

**DETERMINATION OF STRESS FACTORS ACCORDING TO VARIABLES AND  
INVESTIGATION OF THEIR RELATION TO EMPATHETICAL INCLINATION OF  
KARATE REFEREES<sup>1</sup>**

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**ABSTRACT**

The aim of this research is to determine the stress factors of the karate judges according to different variables and the relation with the level of empathic inclination. The sample of the research consist of 17 women and 81 men who work in international, national and regional matches (N = 98) as karate referees in different region of Turkey during 2016- 2017 seasons. As data collection scales "stress factor scale for football referees" which created by Çakmak (2011) and" Empathic inclination Scale" created by Dökmen (1988) were used. Analysis of the data showed that the average individual stress level of female judges and the environmental stress scores of the female referees were higher than the average scores of male referees in environmental stress points. When the relationship between the empathy scores of the referees and the individual and organizational stress factor scores were examined, there was a negative and low level relationship between empathy levels and individual- environmental stress levels. As a result; when the stress sources of karate referees were examined, it can be said that significant differences were found according to gender, age, marital status and experience as referee variables, and the level of empathic inclination has no effect on the stress factors.

**Keywords:** Referees, stress factors, empathic inclination.

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## INTRODUCTION

Refereeing is the symbol of honesty. It is important that the referees are psychologically durable as well as their physical and mental competences. The pressure on the referees who work in the field and in the halls is high. During the competition the referees have to give their decisions within a very short period of time. It is important to be able to make decisions quickly at any time during the game, even though it is under the physical and psychological burden during the competition as "the person who is assigned to detect the numbers taken in the competition and punish those who do not comply with the rules" (Cengiz and Pulur, 2004). The referee can make the right decision as long as he feels himself safe in every aspect. Unmanaged stress has negative influence on objective judgment.

Ponzo and Scoppa (2014) stated that the influence of the home team fans on the referees could make decisions for the home team. Pizzi (2008) stated that in recent years, clubs have spent millions of dollars on sportsmen and technical staff, and that athletes competing in individual sports are also receiving high fees and that the results of the competition are changing due to improper decisions by the referees. Where there is a person, the error will always be, but it is necessary to reduce these errors to a minimum level. Perfect refereeing is to absorb the rules of the game thoroughly and to apply them correctly.

There are many psychological phenomena that affect the performance of the sports. It will be influenced by the referee as if the athlete is affected from these psychological occurrences. The referees, who manage the competitions, are worrying before and after the competition (Polat, 2011). One of the important elements for the referee is to be able to remain calm under difficult conditions and to make the right decisions.

There are many psychological phenomena that affect performance in sports such as fear, anxiety, motivation, mood, concentration and visualization (Karageorghis and Terry, 2017). The judges must be very strong psychologically in order to cope with coaches, players and spectators who have high level of adrenaline. Dohmen (2008) stated that the psychological state is important in using the referee's performance and skill, and that the level of anxiety that the judge has may affect the course of the match negatively.

Lazarov (2006) stated that a fairly educated, referee, jury or executioner must be a pedagogue, and that a friendly smile that is to be done at the right time is strictly more effective than the rules. Mellick et al. (2005) emphasized that communication skills have a crucial role in refereeing, as in "miscommunication practices cause stress for referees and athletes."

One of the most important factors in the sports are the referees, and the referees may improve themselves in rule knowledge, communication skills, body language and in many other subject points of view could only be possible thru education provided by the federations. It is very important that the training and seminars of the referees, who are influenced by the decision and the effect of the decisions, will be fruitful (Karaçam, 2013). It is also thought that the personality traits of the referees have an effect on the stress factors that are affected.

Stress is the effort which one shows beyond their physical and psychological limits due to one's physically and socially challenging environment (Cüceloğlu, 1991). Although the concept of stress is deemed as negative, it can be considered a positive pressure if one can obtain any gain from it (Robbins et al., 2013).

Sleep disorders, palm sweating, foul mood, lack of energy, maladaptive behavior, irritability and rage may occur among individuals who are under stress (Jones et al., 2000).

Empathy, which is a personality characteristic, is an important concept frequently mentioned in psychiatry and psychology. There has been a lot of research on empathy in various fields of psychiatry and psychology, especially in clinical and social psychological development, counseling, school and communication psychology fields (Dökmen, 2005).

Empathy is described as the conscious intellectual effort of an individual to understand another and to enter his inner world (Davis, 2018). The main element in relational empathy is that an individual, feels like he or she is alive while he or she is listening to the other person. People with empathic inclination can put themselves into the lives of other people and understand how these people feels (Hançer and Tanrısevdi, 2003).

When empathic understanding is used in communication in a precise and sensitive way, the empathic person will be more relaxed, expressing the perceptions and meanings of events more easily (Vincent, 2002).

Empathic behavior is important in decreasing hostility within sports. It is believed that mutual understanding, good and correct communication has a positive effect not only among athletes, trainers and referees who work under harsh conditions, but also among spectators (Karabulut et al., 2014).

Karate-do is split into two categories namely traditional and athletic karate-do. Traditional karate-do is a path of self-improvement which drives one to be the best version of themselves. In traditional karate-do, instead of competitiveness, the skills that enable one to control their ego are emphasized. Athletic karate-do, which has roots in traditional karate-do, has a modern sports perception that is more Olympics oriented. Athletic karate-do competitions are held within universal athletic rules which depend on a conception of evaluating physical skills using certain judgment ([www.karate.gov.tr](http://www.karate.gov.tr), 2018). Both shortness of competition durations and movements being numerous and very fast requires referees to be vigilant at the highest possible level.

The aim of this study is to determine the stress factors of the karate referees and the relation with the level of empathic tendency. The following questions have been answered within this framework.

- Does the individual, environmental and organizational stress scores of Karate referees differ according to gender, age, marital status, educational status, year of refereeing (experience) and classification variables?

- What are the factors that cause stress in the individual, environmental and organizational sub-dimensions of karate referees?
- Is there a relation between empathic tendency level and stress factors of karate referees?

## METHOD

This study was conducted in accordance with the 'relational screening model'. The relational screening model is defined as "a research model aimed at determining the presence of the exchange of variables together and / or the degree of interchange between two or more variables" (Karasar, 2005).

In addition, it was examined whether there were any differences according to the demographic variables in the subscales of the scale, and the main reasons causing the stress according to the total scores of the scale were tried to be revealed.

### Study Group

The research universe consists of 132 referees in different provinces of Turkey, employed in international, national and regional karate competitions in 2016-2017. The sample data has been collected from 98 (17 women and 81 men) karate referees.

