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Violence tendency, resilience and decision-making in football referees of various classes: An examining for Turkey

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Abstract: The objective is to investigate; violence tendency, resilience and decision-making styles of Turkey football referees and to find out whether these characteristics change with respect to age, gender, marital status, education, economic status, refereeing years-class, and exposure to violence. This study was conducted with 1115 football referees of various classes who were selected using the cluster sampling method. When the data were analysed with the SPSS 18.0 package program, the level of resilience was found higher in women, married, older individuals, those with higher education-income level and those who were exposed to violence. The violence tendency scores were found significant in favour of men and those exposed to violence, the 18-23 age interval, those aged over 36, those received associate degree education and those with a low income and an income in the range of 2501-3000. With respect to decision-making styles, the rational decision-making score was found significant in favour of those married and with high economic income, the intuitive decision-making score in favour of those who have a PhD and high level of income and the dependent and avoidant decision-making score in favour of those who have a PhD and men. The spontaneous decision-making was found significant in favour of men, singles, and younger referees and in those with a PhD level of education.

Keywords: Turkey Football Referee, Decision-Making Styles, Resilience, Tendency to Violence

Introduction

Since it is a focus of attention in a society and scores obtained in matches are considered important, not only to the sportsmen but also to the referees attract the attention of spectators in football games. As much as sportsmen, spectators also make various comments on the decisions of referees and show their reaction to them in matches. In studies asking the spectators the reasons for violence in football and the factors of incitement during matches, the answer was that the violence and incitement in football arouse from the biased decisions of the referees (1). Studies have reported that since football referees are affected in the field by emotions different from those of spectators and sportsmen, they should be investigated with respect to different variables as an individual (2). They have also mentioned that referees should direct matches in an impartial way and make correct, objective and always fast decisions so that the match results are fair (3). Decision-making is defined as having a complete and perfect understanding of the rules specific to that branch of sports and implementing them in all positions (4). The decision-making strategies of referees, which are considered important in sound evaluation of contest results, need to be studied further because there are only limited number of studies on the subject.

Defined as the capacity to not cause an unfair situation despite the difficult circumstances in which the referees in-charge direct a football match and serve as a kind of bridge (5). Resilience is considered as one of the fundamental issues that need to be dealt with in

relation to football referees. It has been also a matter of curiosity as to what the level of resilience is in referees who are often subjected to violence by both spectators and players due to the momentary decisions they make while directing a contest. For this reason, investigation of the decision-making strategies, resilience levels and violence tendencies of the football referees in Turkey constituted the purpose of this study. To this end, the violence tendency, resilience and decision-making levels of the football referees of various classes who were working in 21 provinces from 7 regions of the in Turkey were explored. Then, it was studied whether or not these violence tendency, resilience and decision-making levels differed with respect to age, gender, marital status, actively football playing and class status, education, economic income, years of refereeing, region of refereeing, non-refereeing occupation and exposure to violence.

Material and Methods

Population and Sample

Before the study, written permission was obtained from the Turkey Football Federation Central Referee Board and Ethics Committee Kocaeli University which committee and the number KÜGOKAEK2017/134 for the administration of the scales and a list of referees was obtained from the Turkey Football Federation, Referee Affairs Directorate to select the sample representing the population. Using the cluster sampling method, the in Turkey was divided into 7 regions and at least 2 cities from each region where the number of referees was large were randomly selected to represent the population. The study was completed in a total of 21 cities.

Participants

This study included volunteers who were selected by way of cluster sampling from the population of football league referees of the following classes: FIFA, assistant FIFA, Premier League, assistant Premier League, Class A, assistant Class A, Class B, assistant Class B, Class C, assistant Class C, Regional, assistant Regional, Female Regional, assistant Female Regional and Provincial.

Measures

To document the socio-demographic characteristics of the football referees, a 14-item questionnaire prepared by the investigators in the light of the literature data was administered.

