European Journal of Physical Education and Sport Science
ISSN: 2501 - 1235
ISSN-L: 2501 - 1235
Available on-line at: www.oapub.org/edu

DOI: 10.46827/ejpe.v6i12.3673 Volume 6 | Issue 12 | 2021

INVESTIGATION OF SPORTS-SPECIFIC PSYCHOLOGICAL ABILITY LEVELS OF HIGH SCHOOL STUDENTS

Kemal Kurak[1],
Hakan Büyükçelebi[2i]
[1]Department of Coaching Education,
Çanakkale Onsekiz Mart University,
Turkey
[2]Department of Coaching Education,
Inonu University,
Turkey

Abstract:
The aim of this study is to investigate the sports-specific psychological ability levels of high school students. The study is a descriptive study, and the data were collected by survey method. A total of 402 students (226 male, 176 female) participated in the study. Mann Whitney U test was used for paired comparisons and Kruscal Wallis H tests for multiple comparisons. The Mann Whitney U test used for non-parametric data was utilized to detect the source of the difference in multiple comparisons. In the study, the significance level was accepted as $p < 0.05$. There was a statistically significant difference in favor of male students in the sub-dimension of goal setting, in all sub-dimensions except for the sub-dimension of being open to learning according to high school type variable, in favor of those who define themselves social-extroverted in all sub-dimensions except for high performance under pressure according to the self-definition variable, in favor of those who do team sport in the sub-dimensions of goal setting, confidence and achievement motive according to the sport branch variable; and in all sub-dimensions of the variables of club license status, sport year, number of exercise per week, being in the school team and presence of a licensed athlete in the family. As a result of this study, it was found that students who were successful in bilateral relations, social and were interested in sports for a long time were more advanced in terms of sports-specific psychological ability.

Keywords: education, student, sports, high school, stress

[i] Correspondence: email hakan.buyukcelebi@inonu.edu.tr

1. Introduction

With the increase of expectations from athletes, whereas all kinds of factors that can affect sports success are examined extensively, the opinion that the psychological characteristics are as effective as physical characteristics in the success of athletes has gained more importance day by day (Malina et al., 2007).

The factors affecting the final result of sporting competitions play an important role in the mixed structure of sporting performance. In general, psychological factors are the leading factors that affect performance positively and negatively. The athlete's subconscious awareness of the current gains after a long period of work in line with his / her existing abilities and skills and the motivation to be shaped depending on these gains can neutralize psychological factors (Aktaş, 2009).

Some athletes with the same physical characteristics and training background might be considered mentally superior to their peers. Some athletes can display better performance when they are under pressure, use their game plans more effectively, find more creative solutions against challenges and resist, concentrate more intensively, push their limits more, learn new techniques more quickly or prepare better for competitions compared to their physical counterparts. Mental advantages of the athlete are evaluated within the science of sports psychology. While the science of psychology is defined as the science that tries to explain behaviors and mental processes, Sports Psychology is defined as a science that tries to explain mental processes in a sportive context.

When children and young athletes are evaluated in terms of the results of sports psychology considering the various social environments in which they exist, their coaches, teachers, family members and peers are stated to have different impacts on athletes (McCarthy, Jones, Harwood and Olivier, 2010). According to Gee, Marshall and King (2010), Sportive Psychological Ability refers to the combination of characteristics that must be possessed by children and adolescents to display high performance; the absence of one or more of these characteristics might adversely affect the performance. Harwood, Cumming, and Fletcher emphasize that young athletes with a high-quality Sportive Psychological Ability need to follow a holistic approach in terms of Psychological Ability to improve performance especially in sporting competitions carried out under high pressure (Harwood, Cumming and Fletcher, 2004). Determination of psychological ability from a sports point of view is introduced as an important factor in specifying in which direction the performance can be (Hayslip, Petrie, MacIntire and Jones, 2010), it is also stated that a positive contribution can be made to performance improvement through the psychological characteristics such as mental preparation, coping with anxiety, confidence, concentration and motivation as well as the techniques such as goal setting, relaxation, visualization and self-talk (Weinberg, Miller and Horn, 2012).

Anxiety; anxiety is a state of uneasiness that occurs when a desire appears to be unreachable (Cevizci, 1999). Therefore, anxiety is a distressing emotion arising from insecurity or lack of confidence (Bakırcıoğlu, 2012). In this regard, anxiety is a series of

negative emotional states associated with the inability to cope with the stress caused by environmental factors (Hagger, 2005).

Sport requires attention, knowledge and attention. For this reason, optimal anxiety is necessary for the sport person to achieve the desired performance and success. The high level of anxiety is expressed as "*start rush*" while the low level of anxiety is expressed as "*start laziness*" (Tavacıoğlu, 1999). At this point, increasing anxiety in sporting activities will affect the performance negatively and this might cause emotional deficiencies such as psychological destruction and low self-confidence.

Scientists who steer sport are in a great effort to take the performance to the top. They develop new training models and search for the ways to get higher levels of efficiency from the athlete. All these scientific studies have shown that not only physical capacity is decisive in sport performance, but psychological factors are a quite important parameter in sporting performance (Akarçeşme, 2004). Performance is a process formed by the combination of physical and psychological parameters. The athlete might suffer both economic and professional losses as a result of failure due to performance impairment. This causes the athlete to get under high pressure before the competition and fails in the competition upon not showing his/her real performance (Akarçeşme, 2004). Considering that most elite athletes have very good skills in psychological capacities such as motivation, anxiety management, coping with competition stress, concentration and goal setting alongside their physical and physiological capacities, it should be known that the psychological dimension should not be ignored in enhancing sportive performance (Koç, 2004).

