

**Examination of The Relationship Between Referee's Emotional Regulation
Status and Self-Efficacyⁱ**

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Abstract

The aim of the study is to examine the relationship between the emotion regulation status of referees and their self-efficacy with some demographic variables. The research is a descriptive study in relational screening model. The sample of the research was formed by the convenience sampling method. 18.9% (n = 62) of the referees participating in the research were female and 81.1% (n = 266) were male referees. Of these referees, 24.7% (n = 81) are referees in basketball, 56.4% (n = 185) in football and 18.0% in handball. Personal information form, "The Referee Self-Efficacy Scale (REFS)" developed by Karaçam and Pulur (2017) and "The Referee Emotion Regulation Scale" developed by Karaçam et al. (2021) were used as data collection tools in the research. Analysis of the data was done using SPSS 25 program. In the study, t-test was used in paired comparisons and Pearson correlation coefficient was used to determine the relationships between variables. The level of significance was taken as $p < .05$. As a result of the research, a significant difference was found in favour of female referees in the total score of emotion regulation and cognitive reappraisal sub-dimension of the referees, and in favour of male referees in the sub-dimension of physical self-efficacy. A positive and significant relationship was found between the age and experience of the referees and their emotion regulation and self-efficacy. A positive and significant relationship was found between the emotion regulation status of the referees and their self-efficacy.

Keywords: Referee, Emotion Regulation, Self-efficacy, Basketball, Football, Handball

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**Hakemlerin Duygu Düzenleme Durumları ile Öz
Yeterlikleri Arasındaki İlişkinin İncelenmesi**

Öz

Araştırmanın amacı hakemlerin duygu düzenleme durumları ile öz yeterlikleri arasındaki ilişkinin bazı demografik değişkenlerle birlikte incelenmesidir. Araştırma ilişkisel tarama modelinde betimsel bir çalışmadır. Araştırma evrenini 2021-2022 sezonunda aktif hakemlik yapanlar oluşturmaktadır. Araştırma örneklemini uygun örnekleme yöntemiyle oluşturmuştur. Araştırmaya katılan hakemlerin %18,9'u (n = 62) kadın ve %81,1'i (n = 266) erkek hakemlerdir. Bu hakemlerin %24,7'si (n = 81) basketbol, %56,4'ü (n = 185) futbol ve %18,0'u hentbol branşında hakemlik yapmaktadır. Araştırmada veri toplama aracı olarak kişisel bilgi formu, Karaçam ve Pulur (2017) tarafından geliştirilen "Hakem Öz Yeterlik Ölçeği (HÖYÖ)" ve Karaçam vd. (2021) tarafından geliştirilen "Hakem Duygu Düzenleme Ölçeği" kullanılmıştır. Verilerin çözümlenmesi SPSS 25 programı kullanılarak yapılmıştır. Araştırmada ikili karşılaştırmalarda t testi ve değişkenler arası ilişkilerin belirlenmesinde Pearson Momentler Çarpımı Korelasyon Katsayısı kullanılmıştır. Anlamlılık düzeyi $p < .05$ olarak alınmıştır. Araştırma sonucunda hakemlerin duygu düzenleme toplam puanı ve bilişsel yeniden düzenleme alt boyutunda kadın hakemler lehine, fiziksel öz yeterlik alt boyutunda ise erkek hakemler lehine anlamlı fark bulunmuştur. Hakemlerin yaş ve kıdemleri ile duygu düzenleme ve öz yeterlikleri arasında pozitif yönlü ve anlamlı ilişki bulunmuştur. Hakemlerin duygu düzenleme durumları ile öz yeterlikleri arasında pozitif yönlü ve anlamlı ilişki bulunmuştur.

Anahtar kelimeler: Hakem, Duygu Düzenleme, Öz yeterlik, Basketbol, Futbol, Hentbol

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Introduction

Referees are an essential part of keeping the competition fair and enjoyable in all sports. It is not possible to talk about a competitive sports environment without the referee who will act as an impartial authority ensuring that the opponents obey the rules (Giel and Breuer, 2020).