Violence Tendency Scale

The Violence Tendency Scale is a 20-item four-point Likert type scale whose content validity was measured in a study titled "Domestic and Social Violence" (6) and whose reliability coefficient was found as 0.78 and 0.87 at two different times. Higher scores indicate more tendency to aggression and violence. The 'Cronbach Alpha' reliability coefficient of the scale was found to be 0.91 in the present study.

Connor–Davidson Resilience Scale

The scale is a 25-item 5-point Likert type scale developed by (7), to assess psychological health. Higher total scores obtained from the scale indicate higher levels of resilience. Its Cronbach Alpha internal consistency coefficient was reported to be .92 (8). The Cronbach Alpha internal consistency coefficient of the scale was found to be 0.92 in the present study.

Decision–Making Styles Questionnaire (DMSQ)

The scale was developed by (9), to measure the personal differences in the decision-making styles used by individuals when approaching problems in their decision-making process. It is a 25-item 5-point Likert type scale containing 5 subscales as rational, intuitive, dependent, spontaneously and avoidant decision-making styles. The Cronbach Alpha value of the scale was found to be 0.74 in its content and construct reliability study (10). The value was found to be 0.88 for this study.

Design and Procedures

For the study sample, 21 cities where the number of referees was the largest were selected out of a population of 81 cities using the cluster sampling method. The sample included a total of 1115 referees, 29 from Class B, 32 from assistant Class B, 26 from Class C, 31 from assistant Class C, 43 from Regional, 87 from assistant Regional, 6 from Female Class, 13 from assistant Female Class and 848 from Provincial referees.

The study data were collected by letting those who volunteered to take part in the study to complete the scales after they were provided the necessary explanations by the investigator. Administration of the scales lasted 5 months.

Statistical Analysis

The data obtained from the study were analysed using the SPSS 18.0 statistics package program. The data were presented as means, standard deviations and percentages. Normality of distribution was checked with Kolmogorov Smirnov test. Since the data showed a normal distribution, the parametric test of Independent Sample T test was used to compare binary groups and One Way Anova test was used to compare multiple groups. The Tukey test was run as a further analysis to find the origin of the differences that came up as a result of the analyses. The level of statistical significance was accepted to be 0.05.

Results

The results obtained from the decision-making scale showed that the female referees had lower scores from the avoidant and dependent decision-making subscales.

There were significant differences in the spontaneously decision-making scores with respect to age, in intuitive, dependent, avoidant and spontaneously decision-making scores with respect to education, and

in rational and intuitive decision-making scores with respect to economic status.

Tendency to violence was found higher in male referees who were exposed to violence and in referees who were subject to violence in a sports environment.

A review of violence tendency with respect to class showed that provincial referees had significantly more tendency to violence than female regional assistant referees and class B assistant referees than female regional assistant referees.

Looking at the resilience statuses of the referees with respect to exposure to violence and socio-demographic characteristics, female referees were found to have more resilience than males, those who were married than singles, and those who were exposed to violence than those who were not.

Resilience was found significantly more in the 30-35 age interval and in those with higher levels of education and income.

Discussion

The decision-making styles scale scores of the football referees revealed that there were no differences in rational and intuitive decision-making with respect to gender. The higher dependent decision-making scores of males suggest that they need to be studied in more detail. Married referees were found to have higher rational decision-making scores and singles to have higher spontaneously decision-making scores. The reason for higher

Table 1. Results of t-test analysis of mean decision-making styles subscale scores of referees with respect to their socio-demographic characteristics

Variables		Rational Decision-Making $\bar{x} \pm sd$	Intuitive Decision-Making $\bar{x} \pm sd$	Dependent Decision-Making $\bar{x} \pm sd$	Avoidant Decision-Making $\bar{x} \pm sd$	Spontaneously Decision-Making $\bar{x} \pm sd$
Gender	**Female**	20.17±3.10	19.24±3.36	16.25±3.42	11.83±5.18	14.05±4.68
	Male	20.37±3.76	18.69±3.88	17.44±3.97	13.42±5.54	15.54±3.10
	p Value	.599	.162	**.001***	**.003***	**.002***
Marital status	**Married**	20.99±3.84	19.09±4.01	17.29±4.16	13.28±5.30	14.22±4.80
	Single	20.20±3.66	18.66±3.79	17.34±3.88	13.26±5.58	15.67±4.78
	p Value	**.006***	.147	.881	.977	**.000***

