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Murat Atasoy[1],
Ünal Türkçapar[2],
Kamil Polat[3]

[2] Kyrgyz-Turkish Manas University,
Bishkek, Kyrgyz Republic

[1, 3] Ahi Evran University,
Kirchehir, Turkey

Investigating stress levels and stress coping strategies in judo athletes[1]

Abstract. This study seeks to determine how stress coping strategies of judo athletes are shaped by the sport they practice. The study uses the screening method and is descriptive and deductive in nature. The study was carried out in 2022 and involved 134 competing judo athletes based in Bishkek, Kyrgyzstan, who volunteered to participate. To collect empirical data, the authors used a demographic information form and the 'Inventory of strategies for coping with stress in sports's cale. The collected data were processed with SPSS 25.0 statistical software. Other procedures included the Student's *t*-test for pairwise comparisonsusing the collected data, the ANOVA test for multiple pairwise comparisons, and the Tukey's multiple comparison test for deciphering significant differences between the groups.

Regarding the gender variable, there was a significant difference between male and female athletes in how high they scored on the subscales of mental imagery, venting

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of unpleasant emotions, and mental distraction. On average, male athletesscored higher than women on the logical analysis and disengagement subscales depending on their athlete level and their status of (not) being a member of the national team. There were also significant differences in the participants' scores on: the subscales of support seeking, logical analysis and disengagement depending on their competitive level; the subscales of thought control, mental imagery, effort expenditure and support seeking depending on the age variable; the subscale of mental imagerydepending on the competitive experience variable.

Keywords: judo, stress in sports, stress coping, coping strategies

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Мурат Атасой[1],
Унал Туркчапар[2],
Камил Полат[3]

[2] Кыргызско-Турецкий университет «Манас»,
г. Бишкек, Кыргызстан

[1, 3] Университет Ахи Эвран,
г. Кирчехир, Турция

Изучение уровней стресса и стратегий его преодоления у спортсменов в дзюдо

Аннотация. В статье приведено исследование, направленное на определение того, как стратегии борьбы со стрессом у дзюдоистов определяются видом спорта, которым они занимаются. В исследовании используется метод скрининга, который носит описательный и дедуктивный характер. Исследование проводилось в 2022 году. В нем принимали участие 134 действующих дзюдоистов, базирующихся в г. Бишкеке (Кыргызстан). Для сбора эмпирических данных авторы использовали форму демографической информации и Перечень стратегий для борьбы со стрессом в спортивных масштабах. Собранные данные обрабатывали с помощью статистического программного обеспечения SPSS 25.0. Другие процедуры включали *t*-тест Стьюдента для парного сравнения с использованием собранных данных, тест ANOVA для множественных парных сравнений и тест Тьюки для множественного сравнения и расшифровки существенных различий между группами.

Что касается гендерной переменной, то между спортсменами-мужчинами и спортсменами-женщинами была существенная разница в том, насколько высоко они оценивали подшкалы умственной образности, выход неприятных эмоций и умственного отвлечения. В среднем мужчины набирали более высокие, чем женщины, подшкалы логического анализа и разделения в зависимости от их спортивного уровня и статуса (не) члена сборной. Были также значительные различия в оценках участников по: подшкалам поиска поддержки, логическому анализу и разделению в зависимости от их конкурентного уровня; подшкалам контроля мышления, умственных образов, затрат усилий и поиска поддержки в зависимости от возрастной переменной; масштабу умственного образа, зависящему от переменной конкурентного опыта.

Ключевые слова: дзюдо, стресс в спорте, преодоление стресса, копинг-стратегии

Introduction

Due to the developments in sports and the increase of sports in the world, expectations from athletes are increasing day by day, competition conditions are becoming more difficult every day, and while some athletes quit sports in the face of difficulties, some continue to struggle despite all difficulties.

Since we can encounter stress at any time in our daily life, it has become an indispensable fact in terms of our daily life. As a result of being faced with stress at any moment in daily life, stress has become one of the frequently used words in everyday language. Although many different definitions have been made for the concept of stress when looking at the literature, it has continued to exist since the early ages when viewed from a historical point of view due to the fact that stress finds its place in daily life, and it has been the subject of many scientific studies from the past to the present [11; 18; 19].

Stress is a condition that disrupts a person's harmony for a short or long time. Internal and external factors affect the cerebral cortex, limbic system, thalamus, hypothalamus, pituitary, autonomic system, glandula suprarenalis [3].