**Tablo 1.** Frequency and Percentage Distribution of Variables

Variables	Group	Frequency	Percentage
Gender	Female	17	17,5
	Male	80	82,5
	<b>Total</b>	<b>97</b>	<b>100,0</b>
Age	20-25	18	18,6
	26-30	17	17,5
	31-35	62	63,9
	<b>Total</b>	<b>97</b>	<b>100,0</b>
Marital Status	Married	67	69,1
	Single	30	30,9
	<b>Total</b>	<b>97</b>	<b>100,0</b>
Educational Level	Primary	11	11,3
	High School	46	47,4
	Collage	40	41,2
	<b>Total</b>	<b>97</b>	<b>100,0</b>
Refereeing Years	0-5	33	34,0
	6-10	29	29,9
	11-15	13	13,4
	16 and over	22	22,7
	<b>Total</b>	<b>97</b>	<b>100,0</b>
Classifications	Regional	17	17,5
	National	44	45,4
	International	35	36,1
	<b>Total</b>	<b>97</b>	<b>100,0</b>

It is observed that 82% of referees are male, 64% are within the ages of 31-35, 70% are married. 47% of referees graduated from high school while, 41% has a bachelor's degree or more. It is determined that 34% of participants have 5 or fewer years of experience as a referee and 45% has participated in international competitions.

### Data Collection

As a data gathering tool, personal information form, stressors in the referees and empathic tendency scale were used. 8 items of "Stress Factors in Football Referees Scale" developed by Çakmak (2011) and composed of 50 items were made by taking expert opinion for the scope of validity. In addition to this, the word interchange (technical director-coach, player-athlete, next match-next competition) was made to be suitable for karate referees.

The Cronbach Alpha values were .897 for the individual factors, .927 for the environmental factors and .917 for the organizational factors. The range of options in the five-rating scale; "I definitely do not participate" (1.00-1.79), "I do not participate" (1.80-2.59), "Undecided" (2.60-3.39), "I agree" (3.40-4.19) and "I absolutely agree" (4.20-5.00). The "Empathic Tendency Scale" developed by Dökmen (1988) consists of 20 items. The "Cronbach Alpha" score of this scale was .753. To control the tendency of the individual to say "yes" on the scale, 8 items are written as negative. Likert type rating is applied in questionnaire and if the responses to the scale items are "Completely Appropriate", 5, "Fairly Appropriate" 4, "Undecided" 3, "Quite Inappropriate" 2, "Completely Inappropriate" 1 is used as ratings.

### Data Analysis

For the analysis of the data, parametric test assumptions were examined first. Accordingly, the appropriate statistical method was determined for the analysis.

In this study, the normality of distribution was investigated with Kolmogorov-Smirnov (K-S) and Shapiro-Wilks tests. If the scores at the  $\alpha = .05$  level are not statistically significant, then the scores are not deviated from the normal distribution, ie, they are normally distributed. Independent groups t test and variance analysis were used for the variables that provided parametric test assumptions. In cases where the assumptions are not met, the nonparametric variations of these tests, "Mann Whitney U" and "Kruskal Wallis", are used and the Descriptive Statistics and Mean Values are given.

## RESULTS

## 1. Are individual, environmental and organizational stress scores of referees varied by gender?

Tables 2, 3 and 4 present the results of gender-t test and Mann-Whitney U test for the individual, environmental and organizational stress scores of the referees.

**Table 2.** Test Results of Individual Stress Scores According to Gender

Gender	n	M	SD	df	t	p
Female	17	64,76	15,38	96	1,748	0,084
Male	81	58,85	12,07			

\*p<0.05

When Table 2 is examined, it is seen that the average scores of female stressors ( $\bar{X}_{\text{female}} = 64,76$ ) are higher than male athletes ( $\bar{X}_{\text{male}} = 58,85$ ). According to this, it can be said that female referees are more influenced by individual stressors than male referees. According to the t-test result in which the statistical significance of the difference between the individual stress factor score averages is examined, it is seen that this difference between mean scores is not significant ( $t(96) = 0,084, p > 0,05$ ).

**Table 3.** Gender Response-Test Results of Environmental Stress Scores

Group	n	Mean Rank	Sum of Rank	U	p	r
Female	17	68,03	1156,50	373,50	0,003*	0,298
Male	81	45,61	3694,50			

\*p<0.05

When Table 3 is examined, it is seen that the average level of environmental stress score ( $M=68,03$ ) of male referees is higher than that of female judges ( $M=45,61$ ). This difference between the mean of the ranks was found to be statistically significant ( $U = 373,50, p < 0,05$ ). This finding shows that female referees are more influenced by environmental stress sources than male referees. The calculated effect size value ( $r = 0.30$ ) revealed that this difference between female and male referees' perceptions of environmental stress was moderate and that gender revealed 9% of the variance of environmental stress scores.

**Table 4.** Gender-Related Test Results of Organizational Stress Scores

Group	n	Mean Rank	Sum of Rank	U	p
Female	17	50,15	852,50	677,50	0,918
Male	81	49,36	3998,50		

\*p<0.05

According to Table 4, it is seen that the average level of organizational stress scores of female referees ( $M=50,15$ ) are higher than average level of organizational stress scores of female referees ( $M=49,36$ ).

It was found that this difference in mean of the line was not statistically significant ( $U = 677,50$   $p > 0.05$ ). According to this, organizational stress scores did not change according to gender.

## 2. Are the individual, environmental and organizational stress scores of the referees varied by age level?

**Table 5.** ANOVA Results According to Age Variance of Stress Factor Scores

Factor	Age	N	$\bar{X}$	Sd	F	p	Sig.Diff	$\eta^2$
Individual	20-30	18	60,22	9,62	1,345	,266	-	
	31-40	17	64,29	13,92				
	41 and over	63	58,59	13,21				
Enviromental	20-30	18	51,17	8,27	6,177	,003*	31-40 ile 41 and over	0,115
	31-40	17	55,06	17,18				
	41 and over	63	43,70	12,88				
Organizational	20-30	18	40,06	9,57	6,714	,002*	31-40 ile 41 and over	0,124
	31-40	17	45,23	7,32				
	41 and over	63	36,36	9,31				

\* $p < 0.05$

When Table 5 was examined, it was found that the scores of the individual, environmental and organizational factors leading to the stress in the referees were  $\bar{X}_{41 \text{ and over}}$  and above ( $\bar{X}_{41 \text{ and over}} = 58,59$ ;  $\bar{X}_{41 \text{ and over}} = 43,7$ ;  $\bar{X}_{41 \text{ and over}} = 36,36$ ) The highest for age 31-40 age groups is ( $\bar{X}_{31-40} = 64,29$ ;  $\bar{X}_{31-40} = 55,06$ ;  $\bar{X}_{31-40} = 45,23$ ). When Table 5 is examined, it is seen that the individual factors that lead the stress in the referees did not change according to the age range of the referees ( $F(2,95) = 1,345$ ,  $p > 0,05$ ). On the other hand, the environmental and organizational stress scores of referees vary significantly according to their age levels ( $F(2,95) = 6,177$ ,  $p < 0,05$ ,  $F(2,95) = 6,714$ ,  $p < 0,05$ ).

