PHYSICAL EDUCATION OF STUDENTS

ORIGINAL ARTICLE

Investigation of the effect of courage behaviors on endurance levels of canoe athletes

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Abstract

Background and Study Aim Courage in sports is a concept that has attracted a lot of attention in recent years. It is very important for the athletes to reveal their psychological performance as well as their physical and technical skills during competition and or training times. In this context, this research is important in terms of revealing the mental endurance and courage levels of canoe athletes who struggle not only with their competitors but also with natural conditions.

Material and Methods The sample of the research consists of 163 volunteer canoe athletes selected by simple random sampling method. In order to collect the necessary data in the research, the "Courage in Sports Scale" was used. The scale consists of the sub-dimensions of 'competence', 'determination', 'aggression', 'taking the risk' and 'being self-sacrificing'. T-test and ANOVA test were used in the analysis of the data. Statistically, the error level was accepted as $p<.05$ and the significance level was Alpha (α).

Results In the study, it was determined that the perception scores of the athlete students between the courage scale components were close to each other. No statistically significant results were found in all sub-dimensions according to gender and weekly training duration variables. According to the age variable: a significant result was determined in the dimensions of determination and assertiveness, and in the dimensions of stability according to the variable of doing sports. According to the education variable, it was determined that there was no significant difference in the risk-taking sub-dimension. There were significant differences in the other sub-dimensions.

Conclusions Without ignoring the acquisition of skills such as courage, it should be included in education and training programs from an early age and supported by sports training. Courage issues should be included in the training programs of educators (coaching training courses, seminars, etc.) and their importance should be emphasized.

Keywords: sport, canoe, courage, mental toughness, student

Introduction

In sports circles, the view that the physical training of the athlete on the field alone is not sufficient for maximal performance is increasing. It is stated that the psychological performance that the athlete will develop will determine the level of success she will achieve in the future. It is stated that if the physical ability between the competitors is equal, the winner will usually be the athletes who prepare themselves better mentally [1].

Talent has a fundamental influence on the discovery and development of the athlete. Despite this, the importance of psychological factors should not be forgotten for the same athlete to maintain his position and be successful. In this context, psychological skills are the way to reach maximal performance and to be able to stay at that point in an environment where the sportive struggle gains momentum every day [2].

In order for the athlete to reach the targeted performance, besides the physical, technical and tactical preparation, psychological preparation must also be planned and put into practice. The absence of even one of these complementary elements can lead to failure to achieve maximal performance [3]. Anxiety, stress, etc., in the education-teaching processes of the athlete students. should be taught how to deal with these factors. We can talk about the necessity of focusing on training on how to deal with these negative situations with the development of courage motives.

Courage

For the ancient Greeks, courage was seen as part of a virtuous life. Virtues are essential qualities that moral philosophers value; it includes concepts such as wisdom, courage, humanity, justice, and attitude [4]. For the Greek philosophers, living bravely was seen as an important virtue in itself. For this virtue, they could take part in many fear-laden activities that involve fear and real death, where the chance of death is higher. A real fear of death can be seen as the extreme point of human beings, which increases the

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possibility of being aware of nature [5]. On the other hand, it is stated that today's courage is perceived as a skill and a tool to benefit from, not as a virtue and a goal to achieve a perfect character in itself [6]. Courage is universally recognized as one of the most admired virtues [7]. Courage, in particular, is seen as an important part of strength of character among young people. Bravery; it is an emotional power that consists of perseverance, originality, honesty and vitality, and involves the use of will against external or internal negativities [4].

The concept of courage is used in many areas. Today, courageous behaviors such as creativity are seen as an important concept in business life [8]. It is stated that these courageous situations should be mostly in the leaders and/or managers within the organization [9]. Courage is a condition associated with human capacity and is in daily life within moral responsibility [10]. Although there are different expressions on courage in modern society, it is seen that there are definitions on two movements [11]. These currents; expresses that courage stems from the strength of an individual's character and is seen as virtuous behavior. On the other hand, courage is seen as a behavioral reaction (action) of the individual against events occurring in social environments [12].

In addition, courage is defined as an individual's selflxess behavior for a moral value, taking the risk of personal harm, injury or death [13]. Woodard, stated that courage is an integral part of the concept of existential authenticity. These definitions recognize that fear may or may not be present to a significant degree for an action to be considered courageous. These two concepts in general; courage, threat, valuable or important result can be said to converge on the components. Courage is a physiological state that is necessary to reduce the level of fear in the face of risk and to create a courageous mindset [14]. It is known that with the courage of stressful situations that develop as a part of tough training, potential growth opportunities can be seized [15].