Referees must perform multiple tasks under pressure to fulfil their duties successfully and not to make mistakes in their decisions during the competition. For example, referees must evaluate and judge actions that take place during the match under adverse conditions and pressure, make quick decisions, manage the game, communicate accurately, pay attention to multiple aspects of the game, maintain order, and resolve disputes and problems (Tuero et al., 2002; Karaçam and Pular, 2016). Inadequacy in these tasks can lead to inattention, wrong decisions, delayed responses, ultimate stress, and burnout (Ekmekçi, 2008; Guillén and Feltz, 2011; Ekmekçi, 2016). In addition, referees are exposed to the pressure of the audience, players, and clubs before, during and after the competition, especially in popular sports branches. Referees must show a strong character against all these negative factors (Barr and Hums, 2012; Chelladurai, 2014). In this context, the referees must regulate and control the psychological pressure and variable emotional states that they experience during the competition (Karaçam et al. 2022).

In some studies, it has been concluded that some positive beliefs of the referees will affect their performances positively (Guillén and Feltz 2011; Myers et al.2012; Karaçam and Pular 2016; Karaçam and Pular 2017a; Karaçam and Pular 2018). In this context, emotion regulation and self-efficacy, which are positive psychology variables that are thought to affect the referees' performance in a positive way, are discussed.

Emotions that take place in all areas of life also show themselves in sports. For example, a referee with a high stress level and very anxious may not be able to perform at a high level (Ekmekçi, 2016). Referees may experience many positive or negative emotions during the match. Situations such as the reaction of the audience, players and coaches after a wrong decision can cause rapid emotional transitions in the referees. At this point, one of the conditions that is critical for the continuity of the performance and will affect the performance positively is emotion regulation (Karaçam et al. 2022a).

Referee self-efficacy has been conceptualized in Bandura's theory of self-efficacy (Bandura, 1997) and more specifically in sports self-efficacy (Feltz et al., 2008). Referee self-efficacy is defined as the degree of belief that referees have the capacity to perform successfully in their duties (Guillén and Feltz 2011).

Referee self-efficacy domains are defined as game knowledge and strategic skills, decision-making skills, psychological skills, game communication, control, and physical fitness (Guillén and Feltz, 2011; Myers et al., 2012; Karaçam and Pular 2017a; Johansen et al., 2018). In addition, Guillén and Feltz (2011) stated that referees with high self-efficacy are more accurate in their decisions and more effective in their performance, based on the theory of self-efficacy and self-efficacy research in sports. In addition, they stated that they received more respect from coaches, managers and other officials and experienced less stress than referees with low self-efficacy.

Based on the studies examined in the literature, the emotion regulation skills and self-efficacy of the referees are seen as important in terms of referee performance. In this context, the aim of the research is to examine the relationship between the emotion regulation status of the referees and their self-efficacy, together with some demographic variables.

Method

Research Model

The research will be descriptive research using the relational screening model. Although relational studies do not prove the existence of causality in a real sense, it is possible to make inferences about cause-effect correlations with relational studies by using advanced statistical techniques (Fraenkel and Wallen, 2009). During the current research, it has been acted within the framework of "Higher Education Institutions Scientific Research and Publication Ethics Directive".

Study Group

The research group consists of those who are active referees within the basketball, football, and handball federations in the 2021-2022 season. The research sample was formed by convenience sampling. 18.9% (n = 62) of the referees participating in the research were female and 81.1% (n = 266) were male referees. Of these referees, 24.7% (n = 81) are referees in basketball, 56.4% (n = 185) in football and 18.0% in handball. The average age of the referees is 28.65 years, and their refereeing experience is 7.17 years on average.

Data Collection Tools

Personal information form, The Referee Self-Efficacy Scale (REFS) developed by Karaçam and Pular (2017a) and Referee Emotion Regulation Scale (RERS) developed by Karaçam et al. (2021) were used as data collection tools in the research.

The Referee Self-Efficacy Scale (REFS)

The Referee Self-Efficacy Scale (REFS) was developed by Karacam and Pular (2017a). There are 18 five-point Likert type items on the scale. The scale consists of a total of 5 subscales; physical fitness, consisting of 5 items (sample item: My physique is suitable to be a referee.), game knowledge, consisting of 3 items (sample item: I can understand the basic game strategies of the branch I referee), decision-making, consisting of 3 items (sample item: I am able to make decisions in critical conditions), pressure, consisting of 3 items (sample item: I am not influenced by pressure from players), and communication, consisting of 4 items (sample item: I am able to communicate with coaches effectively). Grading options for the items are indicated as "Strongly disagree = 1" and "Strongly agree = 5". There are no reverse score items on the scale. High scores obtained from each factor of the scale indicate that self-efficacy in that factor is high. In the analyses conducted by Karacam and Pular (2017a). the variance explained for the scale was 72.27%. A five-component construct whose eigenvalue was greater than 1 was obtained. It was observed that alpha internal consistency coefficients for the scale components were found to be .88 for the area of physical fitness, .71 for game knowledge, .85 for decision-making, .88 for pressure f, .81 for communication, and .90 for the whole scale. The KMO value was found to be .86, because of CFA. $\chi^2/sd = 1.842$ RMSEA = .06, CFI = .94, GFI = .88, RMR = .01.

