The relationship between performance motivational climate and coaches' leadership behavior

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Abstract

In the context of competitive sports, the performance motivational climate is significantly shaped by a coach who gives different amounts of attention to athletes based on their talent level, punishes athletes for mistakes, and encourages rivalry between them. The aim of this paper is to broaden empirical knowledge about the relationship between performance motivational climate and different types of coaches' leadership behaviors. A convenience sample in the present study consisted of 152 football players aged 15-18 years, who played in registered football clubs in the Republic of Croatia. The results showed that 28.3% of the variance in perceived performance motivational climate can be explained by coaching behaviors, with coaches' Insensitivity to Athletes' Well-being, Negative Feedback, and Results Orientation being statistically significant positive predictors.

Keywords: *performance motivational climate; coaching leadership behavior; young football players*

Introduction

Performance motivational climate is characterized by the importance of demonstrating normative superiority. In such a socio-psychological environment, the most talented individuals have preferential treatment, while mistakes are punished (Seifriz et al., 1992). In the sports context, this type of motivational climate is shaped by a coach who provides different amounts of attention to his/her athletes based on their talent and abilities, punishes athletes' mistakes, and encourages rivalry between them (Newton et al., 2000). A systematic literature review by Harwood et al. (2015) indicates that performance climate is associated with different maladaptive outcomes. Performance motivational climate is positively associated with ego goal orientation, amotivation, negative affect, etc. (Harwood et al., 2015), and negatively associated with group cohesion (Eys et al., 2013) and perceived performance (Al-Yaaribi & Kavussanu, 2018).

The other core type of motivational climate, mastery, is shaped by coaches who emphasize the importance of effort and personal growth, try to make every player feel that their role is important, and encourage cooperation between team members (Newton et al., 2000). In this type of environment, mistakes are viewed as part of the learning process. The mastery motivational climate is positively associated with task goal orientation, intrinsic motivation, positive affect, etc. (Harwood et al., 2015).

Smith et al. (2005) emphasize the importance of studying antecedents of the perception athletes have about the motivational climate in their sport's collective. They suggest that coach behavior could be one of those antecedents. The authors presume that the athletes who perceive their coach to provide less positive reinforcements and more punishing behaviors will be prone to perceive their socio-psychological environment as performance oriented. The findings of their research, on a sample of high school female basketball players, confirm that lower degree of positive and higher degree of punishing behavior are predictive of performance motivational climate (Smith et al., 2005). On a sample of volleyball players, Mohammadzade et al. (2012) determined that Autocratic Coaching Behavior is predictive of performance climate, but Democratic Behavior, Social Support, Positive Feedback, and Training/Instructions[1] are not. Barić (2005), accounting for the predictive validity of coaching behaviors in explaining the variance of performance climate on a sample of young football players, found that Training/Instructions acts as a negative, and Positive Feedback as a positive predictor. Studying the same criterion on a sample of young basketball players, Training/Instructions and Social Support emerged as negative predictors (Barić, 2005). Alfermann et al. (2005) collected data on a sample of young swimmers at two points in time. While at the second point of data gathering performance climate was not correlated with positive and encouraging coaching behaviors, at the first point there was a statistically significant (but small) negative correlation between this type of motivational climate and Democratic Behavior.

The aim of this study is to broaden empirical knowledge about the relationship between perceived coaching leadership behaviors and performance motivational climate. The findings reported in the literature about the relationship between positive and encouraging coaching behaviors and performance climate are inconsistent. When statistically significant correlations were found, they were small and negative. Therefore, we expect that positive and encouraging coaching behaviors will act as negative predictors of performance motivational climate (Alfermann et al., 2005; Barić, 2005; Mohammadzade et al., 2012; Smith et al., 2005). According to the achievement goal theory postulates (Nicholls, 1984) and empirical findings (Mohammadzade et al., 2012), we assume that Insensitivity to Athletes' Well-being, Negative Feedback, Results Orientation, and Autocratic Behavior will be positive predictors of performance motivational climate because those behaviors are controlling, punishing and ignoring, which is also how performance motivational climate is often perceived (Newton et al., 2000; Seifriz et al., 1992).