As a result of long-term exposure to a stressful life, stress causes psychological and physiological effects on individuals. These effects cause disorders such as cardiovascular diseases, respiratory system diseases, digestive system diseases, depression, obesity, drug addiction and sleep disorders, which are often observed especially in modern societies [14].

Stress is a condition that occurs when the physical and spiritual boundaries of the organism are threatened and challenged. It has the ability to activate a chain of reactions aimed at protecting the living self in the face of threats and difficulties. This feature is the emergence of the so-called "fight or flight" response when faced with danger. Faced with a danger, a creature tries to get away from this danger that it believes it cannot cope with, fights the danger that it believes it can cope with, and thus adapts to the new situation [4].

Stress is a physical reaction that is not like any emotional state felt in situations of distress or difficulties used in daily life, but is created to adapt to new situations and conditions. In cases where the factors that endanger the integrity of the body, push tension or cause stress cannot be dealt with, emotions such as fear, anxiety, hopelessness, helplessness accompany stress. These are the psychic changes that occur in the organism in response to stress [6].

Stress is one of the most important factors in the emergence of negative health conditions of individuals, and studies in the literature indicate that stress negatively affects physical and mental health. In the studies conducted, it is stated that stress negatively affects human health. Because of this, it can be likened to a button that the intense stress that occurs in the face of situations experienced negatively activates the individual's physical and mental health.

The phenomenon of stress causes motivated emotional states to move above normal. In case of stress, people have to perceive a threat because a certain threat

is obvious. The factors that cause stress are defined as “stressors”. Some stressors can be meaningful or important for people. Whether stressors are meaningful or positive depends on the individual’s family life and the environment in which he lives. The factors that lead to stress are listed in the form of stimuli caused by the internal and external environment that change the individual’s capacity to adapt. In addition, stressors consist of demands from the individual himself or from the environment [2]. Stress is a significant health problem that negatively affects the living standards of individuals, mentally limits their abilities in business life, and affects a person’s emotional controls in a way that shakes them when exposed for a long time, causing healthy individuals to face a wide variety of problems in their lives [10].

There are various information available in the literature that the optimal level of stress positively affects the performance of individuals, but if it exceeds the optimal level, it will be anxiety, anxiety and uncontrolled. It is thought that the results of the findings that will be revealed by comparing the perceived stress levels of university students who play active sports with demographic variables will contribute to the literature in terms of determining what the sources of the stress they experience are or are not.

In this direction, the aim of the study is to examine the stress coping levels of individuals who practice judo sports in sports.

Material and method

The Research Model

The research is descriptive in nature and the levels of coping with stress in sports of individuals who practice judo sports have been examined.

In this study, the model of the research was created by considering the “screening model”. Screening models are research models that aim to describe a situation that existed in the past or at the moment as it is. The event, person or object that is the subject of the research is tried to be conveyed within its own conditions and as it is. There is no purpose to change or influence these conditions in any way [16].

Working Group

A total of 134 participants consisting of 104 men and 30 women who played judo sports in Bishkek, Kyrgyzstan in 2022 constitute the working group of this research.

Collection of Data and the Tools Used

The data was obtained through Google Forms. 2 different data collection tools were used in the research.

Diagnostic Information Form

The "Personal Information Form" developed by the researcher was used to determine the demographic characteristics of the university students participating in the study. This form; gender, age, sports age, sports level and are you a member of the national team? it consists of questions.

Inventory of Strategies for Coping with Stress in Sports

Stress Coping Strategies Inventory in Sports — SSBÇSE (ISCCSI "Inventairedes Stratégies de Copingen Compétition Sportive): The scale developed by Gaudreau and Blondin in Canada" was developed to evaluate the coping strategies used by athletes during competition. It consists of a total of 10 subproblems, and one of the subproblems has 3 items, and 9 of them have 4 "er items. Subproblems; thought control has been called imagining, relaxation, making an effort, mental analysis, seeking support, expressing unpleasant emotions, mental Deconfliction, withdrawal and social withdrawal.

Thought control is a cognitive activity that helps to reconstruct thoughts in highlighting the positive aspects of an individual's self and stressful sports environments in the past, present and future.

Imagining is a cognitive activity used to mentally practice or repeat mental states, techniques and tactics associated with stressful sports situations in the past, present and future.

Relaxation is a behavioral activity used to reduce the level of physiological, muscular and mental tension. Making an effort; activating the physical and mental resources used to take action against stressful situations encountered in the sports environment are behavioral activities.

Mental analysis is a cognitive activity used to evaluate or determine internal and external factors associated with stressful events encountered in the past in the sports environment, which may be encountered in the present and in the future.

