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Clima motivacional y diversión en el deporte: el papel mediador de la regulación conductual

Motivational climate and enjoyment in sport: the mediation role of behavioral regulation

Clima motivacional e divertimento no desporto: o papel mediador da regulação comportamental

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RESUMEN

La regulación del comportamiento es un mecanismo explicativo fundamental para entender cómo influye el clima motivacional en la diversión, lo que refuerza la importancia de fomentar entornos que impliquen tareas para mejorar la motivación de los deportistas y su experiencia deportiva en general, especialmente en lo que respecta a la diversión. El objetivo del estudio fue analizar el papel mediador de la regulación conductual en la relación entre el clima motivacional (implicación en la tarea e implicación en el ego) y la diversión en el deporte. En el estudio participaron 294 jugadores de fútbol (153 hombres y 141 mujeres) con edades comprendidas entre los 15 y los 19 años ($M = 14.55$; $SD = 1.71$). Se utilizó la *Motivational Climate Sport Youth Scale* para evaluar el clima motivacional, la *Sport Motivation Scale-II* para evaluar la regulación conductual y la *Physical Activity Enjoyment Scale* para evaluar la diversión. Se realizó un análisis de mediación para examinar el papel de la regulación conductual en la relación entre el clima motivacional y la diversión. Los resultados indicaron que un clima motivacional de implicación en la tarea se asocia con mayores niveles de motivación autónoma ($r = .681$; $p \leq .001$), que a su vez se relaciona con una mayor diversión ($r = .175$; $p \leq .001$). Por otro lado, un clima de implicación del ego se asocia con una motivación no autodeterminada ($r = .657$; $p \leq .001$) y una menor diversión ($r = -.357$; $p \leq .001$). La motivación autónoma medió significativamente en la relación entre el clima de implicación en la tarea y la diversión ($\beta = .38$; 95% $CI = .201, .575$). El estudio refuerza la importancia de promover climas motivacionales de implicación en la tarea para fomentar la motivación autónoma y aumentar la diversión en los deportistas. La motivación autónoma parece desempeñar un papel mediador en la relación entre el clima motivacional y el disfrute.

Palabras clave: motivación; diversión; regulación del comportamiento; fútbol.

ABSTRACT

Behavioral regulation serves as a critical explanatory mechanism in understanding how motivational climate impacts enjoyment, reinforcing the importance of fostering task-involving environments to enhance athletes' motivation and overall sport experience, particularly in enjoyment. The aim of the study was to analyze the mediating role of behavioral regulation in the relationship between motivational climate (task-involving and ego-involving) and enjoyment in sport. The study involved 294 soccer players (153 males and 141 females) aged between 15 and 19 ($M = 14.55$; $SD = 1.71$). The Motivational Climate Sport Youth Scale was used to assess the motivational climate, the Sport Motivation Scale-II to assess behavioral regulation and the Physical Activity Enjoyment Scale to assess enjoyment. A mediation analysis was conducted to examine the role of behavioral regulation in the relationship between motivational climate and enjoyment. The results indicated that a task-involving motivational climate is associated with higher levels of autonomous motivation ($r = .681$; $p \leq .001$), which in turn is related to greater enjoyment ($r = .175$; $p \leq .001$). On the other hand, an ego-involving climate is associated with non-self-determined motivation ($r = .657$; $p \leq .001$) and lower enjoyment ($r = -.357$; $p \leq .001$). Autonomous motivation significantly mediated the relationship between task-involving climate and enjoyment ($\beta = .38$; 95% $CI = .201, .575$). The study reinforces the importance of promoting task-involving motivational climates to foster autonomous motivation and increase enjoyment in athletes. Autonomous motivation seems to play a mediating role in the relationship between motivational climate and enjoyment.

Keywords: motivation; enjoyment; behavioral regulation; soccer.