A physical capacity at the highest level is not enough for a solid sports performance. Psychological capacity is essential for an excellent performance. Today, modern researches draw attention to an important point and underlines the importance of mental factors along with motoric features. At this point, when the studies in this field conducted are examined, it is seen that there are not enough researches about mental factors and this deficiency is more in our country (Efe et al., 2008).

2. Method

2.1. Population and Sample / Research Group

The population of the research consists of individuals who receive education in high schools in the province of Mersin and its districts in 2019-2020 academic year. The sample group comprises a total of 402 students (226 male, 176 female) from Anatolian high school, vocational high school, sports high school and science high school.

2.2. Data Collection

The data obtained from the research was collected through the personal information form prepared by the researcher and "The Athletic Coping Skills Inventory (ACSI-28)" which was developed by Smith, Schutz, Smoll and Ptacek (1995) and adapted to Turkish by Özcan and Günay (2017) as "(Coping Skills Inventory for Sportive Problems) Sportif Sorunlarla Başa Çıkma Becerileri Envanteri".

2.3. Personal Information Form

In order to reveal the information about the personal characteristics of the research group and to determine how they are shaped according to the characteristics (independent variables) that affect their coping skills with sport problems, the information form including questions related to age, gender, number of exercises per week, type of school, purpose of sport, type of play liked, how they define themselves, education level of the mother and father, branch of sports, the status of playing in the school team, whether there are licensed athletes in the family, sport year and club license status were used.

2.4. Athletic Coping Skills Inventory (ACSI-28)

The scale developed by Smith et al. (1995) aimed to measure athletes' psychological coping ability with difficulties. The structure of the ACSI-28 Scale consists of 28 items and 7 sub-factors. In the scale developed in the form of 4-point Likert-type, the participants were asked to indicate how often they had experiences (almost never = 0, sometimes = 1, often = 2, almost always = 3). The total score interval for each subscale is indicated as the lowest 0 and the highest 12, and the higher score obtained from the subscale is expressed as a stronger indicator.

2.5. Data Analysis

Statistical package program (SPSS 22 Version) was used to analyze the data to be obtained from the research. In order to understand which tests should be applied before statistical analysis, it was tested whether the data was normally distributed or not. The Mann Whitney U test was used for paired comparisons and Kruscal Wallis H tests for multiple comparisons. The Mann Whitney U test used for non-parametric data was utilized to detect the source of the difference in multiple comparisons. In the study, significance level was accepted as $p < 0.05$.

3. Results

Table 1: Frequency values of the research group

	N	%
Age		
15	95	23,6
16	120	29,9
17	123	30,6
18	64	15,9
Total	402	100
Gender		
Male	226	56,2
Female	176	43,8
Total	402	100
High School Type		
Anatolian	134	33,3
Vocational	72	17,9
Sports	112	27,9

Science	84	20,9
Total	402	100
Sport Year		
0-2 years	124	30,8
3-5 years	116	28,9
6-7 years	76	18,9
8 years and more	86	21,4
Total	402	100
Weekly Training/Exercise Number		
1	67	16,7
2	80	19,9
3	68	16,9
4	96	23,9
5 and more	91	22,6
Total	402	100
Branch		
Individual Sport	168	41,8
Team Sport	234	58,2
Total	402	100
Club License		
Yes	207	51,5
No	195	48,5
Total	402	100

Table 2: Frequency values of the research group

	N	**%**
Mother's Education Level		
Primary School	176	43,8
Secondary School	91	22,6
High School	63	15,7
University	72	17,9
Total	402	100
Play Type Liked		
Associative Play	98	24,4
Cooperative Play	230	57,2
Solitary (Independent) Play	74	18,4
Total	402	100
Father's Education Level		
Primary School	106	26,4
Secondary School	119	29,6
High School	93	23,1
University	84	20,9
Total	402	100
Purpose of Sport		
Winning	124	30,8
Improvement	116	28,9
Entertainment, Enjoyment	162	40,3
Total	402	100

Playing in the School Team		
Yes	201	49,6
No	204	50,4
Total	405	100
Licensed Athlete in the Family		
Yes	137	34,1
No	265	65,9
Total	402	100
Self-Definition		
Asocial-Introvert	183	45,5
Social-Extrovert	219	54,5
Total	402	100

Table 3: Analysis results of the research group by the gender variable

Sub-dimensions	Gender	N	$\bar{X}$	Ss	t	p
Goal Setting/ Mental Preparation	Male	226	1,79	,66	-2,504	,012*
	Female	176	1,62	,74		
Concentration	Male	226	1,93	,61	-2,529	,011*
	Female	176	1,76	,66		
Free from Anxiety	Male	226	1,84	,78	-,297	,767
	Female	176	1,85	,83		
High Performance under Pressure	Male	226	1,36	,73	-5,359	,000*
	Female	176	,98	,72		
Coping with Difficulty	Male	226	1,85	,70	-2,314	,021*
	Female	176	1,69	,75		
Confidence and Achievement Motive	Male	226	2,19	,64	-1,265	,206
	Female	176	2,08	,73		
Coaching Status	Male	226	2,26	,57	-1,462	,144
	Female	176	2,15	,66		

According to Table 3, it was determined that there was a statistically significant difference in favor of male students in terms of goal setting / mental preparation, concentration, high performance under pressure and coping with difficulty according to the gender variable of the research group.