In other words, referees are affected by environmental and organizational stress sources at different levels according to age groups. According to the results of multiple comparisons of the differences between the age groups, it was concluded that the age group of 31-40 was significantly influenced by environmental and organizational factors than those of the age group of 40 and above. It was also shown that the age variable explained 12% of the variance in both environmental and organizational factor scores that led to the stressing situation for referees.

## 3. Are the individual, environmental and organizational stress scores of referees changing according to their marital status?

**Table 6.** Test Results of Individual Stress Points According to Marital Status Variable

Marital Status	n	M	SD	df	t	p
Married	68	59,79	13,13	96	-,097	0,923
Single	30	60,06	12,26			

\* $p < 0.05$

**Table 7.** Results of t Test on Marital Status Variability of Organizational Stress Scores

Marital Status	n	M	SD	df	t	p
Married	68	38,42	9,31	96	-,240	0,811
Single	30	38,93	10,29			

\*p&lt;0.05

**Table 8.** U-Test Results of Environmental Stress Points on Marital Status Variables

Group	n	Mean Rank	Sum of Rank	U	p	r
Married	68	44,99	3059,50	713,500	0,018*	0,238
Single	30	59,72	1791,50			

\*p&lt;0.05

According to Tables 6 and 7, the individual and organizational factors that may be sources of stress in the referees do not change according to the referee's marital status ( $t(96) = -0,097$ ,  $p > 0,05$ ), ( $t(96) = -0,240$ ,  $p > 0,05$ ). On the other hand, according to the results of the Mann Whitney U test presented in Table 8, where environmental stress factors are found, the results of the single referees were more influenced by environmental stress sources than married referees ( $U = 713,500$ ,  $p < 0,018$ ).

#### 4. Are the individual, environmental and organizational stress scores of the referees varied by educational attainment?

**Table 9.** Kruskal Wallis test results according to Educational Level Variable of Stress Factor Scores

	Educational Level	n	Mean Rank	df	$\chi^2$	p	Sig. diff.
<b>Individual</b>	Primary	12	47,13	2	0,099	0,952	-
	High School	46	49,99				
	College	40	49,65				
<b>Environmental</b>	Primary	12	39,67	2	1,660	0,436	-
	High School	46	50,45				
	College	40	51,36				
<b>Organizational</b>	Primary	12	39,92	2	1,859	0,395	-
	High School	46	49,27				
	College	40	52,64				

According to Table 9, individual, environmental and organizational stress scores do not change significantly according to the educational status of the referees ( $\chi^2$  (df=2, n=98)=0,099,  $p > .05$ ;  $\chi^2$  (df=2, n=98)=1,660,  $p > .05$ ;  $\chi^2$  (df=2, n=98)=1,859,  $p > 0.05$ ).



### 5. Are the individual, environmental and organizational stress scores of the referees varying according to the year they are refereeing?

**Table 10.** Kruskal Wallis Test Results of Individual and Environmental Stress Scores Compared to Refereed

	Refereeing years	n	Mean Rank	df	$\chi^2$	p	Sig. diff.
Individual	0-5 yıl	33	56,26	3	5,359	0,147	-
	6-10 yıl	29	47,57				
	11-15 yıl	13	54,62				
	16 ve üstü	23	39,35				
Environmental	0-5 yıl	33	58,58	3	5,841	0,120	-
	6-10 yıl	29	48,28				
	11-15 yıl	13	41,23				
	16 ve üstü	23	42,70				

According to the Kruskal Wallis test results presented in Table 10, as a referee there was no difference between individual and environmental stress factor scores according to years of refereeing ( $\chi^2$  (df=3, n=98)=5,359,  $p>.05$ ;  $\chi^2$  (df=2, n=98)=5,841  $p>0.05$ ).

**Table 11.** Results of variance analysis of organizational stress scores according to the year of refereeing.

Factor	Refereeing Years	N	$\bar{X}$	S	F	p	Sig.Diff	$\eta^2$
Örgütsel	0-5	33	39,09	10,25	3,478	,019*	6-10 -16 and over	0,11
	6-10	29	41,35	9,50				
	11-15	13	40,31	6,49				
	16 and over	23	33,39	8,55				

Table 11 presents the results of variance analysis according to the variable of the referee's organizational stress scores for the refereeing years. It is seen that the referees changed their organizational stress scores significantly compared to the number their refereeing years ( $F(3,94) = 3,478$   $p<0,05$ ). According to this, it was found that the average scores of the organizational stressors ( $\bar{X} = 41,35$ ) of referees who were referees between 6-10 years were significantly higher than those of referees who were 16 years and above ( $\bar{X} = 33,39$ ).

### 6. Are the individual, environmental and organizational stress scores of the referees changing according to the classification variable?

**Table 12.** ANOVA Results According to Class Variance of Stress Factor Scores

Factor	Classification	N	sd	F	p	Sig.Diff.
Individual	Regional	17	59,59	10,08	1,128	,328
	National	45	61,84	14,83		
	International	36	57,55	11,01		
Environmental	Regional	17	46,77	12,54	,004	,996

	National	45	47,11	15,78			
	International	36	47,08	11,71			
	Regional	17	38,18	7,81	,095	,909	-
<b>Organizational</b>	National	45	39,04	10,20			
	International	36	38,19	9,73			

\*p<0.05

When Table 12 is examined, it is seen that the average scores of the individual, environmental and organizational factors leading to stress in the referees did not change significantly according to their classifications (F(2,95)=1,128, p>0,05; F(2,95)=0,004, p>0,05; F(2,95)=0,095, p>0,05).