RESUMO

A regulação comportamental é um mecanismo explicativo fundamental para compreender como o clima motivacional afeta o prazer, reforçando a importância de promover ambientes envolventes de tarefas para melhorar a motivação dos atletas e a experiência desportiva global, particularmente no prazer. O objetivo do estudo foi analisar o papel mediador da regulação comportamental na relação entre o clima motivacional (Envolvimento para a tarefa e Envolvimento com o ego) e o prazer no desporto. O estudo envolveu 294 jogadores de futebol (153 do sexo masculino e 141 do sexo feminino) com idades compreendidas entre os 15 e os 19 anos ($M = 14.55$; $DP=1.71$). A *Motivational Climate Sport Youth Scale* foi utilizada para avaliar o clima motivacional, a *Sport Motivation Scale-II* para avaliar a regulação comportamental e a *Physical Activity Enjoyment Scale* para avaliar o prazer. Foi efetuada uma análise de mediação para examinar o papel da regulação comportamental na relação entre o clima motivacional e o prazer. Os resultados indicaram que um clima motivacional de envolvimento com a tarefa está associado a níveis mais elevados de motivação autónoma ($r = .681$; $p \leq .001$), que por sua vez está relacionada com um maior divertimento ($r = .175$; $p \leq .001$). Por outro lado, um clima de envolvimento para o ego está associado a uma motivação não autodeterminada ($r = .657$; $p \leq .001$) e a um menor prazer ($r = -.357$; $p \leq .001$). A motivação autónoma mediou significativamente a relação entre o clima de envolvimento com a tarefa e o divertimento ($\beta = .38$; $IC\ 95\% = .201, .575$). O estudo reforça a importância da promoção de climas motivacionais de envolvimento com a tarefa para fomentar a motivação autónoma e aumentar o prazer dos atletas. A motivação autónoma parece desempenhar um papel mediador na relação entre o clima motivacional e o prazer.

Palavras chave: motivação; divertimento; regulação comportamental; futebol.

INTRODUCTION

Motivation has been one of the most studied variables in sports sciences, with a particular focus on sports psychology (Dominguez, 2007; Roberts, 2012; Singer et al., 2001). Despite this, motivation has been one of the

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most frequently published topics in recent years (Rodrigues et al., 2024), highlighting its importance in predicting various indicators, whether cognitive (Monteiro et al., 2018c; Pope & Wilson, 2012), behavioral (Quested et al., 2013), or emotional (Jowett et al., 2017).

Etymologically, motivation derives from the Latin *movere* (Alves et al., 1996), which conveys a sense of movement, functioning as a true driving force for achievement (Roberts, 2012). It is related to five fundamental aspects: Direction – what an individual seeks; Intensity – the amount of effort exerted; Persistence – the maintenance of effort; Commitment – returning after a break and Performance – the outcome of the action (Deci & Ryan, 2000). In this regard, motivation appears to be the key variable that can predict both the quality of motivation and the persistence of behavior over time in various contexts (Ryan, 2023; Ryan & Deci, 2017).

Over the years, several models and theories have been used to study motivational processes in the sports context (Duda, 2013). However, since the 1980s, researchers have given greater prominence to Achievement Goal Theory (Nicholls, 1984) and Self-Determination Theory (Deci & Ryan, 1985; Ryan & Deci, 2017). Besides being the two most widely used theories for studying motivational processes in sports (Duda, 2013; Monteiro et al., 2018bc), they have also contributed the most in recent years to understanding cognitive, behavioral, and emotional patterns related to athletes' goals in sports settings (Amaro et al., 2023; Rodrigues et al., 2024; Teixeira et al., 2020).

Self-Determination Theory

Self-Determination Theory (Deci & Ryan, 1985; Ryan & Deci, 2017) is a macro-theory of human motivation that considers not only personality factors but also the causes and consequences of self-determined behavior. This theoretical model comprises six micro-theories: cognitive evaluation theory, organismic integration theory, basic psychological needs theory, causality orientations theory, goal content theory, and relationship motivation theory (Ryan & Deci, 2017). Each of these theories systematizes key aspects essential to human motivation. However, for the present study, only the micro-theory of Organismic Integration Theory will be addressed. Organismic Integration Theory is the most extensive component of Self-Determination Theory, as it encompasses the core feature of Self-Determination Theory: the distinction between autonomous/more self-determined motivation and controlled/less self-determined motivation (Deci & Ryan, 2000; Howard et al., 2017).