Table 4: Analysis results of the research group by the age variable

Sub-dimensions	Age	N	$\bar{x}$	SD	X^2	p	Difference U Test
Goal Setting/ Mental Preparation	**a-**15	95	1,66	,68	2,770	,429	
	b-16	120	1,67	,73			
	c-17	123	1,77	,72			
	d-18	64	1,76	,62			
Concentration	**a-**15	95	1,81	,70	,402	,940	
	b-16	120	1,87	,64			
	c-17	123	1,86	,62			
	d-18	64	1,89	,58			
Free from Anxiety	**a-**15	95	1,74	,88	1,555	,670	
	b-16	120	1,88	,84			
	c-17	123	1,87	,69			

	d-18	64	1,88	,83			
High Performance under Pressure	**a-**15	95	1,09	,68	2,284	,516	
	b-16	120	1,23	,75			
	c-17	123	122	,75			
	d-18	64	1,23	,85			
Coping with Difficulty	**a-**15	95	1,70	,76	1,278	,734	
	b-16	120	1,80	,78			
	c-17	123	1,81	,67			
	d-18	64	1,82	,71			
Confidence and Achievement Motive	**a-**15	95	2,11	,70	,870	,833	
	b-16	120	2,12	,70			
	c-17	123	2,19	,66			
	d-18	64	2,12	,68			
Coaching Status	**a-**15	95	2,25	,59	6,478	,091	
	b-16	120	2,28	,65			
	c-17	123	2,20	,57			
	d-18	64	2,05	,66			

According to Table 4, no statistically significant difference was observed in any sub-dimension related to the skills of the research group to deal with sporting problems depending on the age variable.

Table 5: Analysis results of the study group by high school type variable

Sub-dimensions	**High School Type**	**N**	$\bar{x}$	**SD**	X^2	**p**	**Difference U Test**
Goal Setting/ Mental Preparation	a. Anatolian	134	1,76	,64	26,233	,000*	c>a,b,d a>d
	b. Vocational	72	1,62	,82			
	c. Sports	112	1,93	,62			
	d. Science	84	1,42	,67			
Concentration	a. Anatolian	134	1,86	,61	11,066	,011*	c>d
	b. Vocational	72	1,82	,71			
	c. Sports	112	2,00	,62			
	d. Science	84	1,69	,60			
Free from Anxiety	a. Anatolian	134	1,95	,73	13,379	,004	a,b>c,d
	b. Vocational	72	2,02	,86			
	c. Sports	112	1,71	,79			
	d. Science	84	1,71	,84			
High Performance under Pressure	a. Anatolian	134	1,30	,73	21,234	,000*	a,c>b,d
	b. Vocational	72	,95	,70			
	c. Sports	112	1,37	,76			
	d. Science	84	1,02	,73			
Coping with Difficulty	a. Anatolian	134	1,79	,72	9,291	,026*	c>d
	b. Vocational	72	1,76	,80			
	c. Sports	112	1,92	,72			
	d. Science	84	1,60	,66			
Confidence and Achievement Motive	a. Anatolian	134	2,14	,65	10,832	,013*	c>d
	b. Vocational	72	2,05	,83			
	c. Sports	112	2,30	,60			
	d. Science	84	1,99	,66			

Coaching Status	a. Anatolian	134	2,19	,65	3,620	,306	
	b. Vocational	72	2,27	,70			
	c. Sports	112	2,24	,58			
	d. Science	84	2,15	,53			

According to Table 5, it was found that there was a statistically significant difference in all sub-dimensions except for the sub-dimension of being open to learning in the research group by the high school type variable (p <0.05).

Table 6: Analysis results of the research group by the mother's education level variable

Sub-dimension	**Education Level of Mother**	**N**	$\bar{x}$	**SD**	X^2	**p**	**Difference U Test**
Goal Setting/ Mental Preparation	a. Primary school	176	1,77	,68	8,773	,032*	a,b>c,d
	b. Secondary school	91	1,81	,64			
	c. High School	63	1,54	,71			
	d. University	72	1,59	,76			
Concentration	a. Primary School	176	1,89	,64	1,404	,705	
	b. Secondary School	91	1,84	,64			
	c. High School	63	1,78	,63			
	d. University	72	1,87	,63			
Free from Anxiety	a. Primary school	176	1,86	,77	1,985	,575	
	b. Secondary School	91	1,91	,83			
	c. High School	63	1,74	,82			
	d. University	72	1,81	,85			
High Performance under Pressure	a. Primary school	176	1,24	,72	2,647	,449	
	b. Secondary School	91	1,23	,78			
	c. High School	63	1,11	,66			
	d. University	72	1,12	,85			
Coping with Difficulty	a. Primary School	176	1,80	,72	,544	,909	
	b. Secondary school	91	1,80	,73			
	c. High school	63	1,73	,78			
	d. University	72	1,75	,71			
Confidence and Achievement Motive	a. Primary School	176	2,21	,66	3,553	,314	
	b. Secondary school	91	2,13	,69			
	c. High school	63	2,06	,73			
	d. University	72	2,06	,70			
Coaching Status	a. Primary school	176	2,26	,60	2,574	,462	
	b. Secondary school	91	2,13	,67			
	c. High school	63	2,15	,65			
	d. University	72	2,26	,54			

According to Table 6, a statistically significant difference was found only in the Goal Setting / Mental Preparation sub-dimension according to the mother's education level variable of the research group (p <0.05).

