

Leadership, stress and burnout among basketball referees

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ABSTRACT

The study analyses leadership styles and their influence on burnout and stress among basketball referees, applying a non-probabilistic sampling, convenience sampling, to 61 referees, 85.2% men, 14.8% women. Descriptive analysis, correlations and hierarchical multiple regression models were performed. By applying the Multifactor Leadership Questionnaire MLQ-5, Inventario de Burnout en deportistas Revisado IBD-R [Revised Athlete Burnout Inventory], and Escala de Estrés en el Ámbito Deportivo EEAD [Stress Scale for Sports]. Moderate stress level (26-50) as well as burnout (50-60). Transformational leadership is associated with low levels of stress ($p=.003$) and high levels of personal accomplishment ($p=.026$). The developer style, inverse and significant effect ($p=.013$) with stress. Corrective leadership is associated with low levels of stress ($p=.005$) and high personal accomplishment ($p=.019$) and emotional exhaustion ($p=.006$) of burnout. Passive leadership is associated with high levels of stress ($p=.013$) and low levels of personal accomplishment ($p=.023$). As a conclusion, referees mainly apply transformational leadership associated with low levels of stress and high levels of personal accomplishment. They have moderate level of stress and burnout, while there are differences between those at the national level and those at the local-regional level, in addition there are differences regarding the role played, in relation to stress. **Keywords:** Sport; Sports judges; Competition; Exhaustion; Anxiety.

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INTRODUCTION

Sport is a generator of emotions, from all areas of show-competition, athletes, coaches, referees-judges, spectators and media. The referees, from a psychological point of view, must make more complex decisions, due to their role in the game and the quick decision-making process. (Caracuel, Andreu, & Pérez, 1994). However, they are the ones who receive less attention in researches, despite being a primary element in their development (Guillén, 2003; Guillén & Jiménez, 2001) and, of course, in results. Their role is key in organized sport and essential for a normal development of the competition (Louvet, Gaudreau, Menaut, Genty & Deneuve, 2009). Their decisions have influence during the development of some sports as well as on the final result achieved (Caracuel, Andreu & Pérez, 1994; Plá, 2010). During the matches, both players and referees and coaches need a multitude of variables, technical-tactical-physical and psychological to face the competition. The work of the referee's community is essential, although especially complicated in sports involving a high level of action or movement (Aginsky, 2010), as is the case with basketball. In the performance of the arbitration, the psychological variables are very important (Slack, Maynard, Butt & Olusoga, 2013) and specifically in basketball referees (Patiño & Cañadas, 2015), they must face a multitude of stress situations during the matches of competition (Anshel, Sutarso, Ekmekci & Saraswati, 2014). The intervention of the referees is associated with different situations that generate psychological stress (Brandão, Serpa, Krebs, Araújo & Machado, 2011) understanding as psychological stress a particular relationship between the individual and their environment that is evaluated by the subject as threatening or overflowing with their resources and that endangers their well-being (Lazarus & Folkman, 1984). The most important individual source of stress is the personality trait (Sabuncuoğlu & Tüze, 2003). Referees can suffer high amounts of stress, both chronic and acute (Alonso-Arbiol, Falcó, López, Ordaz & Ramírez, 2005). It is understood that the main mental variables that affect the development of refereeing are stress management, decision making, management of social factors and concentration (Peirooz, 2013). Some studies have reviewed the stress in referees, influence in decision making (MacMahon, Helsen, Starkes, & Weston, 2007; Mascarenhas & Mortimer, 2005; Scoppa, 2008), sources of stress (Rainey, 1995), pressure from the public (Dohmen, 2008; Pettersson-Lidbom & Priks, 2010), influence of different game stressors and peripheral environment to the referee (Louvet et al., 2009) or emotional state and situations of stress among basketball referees (Jaenes, Bohórquez, Caracuel, & López, 2012) as well as stress and refereeing technique in basketball based on gender (García-Santos, Vaquera, Calleja-González, González-Espinosa & Ibáñez, 2017).

Regarding the figure of the referee, another of the variables to take into account is the style of leadership that they exercise during the competition. A leader must, among other things, see its effectiveness to reach the established objectives (Chuquimarca, Paz-Sánchez & Romero-Ramírez, 2018). The transformational leadership according to Bass (1985) Bass & Avolio (1994) fosters a superlative development of established expectations, encourages these types of leaders to achieve and surpass their followers. Transactional leadership is based on the exchange of incentives and/or rewards from the leader in exchange for loyalty and effort by the team. By stimulating the success and improvement of employees (Bass, 1999). Laissez faire leadership (Bass & Avolio, 2000), is characterized by avoiding all kinds of influence on others, evading supervisory responsibility and providing information only when requested, without setting clear work goals. The transformational and developer leadership styles have been explored in several scenarios, their application to the field of sports has been very limited (Yukl, 2002).