According to Ryan and Deci (2017), it is not the contextual factors themselves that directly influence how individuals regulate their motivation, but rather the fulfillment of the three basic psychological needs: Autonomy (the need to feel independent, regulating one's own actions); Competence (the need to interact successfully with environmental stimuli), Relatedness (the need to feel connected to and appreciated by others).

These three needs are innate and universal to all human beings. They are not learned and are relevant to human behavior regardless of gender, ethnicity, or cultural background, although the means of satisfying them may differ (Deci & Ryan, 2008). These needs explain how individuals regulate their motivation along a motivational continuum, which ranges from amotivation (the absence of regulation or intention to act) to intrinsic motivation (engaging in an activity for the inherent pleasure and enjoyment it provides). Between these two extremes lies extrinsic motivation, which includes: (i) more controlled forms of regulation: external regulation (behavior is performed to meet external demands, such as obtaining rewards or avoiding punishments); introjected regulation (behavior is internally pressured and performed to avoid negative feelings such as guilt or anxiety). (ii) more autonomous forms of regulation: identified regulation (the activity is personally important, and the individual identifies with its goal or value, even if they do not fully enjoy it). Integrated regulation (the behavior becomes part of the individual's self-concept, with a high degree of harmony/congruence with other values and needs) (Ryan & Deci, 2017).

The way an individual progresses along this motivational continuum, transitioning from more controlled to more autonomous forms of regulation, is explained by Organismic Integration Theory through the processes of internalization and integration. These processes describe how behaviors initially motivated by external factors become more self-determined over time. In other words, Organismic Integration Theory analyzes and explains how controlled regulations gradually integrate into self-determined motivation through internalization, allowing individuals to modify the conditions in which they are embedded (Ryan et al., 2022; Ryan & Deci, 2017).

Thus, we conclude that Organismic Integration Theory underlies the entire motivational continuum, as it posits that intrinsic motivation is not the only form of motivation. There is always an external stimulus involved (e.g., "I go to practice because I want to play"), and most of our daily tasks require extrinsic motivation, where the driver is not pleasure or enjoyment but an external outcome of the task.

Recent research (Amaro et al., 2023; Guzmán & Kieran, 2012; Jowett et al., 2017; Monteiro et al., 2018bc; Quested et al., 2013) has shown that when individuals perceive their basic psychological needs as satisfied, they tend to regulate their behavior in a more self-determined manner. Additionally, studies have demonstrated that individuals who regulate their behavior through more self-determined forms of motivation experience: greater enjoyment (Rodrigues et al., 2024); higher perceived effort (Monteiro et al., 2018c; Pope & Wilson, 2012), lower intention to drop out (Sarrazin et al., 2002), greater persistence in practice (Monteiro et al., 2018b; Pelletier et al., 2001), and other behavioral, emotional, and cognitive consequences (Almagro et al., 2015; Monteiro & Morales-Sánchez, 2024).

Achivement Goal Theory

The achievement goal theory (Nicholls, 1984) encompasses both a dispositional perspective (i.e., individuals' orientation in achievement contexts) and a situational perspective (i.e., motivational climate induced by significant others, including the coach), with the latter being the focus of the present study. The concept of motivational climate first emerged in education through the work of Ames (1995). However, it was quickly applied to the sports context (Seifriz et al., 1992), as it is a socio-cognitive theory concerned with studying individuals' behaviors in achievement contexts (Duda, 2013).

Based on this premise, motivational climate has been studied regarding the environment created by the coach, both in training and competition settings, which is reflected in their words and actions, ultimately influencing athletes' behaviors (Duda, 2013). From this perspective, two types of climates emerge: a) Task-involving climate: emphasizes learning and personal progress, where effort in the task is rewarded, and mistakes are seen as part of the learning process; b) Ego-involving climate: emphasizes comparison between individuals and the demonstration of competence in relation to others, where results are rewarded, and mistakes are punished (Keegan et al., 2014).