Support seeking is a behavioral activity used to provide advice, feedback, emotional support. Dec. The expression of unpleasant emotions is to express and explain unpleasant emotional tensions experienced in stressful sports environments.

Mental disorder is a cognitive and behavioral activity used to voluntarily focus on things that are not related to sports performance.

Withdrawal is a cognitive and behavioral activity used to avoid making the movements necessary to achieve performance goals.

Social withdrawal is a behavioral activity used to instantly reduce or eliminate social relationships.

The 10 subscales of the scale are classified under three dimensions: (1) Task-oriented coping (imagining, making an effort, thought control, seeking support, relaxation, mental analysis), (2) Coping to divert attention (withdrawal and mental confusion), and (3) Withdrawal-oriented coping (expression of unpleasant emotions and social withdrawal). The scale is divided into three sub-scales: (1) Task-oriented coping (imagining, making an effort, thought control, support, relaxation, mental analysis), (2) Withdrawal-oriented coping (withdrawal and mental Deconfliction), (3) Withdrawal-oriented coping (expression of unpleasant emotions and social withdrawal), (3) Withdrawal-oriented coping, (3) Withdrawal-oriented coping, (3) Withdrawal-oriented coping, (3) Withdrawal-oriented coping.

At the completion of the scale, athletes are asked to indicate how much they used or thought about the situations mentioned in each item during the match. The coping methods used by athletes in sports are evaluated with a 5" likert-type scale in the form of not fitting at all (1), sleeping a little (2), sleeping occasionally (3), sleeping (4) and completely sleeping (5). Dec.

The scoring of the scale is done by collecting the items that make up the 10 subscales. There is no inverse matter in the scale. A high score indicates that the athlete prefers that coping strategy more or more often in coping with stressful situations. Low scores, on the other hand, indicate that this strategy is used less or not at all in coping with stress.

Analysis of the Data

Data analysis was performed with IBM SPSS Statistical 25 program. Percentage and frequency values were taken for the demographic variables of the participants (gender, age, sports age, athlete level and mileage status).

As can be seen in Table 1, as a result of the (skewness-kurtosis) test, it was concluded that the data showed a normal distribution. George and Mallery (2003) stated that if the skewness and kurtosis values are in the December range of +2 to –2, the distribution can be interpreted as normal [13]. The *t*-test was applied in binary group comparisons using parametric tests in the data, the ANOVA test was applied in comparing more than two groups, and the Post Hoc Tukey multiple comparison test was applied to Decipher the difference between the groups.

When the demographic values are examined in Table 2, the study consists of 134 athletes, of which 77,6 % are men with 104 people and 22,4 % are women with 30 people. According to the age variable; 23,1 % of them are between the ages of 17–19, 27,6 % are between the ages of 20–21, 30,6 % are between the ages

Table 1

Normality Test

Scale	Skewness	Kurtosis
Thought Control	–0,416	–0,834
Imagination	–0,372	–0,294
Relaxation	–0,378	–0,414
Don't Make An Effort	–0,351	–0,695
Logical Search Decryption	–0,759	–0,230
Don't Search for Social Support Dec	–0,436	–0,678
Social Withdrawal	–0,196	–0,406
Mental Disorder	–0,049	–0,465
resignation	–0,201	–0,587
Expression of Unpleasant Feelings	0,153	–0,283
COPING WITH STRESS IN GENERAL	0,331	0,098

FINDINGS

Table 2

Frequency Distribution Related to Socio-Demographic Characteristics

	Demographic Changes	Frequency	Percent (%)
Age	17–19 Age	31	23,1
	20–21 Age	37	27,6
	22–23 Age	41	30,6
	24 Age and Above	25	18,7
	Total	134	100
Gender	Man	104	77,6
	Women	30	22,4
	Toplam	134	100
Athlete Level	Amateur	90	67,2
	Professional	44	32,8
	Total	134	100
Nationality Status	Yes	39	29,1
	No	95	70,9
	Total	134	100
Sports Year	1–2 Year	48	35,8
	3–4 Year	31	23,1
	5–6 Year	27	20,1
	7 Year and Above	28	20,9
	Total	134	100

of 22–23 and 18,7 % are students aged 24 and older; according to the athlete level: 67,2 % of them are amateur athletes with 90 people, 32,8 % of them are professional athletes with 44 people. It was determined that 35,8 % of the participants had a sports year of 1–2 years, 23,1 % had a sports year of 3–4 years, 20,1 % had a sports year of 5–6 years and 20,9 % had a sports year of 7 years or more. It has been determined that 70,9 % of judoka are not national athletes and 29,1 % are national athletes.