Courage in Sports

Courage, self-efficiency, anxiety, anxiety, and fear have clinical significance and can be associated with different medical conditions. It can change daily life and greatly affect the success of the individual in sports [16]. The concept of courage in sports has attracted a lot of attention in the sports literature, especially in the research of the factors affecting success at the professional level. Some studies in the literature suggest that fear, worry, and anxiety often have a detrimental effect on performance. In addition, historically perceived self-efficacy and courage with virtue are considered as skills and tools that can have a positive impact on competitive sport [17, 18]. Moreover, the term sporting courage relates to a person's ability to be voluntarily determined, assertive and achieve sporting success in challenging conditions [19]. Sports courage is a dynamic process influenced by various factors such as situations (eg, danger, fear, risk), type of sport, personal characteristics, previous experience, and the role of the athlete [20]. These dynamic processes should not only be for the encouragement of athletic students for competitions. Because it is an undeniable fact that it is necessary for them to continue their sport without experiencing economic problems after the education process [21]. With the elimination of stress sources such as economic independence anxiety, more mental integration can be achieved in the sports branch [22]. Courage in competitive activities and sports; it can be used as a tool to manage and overcome anxiety, stress, pressure and fear [23]. In this respect, sports psychology can help athletes. It can help to increase and improve the functionality and performance of the athlete [24]. Courage can occur in many competitive and/or extreme sports; helps overcome anxiety, irritability, and other psychological barriers [25]. Because, it can be said that brave behaviors can be seen more in sportive motor skills and competitive activities rather than in other areas and they can be more special [26]. However, this field of study can be ignored by most athletes and trainers today.

While sports theories and practices in general and sports psychology in particular focus on stress, anxiety and fear, there is little research in the literature on "courage" in sports [6]. Courage in sports is a concept that has attracted a lot of attention in recent years. It is very important for the athletes to reveal their psychological performance as well as their physical and technical skills during competition and or training times. In this context, this research is important in terms of revealing the mental endurance and courage levels of canoe athletes who struggle not only with their competitors but also with natural conditions.

Materials and Methods

Participants

The universe of the research consists of licensed athletes within the body of the Turkish Canoe Federation in the 2019-2020 season. The sample was selected from the athletes who are in the sports clubs of the canoe federation, which constitute the universe group. These athletes were selected by simple random sampling method and consisted of a total of 163 student athletes voluntarily aged between 16-18 (n=97,%59.5) and 19 and over (n=66,%40.5).

Research Design

In order to reveal the current situation regarding the courage levels of canoe athletes in sports, the opinions of the students were tried to be obtained with the general screening model.

Developed by Konter and Johan in the collection of data; the "Courage in Sports" scale, consisting of 31 items and five sub-dimensions, was used [27]. The Cronbach's Alpha internal consistency coefficient of the five-point Likert scale was .82 for the "competence-mastery" sub-dimension, .82 for the "determination" sub-dimension, .72 for the "assertiveness" sub-dimension, .72 for the "taking the risk" sub-dimension, It was found to be .61 for the sub-dimension of "being self-sacrificing".

Statistical Analysis

The answers given by the athlete students in the sample to the scale items according to the demographic variables were measured using a statistical software package. Shapiro-Wilk test was used for the suitability of the data. Total skewness (.326) and kurtosis (.101) were determined in all sub-dimensions of courage in sports scale. Therefore, in our study, analysis studies that can be done with normal distribution were carried out [28]. In addition to descriptive analysis, t-test for pairwise comparisons and Cohen's d-data for effect size were used [29]. A one-way ANOVA test was used to compare three or more groups, and the effect size eta-square (η2) test was applied [30]. Tukey test was used to determine between which groups the significant difference was. In the study, the level of significance was accepted as Alpha (α) and the error level as p<.05.

Results

In this section, the data obtained from the canoe athletes in the sample and the statistical findings related to these data are given.

In the table 1, the relationship between the sub-dimensions of 'competence', 'determination', 'assertiveness', 'taking the risk' and 'being self-sacrificing' of the courage scale in sports and the gender variable is examined. For pairwise comparisons, t-test and arithmetic mean scores were determined. In addition, the levels of significance and the level of significance in terms of gender variable are included.

