, 14).

Control: Keeping composure, being in control and calm under pressure or in unexpected situations (Items 2, 4, 7, 9).

Continuity: Taking responsibility, concentrating and struggling in line with the determined goals (Items 3, 8, 10, 12).

Analysis of Data: In order to determine whether parametric analyzes should be performed for this study, it was first examined whether the data of the scales showed a normal distribution. As a result of the analysis, kurtosis and skewness values were calculated. The results are given below.

Table 2. The kurtosis and skewness values obtained as a result of the normal distribution analyzes of the sub-dimensions of the scale of mental toughness in sports

	Skewness	Kurtosis
Confidence Dimension	-0,672	0,965
Control Dimension	-0,562	0,644
Continuity Dimension	0,602	1,164

RESULTS

The results of the normal distribution analysis are given in Table 2. Kurtosis and skewness values obtained for the mental toughness scale in sports are between -2 and +2. It can be said that the research data show a normal distribution (11).

In this part of the study, the findings related to the personal variables obtained as a result of the analysis of the data obtained from the athletes participating in the survey, the findings of the mental toughness of the athletes and statistical analyzes are included.

Table 3. Mental toughness levels of the participants by age

Dimension	AGE	N	$\bar{X}$	SS	F	P	DIFFERENCE
Confidence Dimension	20 and younger	39	2,88	0,64	3,695	0,028 *	1 - 2
	between 21-30	36	3,20	0,42			
	31 and older	25	3,00	0,36			
Control Dimension	20 and younger	39	2,80	0,59	0,095	0,910	
	between 21-30	36	2,74	0,65			
	31 and older	25	2,77	0,43			
Continuity Dimension	20 and younger	39	2,54	0,37	0,865	0,424	
	between 21-30	36	2,62	0,38			
	31 and older	25	2,67	0,41			

*P<0,05

The results of the analysis of the Anova test, in which the mental toughness levels of the cyclists participating in the study were evaluated according to the age variable, are given in Table 3. It was observed that the level of mental toughness in the confidence dimension of the athletes in the 21-30 age range ($\bar{X}$=3,20±0.42) is significantly higher than the athletes under the age of 20 ($\bar{X}$=2.88±0.64).

Table 4. Mental toughness levels of the participants by the year of doing sports

Dimension	How many years has s/he been doing sports?	N	$\bar{X}$	SS	F	P	DIFFERENCE
Confidence Dimension	5 years and below	38	2,76	0,54	9,790	0,000 **	1 - 2
	between 6-15 years	46	3,22	0,44			
	16 years and above	16	3,09	0,41			
Control Dimension	5 years and below	38	2,80	0,64	0,100	0,905	
	between 6-15 years	46	2,77	0,57			
	16 years and above	16	2,72	0,45			
Continuity Dimension	5 years and below	38	2,51	0,41	2,240	0,112	
	between 6-15 years	46	2,64	0,31			
	16 years and above	16	2,72	0,47			

** Indicates a significant difference at the P<0.05 level.

The results of the analysis of the anova test, in which the mental toughness levels of the cyclists participating in the study were evaluated according to the variable of how many years they have been doing sports, are given in Table 4.

In the confidence dimension, the mental toughness levels of the athletes doing this sport for 6 to15 years ($\bar{X}$=3.22±0.44) are significantly higher than the levels of the athletes doing this sport for 5 years or below ($\bar{X}$=2.76±0.54).

Table 5. Mental toughness levels of the participants by the ranking they achieved in national competitions

		Continuity Dimension	Confidence Dimension	Control Dimension	Best national Ranking
Best national Ranking	PearsonCorrelation	1	-,371**	,147	-,155
	Sig. (2-tailed)		,000	,145	,124
	N	100	100	100	100
Confidence Dimension	PearsonCorrelation	-,371**	1	,018	,099
	Sig. (2-tailed)	,000		,860	,326
	N	100	100	100	100
Control Dimension	PearsonCorrelation	,147	,018	1	,030
	Sig. (2-tailed)	,145	,860		,769
	N	100	100	100	100
Continuity Dimension	PearsonCorrelation	-,155	,099	,030	1
	Sig. (2-tailed)	,124	,326	,769	
	N	100	100	100	100

** Correlation is significant at the level of 0.01 (bidirectional).

Pearson correlation coefficients were calculated in the correlation analyzes conducted to determine the relationship between the mental toughness levels of the cyclists participating in the study and their performance levels in national competitions. As seen in Table 5, it was determined that there was a weak negative correlation between the mental toughness levels of the athletes in the confidence dimension and their best national ranking.