When Table 3 was examined, it was found that the difference in the participants' general stress coping level score was significant according to the gender variable ($p < 0,05$).

Table 3

Gender-based *t*-test results of stress coping scores

General and Sub-Dimensions of the Scale	Gender	*N*	$\bar{x}$	*ss*	*t*	*sd*	*p*
Thought Control	Man	104	16,27	2,92	0,406	132	0,686
	Women	30	16,03	2,34			
Don't Dream	Man	104	16,47	2,55	3,463	132	**0,001****
	Women	30	14,60	2,81			
Relaxation	Man	104	15,82	3,27	1,363	132	0,175
	Women	30	14,90	3,17			
Don't Make An Effort	Man	104	12,55	2,05	1,408	132	0,161
	Women	30	11,97	1,85			
Logical Search Decryption	Man	104	16,27	3,17	2,888	132	**0,005****
	Women	30	14,30	3,70			
Don't Search for Social Support Dec	Man	104	16,38	2,99	–0,425	132	0,672
	Women	30	16,63	2,72			
Social Withdrawal	Man	104	12,89	3,99	1,656	132	0,099
	Women	30	11,53	3,88			
Mental Disorder	Man	104	13,21	3,44	2,688	132	**0,006****
	Women	30	12,00	3,54			
Withdrawal	Man	104	13,54	3,78	1,392	132	0,166
	Women	30	12,43	4,02			
Expression of Unpleasant Feelings	Man	104	12,94	3,64	2,517	132	**0,004****
	Women	30	11,50	3,58			
COPING WITH STRESS IN GENERAL	Man	104	145,51	21,13	2,457	132	**0,015***
	Women	30	135,00	18,80			

Note: ** — $p < 0,01$, * — $p < 0,05$.

In terms of gender, significant differences were found in the participants' expression of unpleasant emotions, mental confusion, logical search and imagining sub-dimension scores ($p < 0$ Dec 05). When arithmetic values were examined in terms of gender, it was found that men had a higher average value than women with the imagination sub-dimension ($x = 16,47$) average, logical search

sub-dimension (x = 16,27) average, mental confusion sub-dimension (x = 13,21) average, expression of unpleasant emotions sub-dimension (x = 12,94) average and general stress coping level (x = 145,51) average (see Table 4).

Table 4

***T*-test results of stress coping scores according to athlete levels**

General and Sub-Dimensions of the Scale	Athlete Level	*N*	$\bar{x}$	*ss*	*t*	*sd*	*p*
Thought Control	Professional	44	16,27	2,90	0,162	132	0,871
	Amateur	90	16,19	2,76			
Don't Dream	Professional	44	16,41	3,04	1,065	132	0,289
	Amateur	90	15,88	2,54			
Relaxation	Professional	44	15,77	3,83	0,398	132	0,691
	Amateur	90	15,53	2,96			
Don't Make An Effort	Professional	44	12,73	2,09	1,234	132	0,219
	Amateur	89	12,27	1,97			
Logical Search Decryption	Professional	44	16,61	3,78	2,156	132	0,**047***
	Amateur	90	15,44	3,12			
Don't Search for Social Support Dec	Professional	44	16,32	3,30	–0,316	132	0,752
	Amateur	90	16,49	2,74			
Social Withdrawal	Professional	44	13,39	4,64	2,826	132	0,**004****
	Amateur	90	12,20	3,60			
Mental Disorder	Professional	44	13,27	3,55	0,770	132	0,442
	Amateur	90	12,78	3,47			
Withdrawal	Professional	44	13,80	4,30	1,062	132	0,290
	Amateur	90	13,04	3,60			
Expression of Unpleasant Feelings	Professional	44	13,20	4,39	1,295	132	0,198
	Amateur	90	12,33	3,25			
COPING WITH STRESS IN GENERAL	Professional	44	146,89	25,98	1,441	132	0,152
	Amateur	90	141,33	18,02			

Note: ** — $p < 0,01$, * — $p < 0,05$.

There was no significant difference in the participants' overall stress coping level score according to the athlete level, except for the logical search and social withdrawal sub-dimensions, and in all other stress coping sub-dimensions ($p > 0,05$).

When arithmetic values were examined in terms of athlete level, it was found that professional-level athletes had a higher average value than amateur-level athletes with average values of logical search sub-dimension (x = 16,61) and social withdrawal sub-dimension (x = 13,39) Deciencies (see Table 5).