It was determined that the canoe athletes participating in the study did not show a statistically significant difference in all sub-dimensions of the courage scale in sports according to the gender variable (p>.05). Considering the perception scores, it can be said that female athlete students have more courage perceptions than male athlete students.

In the table 2, the relationship between the

Table 1. T-test results for the sub-dimensions of courage in sports by gender variable N=163

Components	Gender	N	%	Mean	Ss	SD	t	p	Cohen's d
Competence	Woman	76	46.6	2.72	.96	161	1.066	.288	.166
	Male	87	53.4	2.58	.76				
Determination	Woman	76	46.6	1.98	.79	161	.788	.432	.122
	Male	87	53.4	1.90	.60				
Assertiveness	Woman	76	46.6	2.33	.75	138	1.305	.194	.203
	Male	87	53.4	2.19	.57				
Don't take the risk	Woman	76	46.6	2.32	.88	161	.760	.449	.118
	Male	87	53.4	2.32	.82				
Be self-given	Woman	76	46.6	2.16	.68	161	1.008	.315	.157
	Male	87	53.4	2.06	.59				

Table 2. T-test results of courage and sub-dimensions in sports according to age variable N=163.

Components	Age	N	%	Mean	Ss	SD	t	p	Cohen's d
Competence	16-18 age	97	59.5	2.70	.84	161	.921	.358	.146
	19 years and older	66	40.5	2.57	.89				
Determination	16-18 age	97	59.5	2.02	.74	161	1.880	.042	.005
	19 years and older	66	40.5	1.81	.61				
Assertiveness	16-18 age	97	59.5	2.33	.67	161	1.920	.047	.008
	19 years and older	66	40.5	2.13	.62				
Don't take the risk	16-18 age	97	59.5	2.34	.83	161	-.854	.394	.135
	19 years and older	66	40.5	2.22	.87				
Be self-given	16-18 age	97	59.5	2.11	.66	161	-.092	.927	.014
	19 years and older	66	40.5	2.10	.61				

sub-dimensions of 'competence', 'determination', 'assertiveness', 'taking the risk' and 'being self-sacrificing' of the courage scale in sports and the age variable is examined. For pairwise comparisons, t-test and arithmetic mean scores were determined. In addition, the levels of significance and the level of significance in terms of age variable are included.

According to the age variable of the canoe athletes in the sample, it was determined that there was no statistically significant difference in the dimensions of competence, risk taking and self-efficiency in the courage scale in sports ($p>.05$). On the other hand, it was determined that there was a significant difference in the sub-dimensions of determination and assertiveness ($p<.05$).

In the table 3, the relationship between the sub-dimensions of 'competence', 'determination', 'assertiveness', 'taking the risk' and 'being self-sacrificing' of the courage scale in sports and the sports year variable is examined. One-way ANOVA test and arithmetic mean scores were determined to compare three or more groups. In addition, the levels of significance and the level of significance in terms of sports year variable are included.

It was determined that there was no statistically significant difference in the dimensions of competence, assertiveness, risk-taking and self-efficiency in the courage scale in sports according to the variable of the participating athlete students' years of doing sports ($p>.05$).

In the table 4, the relationship between the sub-dimensions of 'competence', 'determination', 'assertiveness', 'taking the risk' and 'being self-sacrificing' of the courage scale in sports and the educational status variable is examined. One-way ANOVA test and arithmetic mean scores were determined to compare three or more groups. In addition, the levels of significance and the level of significance in terms of educational status variable are included.

According to the variable of educational status of canoe athletes, there was no statistically significant difference in the sub-dimension of Courage in Sports Scale ($p>.05$). On the other hand, a significant result was found in other sub-dimensions ($p<.05$).

In the table 5, the relationship between the sub-dimensions of 'competence', 'determination', 'assertiveness', 'taking the risk' and 'devotion' of the courage scale in sports and the weekly exercise interval variable is examined. One-way ANOVA test and arithmetic mean scores were determined to compare three or more groups. In addition, in terms of the weekly exercise interval variable, the significance status and the significance effect levels are included.

It was determined that there was no statistically significant difference according to the weekly sports interval variable of the canoe athletes in the sample, according to all sub-dimensions of the courage scale in sports ($p>.05$).