### 7. What are the stressors in the individual, environmental and organizational stress sub-dimensions of the referees?

**Table 13.** Mean and Standard Deviation Results for the Individual Factors Sub-dimension.

Matter	Individual Factors	Average	Sd
6	Lack of self-confidence is stressful	3,90	1,05
2	Low psychological condition is stressful.	3,79	1,27
5	The lack of experience is stressful.	3,77	1,07
3	Low physical condition is stressful.	3,76	1,13
1	Being exposed to unrest (conflict) in family and social environment causes stress.	3,72	1,36
4	It's stressful not to be motivated enough to compete.	3,66	1,11
18	It's stressful to lose control of the competition.	3,65	1,12
8	It is stressful to experience pre-competition performance anxiety.	3,60	1,12
7	It is stressful to be expected high success and performance.	3,42	1,25
9	It is stressful that the level of difficulty of the competition is high.	3,35	1,14
17	It is stressful to think that you made the wrong decision (wrong decision) in the competition.	3,35	1,16
16	It is stressful to experience fear of making mistakes during the competition.	3,14	1,17
10	It is stressful if contestants have experienced problems on previous matches.	3,00	1,21
15	Standing on the wrong place of field or having wrong position in competition is stressful	2,91	1,30
12	If the result of the competition has effect on elimination or championship it is stressful	2,86	1,23
11	If previously, there had been a sports related problem with the athlete in competition, it is stressful	2,67	1,20
13	It is stressful that the competition is a regional or national match	2,66	1,17
14	It is stressful to manage the competitions of so-called big teams or well-known athletes.	2,64	1,24

As seen in Table 13, "Stress due to lack of self-confidence", the individual factors that cause stress in the referees takes the most important role ( $\bar{X} = 3,90$ ). Then respectively;

"Low Psychological condition is stressful." ( $\bar{X} = 3,79$ ).

"The lack of experience is stressful." ( $\bar{X} = 3,77$ ),

"Low Physical condition is stressful." ( $\bar{X} = 3,76$ ).

"Being exposed to unrest (conflict) in family and social environment causes stress." ( $\bar{X} = 3,72$ )

These conditions have been determined as questions that have higher impact

**Table 14.** Mean and standard deviation results for the Environmental Factors sub-dimension

Matter	Environmental Factors	Average	Sd
29	Being exposed to physical attack by others in competition is stressful	3,54	1,33
25	Verbal assault by the coach (yelling, swearing, body language) is stressful.	3,51	1,32
28	It is stressful that foreign substances are thrown into the field by the audience.	3,42	1,38
19	It is stressful that there is a disagreement with other referees on the competition.	3,25	1,14
26	It is stressful to be exposed to a verbal assault by athletes.	3,18	1,39
27	It is stressful to be exposed to a verbal assault by the audience.	3,13	1,41
30	It is stressful to have negative criticism and oppression by the club's managers.	3,13	1,24
31	Negative statements made by coaches and players about referees are stressful.	3,03	1,25
32	Negative criticism and pressure of media or public opinion are stressful.	2,99	1,20
21	The adverse environmental conditions of the day the competition is to be played is stressful.	2,80	1,26
23	It is stressful for any player to provoke the audience.	2,74	1,14
34	To experience psychological pressure from friends and/or due environmental elements after the competition is stressful	2,64	1,15
33	It is stressful to experience criticism concerns before and after the next championship.	2,55	1,14
22	Another person's disability (athlete, referee, partner, audience) is stressful.	2,53	1,14
20	It is stressful that the number of audience in the competition is considerably large.	2,42	1,17
24	The attitudes of popular and mediatic athletes in the field are stressful.	2,36	1,07

When Table 14 is examined, the first five sequences in stressful environmental factors are

" Being exposed to physical attack by others in competition is stressful " ( $\bar{X} = 3,54$ ).

" Verbal assault by the coach (yelling, swearing, body language) is stressful." ( $\bar{X} = 3,51$ ).

" It is stressful that foreign substances are thrown into the field by the audience." ( $\bar{X} = 3,42$ ). " It is stressful that there is a disagreement with other referees on the competition " ( $\bar{X} = 3.25$ ), " It is stressful to have a verbal assault by athletes" ( $\bar{X} = 3.18$ ).

**Table 15.** Mean and standard deviation results for the Organizational Factors sub-dimension

Matter	Organizational Factors	Average	Sd
36	The inadequacy of safety and health measures is stressful.	3,77	1,14
48	Inadequacy of communication within the institution is stressful.	3,68	1,18
50	It is stressful not to feel the support of the Federation and the Central Referee Board adequately.	3,68	1,14
41	It is stressful to receive a penalty not to be charged in competitions.	3,65	1,06
42	It is stressful being assigned as a referee for the first match after being not employed for a long time.	3,61	1,01
49	Communication inadequacy with the Referee Board is stressful.	3,53	1,16
40	It is stressful not to be assigned for the duration of the championship.	3,48	1,26
47	The lack of social support practices of the institution is stressful.	3,48	1,17
35	It is stressful that the condition of the gym is inadequate.	3,47	1,20
46	The inadequacy of the physical conditions of the places where the training is done is stressful.	3,43	1,15
43	It is stressful if referee assignments are uneven	3,42	1,11
44	In a career, the anxiety of loss of status is stressful.	3,42	1,25
45	The effort to rise in the referee's career is stressful.	3,33	1,21
37	It is stressful to have security concerns after the competition.	3,24	1,16
38	referee is stressed if he can not recognize the observer of the competition.	2,79	1,19
39	The report the observer will give after the end of the competition is stressful.	2,65	1,19

When table 15 is examined, the top five sequences in stressful environmental factors are;

"The inadequacy of safety and health measures is stressful." ( $\bar{X} = 3,77$ ).

"Inadequacy of communication within the institution is stressful" ( $\bar{X} = 3,68$ ),

"It is stressful not to feel the support of the Federation and the Central Referee Board adequately" ( $\bar{X} = 3,68$ ).

"It is stressful to receive a penalty for not being charged in competitions" ( $\bar{X} = 3,65$ ).

" It is stressful being assigned as a referee for the first match after being not employed for a long time." ( $\bar{X} = 3.61$ ).

### 8. Is there a relationship between the level of empathic tendency of the referees and stress factors?

**Table 16.** Relationship Between Empathy Level and Stress Factors

		Individual	Environmental	Organizational
Empathy	R	-0,144	-0,205	0,046
	p	0,159	0,044*	0,652

In Table 16, the relationship between the referee's empathy scores and individual, environmental and organizational stress factor scores was examined. Accordingly, there is a negative and low level of relationship between the empathy levels of the referees and the individual stress levels ( $r = -0,144$ ). However, this relationship is not significant ( $p > 0.05$ ). Variables also account for 2% of the variation in each other. Similarly, there was a low level of meaningful correlation between referee empathy levels and environmental stress factors on the negative side ( $r = -0,205$ ,  $p < 0,05$ ). There was almost no relationship between empathy levels of referees and organizational stress levels. ( $r = 0,046$ ).