According to the nationality of the athletes participating in the study, there was no significant difference in the overall stress coping level score except for the imagining and social support search sub-dimensions and in all other stress coping sub-dimensions ($p > 0,05$).

Table 5

***t*-test results of stress coping scores according to nationality status**

General and Sub-Dimensions of the Scale	Nationality Status	*N*	$\bar{x}$	*ss*	*t*	*sd*	*p*
Thought Control	Yes	39	16,21	3,05	–0,030	132	0,976
	No	95	16,22	2,71			
Don't Dream	Yes	39	16,72	2,89	2,022	132	0,**047***
	No	95	15,78	2,60			
Relaxation	Yes	39	15,46	3,60	–0,341	132	0,733
	No	95	15,67	3,13			
Don't Make An Effort	Yes	39	12,51	2,11	0,337	132	0,737
	No	95	12,38	1,98			
Logical Search Decryption	Yes	39	15,85	3,79	0,039	132	0,969
	No	95	15,82	3,22			
Don't Search for Social Support Dec	Yes	39	15,67	3,25	–2,013	132	0,**048***
	No	95	16,75	2,74			
Social Withdrawal	Yes	39	12,72	4,15	0,238	132	0,812
	No	95	12,54	3,95			
Mental Disorder	Yes	39	12,82	3,18	–0,254	132	0,800
	No	95	12,99	3,62			
Withdrawal	Yes	39	12,62	4,43	–1,307	132	0,193
	No	95	13,57	3,57			
Expression of Unpleasant Feelings	Yes	39	12,36	3,97	–0,525	132	0,600
	No	95	12,73	3,55			
COPING WITH STRESS IN GENERAL	Yes	39	142,13	24,16	–0,362	132	0,718
	No	95	143,58	19,73			

Note: * — $p < 0,05$.

When arithmetic values were examined in terms of nationality status: it was observed that while the average value was high Deci-Decently in national athletes in the imagination sub-dimension (x = 16,72), it had a high average value among non-national athletes with an average value in the social support search sub-dimension (x = 16,75) (see Table 6).

Table 6

ANOVA results of stress scores according to age variable

	Age	*N*	$\bar{x}$	*ss*	*F*	*p*	Significance
Thought Control	17–19 Year (1)	31	15,03	2,50	2,822	**0,041***	2 > 1
	20–21 Year (2)	37	16,86	2,98			
	22–23 Year (3)	41	16,27	2,79			
	24 Year and Above (4)	25	16,64	2,56			
	Total	134	16,22	2,80			

Age		*N*	$\bar{x}$	*ss*	*F*	*p*	Significance
Don't Dream	17–19 Year (1)	31	14,77	2,36	3,151	**0,027***	3 > 1
	20–21 Year (2)	37	16,46	2,82			
	22–23 Year (3)	41	16,49	2,63			
	24 Year and Above (4)	25	16,32	2,75			
	Total	134	16,05	2,71			
Relaxation	17–19 Year (1)	31	14,55	3,01	2,288	0,082	
	20–21 Year (2)	37	16,57	3,44			
	22–23 Year (3)	41	15,71	2,90			
	24 Year and Above (4)	25	15,36	3,57			
	Total	134	15,61	3,26			
Don't Make An Effort	17–19 Year (1)	31	11,61	1,84	4,060	**0,009****	2 > 1
	20–21 Year (2)	36	13,14	1,69			
	22–23 Year (3)	41	12,15	2,21			
	24 Year and Above (4)	25	12,84	1,97			
	Total	133	12,42	2,02			
Logical Search Decryption	17–19 Year (1)	31	15,03	3,02	0,950	0,419	
	20–21 Year (2)	37	15,73	3,88			
	22–23 Year (3)	41	16,20	3,30			
	24 Year and Above (4)	25	16,36	3,15			
	Total	134	15,83	3,38			
Don't Search for Social Support Dec	17–19 Year (1)	31	16,29	2,56	3,811	**0,012***	2 > 4
	20–21 Year (2)	37	17,57	2,66			
	22–23 Year (3)	41	16,32	3,00			
	24 Year and Above (4)	25	15,12	3,13			
	Total	134	16,43	2,92			
Social Withdrawal	17–19 Year (1)	31	12,39	3,30	1,061	0,368	
	20–21 Year (2)	37	12,70	4,83			
	22–23 Year (3)	41	13,29	3,66			
	24 Year and Above (4)	25	11,52	3,90			
	Total	134	12,59	3,99			
Mental Disorder	17–19 Year (1)	31	12,32	2,66	2,334	0,077	
	20–21 Year (2)	37	13,19	4,12			
	22–23 Year (3)	41	13,88	2,97			
	24 Year and Above (4)	25	11,80	3,86			
	Total	134	12,94	3,49			