According to Duda and Balaguer (2007) and Duda (2013), research on the motivational climate created by the coach has shown that athletes exposed to a task-involving climate, compared to an ego-involving climate, adopt more adaptive strategies, focus more on self-referenced criteria rather than normative ones, are less likely to drop out, experience more enjoyment, show greater intentions to continue participating, and persist longer in their practice. Other studies have also demonstrated that athletes who perceive a task-involving climate regulate their motivation in a more self-determined way (Monteiro et al., 2014), exhibit higher levels of intrinsic motivation, subjective vitality, and intentions to continue participating (Alvarez et al., 2012), have lower dropout rates (Sarrazin et al., 2002), and experience higher levels of enjoyment (Keegan et al., 2014).

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Motivational climate and enjoyment in sport

Achievement goal theory and Self-Determination Theory are two sociocognitive motivational theories with strong theoretical (Duda, 2013; Ntoumanis, 2001) and empirical (Alvarez et al., 2012; Amaro et al., 2023; Sarrazin et al., 2002) connections. For this reason, research has focused on integrating both theories to provide a multi-theoretical explanation of human behavior (Hagger & Chatzisarantis, 2008; Monteiro & Morales-Sánchez, 2024).

On one hand, achievement goal theory explains how people's cognitions, affective responses, and behaviors in achievement contexts are influenced by personal and situational factors (Nicholls, 1984). This is because environmental factors related to the achievement setting, combined with an individual's personal characteristics, influence motivation through the motivational climate, which is shaped by significant others (e.g., including the coach) (Ames, 1995; Duda, 2013).

On the other hand, Self-Determination Theory seeks to study the process of self-determination in individuals, focusing on how social factors can influence motivation through the satisfaction of the basic psychological needs of autonomy, competence, and relatedness (Ryan & Deci, 2017).

Thus, if, according to Self-Determination Theory, social factors (i.e., including the coach-created motivational climate) can explain how individuals regulate their behavior through the satisfaction of their basic psychological needs, then the motivational climate plays an essential role in motivation regulation. This is because it can either facilitate or hinder the fulfillment of these psychological needs (Duda, 2013; Monteiro et al., 2018c; Ntoumanis, 2001), making it a key element that links both theories.

According to Duda (Duda, 2013), a social environment that supports personal development leads to a more self-determined motivational pattern (Duda, 2013; Pelletier et al., 2001), which is associated not only with increased well-being but also with greater behavioral persistence and enjoyment (Alvarez et al., 2012; Amaro et al., 2023; Duda & Balaguer, 2007; Jõesaar et al., 2012; Rodrigues et al., 2024). Conversely, when the social environment places greater emphasis on rewards, punishments, and sanctions, it leads to a more controlled motivational pattern, frustrating basic psychological needs and resulting in athlete disengagement and boredom (Alvarez et al., 2009).

In this sense, it is evident that there is both a theoretical and empirical relationship between the constructs of both theories. A task-involving motivational climate appears to be associated with autonomous motivation since such contexts promote more intrinsic success criteria and are linked to increased intrinsic motivation and enjoyment. In contrast, an ego-involving climate, where success is based on normative criteria, seems to reduce intrinsic motivation and enjoyment as it places greater emphasis on external factors (Duda, 2013; Monteiro et al., 2018b; Ntoumanis, 2001).

In summary, beyond these theoretical connections, several authors (Almagro et al., 2015; Alvarez et al., 2012; Amaro et al., 2023; Boiché & Sarrazin, 2009; Jõesaar et al., 2012; Sarrazin et al., 2002) have demonstrated that a task-involving climate is related to autonomous/more self-determined motivation, whereas an ego-involving climate is linked to controlled/less self-determined motivation.