Table 7: Analysis results of the research group by the father's education level variable

Sub-dimension	Education Level of Father	N	$\bar{x}$	SD	X^2	p	Difference U Test
Goal Setting/ Mental Preparation	a. Primary school	106	1,81	,62	11,893	,008*	d<a,b,c
	b. Secondary school	119	1,70	,69			
	c. High school	93	1,82	,72			
	d. University	84	1,49	,73			
Concentration	a. Primary school	106	1,83	,59	4,158	,245	
	b. Secondary school	119	1,86	,71			
	c. High school	93	1,96	,60			
	d. University	84	1,77	,61			
Free from Anxiety	a. Primary school	106	1,77	,77	3,609	,307	
	b. Secondary school	119	1,89	,82			
	c. High school	93	1,92	,77			
	d. University	84	1,78	,86			
High Performance under Pressure	a. Primary school	106	1,24	,69	4,481	,214	
	b. Secondary school	119	1,27	,78			
	c. High school	93	1,17	,75			
	d. University	84	1,06	,77			
Coping with Difficulty	a. Primary school	106	1,76	,72	6,089	,107	
	b. Secondary school	119	1,88	,77			
	c. High school	93	1,83	,71			
	d. University	84	1,62	,69			
Confidence and Achievement Motive	a. Primary school	106	2,21	,65	4,521	,210	
	b. Secondary school	119	2,16	,74			
	c. High school	93	2,15	,64			
	d. University	84	2,01	,68			
Coaching Status	a. Primary school	106	2,20	,64	1,186	,756	
	b. Secondary school	119	2,25	,61			
	c. High school	93	2,20	,64			
	d. University	84	2,18	,57			

Table 7 points out a statistically significant difference in the Goal Setting / Mental Preparation sub-dimension of the research group according to the variable of father's education level ($p < 0.05$).

Table 8: Analysis results of the research group by the variable of Play Type Liked

Sub-dimensions	Play Type Liked	N	$\bar{x}$	SD	X^2	p	Difference U Test
Goal Setting/ Mental Preparation	a. Associative	98	1,68	,71	,234	,889	
	b. Cooperative	230	1,72	,66			
	c. Solitary (Independent)	74	1,73	,79			
Concentration	a. Associative	98	1,87	,63	1,663	,435	
	b. Cooperative	230	1,88	,64			
	c. Solitary (Independent)	74	1,76	,65			
Free from Anxiety	a. Associative	98	1,93	,78	4,088	,129	
	b. Cooperative	230	1,85	,80			
	c. Solitary (Independent)	74	1,70	,83			
High Performance under Pressure	a. Associative	98	1,18	,75	,331	,847	
	b. Cooperative	230	1,18	,75			

	c. Solitary (Independent)	74	1,25	,77			
Coping with Difficulty	a. Associative	98	1,89	,73	8,164	,017*	c<a,b
	b. Cooperative	230	1,80	,73			
	c. Solitary (Independent)	74	1,58	,70			
Confidence and Achievement Motive	a. Associative	98	2,18	,65	4,535	,104	
	b. Cooperative	230	2,18	,65			
	c. Solitary (Independent)	74	1,95	,80			
Coaching Status	a. Associative	98	2,20	,66	2,378	,304	
	b. Cooperative	230	2,25	,59			
	c. Solitary (Independent)	74	2,12	,63			

Table 8 indicates a statistically significant difference only in the sub-dimension of coping with difficulty according to the variable of play type liked of the research group ($p < 0.05$).

Table 9: Analysis results of the research group by the Sport Purpose variable

Sub-dimensions	**Sport Purpose**	**N**	$\bar{x}$	**SD**	X^2	**p**	**Difference U Test**
Goal Setting/ Mental Preparation	a. Winning	124	1,73	,71	7,007	,030*	b>c
	b. Improvement	116	1,85	,60			
	c. Entertainment	162	1,60	,73			
Concentration	a. Winning	124	1,97	,69	12,593	,002*	b>c
	b. Improvement	116	1,91	,59			
	c. Entertainment	162	1,73	,61			
Free from Anxiety	a. Winning	124	1,87	,79	,126	,939	
	b. Improvement	116	1,85	,75			
	c. Entertainment	162	1,82	,85			
High Performance under Pressure	a. Winning	124	1,27	,81	6,862	,032*	b>c
	b. Improvement	116	1,29	,71			
	c. Entertainment	162	1,08	,72			
Coping with Difficulty	a. Winning	124	1,71	,79	6,677	,035*	b>a,c a>c
	b. Improvement	116	1,94	,67			
	c. Entertainment	162	1,72	,71			
Confidence and Achievement Motive	a. Winning	124	2,15	,75	3,858	,145	
	b. Improvement	116	2,22	,64			
	c. Entertainment	162	2,07	,66			
Coaching Status	a. Winning	124	2,14	,65	3,408	,182	
	b. Improvement	116	2,29	,60			
	c. Entertainment	162	2,21	,60			

Table 9 presents a statistically significant difference in the sub-dimensions of Goal setting / Mental preparation, Concentration, High performance under pressure and Coping with difficulty according to the Sport purpose variable of the research group ($p < 0.05$).

Table 10: Analysis results of the research group by the Sport year variable

Sub-dimensions	Sport Year	N	$\bar{x}$	SD	X^2	p	Difference U Test
Goal Setting/ Mental Preparation	a. 0-2 yr.	124	1,30	,59	85,106	,000*	a<b,c.d
	b. 3-5 yr.	116	1,73	,66			
	c. 6-7 yr.	76	1,88	,65			
	d. 8 and +	86	2,15	,61			
Concentration	a. 0-2 yr.	124	1,44	,56	81,462	,000*	a<b,c.d
	b. 3-5 yr.	116	1,92	,63			
	c. 6-7 yr.	76	2,12	,53			
	d. 8 and +	86	2,13	,54			
Free from Anxiety	a. 0-2 yr.	124	1,53	,81	26,625	,000*	a<b,c.d
	b. 3-5 yr.	116	1,96	,76			
	c. 6-7 yr.	76	1,98	,75			
	d. 8 and +	86	2,02	,77			
High Performance under Pressure	a. 0-2 yr.	124	1,97	,63	12,601	,006*	a<b,c.d
	b. 3-5 yr.	116	1,31	,76			
	c. 6-7 yr.	76	1,31	,83			
	d. 8 and +	86	1,26	,76			
Coping with Difficulty	a. 0-2 yr.	124	1,40	,67	59,153	,000*	a<b,c.d
	b. 3-5 yr.	116	1,81	,67			
	c. 6-7 yr.	76	1,96	,73			
	d. 8 and +	86	2,14	,64			
Confidence and Achievement Motive	a. 0-2 yr.	124	1,74	,71	63,885	,000*	a<b,c.d
	b. 3-5 yr.	116	2,22	,58			
	c. 6-7 yr.	76	2,33	,57			
	d. 8 and +	86	2,44	,60			
Coaching Status	a. 0-2 yr.	124	1,85	,65	58,993	,000*	a<b,c.d
	b. 3-5 yr.	116	2,32	,53			
	c. 6-7 yr.	76	2,37	,52			
	d. 8 and +	86	2,45	,52			