Age		*N*	$\bar{x}$	*ss*	*F*	*p*	Significance
Withdrawal	17–19 Year (1)	31	13,26	2,42	2,259	0,085	
	20–21 Year (2)	37	13,43	4,36			
	22–23 Year (3)	41	14,17	3,75			
	24 Year and Above(4)	25	11,68	4,31			
	Total	134	13,29	3,84			
Expression of Unpleasant Feelings	17–19 Year (1)	31	12,19	2,37	0,898	0,444	
	20–21 Year (2)	37	12,78	4,01			
	22–23 Year (3)	41	13,24	3,95			
	24 Year and Above(4)	25	11,88	3,98			
	Total	134	12,62	3,67			
COPING WITH STRESS IN GENERAL	17–19 Year (1)	31	136,90	13,18	2,304	0,080	
	20–21 Year (2)	37	147,43	24,88			
	22–23 Year (3)	41	146,83	21,91			
	24 Year and Above (4)	25	138,56	19,54			
	Total	134	143,16	21,03			

Note: ** — $p < 0,01$, * — $p < 0,05$.

There were no significant differences in the general dimensions of coping with stress and relaxation, logical search, social withdrawal, mental confusion, withdrawal, expression of unpleasant emotions in athletes according to age variables ($p > 0,05$).

According to the age variable of judoka, significant differences were found in the sub-dimensions of thought control, imagining, making efforts and seeking social support of the scale ($p < 0,05$).

A significant difference was found in the thought control sub-dimension of the scale according to the age variable of the participants ($p < 0,05$). As a result of the Post-Hoc Tukey Multiple Comparison Test conducted to determine which group the difference was caused by; The difference between the 17–19 age group and the 20–21 age group was found to be significant ($p < 0$ Dec 05). When the average values of the thought control sub-dimension were examined, it was observed that the highest value ($x = 16,86$) was in the group between the ages of 20–21 Dec, and the lowest value ($x = 15,03$) was in the group between the ages of 17–19 Dec.

A significant difference was found in the imagining sub-dimension of the scale according to the age variable of the athletes ($p < 0,05$). As a result of the Post-Hoc Tukey Multiple Comparison Test conducted to determine which group the difference was caused by; The difference between the 17–19 age group and the 22–23 age group was found to be significant ($p < 0$ Dec 05). When the average values of the imagination dimension were examined, it was observed that the highest value ($x = 16,49$) was in the group between the ages of 22–23 Dec, and the lowest value ($x = 14,77$) was in the group between the ages of 17–19 Dec.

A significant difference was found in the effort making sub-dimension of the scale according to the age variable of the participants ($p < 0,05$). As a result of the Post-Hoc Tukey Multiple Comparison Test conducted to determine which group the difference was caused by; The difference between the 17–19 age group and the 20–21 age group was found to be significant ($p < 0$ Dec 05). When the average values of the effort sub-dimension were examined, it was observed that the highest value ($x = 13,14$) was in the group between the ages of 20–21 Dec, and the lowest value ($x = 11,61$) was in the group between the ages of 17–19 Dec.

A significant difference was found in the social support search sub-dimension of the scale according to the age variable of the athletes ($p < 0,05$). Dec. As a result of the Post-Hoc Tukey Multiple Comparison Test conducted to determine which group the difference was caused by; The Deciency between the 20–21 age group and the 24 age group and older was found to be significant ($p < 0,05$).

When the average values of the social support search sub-dimension were examined, it was observed that the highest value ($x = 17,57$) was in the group between the ages of 20–21 Dec, and the lowest value ($x = 15,12$) was in the group aged 24 Dec and over (see Table 7).