Method

Sample

The convenience sample consisted of 152 male football players aged between 15 and 18 years, who were competing in registered football clubs in the Republic of Croatia. Young footballers played in 34 selections (under the leadership of 31 coaches) in 21 different clubs. The average age of participants was 16.6 years (*SD* = 1.00).

Instruments

The Croatian version (Greblo, 2011) of the *Leadership Scale for Sports* (LSS; Chelladurai and Saleh, 1980) consists of 40 items across five subscales: Training and Instructions (e.g., „[My coach] Instructs every athlete individually in the skills of the sport."), Democratic Behavior (e.g., "[My coach] Asks

[1] Alfermann et al. (2005) described the latter four behaviors as positive and encouraging coaching behaviors.

for the opinion of the athletes on strategies for specific competitions."), Autocratic Behavior (e.g., "[My coach] Speaks in a manner which discourages questions."), Social support[2] (e.g., "[My coach] Looks out for the personal welfare of the athletes.") and Positive Feedback (e.g., "[My coach] Expresses appreciation when an athlete performs well."). Participants were instructed to estimate the frequency of particular coaching behavior based on a Likert-type scale (1 – never, 5 - always). It was noted that responses should be based on the behaviors of the coach who was training their team during 2019/2020 season. Higher scores indicate higher frequencies of particular coaching behavior. In the present study, the Cronbach alpha coefficient of the Autocratic Behavior subscale was α = .50, which is why this subscale was excluded from the rest of the analysis[3]. The lower reliability of this subscale is in line with previous findings (e.g., Greblo Jurakić & Keresteš, 2017). Alpha coefficients of the remaining LSS subscales are satisfactory, ranging from α = .74 to α = .88.

The *Negative Coaching Behaviors Questionnaire* (NCBQ; originally Upitnik negativnog ponašanja trenera, UNPT; Greblo Jurakić & Keresteš, 2017) consists of 13 items and is used for assessment of the frequency of negative coaching behaviors. Items are distributed in three subscales: Insensitivity to Athletes' Well-being (e.g., "[My coach] Does not help athletes in stressful situations."), Negative Feedback (e.g., "[My coach] Insults athletes in practice."), and Results Orientation (e.g., "[My coach] Wants athletes to win no matter the cost."). Participants were instructed to estimate the frequency of particular coaching behavior based on a Likert-type scale (1 – never, 5 - always). It was noted that their estimates should be based on the behaviors of the coach who was training their team during the 2019/2020 season. Higher scores indicate a higher frequency of the particular negative coaching behavior. Alpha coefficients of all NCBQ subscales are satisfactory, ranging from α = .71 to α = .85.

As a measure of the performance motivational climate, a subscale of the adapted Croatian version (Barić, 2004) of the *Perceived Motivational Climate in Sport Questionnaire* (PMCSQ; Seifriz et al., 1992) was used. This subscale consists of 12 items (e.g., "On this team, players are encouraged to outplay the other players."). Participants were instructed to estimate the degree to which particular items applied to their team during the 2019/2020 season on a Likert-type scale (1 – strongly disagree, 5 – strongly agree). Higher scores indicate greater salience of the performance motivational climate in their team. The alpha coefficient of the performance motivational climate subscale was satisfactory with α = .79.

Procedure

This study was conducted via an online survey created in LimeSurvey. The data was collected in May and June of 2020. The coaches' or boards' permission for the participation of young football players in the study was requested via phone. A written request was sent to the clubs' representatives who agreed to participate in the study. The purpose and the method of conducting the research were explained in the request. All contacted clubs had an online group for internal communication (WhatsApp, Viber, or Facebook groups), and coaches, or club representatives, forwarded the survey link to those groups. The purpose of the study was explained to participants in the opening part of the survey. The anonymity and the possibility of withdrawing from the study at any time were guaranteed. Participants gave their consent for participation and confirmed that they were older than 14 years of age. It was made salient that participants should give their answers based on the 2019/2020 season. The estimated time for completing the questionnaire was approximately 15 minutes.

Results

Table 1 contains descriptive information on the scales used in this research. The normality of the variables was tested with two procedures. Re-

[2] We excluded the item *"My coach invites the athletes home."* on the basis of our opinion that this item could be misinterpreted and reflect some negative coaching behaviors.