According to Table 10, the difference was statistically significant in all sub-dimensions of coping skills with sport problems depending on the sport year variable of the research group ($p < 0.05$).

Table 11: Analysis results of the research group by the variable of being club-licensed

Sub-dimensions	Club License	N	$\bar{x}$	SD	Z	P
Goal Setting/ Mental Preparation	Yes	207	1,94	,66	-6,826	,000*
	No	195	1,47	,65		
Concentration	Yes	207	2,07	,58	-6,955	,000*
	No	195	1,63	,61		
Free from Anxiety	Yes	207	1,96	,80	-2,895	,004*
	No	195	1,73	,79		
High Performance under Pressure	Yes	207	1,34	,78	-3,481	,000*
	No	195	1,05	,69		
Coping with Difficulty	Yes	207	1,97	,70	-5,422	,000*
	No	195	1,58	,70		
Confidence and	Yes	207	2,34	,60	-6,236	,000*

Achievement Motive	No	195	1,92	,70		
Coaching Status	Yes	207	2,35	,58	-4,890	,000*
	No	195	2,06	,62		

According to Table 11, it was found that the was statistically significant in favor of those who play in a sports club difference in all sub-dimensions of coping skills with sport problems depending on the club license variable of the research group ($p < 0.05$).

Table 12: Analysis results of the research group according to the variable of playing in the school team

Sub-dimensions	**School Team**	**N**	$\bar{x}$	**SD**	**Z**	**P**
Goal Setting/ Mental Preparation	Yes	224	1,91	,67	-6,424	,000*
	No	178	1,47	,66		
Concentration	Yes	224	2,00	,58	-5,029	,000*
	No	178	1,67	,66		
Free from Anxiety	Yes	224	2,00	,79	-4,502	,000*
	No	178	1,65	,78		
High Performance under Pressure	Yes	224	1,33	,76	-4,036	,000*
	No	178	1,02	,70		
Coping with Difficulty	Yes	224	1,96	,68	-5,408	,000*
	No	178	1,55	,72		
Confidence and Achievement Motive	Yes	224	2,28	,59	-4,064	,000*
	No	178	1,97	,75		
Coaching Status	Yes	224	2,34	,56	-4,542	,000*
	No	178	2,05	,64		

According to Table 12, the difference was statistically significant in favor of those who participate in sporting activities in school teams in all sub-dimensions of coping skills with sport problems depending on the variable of playing in the school team ($p < 0.05$).

Table 13: Analysis results of the research group according to the presence of licensed athletes in the family

Sub-dimensions	**Licensed Athlete in the Family**	**N**	$\bar{x}$	**SD**	**Z**	**P**
Goal Setting/ Mental Preparation	Yes	137	1,96	,64	-5,030	,000*
	No	265	1,58	,69		
Concentration	Yes	137	2,07	,58	-4,666	,000*
	No	265	1,75	,64		
Free from Anxiety	Yes	137	2,05	,80	-4,042	,000*
	No	265	1,74	,78		
High Performance under Pressure	Yes	137	1,33	,82	-2,149	,032*
	No	265	1,13	,71		
Coping with Difficulty	Yes	137	2,05	,70	-5,357	,000*
	No	265	1,64	,71		
Confidence and Achievement Motive	Yes	137	2,32	,60	-3,859	,000*
	No	265	2,04	,70		
Coaching Status	Yes	137	2,32	,62	-2,842	,004*
	No	265	2,15	,61		

According to Table 13, the difference was statistically significant in favor of the students, whose family has a licensed athlete, in all sub-dimensions of coping skills with sport problems depending on the variable of the licensed athlete in the family (p <0.05).

Table 14: Analysis results of the research group by the sport branch variable

Sub-dimensions	Sport Branch	N	$\bar{x}$	SD	Z	P
Goal Setting/ Mental Preparation	Individual Sports	168	1,63	,70	-2,217	,027*
	Team Sports	234	1,77	,69		
Concentration	Individual Sports	168	1,77	,69	-2,366	,018*
	Team Sports	234	1,92	,59		
Free from Anxiety	Individual Sports	168	1,76	,83	-1,791	,073
	Team Sports	234	1,91	,78		
High Performance under Pressure	Individual Sports	168	1,18	,74	-,270	,787
	Team Sports	234	1,21	,76		
Coping with Difficulty	Individual Sports	168	1,71	,73	-1,730	,084
	Team Sports	234	1,83	,72		
Confidence and Achievement Motive	Individual Sports	168	2,04	,67	-2,633	,008*
	Team Sports	234	2,21	,68		
Coaching Status	Individual Sports	168	2,10	,60	-3,455	,001*
	Team Sports	234	2,29	,61		

Table 14 demonstrates a statistically significant difference in favor of the students doing team sports in the sub-dimensions of Goal setting / Mental preparation, Concentration, Confidence and Achievement motive and Being open to learning according to the sport branch variable of the research group (p <0.05).