Table 7

ANOVA results of stress scores according to the sports year variable

Sports Year		*N*	$\bar{x}$	*ss*	*F*	*p*	Significance
Thought Control	1–2 Year (1)	48	16,29	2,83	1,018	0,387	
	3–4 Year (2)	31	15,97	2,75			
	5–6 Year (3)	27	16,93	2,20			
	7 Year and Above (4)	28	15,68	3,27			
	Total	134	16,22	2,80			
Don't Dream	1–2 Year (1)	48	15,96	2,67	2,789	**0,045***	3 > 2
	3–4 Year (2)	31	15,13	2,73			
	5–6 Year (3)	27	17,07	2,50			
	7 Year and Above (4)	28	16,25	2,73			
	Toplam	134	16,05	2,71			
Relaxation	1–2 Year (1)	48	15,60	2,96	1,816	0,147	
	3–4 Year (2)	31	15,32	2,91			
	5–6 Year (3)	27	16,78	2,83			
	7 Year and Above (4)	28	14,82	4,22			
	Total	134	15,61	3,26			
Don't Make An Effort	1–2 Year (1)	48	12,23	2,02	1,401	0,246	
	3–4 Year (2)	31	12,00	1,95			
	5–6 Year (3)	27	12,96	2,07			
	7 Year and Above (4)	28	12,68	1,98			
	Total	134	12,42	2,02			

Sports Year		*N*	$\bar{x}$	*ss*	*F*	*p*	Significance
Logical Search Decryption	1–2 Year (1)	48	14,67	3,30	4,909	**0,003****	3 > 1
	3–4 Year (2)	31	15,81	3,16			
	5–6 Year (3)	27	17,63	2,65			
	7 Year and Above (4)	28	16,11	3,71			
	Total	134	15,83	3,38			
Don't Search for Social Support Dec	1–2 Year (1)	48	16,73	2,51	1,878	0,137	
	3–4 Year (2)	31	16,26	2,77			
	5–6 Year (3)	27	17,15	3,25			
	7 Year and Above (4)	28	15,43	3,27			
	Total	134	16,43	2,92			
Social Withdrawal	1–2 Year (1)	48	11,88	3,91	2,104	0,103	
	3–4 Year (2)	31	12,42	3,79			
	5–6 Year (3)	27	14,22	3,85			
	7 Year and Above (4)	28	12,43	4,24			
	Total	134	12,59	3,99			
Mental Disorder	1–2 Year (1)	48	13,08	3,59	2,775	**0,047***	2 > 4
	3–4 Year (2)	31	13,74	2,25			
	5–6 Year (3)	27	13,30	4,00			
	7 Year and Above (4)	28	11,46	3,65			
	Total	134	12,94	3,49			
Withdrawal	1–2 Year (1)	48	13,50	3,92	1,795	0,151	
	3–4 Year (2)	31	13,16	3,36			
	5–6 Year (3)	27	14,37	3,98			
	7 Year and Above (4)	28	12,04	3,92			
	Total	134	13,29	3,84			
Expression of Unpleasant Feelings	1–2 Year (1)	48	12,23	3,33	0,318	0,813	
	3–4 Year (2)	31	12,90	3,47			
	5–6 Year (3)	27	12,96	4,24			
	7 Year and Above (4)	28	12,64	3,96			
	Total	134	12.62	3.67			
COPING WITH STRESS IN GENERAL	1–2 Year (1)	48	141,23	19,78	2,347	0,076	
	3–4 Year (2)	31	142,23	18,11			
	5–6 Year (3)	27	152,30	22,62			
	7 Year and Above (4)	28	138,68	22,98			
	Toplam	134	143,16	21,03			

Note: ** — $p < 0{,}01$, * — $p < 0{,}05$.

According to the sports year variable of the participants, there was no significant difference in the overall stress coping level score except for the "imagining, logical search and mental confusion" sub-dimensions and in all other stress coping sub-dimensions ($p > 0,05$).

A significant difference was found in the imagining sub-dimension of the scale according to the sports year variable of the athletes ($p < 0,05$). As a result of the Post-Hoc Tukey Multiple Comparison Test conducted to determine which group the difference is caused by; The difference was found to be significant between judoka with 5–6 years of sports experience and groups with 3–4 years of sports experience ($p < 0,05$). When the average values of the imagination sub-dimension were examined; it was observed that the highest value ($x = 17,07$) was in the group with a 5–6 year sports year, and the lowest value ($x = 15,13$) was in the group with a 3–4 year sports year.

A significant difference was found in the logical search sub-dimension of the scale according to the participants' sports year variable ($p < 0,05$). As a result of the Post-Hoc Tukey Multiple Comparison Test conducted to determine which group caused the difference; It was found that the difference was significant between judoka with 5–6 years of sports experience and groups with 1–2 years of sports experience ($p < 0$ Dec 05). When the average values of the logical search sub-dimension were examined, it was observed that the highest value ($x = 17,63$) was in the group with a 5–6 year sports year, and the lowest value ($x = 14,67$) was in the group with a 1–2 year sports year.

