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EXAMINING OF THE PSYCHOLOGICAL RESILIENCE LEVELS AND DECISION-MAKING STRATEGIES OF BASKETBALL REFEREES IN DIFFERENT CLASSIFICATIONS[i]

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Abstract:
The aim of this study is to examine the decision-making strategies and psychological resilience levels of basketball referees in different divisions. For this purpose, a total of 150 referees from classifications A, B, C, and local referees serving in Gaziantep province were included in the study on a voluntary basis. Referees who have been actively officiating for at least 2 years were included in the study. In the study, a personal information form-survey was applied to determine the division, years of service, and other characteristics of the referees. To examine decision-making styles, the Melbourne Decision Making Scale I-II was used. The Connor-Davidson Resilience Scale was used to measure psychological resilience. The data obtained were analyzed using the SPSS 22.0 software. The data were presented as N, arithmetic mean, and standard deviation. The Shapiro-Wilk test was applied for normality testing, and the Levene test was used for homogeneity testing. In the study, independent sample t-tests were applied for binary group comparisons to determine whether there were differences in the total scale scores and subscale scores based on gender, age, years as a referee, years in the division, and the division level. For comparisons involving more than two groups, one-way ANOVA was used. The Tukey correction test was applied to determine which variable was

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responsible for the differences. Statistical results were evaluated at a significance level of $p<0.05$. As a result, we can conclude that there is a significant difference in the decision-making styles and psychological resilience levels of basketball referees in different divisions.

Keywords: basketball refereeing, decision making strategies, psychological resilience

1. Introduction

Basketball is played by millions of people or watched as spectators in almost every part of the world. Especially popular in the United States, basketball has also gained significant attention in our country in recent years and has a large audience. Refereeing and basketball are an inseparable whole. One of the factors that affect basketball competitions and cause them to be discussed for a long time in the public is the referees (1).

Today, basketball games have a high level of tempo, which requires players to move swiftly and agilely. Similarly, the referees managing these games must constantly monitor the entire playing area, both the inside and the outside, in order to make correct decisions. When the research is examined, it has been observed that referees, just like basketball players, are in motion throughout the game and expend significant energy (2).

In addition to being in good physical condition, referees must also have high mental resilience. This is because they face significant psychological challenges during a match. The pressure from the spectators, the coaches' objections and reactions to decisions, and the high levels of intensity from the players can lead to referees facing intense objections, all of which may cause their heart rates to rise. In these situations, they are required to make accurate and fair decisions. This study focuses on exactly this issue, aiming to examine the psychological resilience of referees and the strategies they prefer when making decisions.

2. Method

2.1 Design and Subjects

In this study, a causal-comparative model, one of the quantitative research methods, has been used. In this context, a total of 150 referees, including national referees with A, B, and C classifications and provincial referees from Gaziantep, who are actively working under the Turkish Basketball Federation in various provinces of the country, were included in the study on a voluntary basis. Referees who have been actively involved for at least two years were included in the study.

2.2 Data Collection

In the study, a personal information form (survey) was used to determine the referees' classification, the number of years they have been officiating, and some other characteristics.

The Connor-Davidson Resilience Scale was used to measure psychological resilience. The scale, developed by Connor and Davidson, is a 25-item, 5-point Likert-type scale. Its adaptation to Turkish culture was carried out by Karaırmak (2010), and the resulting Cronbach's alpha coefficient was found to be 0.92 (3). The test-retest reliability coefficient of the CD-RISK Scale was found to be 0.75, and the Cronbach's alpha internal consistency coefficient was found to be 0.84, according to Ülker Tümlü (2012) (4). The relationship between Connor-Davidson's scale and similar scales, such as the 'Kobasa Resilience Scale', is positive at 0.83; the relationship with the 'Perceived Stress Scale' is negative at 0.76; the relationship with the 'Stress Sensitivity Scale' is negative at 0.32; and the relationship with the 'Sheehan Social Support Scale' is positive at 0.36 (5).

The Melbourne Decision Making Scale I-II was used to examine decision-making styles. The Melbourne Decision Making Styles Scale I-II is divided into two parts. Part I consists of 6 items and determines self-esteem (self-confidence) in decision-making, while Part II consists of 22 items and measures decision-making styles. The Melbourne Decision Making Styles Scale I-II, developed by Mann and colleagues (1997), was adapted to Turkish by Deniz (2004), with validity and reliability studies conducted (6).