One of the psychological factors that affect and influence the referees-judges, in their decisions, is burnout. It is defined in sports as the presence of physical and emotional exhaustion, a low personal accomplishment and a devaluation of sport (Raedeke, 1997). This has received little attention in this community (Gustafsson,

Hancock & Côté, 2014), there are some studies such as those of Al-Haliq, Lufti & Oudat, 2014; Stew, Ellery, & Maher (2004); Pedrosa & García-Cueto, (2016); Arbinaga, Fernández-Ozcorta, Herrera-Macías, & Vela-Calderón (2019); Ponce (2019), influence of burnout and stress among football referees (Martínez-Moreno, Parra & Cabezos, 2017).

There is no record of studies relating leadership, stress and burnout among basketball referees and addressing all the above issues. The objective of the study is to analyse the leadership styles, transformational, developer, corrective and passive/avoidant, burnout level, emotional exhaustion, reduced personal accomplishment and depersonalization, as well as knowing the level of stress and contrasting the influence that leadership has on the burnout and stress, which support basketball referees during the competition.

METHOD

Participants

The final sample of the study consists of 61 basketball referees 85.2% men, 14.8% women, aged between 19 and 55 with an average of 26.5 (SD = 7.5). Their role in the competition; 63.9% of them are main referees, 21.3% assistant and 14.8% performed other duties. By category, 26.2% of them refereed in the local category, 62.3% in regional/autonomous and 11.5% in national. A non-probabilistic sampling, specifically convenience or accidental sampling (Coolican, 2005) is used when obtaining the sample of those referees who formally agreed to collaborate with the research.

Measures

The leadership style was evaluated with the *Multifactor Leadership Questionnaire*, MLQ-5 (Avolio & Bass, 2004), version validated in Spain (Morales & Molero, 1995), using the factorial structure proposed by Molero, Recio & Cuadrado (2010), a valid instrument to evaluate several different aspects of leadership and for the development and feedback purposes (Antonakis & House, 2002). The MLQ-5X has 36 items that determine four types of leadership: transformational leadership (16), developer/transactional leadership (8), corrective leadership (4), passive/avoidant leadership or laissez-faire (8), the remaining nine (to complete the 45 that form the questionnaire) measure variables such as extra effort, effectiveness and satisfaction. Responding to all of them on a Likert scale with frequency graduation from, never (0), to always (4). For burnout, the *Inventario de Burnout en Deportistas Revisado*, IBD-R [Reviewed Athlete Burnout Inventory] (Garcés, De Francisco & Arce, 2012) was applied. The IBD-R, with 19 items, measures the three dimensions of burnout proposed by Maslach & Jackson (1981): Emotional Exhaustion (EE), Reduced Personal Accomplishment (RPA) and Depersonalization (DP). Likert-type scale responses with five alternatives: I have never thought about this (1), until, I think or feel this on a daily basis (5). The RPA dimension has the questions asked in reverse, so the lower the score, the higher the level of burnout. Regarding stress, the *Escala de Estrés en el Ámbito Deportivo*, EEAD [Stress Scale for Sports] (Pedrosa, Suárez-Álvarez & García-Cueto, 2012) was used. The EEAD consists of 15 items, with a five-options Likert scale: Strongly disagree (1), to, Strongly agree (5), the higher the score, the higher the level of stress. The participants also responded to a sociodemographic questionnaire designed for this study, which reflected: gender, age, marital status, level of education, occupation and role within the competition.

Procedure

The inclusion criteria were to have the title of referee and have an active federation license at the time of completing the questionnaires. Validity criteria were applied to the questionnaire, eliminating those that had inconsistent answers in the sociodemographic section or left any questions blank in any of the questionnaires,

corresponding to 3% of them. Referees were contacted before and/or after each match. The questionnaire was applied in paper format and the participation in the study was voluntary, the anonymity of the responses was guaranteed, including a standardized protocol, to avoid applicator bias and obtaining informed consents. All participants received the same information about the subject of study and how they should complete the questionnaire, average time 10-15 minutes.