[3] Alfermann et al., (2005) did not include this subscale in their study due to expectations of low reliability. Multiple sources (according to Tavakol & Dennick, 2011) note the inadequacy of using variables with reliability lower than 0.70.

Table 1. Descriptive statistics (*N* = 152)

	M	*SD*	*K-S*	$p_{K\text{-}S}$	Skew.	Kurt.
Training and Instruction	4.22	0.53	0.10	.00	-0.86	1.31
Democratic Behavior	3.63	0.64	0.07	.05	-0.46	0.82
Social Support	3.74	0.72	0.09	.00	-0.30	-0.38
Positive Feedback	4.15	0.60	0.12	.00	-0.59	0.45
Insensitivity to Athletes' Well-being	1.68	0.83	0.22	.00	1.58	2.16
Negative Feedback	1.29	0.58	0.31	.00	3.05	10.12
Results Orientation	3.12	0.91	0.07	.09	-0.03	-0.68
Performance motivational climate	2.91	0.62	0.08	.02	0.29	-0.02

Note. *M* = mean; *SD* = standard deviation; *K-S* = value of Kolmogorov-Smirnov test; $p_{K\text{-}S}$ = significance of Kolmogorov-Smirnov test; Skew. = skewness; Kurt. = kurtosis

Table 1. Correlations matrix (*N* = 152)

	1	2	3	4	5	6	7
1. Training and Instruction							
2. Democratic Behavior	.65**						
3. Social Support	.65**	.70**					
4. Positive Feedback	.75**	.63**	.65**				
5. Insensitivity to Athletes' Well-being	-.26**	-.23**	-.18*	-.22**			
6. Negative Feedback	-.27[a]**	-.25[a]**	-.21[a]**	-.28[a]**	.46[a]**		
7. Results Orientation	.02	-.01	-.09	-.04	.33**	.29[a]**	
8. Performance motivational climate	-.05	-.06	-.03	-.08	.44**	.36[a]**	.39**

Note. * $p < .05$; ** $p < .01$. Since the distribution of Negative Feedback significantly deviates from the normal distribution (see skewness and kurtosis values in Table 1), correlations between this and other variables were calculated via Spearman's rank coefficient. Correlations between other variables were determined using Pearson's correlation coefficient

sults of the Kolmogorov–Smirnov (K-S) test indicate that only the distributions of Results Orientation and Democratic Behavior do not differ significantly from the normal distribution. This is in line with the results of previous research. In a study conducted by Greblo Jurakić & Keresteš (2017), distributions of all NCBQ subscales, except Results Orientation, significantly differed from normal (based on the K-S test). Kline (2011) argues that distributions can be considered approximately normal if the skewness of the distribution does not exceed 3, and the kurtosis does not exceed 10. According to Kline's (2011) suggested criteria, only Negative Feedback deviates from normality.

Inspecting the correlations in Table 2 shows that there were no statistically significant correlations between performance motivational climate and positive and encouraging coaching behaviors. Moderately high statistically significant correlations between performance motivational climate and negative coaching behaviors were established.

Table 3 presents the results of the hierarchical regression analysis with performance motivational climate as the criterion. Values of tolerance range from .35 to .84, and variance inflation factor (VIF) values range from 1.19 to 2.87, which indicates no meaningful singularity and multicollinearity issues (Miles, 2014). Multicollinearity and singularity are problems that occur when variables in a regression analysis are highly correlated, which can bias regression coefficients (Tabachnick & Fidell, 2013).

Table 3. Hierarchical regression analysis with performance motivational climate as the criterion (N = 152)

	βM1	βM2
Training and Instruction[4]	.02	.08
Democratic Behavior	-.06	-.05
Social Support	.06	.08
Positive Feedback	-.10	-.07
Insensitivity to Athletes' Well-being		.28**
Negative Feedback		.16*
Results Orientation		.26**
R^2	.01	.28
F	0.31	8.13
p	>.05	<.01
ΔR^2		.28
$F\Delta R^2$		18.41
$p\Delta R^2$		<.01

Note. * p <= .05**; p < .01; β = standardized regression coefficients; M1, M2 = groups of predictors in the hierarchical regression analysis (models); R^2 = total criterion variance explained; F = the value of the F ratio; ΔR^2 = additional variance explained by the additional group of predictors; $F\Delta R^2$ = the value of the F ratio for the additional group of predictors.