High scores on the scale indicate a high level of self-esteem in decision making. The scale consists of four factors: Cautious Decision Making Style, Avoidant Decision Making Style, Procrastinatory Decision Making Style, and Panic Decision Making Style. The internal consistency coefficients of the scale are as follows: Self-esteem in decision making 0.72, Cautious 0.80, Avoidant 0.78, Procrastinatory 0.65, and Panic 0.71 (6).

2.4 Statistical Analysis

At the end of the research, the data obtained were statistically analyzed using the SPSS software package (SPSS for Windows, version 22.0, SPSS Inc., Chicago, Illinois, USA). The data were presented as N, arithmetic mean, and standard deviation. The Shapiro-Wilk test was used for normality testing, and the Levene test was applied for homogeneity testing. For data sets that did not show a normal distribution, skewness and kurtosis values were checked, and data sets with values within ±2 were considered to show a normal distribution (George, D., & Mallery, M. (2010). *SPSS for Windows Step by Step: A Simple Guide and Reference, 17.0 update* (10th ed.) Boston: Pearson). In the study, independent samples t-tests were applied for pairwise comparisons to determine whether there were differences in the total scale scores and subscale scores based on gender, age, referee years, classification years, and classification level. For comparisons involving more than two groups, a one-way ANOVA test was used. Tukey's post-hoc test was applied to identify which variable caused the difference. Statistical results were evaluated at a significance level of $p < 0.05$.

3. Results

Table 4.1: Descriptive Statistics

	Avg.	SD
Age	29.61	7.21
Years of Refereeing	9.26	6.78
Years of Classification	4.58	5.37

When examining the descriptive characteristics of the participants, it is observed that the average age is 29.61±7.21 years; the average number of years spent in refereeing is 9.26±6.78 years; and the average number of years spent in their current classification is 4.58±5.37 years.

Table 4.2: Gender and Classification Frequency Analysis

Cinsiyet	**N**	**Total (%)**	**Cumulative (%)**
Male	128	85.3%	85.3%
Female	22	14.7%	100%
Classification	**N**	**Total (%)**	**Cumulative (%)**
C	83	55.3%	55.3%
B	22	14.7%	70.0%
A	14	9.3%	79.3%
Provincial Refeere	31	20.7%	100%

When examining the frequencies of participants' gender and classification, it is observed that male participants make up 85.3% of the total participants, while female participants make up 14.7%.

According to their classification, it is observed that 55.3% of the participants in the study sample are from the C class, 14.7% are from the B class, 9.3% are from the A class, and 20.7% are provincial referees.

Table 4.3: Statistical Analysis of the Melbourne Decision Making Scale I and II, Connor-Davidson Psychological Resilience Scale, and Their Subscales According to the Age Variable

		Age	**N**	**Avg.**	**SD**	**F**	**P**
Melbourne Decision Making Scale I	Self-Respect in Decision Making	18-23	26	5.69	0.93	1.98	0.101
		23-28	49	6.14	0.93		
		28-33	41	5.90	0.58		
		33-40	19	6.00	0.67		
		40+	15	6.27	0.60		
	Careful Decision Making Style	18-23	26	9.38	2.45	0.789	0.537
		23-28	49	10.00	2.05		
		28-33	41	9.80	2.05		
		33-40	19	10.53	1.98		
		40+	15	10.07	1.98		
	Avoidant Decision	18-23	26	2.35	1.65	0.940	0.448
		23-28	49	1.88	1.49		