A significant difference was found in the mental disorder sub-dimension of the scale according to the athletes' sports year variable ($p < 0,05$). As a result of the Post-Hoc Tukey Multiple Comparison Test conducted to determine which group caused the difference; It was found that the difference was significant between judoka with 3–4 years of sports experience and groups with 7 years of sports experience and above ($p < 0,05$). When the average values of the mental disorder sub-dimension were examined; it was observed that the highest value ($x = 13,74$) was in the group with a sports year of 3–4 years, and the lowest value ($x = 11,47$) was in the group with a sports year of 7 years and above.

Discussion and conclusion

When the demographic variables of the athletes participating in the study were examined, 77,6 % of them were men with 104 people, and 22,4 % of them were women with 30 people, consisting of 134 athletes in total. According to the age variable; 23,1 % of them are between the ages of 17–19, 27,6 % are between the ages of 20–21, 30,6 % are between the ages of 22–23 and 18,7 % are students aged 24 and older; according to the athlete level: 67,2 % of them are amateur athletes with 90 people, 32,8 % of them are professional athletes with 44 people. It was determined that 35,8 % of the participants had a sports year of 1–2 years, 23,1 % had

a sports year of 3–4 years, 20,1 % had a sports year of 5–6 years and 20,9 % had a sports year of 7 years or more. It has been determined that 70,9 % of judoka are not national athletes and 29,1 % are national athletes.

It has been concluded that there is a significant difference in the general level of coping with stress score according to the gender variable of the athletes participating in the research. It has been determined that this difference has a higher mean value for men than women. In the study of M. C. Çetin (2009) in which he examined the decision-making styles, social skill levels and ways of coping with stress of BESYO students, it was found that there was a significant difference between the genders of the students and their styles of coping with stress [9]. It was determined that the mean score of the male students was significantly higher than that of the male students.

N. Arsan (2007) found a significant difference in the use of support seeking and avoidance strategies in coping with male and female athletes. There was no significant difference in their use of cognitive and physical effort, relaxation, social withdrawal and expressing unpleasant emotions strategies [1].

According to the athlete level variable of the athletes participating in the research, it was concluded that there was a significant difference in the levels of coping with stress in the logical search and social withdrawal sub-dimensions. It has been determined that this difference has a higher average value than the athletes at the professional level compared to the athletes at the amateur level.

It has been concluded that there is a significant difference in the levels of coping with stress in the sub-dimensions of dreaming and seeking social support according to the nationality status of the athletes participating in the research.

It has been concluded that there is a significant difference in the social support seeking sub-dimension of the scale according to the age variable of the athletes participating in the research. As a result of the Post-Hoc Tukey Multiple Comparison Test conducted to determine which group the difference originated from; There was a significant difference between the 20–21 age group and the 24 and over age group. In their study, E. Bebetsos and P. Antoniou (2003) revealed that older athletes were better prepared to cope with negativities and showed higher emotional control [5]. Reaching a similar conclusion, M. J. Goyen and M. H. Anshel (1998) concluded that adult athletes are more successful in using coping strategies than adolescent athletes [12]. When the stress coping styles of the participants were compared in terms of age, it was determined that there was no statistically significant difference between the ages of the participants in the study of "The Ways of Coping with Stress of Physical Education and Sports Teachers Working in Primary and Secondary Schools" by H. Kırımoğlu, Y. Yıldırım, and A. Temiz (2011) [17].

A significant difference was found in the mental confusion sub-dimension of the scale according to the sports year variable of the athletes participating in the research. As a result of the Post-Hoc Tukey Multiple Comparison Test conducted to determine which group the difference originated from; There was a significant difference between the judokas with 3–4 years of sports experience

and the groups with 7 or more years of sports experience. There are studies that show that as individuals' age and experience increase, their strategies for coping with stress increase. For example, studies by Z. Tuncel, A. M. Yalçınkaya (2000) [20], Balcı (2000) [2], Bulut (2005) [7]. In this context, the findings obtained from these studies do not show similarities with the findings obtained in this study. On the other hand, in studies conducted with different groups, for example, Z. Tuncel, A. M. Yalçınkaya (2000) [20], Çardak (2002) [8] stated that age has no effect on strategies for coping with stress. In a study in which M. Eraslan, A. Karafil and E. Atay (2017) evaluated the methods of coping with stress in terms of the duration of doing sports, a decrease was observed in the mean scores of coping with stress as the duration of doing sports increased, and no significant differences were found [15].

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