Data analysis

Descriptive analyses, averages and standard deviations, Cronbach's alpha and correlations between the variables were performed: transformational, developer, corrective and passive leadership, effort, effectiveness, satisfaction, stress, personal accomplishment (PA), depersonalization (DP), emotional exhaustion (EE) and burnout. To determine the influence on the leadership dimensions of the variables age, function, category, stress and the dimensions of burnout, hierarchical multiple regression models were performed that included as predictor variables, in 1st step, age, function and category, in 2nd step, the stress and in 3rd and last step the burnout dimensions. R^2 (ΔR^2) Increase was calculated to determine the relative contribution of each group of variables in the analysed criterion variables. The standardized coefficient (β) was calculated to compare the relative importance of each variable in the model. Statistical analyses were performed using the IBM SPSS Statistics 20.0 for Windows (IBM Software Group, Chicago, Illinois, United States) the confidence level was established at 95%.

RESULTS

In order to deliver results on the percentage of referees with burnout, the following categorization is proposed: 1) low risk of suffering from burnout (score equal to or less than 50); 2) moderate risk (between 50 and 60); 3) high risk (between 60 and 70), 4) with burnout (greater than 70). In relation to stress, three levels of stress are established: 1) Low level of stress (0-25), 2) Moderate level of stress (26-50), 3) High level of stress (51-75).

Table 1 shows the average, standard deviation, Cronbach's alpha and the correlation matrix between the leadership types, stress and burnout factors. The Cronbach alpha coefficient of the scales showed good reliability, providing values greater than .80. The referees assigned a higher score to the transformational leadership, followed very closely by the corrective and then the developer leadership, the passive leadership obtained the lowest score. Regarding the variables, among effort, effectiveness and satisfaction, the last one is the best scored. The results obtained, in relation to stress, are of a moderate level (26-50), as well as regarding burnout they also present a moderate risk (50-60). The correlations of transformational leadership with developer leadership, corrective leadership, effort, effectiveness, satisfaction ($p = .001$) and PA ($p = .05$) are significantly positive. It is correlated indirectly with passive leadership ($r = -0.46$, $p < .001$) and stress ($r = -0.37$, $p = .01$). The developer style correlates statistically significantly and positively with corrective leadership ($r = 0.59$) with effort ($r = 0.55$) effectiveness ($r = 0.56$) and satisfaction ($r = 0.57$) and indirectly with passive leadership ($r = -0.26$). Regarding corrective leadership, it correlates statistically significantly and positively with effort ($r = 0.42$) effectiveness ($r = 0.42$) satisfaction ($r = 0.55$) and the PA ($r = 0.29$, $p = 0.21$), while correlates negatively with passive leadership ($r = -0.4$) and stress ($r = -0.3$). In relation to passive leadership, it correlates statistically positively with satisfaction ($r = 0.27$) and negatively with the effort ($r = -0.36$) effectiveness ($r = -0.4$) satisfaction ($r = -0.48$) and the PA ($r = -0.31$). The effort correlates positively with effectiveness ($r = 0.83$) and satisfaction ($r = 0.59$) and negatively with stress ($r = -0.26$). Effectiveness correlates positively with satisfaction ($r = 0.66$) and negative with stress ($r = -0.35$). Satisfaction only correlates negatively with stress ($r = -0.28$). Stress correlates positively with DP ($r = 0.45$) EE ($r = 0.75$) and burnout ($r = 0.63$). The PA correlates positively

with burnout ($r=0.29$) and negatively with DP ($r=-0.30$) and EE ($r=-0.26$). The DP correlates positively with EE ($r=0.61$) and burnout ($r=0.66$). EE correlates positively with burnout ($r=0.7$).

Table 1. Mean (M), Standard Deviation (SD), Alpha coefficient (α) and Analysis of All Variable Correlations.

Scale	Mean (SD)	Alpha	1	2	3	4	5	6	7	8	9	10	11
1.Transformational	2.88 (0.52)	.86	1										
2.Developer	2.82 (0.46)	.89	.73***	1									
3.Corrective	2.84 (0.68)	.83	.79***	.59***	1								
4.Passive	1.24 (0.75)	.86	-.46***	-.26*	-.4***	1							
5.Effort	2.75 (0.56)	.84	.68***	.55***	.42***	-.36**	1						
6.Effectiveness	2.83 (0.54)	.87	.62***	.56***	.42***	-.4**	.83***	1					
7.Satisfaction	3 (0.57)	.81	.64***	.57***	.55***	-.48***	.59***	.66***	1				
8.Stress	29.05 (11.04)	.89	-.37**	-.19	-.3*	.27*	-.26*	-.35**	-.28*	1			
9.PA	25.16 (4.95)	.90	.25*	.2	.29*	-.31*	.1	.02	.17	-.13	1		
10.DP	10.62 (3.45)	.91	-.1	-.09	-.14	.21	-.13	-.07	-.1	.45***	-.3*	1	
11.EE	14.51 (5.68)	.88	0.14	-.03	-.07	.19	-.15	-.18	-.06	.75***	-.26*	.61***	1
12.Burnout	50.3 (8.22)	.89	.02	.06	.07	.03	-.09	-.14	.02	.63***	.29*	.66***	.79***