Melbourne Decision Making Scale II	Making Style	28-33	41	2.07	1.57		
		33-40	19	2.63	1.57		
		40+	15	2.00	1.65		
	Procrastinator Decision Making Style	18-23	26	1.85	1.91	0.436	0.782
		23-28	49	1.57	1.51		
		28-33	41	1.27	1.70		
		33-40	19	1.52	1.65		
		40+	15	1.67	1.72		
	Panic Decision Making Style	18-23	26	1.73	1.82	1.184	0.328
		23-28	49	1.41	1.69		
		28-33	41	1.22	1.75		
		33-40	19	0.79	1.40		
		40+	15	0.93	1.58		
	Total Point	18-23	26	15.3	6.20	0.233	0.920
		23-28	49	14.9	4.61		
		28-33	41	14.4	4.68		
		33-40	19	15.5	4.17		
		40+	15	14.7	5.34		
Connor Davidson Psychological Resilience Scale	Perseverance and Personal Competence	18-23	26	50.85	6.58	0.921	0.459
		23-28	49	51.57	6.98		
		28-33	41	51.49	8.04		
		33-40	19	53.79	4.89		
		40+	15	52.67	7.04		
	Tolerance to Negative Facts	18-23	26	20.42	3.14	1.107	0.363
		23-28	49	21.29	4.05		
		28-33	41	21.95	3.96		
		33-40	19	21.95	3.15		
		40+	15	22.33	4.40		
	Spiritual Tendency	18-23	26	6.11	2.58	1.166	0.336
		23-28	49	6.84	2.36		
		28-33	41	7.17	2.25		
		33-40	19	6.53	2.27		
		40+	15	6.07	2.05		
	Total Point	18-23	26	77.4	10.09	0.686	0.603
		23-28	49	79.7	10.62		
		28-33	41	80.6	11.89		
		33-40	19	82.3	7.88		
		40+	15	81.1	11.23		

When the Melbourne Decision Making Scale I and II, the Connor-Davidson Psychological Resilience Scale, and their subscales were evaluated according to the age variable, no statistically significant difference was found ($p>0.05$).

Table 4.4: Statistical Analysis of the Melbourne Decision Making Scale I and II, Connor-Davidson Psychological Resilience Scale, and Their Subscales According to the Gender Variable

		Gender	N	Avg.	SD	T	P
Melbourne Decision Making Scale I	Self-Respect in Decision Making	Erkek	128	6.02	0.73	0.824	0.411
		Kadın	22	5.86	1.13		
Melbourne Decision Making Scale II	Careful Decision Making Style	Erkek	128	9.90	2.11	-0.208	0.835
		Kadın	22	10.00	2.12		
	Avoidant Decision Making Style	Erkek	128	2.08	1.53	-0.788	0.432
		Kadın	22	2.36	1.79		
	Procrastinator Decision Making Style	Erkek	128	1.58	1.73	0.675	0.501
		Kadın	22	1.32	1.25		
	Panic Decision Making Style	Erkek	128	1.26	1.70	-0.502	0.616
		Kadın	22	1.45	1.68		
	Total Point	Erkek	128	14.81	4.98	-0.285	0.776
		Kadın	22	15.14	4.58		
Connor Davidson Psychological Resilience Scale	Perseverance and Personal Competence	Erkek	128	51.68	6.98	-0.565	0.573
		Kadın	22	52.59	7.06		
	Tolerance to Negative Facts	Erkek	128	21.60	3.64	0.735	0.464
		Kadın	22	20.95	4.75		
	Spiritual Tendency	Erkek	128	6.66	2.28	-0.384	0.702
		Kadın	22	6.86	2.66		
	Total Point	Erkek	128	79.94	10.53	-0.192	0.848
		Kadın	22	80.41	11.35		

When the Melbourne Decision Making Scale I and II, the Connor-Davidson Psychological Resilience Scale, and their subscales were evaluated according to the gender variable, no statistically significant difference was found ($p>0.05$).

Table 4.5: Statistical Analysis of the Melbourne Decision Making Scale I and II, the Connor-Davidson Psychological Resilience Scale, and their subscales according to the variable of years spent in refereeing

		Years	N	Avg.	SD	F	P
Melbourne Decision Making Scale I	Self-Respect in Decision Making	1-5	33	5.69	0.93	2.914	**0.036* (AF: 1-2)**
		5-10	65	6.14	0.93		
		10-15	28	5.90	0.58		
		15+	24	6.00	0.67		
Melbourne Decision Making Scale II	Careful Decision Making Style	1-5	33	9.38	2.45	1.212	0.308
		5-10	65	10.00	2.05		
		10-15	28	9.80	2.05		
		15+	24	10.53	1.98		
	Avoidant Decision Making Style	1-5	33	2.35	1.65	1.141	0.334
		5-10	65	1.88	1.49		
		10-15	28	2.07	1.57		
		15+	24	2.63	1.57		
	Procrastinator Decision Making Style	1-5	33	1.85	1.91	0.905	0.440
		5-10	65	1.57	1.51		
		10-15	28	1.27	1.70		