Table 6. Mental toughness levels of the participants by the ranking they achieved in international competitions

		Confidence Dimension	Control Dimension	Continuity Dimension	Best National Ranking
Confidence Dimension	PearsonCorrelation	1	,018	,099	-,128
	Sig. (2-tailed)		,860	,326	,203
	N	100	100	100	100
Control Dimension	PearsonCorrelation	,018	1	,030	,013
	Sig. (2-tailed)	,860		,769	,898
	N	100	100	100	100
Continuity Dimension	PearsonCorrelation	,099	,030	1	-,102
	Sig. (2-tailed)	,326	,769		,314
	N	100	100	100	100
Best National Degree	PearsonCorrelation	-,128	,013	-,102	1
	Sig. (2-tailed)	,203	,898	,314	
	N	100	100	100	100

Pearson correlation coefficients were calculated in the correlation analyzes conducted to determine the relationship between the mental toughness levels of the cyclists participating in the study and their performance levels in international competitions. As seen in Table 6, there was no significant relationship between the mental toughness levels of the athletes and their international ranking.

DISCUSSION AND CONCLUSION

The aim of this study is to determine whether there is a relationship between the mental toughness of national and non-national cyclists and the ranking they have achieved, and to detect the mental toughness levels of the participants according to their age and the year of starting sports.

In the first finding of the study, while a significant difference was found in the confidence sub-dimension of the athletes engaged in cycling according to the age variable, no significant difference was found in the control and continuity sub-dimensions. Anova test was applied in order to determine between which groups these significant differences were, and it was determined that cyclists in the 21-30 age group showed significant differences compared to the cyclists aged 20 and younger. According to these results, it can be said that the athletes in the middle age group have more mental

toughness in the confidence sub-dimension than the athletes aged 20 and younger. When the literature was examined, studies that were similar to our study were found. Yarayan et al (31) found a significant difference between the age variable and mental toughness in the control subgroup and reported that mental toughness increases with age. Marchant et al (25), Nichools et al (26), and Crust et al (6) found positive parallelism between the ages of athletes and their mental toughness.

When the findings obtained in our study were examined, a significant difference was found between the cyclists' age of doing sports variable and the total scores of the confidence sub-dimension. No statistically significant differences were found in the control and continuity sub-dimensions. Anova test was conducted to determine between which groups the significant change in the confidence sub-dimension was, and it was determined that the athletes engaged in cycling for 6-15 years had a more significant mean than those engaged in cycling for 5 years or less. Nicholls et al (26) stated that experienced athletes have higher mental toughness. Connaughton et al (8) also found that as the age of doing sports increases, mental toughness also increases. Crust and Swann (7) examined the relationship between mental toughness and optimal performance mood on 135 athletes with an average age of 20, and revealed that there is a significant and positive relationship between general mental toughness and optimal performance mood. Nicholls et al. (26) indicated that athletes with high training age got high scores in mental toughness sub-dimensions such as challenge and life control. In a different study, Gucciardi (2010), after researching 214 Austrian football players, revealed that task-oriented athletes have high levels of intrinsic motivation, and that their mental toughness scores are similarly high. Yarayan et al (31), on the other hand, found a significant difference in the control sub-dimension of individual athletes and the continuity sub-dimension of team athletes as the number of years of doing sports increased. In the light of these results, it can be said that the athletes with a certain level of experience have more mental toughness and can display positive performances even in the face of the difficulties, challenges and obstacles they encounter during the competitions.

As a result of the statistical analyzes, a significant relationship was found in the confidence sub-dimension and the best national ranking achieved by the athletes engaged in cycling. Accordingly, it can be said that the cyclists, whose self-confidence increased, achieved better results in national competitions. No significant difference was found between the control and continuity sub-dimensions of mental toughness and the best national ranking achieved. There was no significant difference between the international rankings achieved by the cyclists participating in the study and any of the sub-dimensions of mental toughness .

Including different sample groups in this study, which was carried out with a limited sample group, making comparisons with cyclists from other countries and examining the differences between athletes engaged in individual and team sports are among the suggestions of the researchers of this study.

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