* $p < .05$ ** $p < .01$ *** $p < .001$. PA (Personal Accomplishment), DP (Depersonalization), EE (Emotional Exhaustion).

Table 2 shows the descriptions and comparisons of the different variables in relation to the performed role of referee. It is stressed that there are statistically significant differences between the assistant referees and those who perform other functions (table judges, timekeepers) in terms of transformational leadership ($p= .018$), also among those who perform other functions with respect to the main and assistant referees, in relation to corrective leadership ($p= .018$). Regarding the effort and effectiveness, the differences between main and assistant referees are presented ($p= .03$ and $p= .012$). However, in relation to stress there are differences between the three roles: main referee, assistant referee and others ($p= .001$).

Table 2. Descriptions and comparisons of the different variables according to the role of the referee.

Variable	Function, mean (SD)			ANOVA	
	Main Referee (n = 39)	Assistant Referee (n = 13)	Other (n = 9)	F (2,58)	p-value
Leadership Transformational	2.93 (0.48) ab	2.55 (0.5) a	3.14 (0.54) b	4.29	.018
Leadership Developer	2.87 (0.45)	2.59 (0.5)	2.93 (0.36)	2.31	.108
Leadership Corrective	2.79 (0.66) a	2.6 (0.68) a	3.39 (0.52) b	4.29	.018
Leadership Pasive	1.3 (0.73)	1.35 (0.67)	.81 (0.83)	1.86	.165

Effort	2.88 (0.47) a	2.41 (0.67) b	2.7 (0.61) ab	3.74	.03
Effectiveness	2.92 (0.46) a	2.44 (0.67) b	2.97 (0.44) ab	4.75	.012
Satisfaction	3.06 (0.48)	2.73 (0.81)	3.11 (0.49)	1.93	.155
Stress	28.54 (10.25) a	36.92 (10.83) b	19.89 (6.53) c	7.94	.001
Personal Accomplishment	24.51 (5.02)	24.92 (4.17)	28.33 (4.92)	2.30	.11
Depersonalization	11 (3.68)	10.85 (2.54)	8.67 (3.12)	1.75	.182
Emotional Exhaustion	14.49 (5.57)	16.77 (5.69)	11.33 (5.15)	2.56	.086
Burnout	50 (9.4)	52.54 (5.44)	48.33 (5.48)	.76	.473

a, b, c: Tukey's two-by-two comparisons. Different letters between two functions indicate statistically significant differences at level $p < .05$.

Table 3 shows the descriptions and comparison in relation to the referee category. There are significant differences regarding corrective leadership between local and national level referees ($p = .047$), stress ($p = .001$), depersonalization ($p = .013$), and burnout ($p = .015$). Indicating that, in emotional exhaustion, these significant differences are ($p < .001$).

Table 3. Descriptions and comparison of the different variables according to the level of the referee.

Variable	Category, mean (SD)			ANOVA	
	Local (n = 16)	Regional (n = 38)	National (n = 7)	F (2,58)	p-value
Leadership Transformational	2.81 (0.47)	2.85 (0.54)	3.23 (0.45)	1.87	.163
Leadership Developer	2.77 (0.45)	2.78 (0.46)	3.18 (0.39)	2.50	.091
Leadership Corrective	2.64 (0.68) b	2.82 (0.67) ab	3.39 (0.54) a	3.24	.047
Leadership Passive	1.27 (0.79)	1.3 (0.7)	0.84 (0.88)	1.15	.323
Effort	2.67 (0.63)	2.73 (0.55)	3.1 (0.42)	1.54	.223
Effectiveness	2.73 (0.63)	2.8 (0.52)	3.21 (0.27)	2.17	.123
Satisfaction	2.97 (0.64)	2.96 (0.56)	3.29 (0.39)	0.99	.376
Stress	36.75 (11.32) a	27.34 (9.72) a	20.71 (7.67) b	7.77	.001
Personal Accomplishment	23.81 (5.11)	25.08 (4.9)	28.71 (3.45)	2.53	.089
Depersonalization	12.63 (3.05) a	10.13 (3.55) a	8.71 (1.11) b	4.67	.013
Emotional Exhaustion	18.88 (6.32) a	13.42 (4.72) a	10.43 (2.76) b	9.20	< .001
Burnout	55.31 (10) a	48.63 (7.28) a	47.86 (2.91) b	4.54	.015

a, b: Tukey's two-by-two comparisons. Different letters between two categories indicate statistically significant differences at level $p < .05$.