		15+	24	1.52	1.65		
	Panic Decision Making Style	1-5	33	1.73	1.82	1.103	0.350
		5-10	65	1.41	1.69		
		10-15	28	1.22	1.75		
		15+	24	0.79	1.40		
	Total Point	1-5	33	15.3	6.20	0.213	0.887
		5-10	65	14.9	4.61		
		10-15	28	14.4	4.68		
		15+	24	15.5	4.17		
Connor Davidson Psychological Resilience Scale	Perseverance and Personal Competence	1-5	33	50.42	7.61	1.482	0.222
		5-10	65	51.31	7.49		
		10-15	28	53.82	4.86		
		15+	24	52.75	6.44		
	Tolerance to Negative Facts	1-5	33	20.64	3.63	2.694	**0.048* (AF: 1-3, 2-3)**
		5-10	65	21.01	4.16		
		10-15	28	22.85	2.41		
		15+	24	22.46	3.97		
	Spiritual Tendency	1-5	33	6.48	2.83	1.323	0.269
		5-10	65	6.57	2.26		
		10-15	28	7.46	2.15		
		15+	24	6.37	1.91		
	Total Point	1-5	33	77.54	11.61	2.494	0.062
		5-10	65	78.89	11.05		
		10-15	28	84.14	7.14		
		15+	24	81.58	10.39		

When examining the results of the one-way analysis of variance for the total scores and subscale scores of the applied scales according to the years spent in refereeing, statistically significant differences were found in the Melbourne Decision Making Scale I in the self-esteem subscale and in the Connor-Davidson Psychological Resilience Scale in the tolerance to negative events subscale ($F = 2.914$, $p = 0.036$; $F = 2.694$, $p = 0.048$).

According to the results of the applied Tukey test, a significant difference in the self-esteem subscale of decision making is found between the group with 1-5 years of refereeing experience and the group with 5-10 years of experience, with the group having 5-10 years of experience showing higher scores. It can be said that basketball referees with 5-10 years of refereeing experience maintain more self-respect when making decisions compared to their colleagues with less experience (1-5 years). Additionally, according to the results of the Tukey post hoc test, it can be stated that referees with more years of experience have a higher tolerance to negative events compared to less experienced referees.

When examining the scales and subscales applied according to the classification of the participant referees, statistically significant differences were found in the avoidant decision making and panic decision making subscales of the Melbourne Decision Making Scale II ($F = 4.298$, $p = 0.006$; $F = 2.978$, $p = 0.034$).

According to the results of the applied Tukey test, the difference in the avoidant decision making subscale was found to be in favor of classification referees, between the provincial referees and all other classification referees. In the panic decision making subscale, the difference was found to be in favor of the B-class referees, between the provincial referees and B-class referees. Based on the analysis results, it is considered that provincial referees make more avoidant and panic decisions compared to classification referees.

Table 4.1: Statistical Analysis of the Melbourne Decision Making Scale I and II, Connor-Davidson Psychological Resilience Scale, and Their Subscales According to the Classification Rank in Refereeing

		Classifications	**N**	**Avg.**	**SD**	**F**	**P**
Melbourne Decision Making Scale I	Self-Respect in Decision Making	Provincial Ref.	31	5.93	1.09	0.802	0.494
		C	83	6.02	0.78		
		B	22	5.81	0.50		
		A	14	6.21	0.42		
Melbourne Decision Making Scale II	Careful Decision Making Style	Provincial Ref.	31	9.67	2.35	0.480	0.697
		C	83	9.86	2.11		
		B	22	10.36	1.70		
		A	14	10.00	2.18		
	Avoidant Decision Making Style	Provincial Ref.	31	2.90	1.70	4.298	**0.006* (AF: 1-2, 1-3, 1-4)**
		C	83	2.06	1.57		
		B	22	1.59	1.14		
		A	14	1.57	1.22		
	Procrastinator Decision Making Style	Provincial Ref.	31	1.83	1.88	0.823	0.483
		C	83	1.56	1.67		
		B	22	1.13	1.49		
		A	14	1.35	1.33		
	Panic Decision Making Style	Provincial Ref.	31	1.80	1.88	2.978	**0.034* (AF: 1-3)**
		C	83	1.37	1.74		
		B	22	0.54	0.73		
		A	14	0.78	1.62		
	Total Point	Provincial Ref.	31	16.22	5.48	1.524	0.211
		C	83	14.86	5.07		
		B	22	13.63	3.09		
		A	14	13.71	4.56		
Connor Davidson Psychological Resilience Scale	Perseverance and Personal Competence	Provincial Ref.	31	49.77	9.46	3.150	**0.027* (AF: 1-4)**
		C	83	51.39	6.41		
		B	22	53.77	4.75		
		A	14	55.71	4.58		
	Tolerance to Negative Facts	Provincial Ref.	31	20.00	4.70	3.968	**0.009* (AF: 1-4)**
		C	83	21.41	3.49		
		B	22	22.63	2.92		
		A	14	23.64	3.47		
	Spiritual Tendency	Provincial Ref.	31	6.93	2.55	0.811	0.489
		C	83	6.81	2.33		
		B	22	6.22	1.92		