### CONCLUSION and DISCUSSION

This study which is carried out to determine stress factors in karate referees, it is observed that the most frequent individual factors leading to stress are the "lack of self-confidence", "Low Psychological condition", "The lack of experience", "Low physical condition" and "Being exposed to unrest (conflict) in family and social environment".

In environmental factors; "Being exposed to physical attack by others in competition", "Verbal assault by the coach (yelling, swearing, body language)", "foreign substances are thrown into the field by the audience", "a disagreement with other referees on the competition" and "to be exposed to a verbal assault by athletes" are considered as important stress sources.

In the organizational factors, the first five stress sources are; "The inadequacy of safety and health measures", "Inadequacy of communication within the institution", "not to feel the support of the Federation and the Central Referee Board adequately", "to receive a penalty not to be charged in competitions" and "being the referee for the first match after being not employed for a long time".

In the study conducted by Çakmak (2011) by using the same data collection tool on football referees, in individual factors; poor psychological condition and lack of self-confidence, environmental factors; the dispute with the other referees on the competition and being exposed to physical attack by others in competition, organizational factors; uneven referee assignments and effort to rise in the referee's career took places at top levels. In addition to that, "not to feel the support of the Federation and the Central Referee Board adequately" is in the upper ranks which is parallel to our survey.

When the relations between the referees' self-confidence, stress and decision-making ability in the research conducted with the football referees, it was observed that the level of self-esteem decreased when the stress level increased and that the decision-making skill decreased with the level of low self-confidence (Baştuğ et al., 2016) This relationship between stress self-reliance and decision-making skill reflects the importance of self-confidence during refereeing. This situation can explain the lack of confidence in referees to create a high level of stress

Similar results are found in many studies carried out in different branches in the field. In the wrestling branch, because of verbal aggression by the coach (Erdem, 2015), physically damaging of the football referees, verbal assault, physical aggression, the stressors were determined as the stressor factors in the individuals (Goldsmith et al., 1992; Nikbakshsh et al., 2013). The attacks and physical attacks made by the coaches and players in the basketball referees are seen in the upper places in the stress sources (Kaissidis et al., 2000; Rainey, 1999; Sayinel et al. 2009). Factors like being observed as insufficient and physical attacks in handball referees have also been identified in the front plate (Tsozbatzoudis et al. 2005).

When the relationship of stress factors with independent variables is examined; it is seen that female referees are more influenced by individual and organizational stress factors than male referees, but this difference is not significant. On the other hand, it was determined that female referees were significantly more affected by environmental stress factors than male referees. In a study of Baştuğ and his colleagues (2016) on football referees, it was argued that female referees had more stress levels than male referees and as a source of this situation football is bound to have a male-dominated structure in history. Yüksel (2014) found that the "differences in popular sports branches on gender and educational level axes" are among the branches of the Karate-do branch that is not considered sports that a female may involve in. In the light of all this information, when the gender distribution of the coaches and referees in the Karate-do branch is examined, it can be considered that, concerns of self-ownership and being successful increase, the environmental stress experienced by women as they are still in the minority.

According to the age variable, the individual, environmental and organizational factors leading to the stress in the referees were found to be the lowest for the age groups of 41 and above, and the highest for the age groups of 31-40. It is seen that the individual factors that lead the stress in the referees do not change according to the age range. On the other hand, referees are affected by environmental and organizational stress sources at different levels according to age groups. This difference is due to the fact that the age group of 31-40 is significantly higher than the environmental and organizational factors according to the age group of 40 and above. In researches conducted in different branches; different age groups were affected differently by different stress factors (Anshel, 1996; Erdem, 2015).

Individual and organizational factors that may be a source of stress in referees are determined in favor of married referees according to the marital status of referees, but do not change significantly. On the other hand, according to environmental stress factors, single referees are more affected by environmental stress sources

than married referees. The study on football referees by Çakmak (2011) stated that the stress levels of single referees were higher in three dimensions but the statistically any difference was not found. Similarly, in Erdal's (2009) study to determine stress sources in enterprises, environmental factors were found to differ according to the marital status variable in the lower dimension. The reason for this situation is that married individuals who have a positive marriage feel less stress and negative effects of stress than single individuals (Özmutaf, 2007).

Individual, environmental and organizational stress scores do not change significantly according to the educational status of referees.

While there was no difference between individual and environmental stress factor scores according to the referee's years of experience, organizational stress scores changed significantly. According to this, it was found that the stress scores of the referees from organizational origin were significantly higher than the average of the referees for 16 years and above. It can be predicted that these results are due to the fact that the lack of experience in the foreground is an important stress factor in the individual factors and that as the years of refereeing increase, the experience also increases.

It is seen that the scores of the individual, environmental and organizational factors leading to stress in the referees did not change significantly according to their classifications. However, Baştuğ and his colleagues (2016) conducted a study on football referees and found that the average scores of physical and verbal aggressions were higher in A class referees than B class referees. It can be considered that the branch and class matches are caused by different environmental conditions.

There was a negative correlation between the empathy levels of referees and the individual and environmental stress levels and a low correlation between the empathy levels and organizational stress levels.

Referees influence the outcome of a competition along with athletes and spectators. Therefore it can assumed that high levels of empathy among trainers and referees will have a positive impact on competitions (Öztürk et al., 2004). On the other hand, it can be considered that high levels of empathy may affect objective decision making.

As a result; the individual factors that push karate referees to stress; Lack of self-confidence, Low psychological condition, Lack of experience, Low physical condition and Being exposed to unrest (conflict) in family and social environment. Besides this, environmental factors; Being exposed to physical attack by others in competition, Verbal assault by the coach (yelling, swearing, body language), Foreign substances are thrown into the field by the audience, Disagreement with other referees on the competition and Verbal assault by athletes.

Moreover, in organizational factors; Inadequate security and health measures, Inadequacy of communication within the institution, not to feel the support of the Federation and the Central Referee Board adequately,

Receiving a penalty not to be charged in competitions, and the being assigned as a referee for the first match after being not employed for a long time is stated.

It can be said that the stress sources of the referees differ according to the gender, age, marital status and the refereeing year, on the contrary the level of empathic tendency has no effect on stress factors.

#### **SUGGESTIONS**

Stress factors can be investigated for referees in different branches.

Empathy levels can be investigated for referees in different branches.

Empathy levels of referees can be determined by spectators and athletes.