Multiple regression analysis

Multiple regression models have been determined to determine the influence on the different types of leadership –transformational, developer, corrective and passive/avoidant - that exercise the age, category, role, stress and burnout dimensions variables, including as predictors in the 1st, age, role and category, in 2nd, stress and in 3rd step, burnout dimensions. Indicating that, in none of the leadership types, they have a significant effect by introducing step 1. As a hierarchical model, we present in Table 4, Step 3 of the different leadership types.

Table 4. Multiple regression analysis step 3, of transformational, developer, corrective and passive leadership.

Predictor	Leadership Transformational			Leadership Developer			Leadership Corrective			Leadership Passive/Avoider		
	B(ET)	t	r partial	B(ET)	t	r partial	B(ET)	t	r partial	B(ET)	t	r partial
Age	.01 (.01)	1.01	.117	.01 (.01)	1.66	.2	-.02 (.01)	1.61	.182	-.03 (.01)	-1.84	-.225
Function												
Main Referee	.12 (.20)	.58	.067	.25 (.19)	1.34	.161	-.17 (.26)	-.66	-.075	.06 (.31)	.21	.025
Assistant Referee	-.14 (.25)	-.56	-.064	.01 (.23)	.05	.006	-.21 (.32)	-.66	-.075	.03 (.38)	.08	.009
Category												
Local	-.02 (.26)	-.09	-.01	-.22 (.24)	-.89	-.107	-.29 (.34)	-.86	-.097	-.27 (.40)	-.68	-.083
Regional	-.15 (.22)	-.69	-.079	-.29 (.20)	-1.42	-.172	-.19 (.28)	-.67	-.076	.00 (.33)	-.01	-.001
Stress	-.03 (.01)	-3.06**	-.354	-.02 (.01)	2.57*	-.237	-.04 (.01)	-2.95**	-.335	.04 (.01)	2.57*	.228
Burnout												
Personal Accomplishment	.03 (.01)	2.29*	.265	.03 (.01)	2.22*	.23	.04 (.02)	2.42*	.275	-.05 (.02)	-2.35*	-.287
Depersonalization	.00 (.02)	.08	.009	-.01 (.02)	-.51	-.061	-.01 (.03)	-.28	-.032	.01 (.04)	.34	.041
Emotional Exhaustion	.04 (.02)	1.96	.227	.04 (.02)	2.11*	.254	.07 (.02)	2.87**	.325	-.03 (.03)	-.90	-.11
R² (%)	31.9			25.9			34.3			34.3		
ΔR² (%)	10.6			10.1			15.8			15.8		
Model	F (9.60) = 2.66*			F (9.60) = 2.98**			F (9.60) = 2.96**			F (9.60) = 2.96**		

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

In relation to transformational leadership, by introducing stress, Step 2, significantly increased (6.3%) the variance explained, meaningfully associated with leadership. In step 3, 31.9% of the total variance, an additional 10.6% of the variance corresponding to the burnout, statistically significant increase, was explained. Transformational leadership is associated with low levels of stress ($\beta = -.03$, $p = .003$) and, on the contrary, it is associated with high levels of personal accomplishment ($\beta = .03$, $p = .026$). Regarding the developer leadership, step 3 was significant and 25.9% of the total variance was explained, so that the burnout dimensions explained an additional 10.1% of it, an increase that was statistically significant. Stress showed an inverse and significant effect ($\beta = -.02$, $p = .013$). In relation to the burnout dimensions personal accomplishment ($\beta = .03$, $p = .030$) and emotional exhaustion ($\beta = .04$, $p = .041$), they are associated with high levels of them. Corrective leadership, step 3, the model is significant, explaining 34.3% of the total variance, corresponding to 15.8%, of additional and statistically significant increase by introducing burnout. Corrective leadership is associated with low levels of stress ($\beta = -.04$, $p = .005$) and with high levels of personal accomplishment ($\beta = .04$, $p = .019$) and emotional exhaustion ($\beta = .07$, $p = .006$) of burnout. Passive leadership, with step 3, explains 23.6% of the total variance, so that the burnout dimensions explained an additional 9.3% of the variance, an increase that was statistically significant. Passive leadership is associated with high levels of stress ($\beta = .04$, $p = .013$) as well as with low levels of personal accomplishment ($\beta = -.05$, $p = .023$).