		A	14	6.07	2.43		
	Total Point	Provincial Ref.	31	76.71	14.03	2.794	**0.042* (AF: 1-4)**
		C	83	79.62	9.67		
		B	22	82.63	7.62		
		A	14	85.42	9.15		

Table 4.2: Statistical Analysis of the Melbourne Decision Making Scale I and II, Connor-Davidson Psychological Resilience Scale and Their Subscales According to the Duration of Time Spent in the Classification in Refereeing

		Years	**N**	**Avg.**	**SD**	**F**	**P**
Melbourne Decision Making Scale I	Self-Respect in Decision Making	1	54	5.78	0.94	2.755	0.071
		2	70	6.09	0.65		
		3 ve üzeri	26	6.19	0.74		
Melbourne Decision Making Scale II	Careful Decision Making Style	1	54	9.83	2.14	0.078	0.924
		2	70	9.93	2.05		
		3 ve üzeri	26	10.04	2.25		
	Avoidant Decision Making Style	1	54	2.13	1.41	0.038	0.963
		2	70	2.09	1.61		
		3 ve üzeri	26	2.19	1.78		
	Procrastinator Decision Making Style	1	54	1.85	1.83	2.006	0.143
		2	70	1.26	1.49		
		3 ve üzeri	26	1.65	1.67		
	Panic Decision Making Style	1	54	1.31	1.68	0.081	0.922
		2	70	1.31	1.65		
		3 ve üzeri	26	1.15	1.87		
	Total Point	1	54	15.13	4.90	0.204	0.816
		2	70	14.59	4.94		
		3 ve üzeri	26	15.04	5.00		
Connor Davidson Psychological Resilience Scale	Perseverance and Personal Competence	1	54	50.87	8.14	0.707	0.497
		2	70	52.40	5.44		
		3 ve üzeri	26	52.19	8.04		
	Tolerance to Negative Facts	1	54	21.00	4.09	0.888	0.417
		2	70	21.61	3.46		
		3 ve üzeri	26	22.27	4.09		
	Spiritual Tendency	1	54	6.54	2.59	0.279	0.757
		2	70	6.70	2.17		
		3 ve üzeri	26	6.96	2.25		
	Total Point	1	54	78.41	11.90	0.851	0.432
		2	70	80.71	8.60		
		3 ve üzeri	26	81.42	12.58		

When the Melbourne Decision Making Scale I and II, the Connor-Davidson Psychological Resilience Scale, and their subscales were evaluated according to the variable of the duration of time spent in the referees' classification, no statistically significant difference was found ($p>0.05$).

Tablo 4.3: Correlation Analysis Among the Subscales of the Melbourne Decision Making Scale II

			Careful Decision Making Style	Avoidant Decision Making Style	Procrastinator Decision Making Style	Panic Decision Making Style
Melbourne Decision Making Scale II	Avoidant Decision Making Style	R	0.103	-		
		P	0.211	-		
	Procrastinator Decision Making Style	R	**0.208***	**0.417****	-	
		P	**0.010**	**<0.001**	-	
	Panic Decision Making Style	R	**0.203***	**0.493*****	**0.569*****	-
		P	**0.013**	**<0.001**	**<0.001**	-
	Total Point	R	**0.602*****	**0.675*****	**0.758*****	**0.782*****
		P	**<0.001**	**<0.001**	**<0.001**	**<0.001**