The stress factors of the referees can be determined and studies can be made on the methods of coping with stress.



## KARATE HAKEMLERİNİN STRES FAKTÖRLERİNİN DEĞİŞKENLERE GÖRE BELİRLENMESİ VE EMPATİK EĞİLİM İLE İLİŞKİSİNİN İNCELENMESİ

### TÜRKÇE GENİŞ ÖZET

#### GİRİŞ

Hakemlik dürüstlüğün simgesidir. Hakemlerin fiziksel ve zihinsel yeterliliklerin yanında psikolojik olarak da dayanıklı olması önemlidir. Saha ve salonlarda görev yapan hakemlerin üzerindeki baskı oranı yüksektir. Müsabaka esnasında hakemler kararlarını çok kısa bir zaman dilimi içerisinde vermek durumundadırlar.

“Müسابakalarda alınan sayıları tespit etmek ve kurallara uymayanları cezalandırmakla görevlendirilen kişi olarak” adlandırılan hakemin (Cengiz ve Pulur, 2004) müsabaka esnasında fiziksel ve psikolojik yükün altında olmasına karşın, oyun süresince her an hızlı karar verebilmesi önemlidir. Hakem, kendini her açıdan güvende hissettiği sürece doğru karar verebilir. Doğru yönetilmeyen stres objektif kararın negatif etkileyicisidir.

Stres “bireyin fizik ve sosyal çevredeki uyumsuz koşullar nedeniyle, bedensel ve psikolojik sınırlarının ötesinde harcadığı gayrettir (Cüceloğlu, 1991). Stres kavramı olumsuz bir durum olarak değerlendirilse de sonuç olarak kişiye bir kazanım sağlıyorsa olumlu bir baskı olarak düşünülebilir (Robbins v.d.,2013). Hakemlerin maçı yönetme esnasındaki stres düzeyi bireysel, çevresel ve örgütsel faktörlerden etkilenebilmektedir.

Spor ortamlarından saldırganlık içeren davranışların azalmasında da empatik davranış önemlidir. Zor şartlar altında görevlerini yapan sporcular, antrenörler ve hakemlerin yanı sıra seyircilerin birbirlerini anlamaları, iyi ve doğru iletişim içerisinde olmaları bu davranışların azalmasında olumlu etki yaratacağı düşünülmektedir (Karabulut v.d., 2014). Empati, bir bireyin diğerinin anlamak onun iç dünyasına girebilmek için bilinçli bir entelektüel çaba sarf etmesi şeklinde tanımlanmaktadır (Davis, 2018). İlişkisel empati kurma eylemi içerisindeki ana öge, insanın kendisinin yaşamadığı bir olayı, diğer insanı dinlerken sanki o olayı yaşıyormuş gibi hissetmesidir. Empatik eğilime sahip olan kişiler diğer insanların yaşantılarına girebilirler ve karşısındaki kişinin yaşadıklarını anlayabilirler (Hançer ve Tanrısevdi, 2003).

Karate branşında yarışmalar; bedensel becerilerin belirli hükümlerle değerlendirilmesi anlayışına dayanan, uluslararası evrensel sportif kurallar çerçevesinde yapılır (<http://www.karate.gov.tr>). Müsabaka sürelerinin kısa olması hareketlerin ise seri ve çoklu olması hakemlerin dikkatli ve hazır bulunuşluk seviyelerinin yüksek olmasını gerektirmektedir.

Bu çalışma ile, Türkiye de görev yapan karate hakemlerinin stres kaynaklarının ve empatik eğilim düzeyleri ile ilişkisinin incelenmesi amaçlanmıştır.

## YÖNTEM

Bu araştırma ‘ilişkisel tarama modeli ’ne uygun olarak gerçekleştirilmiştir. Ölçeğin alt boyutlarında demografik değişkenlere göre farklılık olup olmadığı incelenmiş, ölçek toplam puanlarına göre stres yaratan başlıca nedenler ortaya konmuş ve stres düzeyi ile empatik eğilim arasında ilişki olup olmadığı tespit edilmeye çalışılmıştır.

Araştırmanın evreni 2016–2017 sezonunda Türkiye’nin farklı illerinde uluslararası ulusal ve bölgesel maçlarda görev yapan 132 karate hakeminden, örneklem ise 17 kadın ve 81 erkek (N=98) karate hakeminden oluşmaktadır.

Veri toplama aracı olarak, kişisel bilgi formu, hakemlerde stres yaratan faktörler ve empatik eğilim ölçeği kullanılmıştır. Çakmak (2011) tarafından geliştirilen ve 50 maddeden oluşan “Futbol Hakemlerinde Stres Faktörleri Ölçeği”nin 8 maddesinde kapsam geçerliği için uzman görüşü alınarak karate hakemlerinde uygun olacak şekilde kelime değişikliği (Teknik direktör-antrenör, oyuncu-sporcu, sonraki maç-sonraki müsabaka) yapılmıştır. Sadece gönüllü olarak araştırmaya katılmak isteyen hakemlere anket uygulanmış, eksik doldurulan anketler araştırmadan çıkarılmıştır. Uygulanan ölçeğin Cronbach Alfa değerleri bireysel faktörler için .897, çevresel faktörler için .927, örgütsel faktörler için ise .917 olarak tespit edilmiştir. Beşli derecelendirme ölçeğindeki seçenek aralıkları, “Kesinlikle Katılmıyorum” (1.00-1.79), “Katılmıyorum” (1.80-2.59), “Kararsızım” (2.60-3.39), “Katılıyorum” (3.40-4.19), “Kesinlikle Katılıyorum” (4.20-5.00) olarak düzenlenmiştir.

Dökmen (1988) tarafından geliştirilen “Empatik Eğilim Ölçeği” 20 maddeden oluşmuştur. Ölçeğin Cronbach Alfa değeri .753 tespit edilmiştir. Ölçekte bireyin “evet” deme eğilimini denetlemek için 8 madde negatif yazılmıştır. Ölçek maddelerine ilişkin yanıtlar “Tamamen Uygun” ise 5, “Oldukça Uygun” ise 4, “Kararsızım” 3, “Oldukça Aykırı” ise 2, “Tamamen Aykırı” ise 1 olarak Likert tipi derecelendirilmiştir.

Verilerin analizi için öncelikle parametrik test varsayımları incelenmiştir. Buna göre analiz için uygun istatistiksel yöntem belirlenmiştir.