DISCUSSION AND CONCLUSIONS

The objective of the study has been to analyse leadership styles: transformational, developer, corrective and passive/avoidant, stress level, burnout, emotional exhaustion, reduced personal accomplishment and depersonalization. As well as the inference that leadership type has in burnout and stress that referees endure.

The leadership style most used by the referees of the sample, is the transformational and developer coinciding with Silva (2010) whose study is about internal trainers. Supported by Bass & Avolio (2000) an effective leader will exhibit all styles to some degree. The transformational style modifies the value scale, attitudes, beliefs and achieves a higher performance than expected, in the subordinates (Aguilar-Luzón, Calvo-Salguero & García-Hita, 2007) supported by the satisfaction variable, which reaches the highest score.

The stress levels of the sample are in moderate values (29.05) similar to those of Anshel & Weinber (1995), Stew, Ellery & Maher (2004), Jaenes et al. (2012) and González (1999) on basketball and volleyball referees, as well as Blasco (1999), although they were on cycling referees and Gencay (2009) on football referees. High level referees have higher levels of mental strength, such as emotional endurance, determination and persistence (Morris & O'Connor, 2017). However, if there are differences according to the performed role (main, assistant, other), as well as the category in which there is local and regional category in relation to the national category. that does not coincide with Pedrosa & García-Cueto (2016) where there are no differences among football referees. It confirms the significant relation with depersonalization ($r = 0.45$) and emotional exhaustion, just as Öztürk, Koparan, Haşıl, Efe & Özkaya (2004) and Esentaş, Çelik, Dinçer & Işıkgöz (2017). Regarding burnout, it is the assistant referees, who have the highest level of the syndrome (52.54%) as opposed to Pedrosa & García-Cueto (2016) where it was the main referees who presented the highest risk of suffering from the syndrome. Consequently, it is necessary to confirm the relationship between coping strategies and burnout (Carlin, Garcés & De Francisco, 2012), in order to establish measures so that this syndrome does not develop. Depending on the category in which they perform their functions, those at the local level have a higher level of syndrome (55.31%). With regard to exhaustion, we agree with Pedrosa & García-Cueto (2016) that it is the assistant referees who presents the highest level of exhaustion. It is the main referees who obtain the greatest satisfaction differing from Alonso-Arbiol, Arratibel, & Gómez (2008),

for them the assistant referees are the most satisfied, although their study was about football referees. Satisfaction, just like motivation (Garcés de Los Fayos & Cantón, 1995, 2007), is a psychological variable that has to correlate negatively with the presence of burnout, satisfied and motivated athletes feel less burnout, and those who suffer from the syndrome show lower levels of both satisfaction and motivation. The relationship between burnout and stress is confirmed as in previous works (Gustafsson & Skoog, 2012; Gustafsson, Skoog, Podlog, Lundqvist, & Wagnsson, 2013) as well as the prevalence of stress with the burnout syndrome, presenting a high correlation ($r= 0.63$), also confirmed in previous works (e.g. DeFreese & Smith, 2013; González-Boto, Salguero, Tuero, Kellman & Márquez, 2008).

This study is not without limitations, among which we can find the descriptive and cross-cutting nature, the total size of the sample and the subjects belonging only to one sport. As a conclusion, it is noted that research participants preferably use the transformational leadership style. The transformational, developer and corrective style of the sample is associated with low levels of stress and high levels of personal accomplishment, however, the passive style is associated with high levels of stress and low levels of personal accomplishment. The developer and corrective styles present high levels of emotional exhaustion. The sample presents a moderate level of stress, with differences in relation to the role played (main-assistant-others) as well as between those at the national level and those at the local-regional level. As for burnout, the referees have moderate levels of burnout, with differences between those at the national level and those at the local-regional level.

AUTHOR CONTRIBUTIONS

Alfonso Martínez Moreno, research design, article writing and final review. Ricardo Ibáñez Pérez, translation, help with writing, discussion and revision of the article. Catalina Sánchez-Roca, statistical analysis, help in writing conclusions and revision of the article.

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