* p<0.05, ** p<0.01, *** p<0.001

According to the applied Pearson correlation analysis, the following correlations were found among the subscales of the Melbourne Decision Making Scale II: A low positive correlation between procrastinatory decision making and careful decision making (r = 0.208), A moderate positive correlation between procrastinatory decision making and avoidant decision making (r = 0.417), A low positive correlation between panic decision making and careful decision making (r = 0.203), A moderate positive correlation between panic decision making and avoidant decision making (r = 0.493), A moderate positive correlation between panic decision making and procrastinatory decision making (r = 0.569), A moderate positive correlation between total score and careful decision making (r = 0.602), A moderate positive correlation between total score and avoidant decision making (r = 0.675), A high positive correlation between total score and procrastinatory decision making (r = 0.758), A high positive correlation between **total score** and **panic decision making** (r = 0.782).

Table 4.4: Correlation Analysis Among the Subscales of the Connor-Davidson Psychological Resilience Scale

			Perseverance and Personal Competence	Tolerance to Negative Facts	Spiritual Tendency
Connor Davidson Psychological Resilience Scale	Tolerance to Negative Facts	r	**0.727*****	**-**	
		p	**<0.001**	**-**	
	Spiritual Tendency	r	0.078	**0.167***	**-**
		p	0.340	**0.042**	**-**
	Total Point	r	**0.935*****	**0.873*****	**0.331*****
		p	**<0.001**	**<0.001**	**<0.001**

* p<0.05, ** p<0.01, *** p<0.001

According to the applied Pearson correlation analysis, the following correlations were found among the subscales of the Connor-Davidson Psychological Resilience Scale: A high positive correlation between tolerance to negative events and determination and

personal competence (r = 0.727), A low positive correlation between spiritual inclination and tolerance to negative events (r = 0.167), A high positive correlation between total score and determination and personal competence (r = 0.935), A high positive correlation between total score and tolerance to negative events (r = 0.873), A moderate positive correlation between total score and spiritual inclination (r = 0.331).

4. Discussion and Conclusion

This study was conducted to examine the decision-making strategies and psychological resilience of referees based on variables such as age, gender, years spent in refereeing, classification rank, and duration of time spent in their current classification. A total of 150 volunteer referees with an average age of 29.61±7.21 years participated in the study. The participants completed a Personal Information Form, the Melbourne Decision Making Scale I and II, and the Connor-Davidson Psychological Resilience Scale as part of the study.

In our study, when the Melbourne Decision Making Scale I and II, and the Connor-Davidson Psychological Resilience Scale, along with their subscales, were evaluated in terms of the age variable, no statistically significant difference was found. Some of the other studies in the literature that support our work have been mentioned.

Bülbül (2015), in his research conducted on tennis and basketball players, reached similar results to our study and found no significant difference in psychological resilience levels between age groups (7).

Şenol and colleagues (2012), in their studies on self-esteem in decision making, did not find any differentiation based on the age variable, supporting the findings of our research (8).

In our study, when the Melbourne Decision Making Scale I and II, and the Connor-Davidson Psychological Resilience Scale, along with their subscales, were evaluated in terms of the gender variable, no statistically significant difference was found.

When reviewing the studies that support our research, it was found that Taşdelen (2001), Alver (2003), Avşaroğlu and Üre (2007), Çetin (2009), Gacar (2011), Karahüseyinoğlu (2013), Kelecek et al. (2013), Aktaş (2014), Kırgil (2015), Vural (2013), and Dinçer (2013) concluded that there was no significant difference in decision-making methods between genders (9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19).

However, there are also studies in the literature that contrast with our findings. For example, Deryahanoğlu (2014), in his study conducted on kickboxing referees, found a significant difference in favor of male referees in the careful decision-making subdimension (20).

Temel (2021), in his study on physical education teachers, concluded that there was a significant difference in favor of male teachers in the careful decision-making subdimension, based on the gender factor (21).

Our study, similar to many studies in the literature, concluded that there is no significant difference in a referee's decision-making strategies and mental resilience levels based on age and gender factors.

One of the factors that affect decision-making strategies in refereeing is the referee's goals. It is believed that referees without specific goals may not show significant differences in their decision-making strategies after a certain period, regardless of age or gender.