Referee Emotion Regulation Scale (RERS)

To determine the emotion regulation levels of the referees in the study, Karaçam et al. (2021), the "Referee Emotion Regulation Scale (RERS)" was used. The scale is in seven-point Likert type and consists of eight items (sample item = I try to think in a way that will help me to stay calm when I encounter a stressful situation in a match where I serve as a referee). The scale has two sub-dimensions called cognitive reappraisal (item= 3-5-6-8) and suppression (item= 1-2-4-7). In the scale, each dimension is evaluated individually. The lowest possible score for each dimension of the scale is 4, and the highest score is 28. In the analyses performed by Karaçam et al. (2021), it was seen that the variance explained for RERS was 64.14%. As a result of the analysis of the components, a two-component structure emerged with eigenvalues greater than 1. The alpha internal consistency coefficients for the scale components were found to be .83 for the cognitive reappraisal factor, .76 for the Suppression factor, and .76 for the KMO value. As a result of confirmatory factor analysis applied to the scale, it was seen that $\chi^2/sd = 1.603$, RMSEA = .07, CFI = .96, GFI = .93, RMR = .10 NFI = .90 and IFI = 96. Due to the theoretical structure of the scale, using the sub-dimensions within themselves instead of using them by calculating the total score is recommended.

Data Analysis

The analysis of the data was done using the SPSS 25 program. In the research, t-test was used in pairwise comparisons and Pearson Product-Moment Correlation Coefficient was used to determine the relationships between variables. The significance level was taken as $p < .05$.

Findings

Table 1

The Variation of REFS and RERS by Gender

Variables	Female (n=62)		Male (n=266)		t	sd	P
	\bar{X}	S	\bar{X}	S			
REFS Total	81.98	5.91	82.08	6.36	-.11	326	.91
Physical Fitness	21.91	2.45	22.63	2.41	-2.09	326	.03*
Game Knowledge	13.74	1.15	13.86	1.39	-.62	326	.53
Decision-Making	13.67	1.42	13.67	1.42	.02	326	.98
Pressure	14.03	1.27	13.85	1.51	.84	326	.40
Communication	18.64	1.62	18.34	1.78	1.19	326	.23
Cognitive Reappraisal	23.85	3.86	22.57	4.46	2.08	326	.03*
Suppression	20.82	4.15	19.94	4.44	1.41	326	.15
RERS Total	44.67	7.24	42.52	7.62	2.02	326	.04*

* $p < .05$

A significant difference was found in favour of female referees in RERS Total score and Cognitive Reappraisal sub-dimension of the referees, and in favour of the male referees in Physical Fitness sub-dimension $p < .05$.

Table 2

The relationship between the Age and Refereeing experience and REFS and RERS

Variables	n	Age	Refereeing experience
REFS total	328	.328**	.328**
Physical Fitness	328	.294**	.304**
Game Knowledge	328	.303**	.294**
Decision-Making	328	.257**	.251**
Pressure	328	.161**	.133**
Communication	328	.250**	.253**
Cognitive Reappraisal	328	.118**	.111*
Suppression	328	.176**	.164**
RERS Total	328	.170**	.159**

** $p < .01$, * $p < .05$

A positive and significant relationship was found between the age of the referees and their REFS and RERS in all dimensions ** $p < .01$.

A positive and significant relationship was found between Refereeing experience and their RERS and REFS in all dimensions $**p < .01$, $*p < .05$.