Bu çalışmada dağılımın normalliği Kolmogorov-Smirnov (K-S) ve Shapiro-Wilks testleri ile incelenmiştir. Bu testlere göre  $\alpha=.05$  düzeyinde puanların istatistiksel olarak anlamlı olmaması durumunda, puanların normal dağılımdan sapma göstermediği yani normal dağıldığı sonucuna varılır. Parametrik test varsayımlarını sağlayan değişkenler için değişkenin tipine ve kategori sayısına göre bağımsız gruplar t testi ve varyans analizi kullanılmış, varsayımların sağlanmadığı hallerde bu testlerin parametrik olmayan varyasyonları olan Mann Whitney U ve Kruskal Wallis testleri kullanılmış ayrıca Betimsel İstatistik ve Ortalama Değerleri verilmiştir.

## BULGULAR

Hakemlerin, yaklaşık %82’sinin erkek, %64’ünün 31-35 yaş aralığında, %70’inin evli olduğu görülmektedir. Hakemler %47 oranında lise, %41 oranında ise yüksek öğretim programlarından mezun olmuştur. Katılımcıların %34’ünün 0-5 yıl arası hakemlik görevi yaptığı %45 ‘inin ise ulusal maçlarda görev aldığı tespit edilmiştir.

Cinsiyet değişkenine göre örgütsel ve bireysel stres puanlarının kadınlarda daha yüksek görülmesine rağmen istatistiki olarak anlamlı bir fark tespit edilmemiştir. Ancak kadın hakemlerin çevresel stres puanları erkek hakemlere göre anlamlı derecede yüksek bulunmuştur.

Hakemlerin çevresel ve örgütsel stres kaynaklarından yaş gruplarına göre farklı düzeylerde etkilendikleri görülmektedir. Bu farklılık 31-40 yaş grubunun 40 ve üzeri yaş grubundaki hakemlere göre çevresel ve örgütsel faktörlerden anlamlı derecede yüksek etkilenmesinden kaynaklanmaktadır.

Medeni durum değişkenine göre bireysel ve örgütsel stres puanlarında bir fark bulunmazken, bekar hakemlerin, evli hakemlere göre çevresel stres kaynaklarından daha çok etkilendikleri sonucuna ulaşılmıştır.

Eğitim durumu ve klasmanın stres puanları üzerinde etkili birer değişken olmadığı, hakemlik yapılan yıla göre sadece örgütsel boyutta 6-10 yıl görev yapanların 16 yıl ve üzeri görev yapanlara göre stres puanlarının anlamlı şekilde farklılaştığı tespit edilmiştir.

## TARTIŞMA

Karate hakemlerinde stres faktörlerini belirlemek amacıyla yapılan bu çalışmada; karate hakemlerini strese iten bireysel faktörlerin başında “Özgüven eksikliğinin olması”, “Psikolojik durumun kötü olması”, “Tecrübe eksikliğinin olması”, “Fiziksel durumun kötü olması” ve “Aile ve sosyal ortamda huzursuzluk yaşanması” gelmektedir.

Çevresel faktörlerde; “Müsabakada başkaları tarafından fiziksel saldırı tehdidi”, “Antrenör tarafından sözlü saldırı yapılması (bağırma, küfür, beden dili)”, “Seyirciler tarafından sahaya yabancı madde atılması”, “Müsabakada diğer hakemlerle anlaşmazlık yaşanması” ve “Sporcular tarafından sözlü saldırı yapılması” önemli stres kaynakları olarak belirlenmiştir.

Örgütsel faktörlerde ise ilk beş sırayı; “Güvenlik ve sağlık önlemlerinin yetersizliği”, “Kurum içerisinde iletişim yetersizliği”, “Federasyonun ve Merkez Hakem Kurulunun desteğini yeterince hissedememek”, “Müsabakalarda görevlendirilmeme cezası alınması”, “Uzun süre müsabaka yönetmeyip, yeniden görev alınan ilk maç” maddeleri almıştır.

Çakmak (2011) tarafından futbol hakemleri üzerinde aynı veri toplama aracı kullanılarak yapılan çalışmada bireysel faktörlerde ilk sıraları; psikolojik durumun kötü olması ve özgüven eksikliği, çevresel faktörlerde; müsabakada diğer hakemle anlaşmazlık ve müsabakada başkaları tarafından fiziksel saldırı tehditi, örgütsel faktörlerde ise; hakem atmalarının eşit yapılmaması ve hakemlik kariyerinde yükselme çabası almaktadır. Ayrıca merkez hakem kurulunun desteğini yeterince hissedememe durumu da çalışmamızla paralel olarak üst sıralarda yer almaktadır.

Futbol hakemleri ile yapılan araştırmada hakemlerin özgüven stres ve karar verme becerileri arasındaki ilişkilere bakıldığında stres düzeyi yükseldiğinde özgüven seviyesinin düştüğü, düşük özgüven seviyesinde ise karar

verme becerisinin de düştüğünün gözlemlendiği belirtilmiştir (Baştuğ v.d., 2016). Stres, özgüven ve karar verme becerisi arasındaki bu ilişki hakemlik esnasında özgüven düzeyini önemini yansıtmaktadır. Bu durum hakemlerde özgüven eksikliğinin stres yaratma düzeyinin yüksek olmasını açıklayabilir.

Alan yazında farklı branşlarda yapılan birçok çalışmada bulgularımızla benzer sonuçlara rastlanmaktadır. Güreş branşında hakemlik yapan bireylerde antrenör tarafından sözlü saldırıya uğramak (Erdem, 2015), futbol hakemlerinde fiziksel zarar görme, sözlü saldırı, fiziksel saldırganlık olması stres yaratan faktörler olarak belirlenmiştir (Goldsmith v.d., 1992; Nikbakshsh v.d., 2013). Basketbol hakemlerinde antrenör ve oyuncular tarafından yapılan saldırılar ve fiziksel saldırı stres kaynaklarında üst sıralarda görülmektedir (Kaissidis v.d., 2000; Rainey, 1999; Sayinel v.d., 2009). Hentbol hakemlerinde yetersiz görünme ve fiziksel saldırı stres yaratan faktörlerde yine ön planda tespit edilmiştir (Tsorbatzoudis v.d. 2005).