Discussion

It was determined that the canoe athletes participating in the study did not show a statistically significant difference in all sub-dimensions of the courage scale in sports according to the gender variable (Table 1). Considering the perception scores, it can be said that female athlete students have more courage perceptions than male athlete

Table 3. ANOVA results of courage and sub-dimensions in sports according to the variable of years of doing sports N=163.

Components	Sports Year	N	Mean	Ss	SD	F	p	η^2
Competence	1-3 year	87	2.12	.45	2.160	1.135	.241	.018
	4-6 year	43	2.00	.54				
	7 year and above	33	1.89	.31				
Determination	1-3 year	87	2.19	.57	2.160	2.821	.043	.014
	4-6 year	43	2.27	.75				
	7 year and above	33	2.35	.34				
Assertiveness	1-3 year	87	2.35	.31	2.160	2.553	.081	.031
	4-6 year	43	2.31	.28				
	7 year and above	33	2.47	.28				
Don't take the risk	1-3 year	87	2.12	.45	2.160	1.663	.193	.002
	4-6 year	43	2.00	.54				
	7 year and above	33	1.89	.31				
Be self-given	1-3 year	87	2.19	.57	2.160	.219	.804	.003
	4-6 year	43	2.27	.75				
	7 year and above	33	2.35	.34				

Table 4. ANOVA results of courage in sports and its sub-dimensions according to educational status variable N=163.

Components	Educational status	N	Mean	Ss	SD	F	p	η2
Competence	a) Primary education	31	2.53	.77	2.160	3.657	.028	.044
	b) Secondary education	97	2.79	.82				
	c) Licence	35	2.36	.98			Tukey	b-c
Determination	a) Primary education	31	1.93	.61	2.160	6.786	.001	.078
	b) Secondary education	97	2.07	.75				
	c) Licence	35	1.58	.45			Tukey	b-c
Assertiveness	a) Primary education	31	2.35	.61	2.160	11.276	.000	.124
	b) Secondary education	97	2.38	.68				
	c) Licence	35	1.81	.44			Tukey	b-c
Don't take the risk	a) Primary education	31	2.39	.76	2.160	.691	.503	.009
	b) Secondary education	97	2.28	.90				
	c) Licence	35	2.14	.75			Tukey	-
Be self-given	a) Primary education	31	2.02	.51	2.160	3.145	.046	.038
	b) Secondary education	97	2.20	.69				
	c) Licence	35	1.91	.50			Tukey	b-c

Table 5. ANOVA results of courage and sub-dimensions in sports according to the variable of weekly exercise interval N=163.

Components	Weekly exercise interval	N	Mean	Ss	SD	F	p	η^2
Competence	1-4 hour	46	2.72	.84	2.160	.363	.696	.005
	5-10 hour	48	2.67	.72				
	11 hour and above	69	2.58	.96				
Determination	1-4 hour	46	1.96	.76	2.160	1.553	.215	.009
	5-10 hour	48	2.06	.68				
	11 hour and above	69	1.84	.65				
Assertiveness	1-4 hour	46	2.21	.69	2.160	2.752	.057	.003
	5-10 hour	48	2.43	.61				
	11 hour and above	69	2.15	.65				
Don't take the risk	1-4 hour	46	2.35	.80	2.160	.334	.716	.004
	5-10 hour	48	2.22	.84				
	11 hour and above	69	2.25	.89				
Be self-given	1-4 hour	46	1.97	.62	2.160	2.768	.066	.003
	5-10 hour	48	2.27	.71				
	11 hour and above	69	2.08	.57				

students. Due to this situation, it can be said that female athletes are more cold-blooded than male athletes in the face of unexpected situations, and they can use the necessary techniques with courage without panicking. In addition, Can and Kacay, did not find a significant difference between genders in terms of courage in their studies in different sports branches [31]. This study parallels our research. However, according to Giuliano et al., gender-related differences are particularly pronounced in favor of males in competence and risk-taking characteristics [32]. This is because men receive more attention and support from their families, coaches and trainers. Similarly, it is stated that male sports participants are more determined, competent and take more risks than females [33]. It is also stated that courage on the basis of gender has positive results in increasing the self-efficacy and performance of athletes, and negative results among the results obtained with fear [34].