Table 15: Analysis results of the research group by the variable of the number of trainings

Sub-dimensions	Number of Trainings per Week	N	$\bar{x}$	SD	X^2	p	Difference U Test
Goal Setting/ Mental Preparation	a. Once	67	1,14	,54	106,708	,000*	a,b<c,d,e
	b. Twice	80	1,38	,55			
	c. 3 times	68	1,86	,65			
	d. 4 times	96	2,01	,63			
	e. 5 times	91	2,00	,64			
Concentration	a. Once	67	1,36	,57	86,619	,000*	a,b<c,d,e
	b. Twice	80	1,57	,56			
	c. 3 times	68	2,05	,51			
	d. 4 times	96	2,14	,50			
	e. 5 times	91	2,03	,66			
Free from Anxiety	a. Once	67	1,56	,80	28,085	,000*	a,b<c,d
	b. Twice	80	1,66	,77			
	c. 3 times	68	1,98	,72			
	d. 4 times	96	2,13	,75			
	e. 5 times	91	1,82	,85			
High Performance under Pressure	a. Once	67	,83	,67	32,874	,000*	a<b,c,d,e
	b. Twice	80	1,01	,57			
	c. 3 times	68	1,39	,76			
	d. 4 times	96	1,20	,70			
	e. 5 times	91	1,48	,84			

Coping with Difficulty	a. Once	67	1,27	,60	67,215	,000*	a<b,c,e b<c,d,e
	b. Twice	80	1,52	,66			
	c. 3 times	68	1,93	,63			
	d. 4 times	96	2,08	,71			
	e. 5 times	91	1,97	,71			
Confidence and Achievement Motive	a. Once	67	1,62	,74	74,075	,000*	a,b<c,d,e
	b. Twice	80	1,87	,63			
	c. 3 times	68	2,27	,57			
	d. 4 times	96	2,42	,54			
	e. 5 times	91	2,36	,62			
Coaching Status	a. Once	67	1,88	,63	55,899	,000*	a,b<c,d,e
	b. Twice	80	1,95	,60			
	c. 3 times	68	2,38	,54			
	d. 4 times	96	2,45	,54			
	e. 5 times	91	2,31	,57			

Table 15 shows a statistically significant difference in favor of the students who train three times or more per week in all the sub-dimensions of coping skills with sport problems depending on the variable of number of trainings per week ($p<0.05$).

Table 16: Analysis results of the research group by the self-definition variable

Sub-dimensions	**Self-Definition**	**N**	$\bar{x}$	**SD**	**Z**	**P**
Goal Setting/ Mental Preparation	Asocial-Introvert	183	1,55	,68	-4,356	,000*
	Social-Extrovert	219	1,85	,68		
Concentration	Asocial-Introvert	183	1,71	,63	-4,433	,000*
	Social-Extrovert	219	1,98	,62		
Free from Anxiety	Asocial-Introvert	183	1,70	,84	-3,121	,002*
	Social-Extrovert	219	1,97	,75		
High Performance under Pressure	Asocial-Introvert	183	1,11	,72	-1,767	,077
	Social-Extrovert	219	1,26	,77		
Coping with Difficulty	Asocial-Introvert	183	1,60	,74	-4,521	,000*
	Social-Extrovert	219	1,93	,69		
Confidence and Achievement Motive	Asocial-Introvert	183	2,01	,68	-3,714	,000*
	Social-Extrovert	219	2,25	,67		
Coaching Status	Asocial-Introvert	183	2,12	,63	-2,772	,006*
	Social-Extrovert	219	2,29	,59		

Table 16 presents a statistically significant difference in favor of those who define themselves social-extroverted in all of the sub-dimensions of coping skills with sport problems except for high performance under pressure according to the self-definition variable of the research group ($p<0.05$).

4. Discussion

In our study, it was determined that there was a statistically significant difference in favor of male students in terms of goal setting / mental preparation, concentration, high

performance under pressure and coping with difficulty according to the gender variable. The study of Elferink-Gemser, Visscher and Lemmink (2005) put forward that boys had higher scores than girls (among athletes with an age average of 14.8) in factors of self-confidence, anxiety control, mental preparation and imagination factors in terms of their sports psychological abilities. In another study in which the relationship between continuous sportive self-confidence and gender variable was examined, it was determined that male participants had a higher level of continuous sporting self-confidence compared to females. It is stated that this might result from the fact that males have a higher self-confidence in terms of motoric features and general sporting confidence than females (Corbin, 1981; Vurgun, 2010). In general, it is remarked that new longitudinal studies are needed for gender specific development of psychological skills in sports during adolescence; and it should be considered that, in terms of psychological change, boys and girls might develop differently in the background of this period because of the rapid physical change (Christie, 2005).

According to the High School type variable of the research group, it was determined that there was a statistically significant difference in all sub-dimensions excluding the sub-dimension of coaching status. Taking into account the source of the difference, the fact that the difference is in favor of the students in the sports high schools suggests that they are more capable in overcoming sporting problems due to their experience and involvement in more sporting activities than other high schools.

In accordance with the self-definition variable of the research group, it was found that there was a statistically significant difference in favor of those who defined themselves social-extroverted in all sub-dimensions of coping skills with sport problems except for high performance under pressure. In many similar studies, it was also found that the extroversion characteristic of the participants doing sports was better (Egloff and Gruhn, 1996; Courneya and Hellsten, 1998; Blanco et al., 1999).

It was determined that there was a statistically significant difference only in the goal setting / mental preparation sub-dimension according to the education level of the parents.

It was specified that was a statistically significant difference only in coping with difficulty sub-dimension of the research group according to the play type liked.

A statistically significant difference was observed in the goal setting / mental preparation, concentration, high performance under pressure and coping with difficulty sub-dimensions according to the sport purpose variable of the research group.