Enjoyment has been widely explored in the context of sport, as it plays a crucial role in both the initiation and long-term engagement in physical activity (Amaro et al., 2023). It is considered a key outcome of a task-involving motivational climate and a significant predictor of future participation intentions (Balish et al., 2014; Monteiro et al., 2017a). Additionally, enjoyment itself fosters continued engagement in sport (Rodrigues et al., 2024). Conceptually, enjoyment is recognized as a multidimensional construct encompassing aspects such as positive activation, perceived competence, attitude, and cognition (Rodrigues et al., 2020). Within the sporting context, it reflects an athlete's favorable reaction to their participation, often characterized by feelings of pleasure and experiences of flow (Monteiro et al., 2018b; Rodrigues et al., 2024). Moreover, enjoyment is a positive emotional state shaped by an athlete's experiences in sport (Monteiro & Morales-Sánchez, 2024), and it has been consistently associated with stronger intentions to continue practicing and greater adherence to sport over time (Monteiro et al., 2018b; Rodrigues et al., 2024).

The mediation role of behavioral regulation, specifically autonomous and controlled motivation, in the relationship between motivational climate and enjoyment has been extensively studied within the frameworks of Self-Determination Theory and Achievement Goal Theory. Conceptually, Achievement Goal Theory posits that the motivational climate—task-involving or ego-involving—established by coaches or significant others shapes how athletes approach achievement contexts (Duda, 2013). A task-involving climate, which emphasizes personal mastery, effort, and self-improvement, fosters autonomous forms of motivation, such as intrinsic motivation and identified regulation, which are characterized by engagement in an activity out of personal choice and internalized values (Ryan & Deci, 2017). In contrast, an ego-involving climate, which emphasizes competition, social comparison, and external validation, tends to elicit controlled forms of motivation, such as introjected and external regulation, where behaviors are driven by contingent self-worth, external rewards, or fear of punishment (Ntoumanis, 2001). This differentiation in behavioral regulation is crucial because autonomous motivation is strongly linked to higher enjoyment, persistence, and well-being, whereas controlled motivation is associated with lower enjoyment, burnout, and dropout from sport (Monteiro et al., 2018b; Pelletier et al., 2001; Sarrazin et al., 2002).

Empirically, several studies have confirmed the mediating role of behavioral regulation in this motivational sequence. For instance, Álvarez et al. (2012) and Monteiro et al. (2018c) found that a task-involving climate predicted higher levels of autonomous motivation, which in turn led to greater enjoyment in young soccer players. Similarly, Jõesaar et al. (2012) demonstrated that perceived peer and coach support for a mastery-oriented climate was positively associated with need satisfaction and autonomous motivation, which subsequently enhanced enjoyment and sport persistence over time. Recently Rodrigues et al. (2024) showed the importance of task-involving climate and self-determined motivation on enjoyment in youth football players. Conversely, when athletes perceived an ego-involving climate, they were more likely to develop controlled motivation, leading to decreased enjoyment and a greater likelihood of sport disengagement (Quested et al., 2013). These findings support the idea that motivational climate does not directly determine enjoyment but rather exerts its influence through the type of behavioral regulation athletes develop in response to their environment. Thus, behavioral regulation serves as a critical explanatory mechanism in understanding how motivational climate impacts enjoyment, reinforcing the importance of fostering task-involving environments to enhance athletes' motivation and overall sport experience, particularly in enjoyment. Therefore, the aim of the present study was to analyze the mediation role of behavioral regulation in the relationship between motivational climate and enjoyment in athletes.

MATERIAL AND METHODS

This cross-section study, as it only collected data from one population at a single point in time.

Participantes

To take part in this study, participants had to be federated soccer players of both sexes and have agreed to take part in this study. Likewise, participants who did not provide informed consent, did not complete the assessment instruments or who also practiced other sports were excluded.

Instrumentos

Motivational Climate Sport Youth Scale (Smith et al., 2008), Portuguese version by Monteiro et al. (2018a). This questionnaire consists of 8 items, to which participants respond using a Likert scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"). The items are subsequently grouped into two factors (with four items each), reflecting the theoretical construct underlying the Achievement Goal Theory (Nicholls, 1984) in relation to motivational climate. Previous studies support the validity and reliability of this questionnaire across various sports (Monteiro et al., 2018a). For the purpose of present study two composite factors were created (i.e., task and ego-involving motivational climate) as used in previous studies (Monteiro et al., 2018c).