According to the age variable of the canoe athletes in the sample, it was determined that there was no statistically significant difference in the dimensions of competence, risk taking and self-efficiency in the courage scale in sports. It was determined that there was a statistically significant difference in the sub-dimensions of determination and assertiveness, but the effect levels were weak (Table 2). It was determined that the significance was in favor of the athletes in the 16-18 age group, and the courage perceptions of the athletes in this age group were higher. In this case, it can be said that young individuals do not feel much anxiety in situations of fear and stress. In the studies on the subject, they concluded that there is no significant difference between the age groups and the courage levels of the athletes who perform different sports branches [31, 35]. Despite these results, in a study conducted by Konter, on university students, it is stated that there is a positive relationship between age and courage [33].

It was determined that there was no statistically significant difference in the dimensions of competence, assertiveness, risk-taking, and self-efficiency in the courage scale in sports according to the variable of the participating athlete students' years of doing sports (Table 3). It was determined that there was a statistically significant difference in the stability sub-dimensions and that there was a wide effect level. It has been determined that the significance is in favor of the athletes who have been doing this sport for seven years or more. In this case, it can be said that determination (continuity) increases with experience. In general, it can be said that the year of doing sports does not affect the level of courage, since the effect size is small and there is no significant difference. When the studies on the subject are examined, it is stated that the athletes with less experience continue their struggle despite the difficulties and are more determined than the experienced athletes [31]. On the other hand, Konter and Turhan state that amateur athletes are less competent in sports than professional athletes [24].

According to the variable of educational status of canoe athletes, there was no statistical significance in the sub-dimension of taking risks, which is one of the sub-dimensions of courage in sports. However, a significant result was found in other sub-dimensions (Table 4). The data obtained regarding the educational status show that these significant differences arise from individuals with high school and undergraduate education. Considering the effect size and the significant difference, it can be said that the education level affects the courage level. When the literature on the subject is examined; according to the variable of educational status, different psychological variables were examined. For example; when the sportive self-confidence is examined according to the educational status variable, it is stated that the increased education has a positive effect on the sportive self-confidence [24]. In another study, it was determined that the variable of educational status did not have an effect on the perception of self-efficacy and commitment to the sports organization they were in [37, 38, 39]. In addition, demographic, physical health, family and education processes have an important place in increasing the endurance and courage in the sports branch. Giving courage and endurance through physical education in schools can be seen as an important process for adolescent individuals [40].

It was determined that there was no statistically significant difference according to the weekly sports interval variable of the canoe athletes in the sample, according to all sub-dimensions of the courage in sports scale (Table 5). Since the effect size is small and there is no significant difference, it can be stated that the interval of doing sports does not affect the level of courage. Considering the perception scores, it can be said that the weekly training scores are close to each other and the courage level perceptions are close to each other. It is stated that differences in training hours affect different psychological variables. For example, it is stated that the social identity status of the athletes who train for 8 hours or more is higher than the athletes who train for 1-7 hours [41]. In another study, the methods of coping with the stress factors that martial athletes face were examined and it was observed that as the training time increased, the athletes developed a natural protector against anxiety and stress situations [42]. In addition, mental energy plays a purely intermediary role between many sports branches. On sports branches, mental energy has a positive effect on sports performance [43].

Conclusions

As a result, in this study, it was determined that the perception scores of the athlete students between the courage scale components were close to each other. Sports students; no statistically significant results were found in all sub-dimensions according to gender and weekly training duration variables. According to the age variable; a significant result was determined in the dimensions of determination and assertiveness, and in the dimensions of stability according to the variable of doing sports. According to the education variable, it was determined that there was no significant difference in the risk-taking sub-dimension, and there were significant differences in the other sub-dimensions. Considering the courage perception scores of the athlete students; it has been observed that there are scores in favor of female athletes and athletes between the ages of 16 and 18. In addition, it has been determined that there are scores in favor of the students who have been doing this sport for 7 years or more, those who have been educated at

the undergraduate level and who have less weekly training numbers.

Recommendations

Without ignoring the acquisition of skills such as courage, it should be included in education and training programs from an early age and supported by sports training. Courage issues should be included in the training programs of educators (coaching training courses, seminars, etc.) and their importance should be emphasized. The sports factor, which has an impact on the shaping of the courage endurance of individuals who do not have a high sports year, should be followed in all processes such as the increase in years and gaining experience without leaving the person alone. The frequency and duration of training should be prepared by taking into account individual variables in the preparation of the athlete's weekly and seasonal training.

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