It was designated that there was a statistically significant difference in the sub-dimensions of goal setting / mental preparation, concentration, confidence and achievement motive and being open to learning in favor of the students doing team sport according to the variable of sport branch of the research group. With respect to the results of the research aimed to compare the self-efficacy levels of individuals who were between 9-13 years and did or did not do sports; it was ascertained that it was parallel to our study in terms of sportive psychological abilities, there was a statistically significant difference in the self-efficacy scores of students who did team sport and did not do sports, and the self-efficacy scores of female students in the team sport group were higher than male

students (Öztürk and Şahin, 2007). Vanek's and Caratty's book ''Psychology and the Superior Athlete'' (1970), which support our study and reached similar results, concluded that team athletes were less anxious than the individual athletes and their self-confidence was higher. The reasons such as that the athletes competing in team sports have a high self-confidence and get support from their team mates while struggling against difficulties, the negativities that may occur during and after the competition concern the whole team and the responsibility is shared suggest that they are better than individual athletes in the fight against stress.

Depending on the sport year variable of the research group, it was seen that the difference was in the group who had been doing sports for 6-7 years and 8 years and more in all of the sub-dimensions of coping with sport problems. Therefore, it is seen that the increase in the sport year affects positively the sports-specific psychological ability level. Coşkun's study (2018), which supports our findings, demonstrates that as the age of sports increases, the sports psychological skill levels of the participants increase, and there are statistically significant differences in favor of those with higher sport year among the groups in terms of all factors and general levels of psychological skills (Coşkun, 2018).

According to the variables of being club licensed and playing in school teams, it was determined that the difference was in favor of those who actively participated in these activities in all sub-dimensions of sport-specific psychological ability levels. This situation shows that there is a significant difference between the sports-specific psychological ability levels of sportive and sedentary students. Based on available findings, we can say that sportive students act in a planned way to achieve the goal, can concentrate without being influenced by external factors while performing sports and can show better performance under high pressure, display the best performance in the face of difficult situations by keeping the situation under control, can always be positively motivated by their self-confidence and are open to learning and improving themselves by following the directives given.

Depending on the variable of the number of weekly trainings, it was determined that the difference was statistically significant in favor of the students exercising three times or more per week in all of the sub-dimensions of coping with sporting problems. Examining the results of the study investigating the psychological effects of exercise frequency, it was reported that those with a high frequency of exercise had lower levels of loneliness points than those with low frequency (Yazıcılar, 2004, Page RM, Tucker LA, 1994, Hopman RM, Westhoff MH, 2002). In the study conducted by Canan and Ataoğlu in 2010, it was found that depression and anxiety symptoms decreased as the time spent doing sports increased, and there was a linear relationship between this time and perception of problem solving skill (Canan and Ataoğlu, 2010). The results obtained in our study are in line with the literature.

On the basis of the variable of licensed athletes in the family of the research group, it was found that the difference was statistically significant in favor of the students with licensed athletes among the family members in all sub-dimensions of coping skills with sport problems.

As a result of our study, it has been seen that the students who are successful in bilateral relations, social, have athletic identities in the forefront and are interested in sports for a long time are more advanced in terms of sports-specific psychological abilities and goal setting, concentration, being free from anxiety, high performance under pressure, coping with difficulties, confidence and achievement motive and being open to learning. Thus, sports environments can provide positive contributions to the development of sports-specific psychological skills by providing students with such appropriate areas.

As a result, it was asserted that psychological factors were more effective in determining performance compared to physical evaluations (Smith and Christensen, 1995). Today, the concept of psychological skills has become a very important phenomenon in the world of sports, and the scientists who steer the world of sports have gone into a great effort to elevate the performance to the highest levels. They develop new training models to maximize the efficiency of the athlete and explore the ways to improve their performance, and psychological skills are seen as the combination of motivating elements that maximize the improved performance. However, although the concept of psychological skill is one of the most important methods that provide sporting efficiency in the world, it is obvious that it is not properly used in our country. Therefore, increasing the number of the studies on psychological skills in our country will make positive contributions to the literature.

5. Conclusion

In the light of the results obtained from our study;

1) When the data obtained from our study and the studies conducted are examined, it was seen that male athletes used strategies related to sport-specific psychological abilities more than female athletes (Elferink-Gemser, Visscher and Lemmink (2005), Corbin, 1981). At this point, coaches and sports psychologists can work extra with female athletes to support them in developing their sports-specific psychological abilities and help them improve their sporting performance.
2) Coaches and trainers prepare the necessary environment to cope with the sports-specific psychological factors; and sports psychologists can provide support and managers can be developed in this regard.
3) The number of the studies based on personality traits of students can be increased in terms of contributing to the development of sports-specific psychological ability.
4) From the viewpoint of athletes, athletes should be willing to train themselves and be open to all kinds of support in developing their sports-specific psychological abilities.
5) In the period of beginning sports, the basic psychological views of the athletes should be revealed, strategies to develop the sports-specific psychological skills should be taught to athletes from a certain age, and in the design of training, the practices of working conditions appropriate to the competition conditions should

be prioritized and entertaining activities in the play format should be included. Since the sporting activity started at a young age in a play format will enable the athlete to do sports in a healthier way physically, mentally and psychologically, for maximum performance, attention should be paid to keep athletes away from training and competitions where maximum success is expected from early ages.

Conflict of Interest

No potential conflict of interest was reported by the authors.

About the Authors

Doctor Lecturer **Kemal Kurak**, Çanakkale Onsekiz Mart University, Faculty of Sport Sciences, Department of Recreation, Çanakkale, Turkey. Research interests: sport science, movement and training, coaching, football, sport psychology.