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Sport Motivation Scale-II (Pelletier et al., 2013), Portuguese version by Rodrigues et al. (2021). This questionnaire consists of 18 items grouped into 6 dimensions (3 items each), corresponding to the types of motivational regulation underlying the motivational continuum of Self-Determination Theory. The items are rated on a Likert scale ranging from 1 ("does not correspond at all") to 7 ("completely corresponds"). Previous studies support its validity and reliability in the sports context across different cultures (Li et al., 2018; Pelletier et al., 2013). For the purpose of present study two composite factors were created (i.e., self and non-self-determined motivation) as used in previous studies (Monteiro et al., 2018c).

Physical Activity Enjoyment Scale (Kendzierski & DeCarlo, 1991). This questionnaire was reduced to 8 items (Mullen et al., 2011) and adapted to the sports context in Portugal by Monteiro et al. (2017b), which is the version used in the present study. It consists of 8 items, to which participants respond using a 5-point Likert scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"). The items are subsequently grouped into a single factor that represents the individual's level of enjoyment in the sports context.

Procedimiento

Ethical approval was obtained from the Polytechnic University of Leiria Ethics Committee (PARECER N.º CE/IPLEIRIA/24/2021). Then, the authorization from the clubs and the signed informed consent from the participants (for underage athletes, consent was obtained through their guardians), were asked and all data were collected and analyzed anonymously, thus ensuring confidentiality, in accordance with the guidelines outlined in the Helsinki Declaration of the World Medical Association (2013). It is also important to note that the questionnaire data were collected at the beginning of the training sessions, with the application taking approximately 20 minutes, this period was considered sufficient for the respondents to be able to read and interpret the questions carefully, minimizing possible biases caused by haste or cognitive fatigue. The questionnaires consisted of closed questions. During application, we tried to ensure a calm and suitable environment for completion, avoiding external interference that could compromise the quality of the answers. Clear and objective instructions were also provided to ensure full understanding of the items assessed, contributing to the reliability of the data collected.

Análisis estadístico

A preliminary examination discovered no missing values or outliers. Means, standard deviation and bivariate correlations were calculated for all studied variables. The skewness and kurtosis values were below the cutoff values, indicating a normal distribution. For the strength of correlations, the following ranges were considered: 0.10-0.30 (weak correlation); 0.31-0.50 (moderate correlation); > 0.50 (strong correlation) (Cohen, 1988). In addition, to reply of the purpose of present study a mediation analysis (model 4), based on Hayes's (2018) recommendations was performed in IBM PROCESS version 3.5 macro. In total, two models were tested: model 1) task-involving motivational self-determined and non-self-determined regulations and enjoyment; model 2) ego-involving motivational self-determined and non-self-determined regulations and enjoyment. Specifically, the predictor variables (i.e., task- and ego-involving motivational climates), the outcome variable (i.e., enjoyment), and two parallel mediators (i.e., self-determined and non-self-determined motivation) were included in the mediation analysis. Given the sequential nature of the model, variables were positioned based on prior theoretical and empirical evidence. This methodological framework allowed for the estimation of both direct and indirect effects while accounting for the mediating role of motivation types between the predictor and outcome variables (Hayes, 2022). To ensure robustness, bias-corrected bootstrapped estimates (standard errors and 95% confidence intervals) were computed for the independent-dependent variable interaction. Indirect effects were deemed significant if the confidence interval did not contain zero ($\alpha = 0.05$). The analysis employed a 5000-sample bootstrapping procedure with bias correction and confidence intervals. As recommended by Hayes (2022) and MacKinnon et al (2004), bootstrapping was utilized due to its greater statistical efficiency and power compared to traditional normal theory approaches, particularly in studies with smaller sample sizes.

RESULTS

A total of 294 football athletes (153 males, 141 females) voluntarily participated in this study, with ages ranging from 15 to 19 years ($M = 14.55$; $SD = 1.71$). Their years of practice varied between 2 and 11 years ($M = 6.67$; $SD = 2.93$). As stated by Fritz and Mackinnon (2007), the sample size used in this study aligns with simulations designed for mediation analysis with this number of variables, thereby ensuring adequate statistical power.