*p<0.05

Table 2. Results of variance analysis (Anova) of mean decision-making styles subscale scores of referees with respect to their socio-demographic characteristics

Variables		Rational Decision-Making $\bar{x} \pm sd$	Intuitive Decision-Making $\bar{x} \pm sd$	Dependent Decision-Making $\bar{x} \pm sd$	Avoidant Decision-Making $\bar{x} \pm sd$	Spontaneously Decision-Making $\bar{x} \pm sd$
Age	18-23[a]	20.32±3.57	18.81±3.69	17.31±3.71	13.28±5.55	15.82±4.59
	24-29[b]	20.32±3.69	18.71±3.67	17.67±4.10	13.59±5.70	15.24±5.00
	30-35[c]	20.31±4.25	18.75±4.58	16.31±4.39	12.39±5.14	14.09±4.97
	36 and over[d]	21.15±3.58	18.25±4.48	17.63±3.01	12.97±4.52	15.77±4.58
	p Value	.543	.817	.600	.175	**.002***
	Tukey					**a-c**
Education Status	High school[a]	20.22±3.75	18.50±4.16	17.72±3.69	13.44±5.39	15.59±4.50
	Associate degree[b]	20.26±3.55	19.36±3.37	17.69±3.78	14.33±5.14	16.52±4.78
	Undergraduate[c]	20.28±3.71	18.57±3.81	16.91±4.00	12.90±5.63	15.01±4.89
	Postgraduate[d]	20.96±3.82	18.82±4.12	18.15±4.02	12.93±5.33	14.77±4.52
	PhD[e]	23.33±2.50	21.55±3.00	21.00±1.93	14.66±8.23	19.77±4.84
	p Value	.580	**.016***	**.000***	**.024***	**.000***
	Tukey		**b-c**	**c-d, c-e**	**b-c**	**b-c**
Economic Income	1500 TL and less[a]	20.37±3.68	18.85±3.60	17.64±2.76	13.30±5.31	15.61±3.50
	1501-2000 TL[b]	19.82±3.86	19.28±3.83	17.57±3.24	14.68±5.14	17.04±3.78
	2001-2500 TL[c]	19.91±3.29	18.79±3.12	17.20±2.91	13.88±3.63	15.82±3.89
	2501-3001 TL[d]	20.74±2.98	18.60±3.82	16.93±3.66	12.32±5.33	14.68±3.41
	3001 TL and over[e]	20.85±4.05	18.03±4.59	16.63±3.11	11.98±3.23	13.44±4.32
	P Value	**.031***	**.021***	.511	.102	.152
	Tukey	**b-e**	**b-e**			

*p<0.05

Table 3. Results of violence tendency analysis (T-Test) of referees with respect to their exposure to violence and socio-demographic characteristics

Variables		N	$\bar{x}$	sd	t	p
Gender	Female	107	36.00	9.16	-4,102	**.000***
	Male	1008	40.92	12.02		
Exposure to Violence	Yes	191	42.70	11.23	3,015	**.003***
	No	924	39.98	11.94		

*p<0.05

spontaneously decision-making scores in men and singles may be attributed to their gender role learning. In fact, independent decision-making by men and singles in gender role learning is a supported behaviour (11).

While no differences were found in rational, intuitive, dependent and avoidant decision-making styles with respect to age, the reason that the referees in the 18-23 age interval had the highest mean score of spon-

taneously decision-making style may be because they were new in their profession and had more tendency to make outright spontaneously decisions upon an incident. In the literature, there are studies supporting our study (12), as well as studies arguing that the decision-making style does not differ with respect to age (13). The reason for the spontaneously decision-making score of the referees in the 30-35 age interval was the

Table 4. Results of violence tendency analysis (Anova) of referees with respect to their professional and socio-demographic characteristics