Table 3

The relationship between REFS and RERS

Variables	1	2	3	4	5	6	7	8	9
1. REFS total	1.00	.696*	.824**	.773**	.689**	.702**	.329**	.347**	.391**
2. Physical Fitness		1.00	.552**	.352**	.282**	.269**	.154**	.256**	.237**
3. Game Knowledge			1.00	.635**	.500**	.519**	.148**	.198**	.200**
4. Decision-Making				1.00	.563**	.526**	.246**	.289**	.310**
5. Pressure					1.00	.447**	.284**	.227**	.295**
6. Communication						1.00	.312**	.277**	.341**
7. Cognitive Reappraisal							1.00	.495**	.864**
8. Suppression								1.00	.865**
9. RERS Total									1.00

$**p < .01$, $*p < .05$

A positive and significant relationship was found between RERS Total score and REFS total score of $.391**p < .01$. A positive and significant relationship was found between RERS' sub-dimensions and REFS' sub-dimensions in all dimensions $**p < .01$.

Discussion and Conclusion, Suggestions

Emotion regulation skills and self-efficacy of referees are considered important in terms of referee performance. In this context, the relationship between the emotion regulation status of the referees and their self-efficacy was examined together with some demographic variables in the research.

As a result of the research, a significant difference was found in favour of female referees in RERS Total score and Cognitive Reappraisal sub-dimension of the referees. Karaçam et al., (2022), in their study on basketball referees, reached the opposite conclusion of the research. When the studies outside the referee group were examined in the literature, it was seen that results were obtained in parallel with the study (Demirtaş, 2018; Seç, 2020) and contrary to the study (Gross, 1998; Flynn, Hollenstein and Mackey, 2010; Nolen-Hoeksema, 2012; Rogier, Garofalo and Velotti, 2017). It is thought that these different results in the literature are due to the specific characteristics of the referee group studied and other groups.

As a result of the study, a significant difference was found in favor of male referees in the Physical Fitness sub-dimension of the referees. In the studies conducted on referees in the literature, Adıgüzel (2018), Karaçam and Pular (2017b) and Karaçam and Pular (2019) reached results in parallel with the research. In this context, the research is parallel to other studies in the literature. This situation can be interpreted as physical fitness is an important variable for male referees.

A positive and significant correlation was found between the age and refereeing experience, and their emotion regulation and self-efficacy. This situation can be interpreted as the emotion regulation skills and self-efficacy of the referees increase as their age and refereeing experience.

Karaçam and Pular (2017a), Karaçam and Pular (2017b), Karaçam and Pular (2017c), Adıgüzel (2018), Karaçam and Pular (2019), Myers et al., (2012) found a positive and significant relationship between the RERS total score and all sub-dimensions of the scale, as well as age and refereeing experience, like the research they conducted. In addition, Karaçam (2022b) found a positive and significant relationship between the total score of RERS and the sub-dimensions of the scale, as well as age and seniority, like the study they conducted on referees. In this respect, the study is parallel to other studies in the literature. In this context, it can be said that the age of the referees and their refereeing experience are important variables in their emotion regulation skills and self-efficacy.

A positive and significant relationship was found between the emotion regulation and self-efficacy of the referees in the total score and in all sub-dimensions. This situation can be interpreted as the self-efficacy of the referees as their emotion regulation skills increase and their emotion regulation skills increase as their self-efficacy increases. In the detailed literature review, no study was found that examined the relationship between the emotion regulation skills of the referees and their self-efficacy. However, there are studies in the literature that show a positive relationship between referee performance and self-efficacy and between referee performance and emotion regulation (Karaçam et al. 2022b; Karaçam and Adıgüzel 2019). In this context, it is thought that the relationship between self-efficacy and emotion regulation obtained as a result of the research is important in terms of referee performance. In terms of improving referee performance, it is important to plan studies to improve referees' self-efficacy and emotion regulation skills during referee training processes.

In this study, the emotion regulation and self-efficacy of the referees were discussed descriptively. In other studies, to be carried out, practical studies can contribute to the literature.

In this study, the emotion regulation status and self-efficacy of the referees were discussed. In other studies, to be carried out, studies on other positive beliefs of the referees can be done.

Ethics Committee Permission Information

Ethical evaluation: Istanbul Aydın University Social Sciences Ethics Committee Commission

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Authors' Contribution

The processes related to the introduction, method, findings and discussion and conclusion, suggestion's part of the research was carried out by the first and second authors, the processes related to the introduction part were carried out by the third author, and the processes related to the findings part were carried out by the fourth author.

Conflicts of Interest

The author(s) did not have a conflict statement regarding the research.

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^{i i} Bu çalışma 6. Uluslararası Akademik Spor Araştırmaları Kongresi'nde özet bildiri olarak sunulmuştur.