A preliminary analysis of the data confirmed the absence of missing values and outliers; therefore, the entire sample was utilized. Table 1 presents the means, standard deviations, and bivariate correlations among the study variables. The athletes exhibited high levels of self-determined motivation ($M = 5.94$, $SD = 1.55$), enjoyment ($M = 3.94$, $SD = 1.21$), and task-involving climate ($M = 3.82$, $SD = 1.06$); while reporting low levels of ego-involving climate ($M = 1.86$, $SD = .753$) and non-self-determined motivation ($M = 2.73$, $SD = 1.32$), compared to the lower and upper values of the scales. The correlation matrix revealed significant associations among the analyzed variables. There was a significant and strong negative correlation between task-involving motivational climate and ego-involving motivational climate and between self-determined motivation and non-self-determined motivation. Similarly, there was a significant and strong positive correlation between task-involving motivational climate and self-determined motivation, between task-involving motivational climate and self-determined motivation and between enjoyment and self-determined motivation.

Table 1

Means, standard deviation and bivariate correlations.

	1	2	3	4	5
1. TI	1	-	-	-	-
2. EI	-.795**	1	-	-	-
3. SDM	.681**	-.632**	1	-	-
4. NSDM	-.411**	.657**	-.658**	1	-
5. ENJ	.175**	-.357**	.751**	-.491	1
Mean	3.82	1.86	5.94	2.73	3.97
Standard-Deviation	1.06	.753	1.55	1.32	1.21

Note. TI: task-involving motivational climate; EI: ego-involving motivational climate; SDM: self-determined motivation; NSDM: non-self-determined motivation; * = $p < 0.05$; ** = $p < 0.001$.

Table 2 shows the two mediation models analyzed. Although the results are significant for all the relationships between the variables studied, only model 1 revealed a mediation effect since the total indirect effect was greater than the direct effect.

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Table 2

Mediation analysis.

Models	Paths	Effect
Model 1	TI→NSDM	-.19 [-.391, -.101]
	TI→SDM	.38 [.201, .575]
	TI→ENJ	.21 [.102, .411]
	NSDM→ENJ	-.29 [-.598, -.198]
	SDM→ENJ	.41 [.231, .612]
Model 2	EI→NSDM	.32 [.224, .599]
	EI→SDM	-.24 [-.451, -.122]
	EI→ENJ	-.17 [-.245, -.110]
	NSDM→ENJ	-.29 [-.598, -.198]
	SDM→ENJ	.41 [.231, .612]

Note. TI: task-involving motivational climate; EI: ego-involving motivational climate; SDM: self-determined motivation; NSDM: non-self-determined motivation.

DISCUSSION

Motivation plays a crucial role in sports performance and adherence, and its study has been widely explored through different theoretical frameworks. Among these, Self-Determination Theory (Deci & Ryan, 2000; Deci & Ryan, 1985) and Achievement Goal Theory (Nicholls, 1984) have been the most prominent in explaining how motivational processes influence athletes' behavior, cognition, and emotional outcomes (Duda, 2013; Monteiro et al., 2018bc). The present study aimed to analyze the mediating role of behavioral regulation in the relationship between motivational climate and enjoyment in athletes, contributing to the existing literature on motivation in sports. The results indicated that a task-involving motivational climate is associated with higher levels of autonomous motivation ($r = .681$; $p \leq .001$), which in turn is related to greater enjoyment ($r = .175$; $p \leq .001$). On the other hand, an ego-involving climate is associated with non-self-determined motivation ($r = .657$; $p \leq .001$) and lower enjoyment ($r = -.357$; $p \leq .001$). Autonomous motivation significantly mediated the relationship between task-involving climate and enjoyment ($\beta = .38$; 95% CI = .201, .575).

Motivational Climate and Behavioral Regulation

The findings of this study support previous research highlighting the importance of a task-involving climate in fostering autonomous motivation (Alvarez et al., 2012; Monteiro et al., 2018c). Athletes who perceive a task-involving climate are more likely to experience autonomy, competence, and relatedness satisfaction, which in turn enhances self-determined motivation (Ryan & Deci, 2017). Conversely, an ego-involving climate is associated with controlled forms of motivation, where external contingencies or internal pressures drive participation (Duda, 2013; Ntoumanis, 2001). This distinction aligns with the theoretical premises of Self-Determination Theory, which posits that the fulfillment of basic psychological needs facilitates the internalization of extrinsic motivation, fostering a more autonomous regulatory style (Deci & Ryan, 2000; Ryan & Deci, 2017).