	Variables	N	x̄	sd	F	p	Tukey
Class	Provincial referee[a]	848	40.90	12.05	3,166	.001*	a-ı
	Regional assistant referee[b]	87	39.28	10.50			g-ı
	Regional referee[c]	43	39.23	9.37			
	Female regional referee[d]	6	29.00	5.47			
	Class C assistant referee[e]	31	41.29	14.42			
	Class C referee[f]	26	35.76	7.84			
	Class B assistant referee[g]	32	43.87	10.98			
	Class B referee[h]	29	38.96	12.40			
	Female regional assistant referee[i]	13	30.30	9.61			
Age	18-23[a]	531	41.27	11.63	3,368	.018*	a-c
	24-29[b]	401	39.80	12.15			
	30-35[c]	139	38.35	11.03			
	36 and over[d]	44	42.95	13.33			
Education Status	High school[a]	192	39.14	10.30	2,741	.027*	a-b
	Associate degree[b]	198	42.41	12.99			
	Undergraduate[c]	617	40.08	11.41			
	Postgraduate[d]	99	41.72	14.55			
	PhD[e]	9	35.77	9.66			
Economic Income	1500 TL and less[a]	493	41.28	11.45	5,501	.000*	a-b
	1501-2000 TL[b]	200	39.72	13.35			b-c
	2001-2500 TL[c]	109	35.98	10.11			c-a
	2501-3000 TL[d]	105	42.44	12.51			c-e
	3001 TL and over[e]	208	40.50	11.28			c-d

*p<0.05

Table 5. Results of resilience analysis (T-Test) of referees with respect to their exposure to violence and socio-demographic characteristics

Variables		N	x̄	sd	t	p
Gender	Female	107	100.76	13.81	2,648	.008*
	Male	1008	96.87	14.50		
Marital status	Married	210	99.51	15.78	2,520	.012*
	Single	905	96.72	14.11		
Exposure to Violence	Yes	191	99.90	13.25	2,983	.003*
	No	924	96.70	14.66		

*p<0.05

second highest may have been their accumulated experience with advancing age.

While the education level of football referees did not have a significant correlation with their rational de-cision-making subscale score, it had a significant correlation with their other subscale scores. A further analysis of these correlations showed that the mean intuitive de-cision-making style score of the referees at undergradu-

Table 6. Results of resilience testing (Anova) of referees with respect to their socio-demographic characteristics

	Variables	N	x̄	sd	F	p	Tukey
Age	18-23[a]	531	94.86	14.56	10,567	.000*	**a-b** **a-c**
	24-29[b]	401	99.35	12.90			
	30-35[c]	139	100.67	15.06			
	36 and over[d]	44	96.06	19.70			
Education Status	High school[a]	192	94.97	15.88	5,117	.000*	**a-c** **a-d** **b-d**
	Associate degree[b]	198	96.43	14.77			
	Undergraduate[c]	617	97.46	13.99			
	Postgraduate[d]	99	100.60	13.11			
	PhD[e]	9	112.00	7.93			
Economic Income	1500 TL and less[a]	493	95.74	14.91	9,552	.000*	**a-b** **a-d** **b-c** **b-d**
	1501-2000 TL[b]	200	95.62	14.98			
	2001-2500 TL[c]	109	100.32	13.07			
	2501-3001 TL[d]	105	98.64	12.34			
	3001 TL and over[e]	208	101.52	13.42			

*p<0.05

ate level was lower than that of the referees at associate degree level, the mean dependent decision-making style score of the referees at undergraduate level was lower than those of the referees at master's degree and PhD level, the mean avoidant decision-making style score of the referees at undergraduate level was lower than that of the referees at associate degree level and the mean spontaneously decision-making style score of referees at associate degree level was higher than that of the referees at undergraduate level.

Economic statuses of the referees were not found correlated with their dependent, avoidant or spontaneously decision-making styles. The mean rational decision-making style score of the referees with 1501-2000 of income was found significantly lower than that of the referees with 3001 and more income. The mean intuitive decision-making style score of the referees with 1501-2000 of income was found significantly higher than that of the referees with 3001 and more income. Although the results in the literature showing that decision-making scores increase as income level goes up (12), are consistent with our study, the intuitive decision-making subscale results seem to differ.