Stres faktörlerinin bağımsız değişkenler ile ilişkisi incelendiğinde; kadın hakemlerin bireysel ve örgütsel stres faktörlerinden erkek hakemlere göre daha fazla etkilendiği ancak bu farkın anlamlı olmadığı görülmektedir. Öte yandan kadın hakemlerin çevresel stres faktörlerden erkek hakemlere göre anlamlı şekilde fazla etkilendikleri tespit edilmiştir. Baştuğ ve arkadaşlarının (2016) futbol hakemleri üzerine yaptığı çalışmada bulgularımıza benzer olarak kadın hakemlerin erkek hakemlere göre stres düzeylerinin daha fazla olduğu savunulmuş, bu durumun kaynağı olarak ta futbolun tarihte erkek egemen bir yapıya sahip olmasına bağlanmıştır. Yüksel (2014) tarafından yapılan “cinsiyet ve eğitim düzeyi eksenlerinde popüler spor branşlarındaki farklılıklar” isimli çalışmasında Karate- do branşının da kadınlar tarafından yapılması düşünülmemeyen branşlar arasında olduğunu tespit etmiştir. Tüm bu bilgiler ışığında Karate-do branşında hakemlik ve antrenörlük yapanların cinsiyet dağılımı incelendiğinde kadınların hala azınlıkta olmasından dolayı kendine yer edinme ve tutunma kaygılarının yaşadıkları çevresel stresi arttırdığı düşünülebilir.

Yaş değişkenine göre hakemlerde strese yol açan bireysel, çevresel ve örgütsel faktör puan ortalamalarının 41 ve üzeri yaş grupları için en düşük, 31-40 yaş grupları için en yüksek olduğu görülmüştür. Hakemlerde strese yol açan bireysel faktörlerin hakemlerin yaş aralığına göre değişmediği görülmektedir. Öte yandan hakemlerin çevresel ve örgütsel stres kaynaklarından yaş gruplarına göre farklı düzeylerde etkilendikleri görülmektedir. Bu farklılığın 31-40 yaş grubunun 40 ve üzeri yaş grubundaki hakemlere göre çevresel ve örgütsel faktörlerden anlamlı derecede yüksek olmasından kaynaklanmaktadır. Farklı branşlarda yapılan araştırmalarda; farklı yaş gruplarının, farklı stres faktörlerinden, farklı şekilde etkilendikleri belirtilmiştir (Anshel, 1996; Erdem, 2015).

Hakemlerde stres kaynağı olabilecek bireysel ve örgütsel faktörler hakemlerin medeni durumlarına göre evli hakemler lehine tespit edilmişse de anlamlı şekilde değişmemektedir. Öte yandan çevresel stres faktörlerine göre bekar hakemlerin, evli hakemlere göre çevresel stres kaynaklarından daha çok etkilendikleri sonucuna ulaşılmıştır. Çakmak (2011) tarafından futbol hakemleri üzerine yapılan çalışmada üç boyutta da bekar hakemlerin stres düzeyleri fazla çıkmış ancak istatistiki bir fark bulunmamıştır. Sonuçlarımızla benzer şekilde Erdal (2009)'un işletmelerde stres kaynaklarını belirlemeye yönelik çalışmasında çevresel faktörler alt boyutunda medeni durum değişkenine göre farklılık tespit edilmiştir. Bu durumun sebebi olarak; olumlu bir

evlilik geçiren evli bireylerin, bekar bireylere nazaran stresi ve stresin olumsuz etkilerini daha az hissetmeleri gösterilebilir (Özmutaf, 2007).

Hakemlerin hakemlik yaptıkları yıllara göre bireysel ve çevresel stres faktör puanları arasında fark bulunmazken, örgütsel stres puanlarının hakemlik yaptıkları yıla göre anlamlı bir şekilde değiştiği görülmektedir. Buna göre 6-10 yıl arası hakemlik yapan hakemlerin örgütsel kaynaklı stres puan ortalamalarının 16 yıl ve üstü hakemlik yapanların ortalamalarından anlamlı derecede yüksek olduğu bulunmuştur. Bu sonuçların bireysel faktörlerde ön plana çıkan tecrübe eksikliğinin önemli bir stres faktörü olmasından ve hakemlik yılı arttıkça tecrübenin de artmasından kaynaklandığı öngörülebilir.

Hakemlerde strese yol açan bireysel, çevresel ve örgütsel faktör puan ortalamalarının klasmanlarına göre anlamlı düzeyde değişmediği görülmektedir. Ancak Baştuğ ve arkadaşlarının (2016) futbol hakemleri üzerinde yaptığı çalışmada fiziksel ve sözel saldırı ile ilgili puan ortalamalarının A klasman hakemlere göre B klasman hakemlerde daha yüksek olduğu sonucuna ulaşılmıştır. Bu durumun branş ve klasman maçlarının farklı çevre şartlarından kaynaklandığı düşünülebilir.

Hakemlerin empati düzeyleri ile bireysel ve çevresel stres düzeyleri arasında negatif yönde ve düşük düzeyde bir ilişki, empati düzeyleri ile örgütsel stres düzeyleri arasında ise sifıra yakın bir ilişki bulunmuştur.

Hakemler müsabaka ortamında sporcularla birlikte sonucu belirleyen aynı zamanda seyirciyi de etkileyen bireylerdir. Bu nedenle antrenör ve hakemlerin empati düzeyinin yüksek olmasının spor ortamını olumlu etkileyeceği varsayılabilir (Öztürk v.d., 2004). Diğer taraftan empati düzeyinin yüksek olması objektif karar verebilme durumunu etkileyeceği düşünülebilir.

Sonuç olarak; karate hakemlerini strese iten bireysel faktörlerin başında “Özgüven eksikliğinin olması”, “Psikolojik durumun kötü olması”, “Tecrübe eksikliğinin olması”, “Fiziksel durumun kötü olması” ve “Aile ve sosyal ortamda huzursuzluk yaşanması”, çevresel faktörlerde; “Müsabakada başkaları tarafından fiziksel saldırı tehdidi”, “Antrenör tarafından sözlü saldırı yapılması (bağırma, küfür, beden dili)”, “Seyirciler tarafından sahaya yabancı madde atılması”, “Müsabakada diğer hakemlerle anlaşmazlık yaşanması ve Sporcular tarafından sözlü saldırı yapılması”, örgütsel faktörlerde ise; “Güvenlik ve sağlık önlemlerinin yetersizliği”, “Kurum içerisinde iletişim yetersizliği”, “Federasyonun ve Merkez Hakem Kurulunun desteğini yeterince hissedememek”, “Müsabakalarda görevlendirilmeme cezası alınması”, “Uzun süre müsabaka yönetmeyip, yeniden görev alınan ilk maç” gelmektedir. Hakemlerin stres kaynaklarının cinsiyet, yaş, medeni durum ve hakemlik yılı değişkenlerine göre farklılıklar gösterdiği, empatik eğilim düzeyinin stres faktörleri üzerinde yordayıcı olmadığı söylenebilir.

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