Behavioral Regulation as a Mediator

The mediating role of behavioral regulation in the relationship between motivational climate and enjoyment is well-established in the literature (Monteiro et al., 2018b; Pelletier et al., 2001; Sarrazin et al., 2002). The current study reinforces the idea that autonomous motivation mediates the positive effects of a task-involving climate on enjoyment (Rodrigues et al., 2024). This suggests that when athletes internalize motivation in a more self-

determined manner, they are more likely to experience enjoyment, which is a key factor in sustained sports participation (Amaro et al., 2023; Monteiro & Morales-Sánchez, 2024). Our results indicated that behavioral regulation, particularly self-determined motivation, significantly mediated the relationship between a task-involving climate and enjoyment, reinforcing the importance of fostering autonomy-supportive environments. On the other hand, controlled motivation, which is typically associated with an ego-involving climate, leads to lower enjoyment and an increased risk of dropout (Quested et al., 2013).

Enjoyment as a Key Outcome

Enjoyment has been identified as a fundamental predictor of long-term engagement in sports (Balish et al., 2014; Monteiro et al., 2017b). The findings of this study corroborate prior research indicating that a task-involving climate enhances enjoyment through its positive impact on autonomous motivation (Rodrigues et al., 2024). This aligns with the concept of enjoyment as a multidimensional construct, encompassing affective, cognitive, and motivational components that contribute to an athlete's positive experience in sports (Monteiro & Morales-Sánchez, 2024). Furthermore, the results highlight the detrimental effects of an ego-involving climate on enjoyment, emphasizing the importance of fostering environments that support intrinsic and identified regulation in athletes (Duda & Balaguer, 2007; Jõesaar et al., 2012). Specifically, our findings showed that enjoyment scores were significantly higher among athletes who perceived a task-involving climate, underscoring the crucial role of motivation in promoting positive sport experiences.

Limitations, Future Research

While this study provides valuable insights, it is not without limitations. The cross-sectional design limits our ability to infer causality. The study also only recruited soccer players, so it cannot be generalized to other athletes. Future research should employ longitudinal designs to assess the long-term effects of motivational climate on athletes' engagement and performance outcomes. Additionally, exploring the role of other potential mediators, such as psychological well-being or resilience, could provide a more comprehensive understanding of the motivational processes in sports.

CONCLUSION

This study provides further empirical support for the mediating role of behavioral regulation in the relationship between motivational climate and enjoyment. By demonstrating that a task-involving climate fosters autonomous motivation, which in turn enhances enjoyment, these findings contribute to the theoretical integration of Self-Determination Theory and Achievement Goal Theory in sports contexts. Future research should explore longitudinal designs to assess the long-term effects of motivational climate on athletes' engagement and performance outcomes. Additionally, interventions aimed at modifying motivational climates in sports settings should be developed to maximize enjoyment and long-term adherence to sport.

PRACTICE APPLICATIONS

The integration of Achievement Goal Theory and Self-Determination Theory in this study provides a comprehensive understanding of how social environments shape motivation in sports settings (Hagger & Chatzisarantis, 2008; Monteiro et al., 2018a; Monteiro et al., 2018b). The findings emphasize the need for coaches and sports practitioners to promote a task-involving climate, as it fosters self-determined motivation and enhances enjoyment. Given the strong relationship between enjoyment and continued participation in sports (Rodrigues et al., 2024), practical interventions should focus on motivational climate, particularly task-involving motivational climate that emphasize effort, personal improvement, and autonomy support (Duda, 2013; Keegan et al., 2014). Moreover, our results suggest that interventions targeting behavioral regulation can be effective in enhancing

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enjoyment and preventing dropouts in sports, highlighting the need for strategies that promote self-determined motivation and consequently enjoyment.

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