According to the results of the one-way analysis of variance for the total scores and sub-scores of the scales based on the years spent in refereeing, a statistically significant difference was found in the Melbourne Decision-Making Scale I in the decision-making self-esteem subscale and in the Connor-Davidson Psychological Resilience Scale in the negative tolerance subscale. According to the results of the Tukey test, a significant difference in the decision-making self-esteem subscale was found between the group with 1-5 years of refereeing experience and the group with 5-10 years of experience, with the 5-10 years group showing higher scores. It can be stated that basketball referees with 5-10 years of experience tend to maintain more respect for themselves when making decisions compared to their less experienced colleagues with 1-5 years of refereeing experience. Furthermore, according to the results of the test, referees with more years of experience in refereeing have a higher tolerance for negative situations compared to their less experienced counterparts.

Gacar (2011), in his study on the decision-making methods of the academic staff in the field of physical education and sports, found that the group with the highest professional experience showed a significant difference in the careful decision-making subscale compared to the other groups (13).

Similarly, Göral (2014) also stated that there was a significant difference in the careful decision-making subscale between the group with the highest professional experience and the group with the lowest professional experience among football coaches, with the former group having the advantage (22).

In a study conducted by Diotaiuti and colleagues (2017) with handball referees, it was stated that referee experience, factors such as teamwork and enjoyment of refereeing, had a significant impact on perceived referee self-efficacy (23).

When looking at the literature, there are studies that do not support our findings and exhibit opposing characteristics:

Kıratlı (2015), in his study examining the decision-making styles of tennis referees, found no statistically significant difference based on the variable of years of refereeing (24).

Demir (2018), in his study, compared the average scores of decision-making self-esteem (self-confidence) and decision-making styles based on the variable of years of refereeing for football referees and found no statistically significant difference between these scores (25).

When conducting a literature review, our research has yielded similar results to other studies. However, studies with opposing findings are few in number. The number of matches a referee manages is of great importance, as a referee with more experience will likely have a better memory of past positions. This means they can quickly recall past situations, allowing them to make faster and more accurate decisions. This situation positively influences a referee's game management over time, enhancing their understanding of the game, grasp of its spirit, and boosting their self-confidence.

When the scales and subdimensions applied were examined according to the participants' refereeing classification, statistically significant differences were found in the subdimensions of avoidant decision-making and panic decision-making of the Melbourne Decision-Making Scale II. According to the results of the Tukey test, the difference found in the avoidant decision-making subdimension was in favor of the classification referees compared to provincial referees, while in the panic decision-making subdimension, the difference was in favor of the B-class referees compared to the provincial referees. Based on the analysis results, it is suggested that provincial referees tend to make more avoidant and panic decisions compared to classification referees.

Koca and Yıldız (2018), in their study examining the factors that cause stress in football referees and the relationship between job satisfaction and job performance, observed that as the referees' experience and classification levels increased, their job performance also improved positively.

In Selvi's (2018) study, the relationship between referees' decision-making styles and their classification status was examined, and significant differences were found in the spontaneous decision-making style. The mean scores of provincial and regional referees were found to be lower, which supports our study (26).

In a study conducted by Dinç (2017), when evaluating football referees' professional competencies according to their classifications, no significant differences were found in the dimensions of competence, foresight, and confidence with the increasing level of classification (27).

Based on the results of our study, it is suggested that referees tend to make more avoidant and panic-based decisions as their classification level decreases. This is because referees at lower levels tend to have lower self-confidence. Self-confidence is one of the most important factors for a referee on the field. If they exhibit low self-confidence in every decision they make or during interactions with coaches and players, they will be subjected to more pressure, which could negatively affect their psychological resilience. A referee's classification level can even lead to prejudices against them by others before the match begins.

For example, the trust and respect directed toward an international A-level basketball referee is higher compared to a national C or B-level basketball referee. This difference in trust is believed to boost confidence in decision-making for the higher-level referee, while causing the lower-level referee to experience self-doubt, avoidant behavior, and panic-driven decisions. It is also believed that the level of objections toward referees during a match varies based on their classification. As a result, it has been concluded that

there are significant differences in decision-making styles and psychological resilience levels among basketball referees of different classifications.

Conflict of Interest Statement
The authors declare no conflicts of interest.

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