Research Assistant **Hakan Büyükçelebi**, İnönü University, Faculty of Sport Sciences, Department of Coaching Education, Malatya, Turkey. Research interests: sport science and technology, movement and training, analysis in sport, football analysis, sport psychology.

References

Akarçeşme C, 2004. The Relationship Between Pre-Competition State Anxiety and Performance Criteria in Volleyball, Master Thesis, Gazi University Institute of Health Sciences, Ankara.

Aktaş S. 2009. The Effect of Balance on Performance of Elite Alpine Skiers. Niğde University Institute of Social Sciences, PhD Thesis, Nigde University.

Bakırcıoğlu R. 2012. Encyclopedic Dictionary of Education and Psychology, Ankara, Turkey.

Blanco S, Hill CD, Piedmont RL, 1999. Predicting Athletic Performance Using the Five-Factor Model of Personality. Personality and Individual Differences 27: 769-777.

Canan F, Ataoğlu A, 2010. The influence of sports on anxiety, depression, and perceived problem solving ability. Anatolian Journal of Psychiatry, 11: 38-43.

Cevizci A, 1999. Philosophical Dictionary, İstanbul, Turkey.

Christie D, 2005. Adolescent development. British Medical Journal, 330(7486): 301-304.

Corbin CB, 1981. Sex of subject, sex of opponent, and opponent ability as factors affecting self-confidence in a competitive situation. Journal of Sport Psychology, 3: 265-270.

Courneya KS, Hellsten LAM, 1998. Personality Correlates of Exercise Behavior, Movives, Barriers and Preferences: An Application of the Five-Factor Model. Personality and Individual Differences, 24(5): 625-633.

Coşkun K, 2018. Psychological Skill Levels of Amateur and Professional Football Players. Master Thesis. Erzincan University Institute of Health Sciences, Erzincan.

Çetinkaya T, 2015. Athlete identity and continuous sportive self-confidence relationship in team sports. PhD Thesis, Gazi University Institute of Education Sciences, Ankara.

Efe M, Öztürk F, Koparan Ş, Şenışık Y, 2008. The Effect of Volleyball Training on Social Efficacy Expectation and Assertiveness at 14-16 Age Group Individuals. Journal of Uludağ University Education Faculty, 20(1): 69-97.

Elferink-Gemser MT, 2005. Today's talented youth field hockey players, the stars of tomorrow, PhD Thesis.

Egloff B, Gruhn AJ, 1996. Personality and Endurance Sports. Personality and Individual Differences, 21(2): 223-229.

Gee CJ, Marshall JC, King JF, 2010. Should coaches use personality assessments in the talent identification process? A 15 year predictive study on professional hockey players. International Journal of Coaching Science, 4: 25-34.

Hagger M, Chatzisarantis N, 2005. The Social Psychology of Exercise and Sport, New York, USA.

Harwood C, Cumming J, Fletcher D, 2004. Motivational profiles and psychological skills use within elite youth sport. Journal of Applied Sport Psychology, 16: 318-332.

Hayslip B, Petrie TA, MacIntire MM, Jones GM, 2010. The influences of skill level, anxiety, and psychological skills use on amateur golfers' performances. Journal of Applied Sport Psychology, 22: 123-133.

Hopman RM, Westhoff MH, 2002. Health education and exercise stimulation for older people: development and evaluation of the program –Healty and Vital-, Tijdschrift voor Gerontologie en Geriatrie, 33(2): 56-63.

Koç H, 2004. Evaluation of the factors affecting the state anxiety levels of professional football players, Master Thesis, Dumlupınar University Institute of Social Sciences, Kütahya.

Lazarus RS, Folkman S, 1984. Stress, Appraisal and Coping, New York, USA.

Malina RM, Ribeiro B, Aroso J, Cumming SP, 2007. 'Characteristics of youth Soccer Players Aged 13-15 Years Classified by Skill Level', British Journal of Sports Medicine, 41: 290-295.

McCarthy PJ, Jones MV, Harwood CG, Olivier S, 2010. What do young athletes implicitly understand about psychological skills? Journal of Clinical Sport Psychology, 4(2): 158-172.

Özcan V, Günay M, 2017. The Turkish Adaptation of Athletic Coping Skills Inventory-28 (ACSI-28): The validity and reliability study. Turkish Journal of Sport and Exercise, 19(1):130-136.

Öztürk F, Şahin Ş, 2007. Comparison of the social self efficacy results of 9-13 age groups individuals who do sports and don't do (Bursa sample). İlköğretim Online, 6(3): 469-479.

Page RM, Tucker LA, 1994. Psychosocial discomfort and exercise frequency: epidemiological study of adolescents, adolescence. National Library of Medicine, 29(113):183-91.

Smith RE, Christensen, DS, 1995. Psychology skills as predictors of performance and survival in professional baseball. Journal of Sport and Exercise Psychology, 17: 399-415.

Smith RE, Schutz RW, Smoll FL, Ptacek JT, 1995. Development and validation of a multidimensional measure of sport-specific psychological skills: The athletic coping skills inventory-28. Journal of Sport & Exercise Psychology, 17: 379-389

Tavacıoğlu L, 1999. Sports Psychology, Ankara, Turkey.

Vanek M, Cratty BJ, 1970. Psychology and the Superior Athlete, London, England.

Vurgun T, 2010. Adapting the sports imagery questionnaire to Turkish and the effect of imagination in sports on competition anxiety and sportive confidence. PhD Thesis, Ege University Institute of Health Sciences.

Weinberg R, Miller A, Horn T, 2012. The influence of a self-talk intervention on collegiate cross-country runners. International Journal of Sport and Exercise Psychology, 10(2): 123-134.

Yazıcılar İ, 2004. Investigating the loneliness levels of young people who do sports and those who do not. Master Thesis, Celal Bayar University.