Variables were included in the hierarchical regression analysis in two blocks. Positive and encouraging coaching behaviors were included in the first block. None of these behaviors were statistically significant predictors for the performance motivational climate. Negative coaching behaviors were included in the second block. Total R^2 suggests it is possible to explain 28.3% of the performance motivational climate variance based on coaching behaviors. Negative coaching behaviors (Insensitivity to Athletes' Well-being, Negative Feedback, and Results Orientation) emerge as statically significant predictors.

[4] Although the correlations between positive and encouraging coaching behaviors and performance motivational climate are not statistically significant, they were still retained in the regression analysis. Given the fact that those behaviors have significant correlations with some of the negative coaching behaviors (see Table 2), their inclusion can possibly control some of the negative coaching behaviors variances that are unrelated to the criterion, and thus enhance the relationship between negative behaviors and the criterion variable (Cohen et al., 2003).

Discussion

The aim of this study was to determine the role of coaches' leadership behaviors in the explanation of performance motivational climate variance in a sample of young football players. The results showed that negative coaching behaviors (Insensitivity to Athletes' Well-being, Negative Feedback, and Results Orientation; see Table 3) are positive predictors of the level of perceived performance motivational climate. This finding is in line with expectations, considering the fact that coaches who constantly emphasize the importance of winning and achievement of good sports results as imperative, who give most of their attention to the best players and are generally uninterested in the feelings and needs of athletes, and who use inappropriate verbal and physical behaviors in order to punish athletes for mistakes, failure or unfulfilled expectations, are the ones that, according to the achievement goal theory (Nicholls, 1984), create performance motivational climate. Also, Autocratic Behavior, one of the coaching behaviors that could be considered similar by nature to negative coaching behaviors included in the present study, was shown to be positively predictive of performance motivational climate (Mohammadzade et al., 2012). However, it should be noted that negative coaching behaviors, such as Insensitivity to Athletes' Well-being and Negative Feedback, are perceived by the participants in the present study to be very rare, with average answers fluctuating between never and seldom. In this study, positive and encouraging coaching behaviors (Training and Instructions, Democratic Behavior, Positive Feedback, and Social Support) were not statistically significant predictors of performance motivational climate, which is in line with the results of some previous research (e.g., Alfermann et al., 2005; Mohammadzade et al., 2012).

The contribution of this study consists in deepening the understanding of the relationship between different coaching behaviors and young football players' perception of the performance motivational climate. The work of Greblo Jurakić

& Keresteš (2017) was incited by the underrepresentation of negative coaching behaviors in coach leadership research literature. This study covers a wider range of negative coaching behaviors compared to the research conducted by Barić (2005) or Mahammadzade et al. (2012). The limitations of the present study include its correlational design. Because of that, it's not possible to draw causal conclusions about relations between variables. A potential limitation arises from the fact that groups of several participants evaluated the same coaches, which could lead to data clustering. In that case, the answers of two participants from the same club could be more similar than the answers of two participants from different clubs. The problem of clustering can lead to inaccuracy in the conclusions when applying regression analysis. One way to solve this problem is to use multilevel analysis (Cohen et al., 2003). A large part of the variance in the performance motivational climate remains unexplained in this study. Ego goal orientation is shown to be a prominent predictor of this type of motivational climate (Barić, 2005). Considering this, future research on performance motivational climate predictors in the sport context should include ego goal orientation besides negative coaching leadership behaviors.

Conclusion

In conclusion, this study established coaches' Insensitivity to Athletes' Well-being, Negative Feedback, and Results Orientation as positive predictors for performance motivational climate, which is considered a less desirable type of motivational climate and is associated with different maladaptive outcomes in sports context (Harwood et al., 2015). Such results add to leadership behavior literature, strengthening the assumption that coaches could be an important factor in shaping the motivational climate in sports.

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