Violence tendency was found less in female referees than males. It is stated in the literature that because females have been taught from childhood that submission and silence is a good personality trait and males

that aggression is a good personality trait, males have come to think resorting to violence is a positive attitude and they expressly show violent behaviour, whereas females exercise violence in a rather implicit way. The fact that males have higher levels of the hormone testosterone, which increases aggression physiologically (14,15,16,17), may have also caused men to have more tendency to violence. Those who had been exposed to violence also had more tendency to violence. These results support the literature data in that exposure to violence increases tendency to violence. The reason for this is stated to be that violence is taken as a model and learned as a way to solve problems (18,16).

The class statuses of football referees had a statistically significant correlation with their mean violence tendency scores. The results showed that the mean score of regional assistant referees was lower than those of provincial referees and Class B assistant referees. As for age, those who were aged 36 years and over had more tendency to violence and they were followed by those in the 18-23 age interval. Looking from the education point of view, it was observed that as the level of education went down, tendency to violence decreased, showing that education may have an influence in shaping behaviour. The fact that those who had a high school level of education had a tendency to violence to a certain extent supports our view.

The highest level of tendency to violence was in those who had an economic level between 2501 and 3001 and afterwards as the economic level decreased, tendency to violence increased. Considering the information in the literature stating that lower economic levels constitute a risk factor for tendency to violence (18). poorer socio-economic conditions may be said to have an impact on increased tendency to violence, but the fact that the highest tendency was in those who had an income of 3000 and over needs to be questioned.

In this study, female referees were observed to have more resilience than males. However, there are studies in the literature reporting no significant correlation between gender and resilience (19,20). Women are reported to think they serve a purpose when they are employed and have gained their economic independence, which improves their self-esteem and psychological well-being (21). Assuming an active role in football, which is not considered suitable for women, and especially in a supervising position like refereeing may have increased resilience in these women with a feeling of success in challenging circumstances. As for marital status, married referees were observed to have significantly more resilience than singles. There are studies in the literature reporting that there is no correlation between marital status and resilience (22,19). and that when women's responsibilities increase with marriage, their stress also increases and burnout occurs, and in this way marriage becomes a source of psychological disorder for women and bachelorhood for men (11). The differences between our study results and the literature data suggest further studies need to be carried out in more detail.

Looking at the relationship between exposure to violence and resilience, a significant difference was found in favour of the referees who were exposed to violence. Although there are no studies investigating resilience with respect to exposure to violence in the literature, exposure to violence may have supported experiencing and coping with negative events in life and in this way increased resilience. Studies have shown that there is a significant correlation between social support and resilience (23). They have also reported that team work as a natural consequence of sporting environments and secretion of hormone serotonin during exercising support referees in coping with social anxiety and in improving their self-esteem (24). There are also studies argu-ing that regular workouts performed by referees during their professional life without any intent to contest improve their self-sufficiency and develop positive thinking, resulting in increased self-esteem and psychological well-being (25,26,27). Considering the above study results, it can be concluded that since the workouts done by referees are not intended for contest and they also lead an active life, their resilience improves. The reason for resilience turning out to be more in referees who are in the 30-35 age interval, and in those whose education is at PhD level and whose economic status is well may be attributed to increased experience with advancing age, improved insight and problem-solving skills with higher levels of education and improved resilience with higher levels of income.

Conclusion

The results of the studies made with referees show that resilience is more in female, married and older referees and in those with higher levels of education and income, and those who were exposed to violence. The violence tendency scores were found higher in men and those exposed to violence, those in the 18-23 age interval, those aged over 36, those received associate degree education and those with a low income and an income in the range 2501-3000. With respect to decision-making, those who were married and had higher income had a higher rational decision-making score; those who had a PhD level of education and lower income had a higher intuitive decision-making score; and males and those who had a PhD level of education had a higher dependent and avoidant decision-making score. The spontaneously decision-making was found significant in favour of men, singles, younger referees and in those with a PhD level of education.

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