

REVIEW ARTICLE

Transformational leadership and team performance in sports teams: A conditional indirect model

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Abstract

This study tests how transformational leadership fosters team performance through team cohesion and how that relationship is moderated by previous team performance and leadership consensus. We computed a moderated-mediation model based on a sample of 690 professional players in 59 top professional teams in interactive team sports leagues (basketball, handball, roller hockey, and indoor football/soccer) in Spain. Our findings suggest that transformational leadership indirectly influences objective team performance through the mediation role of team cohesion and that this indirect effect is more prominent when the level of previous performance is higher. We also found that the indirect effect of transformational leadership on team performance via cohesion is stronger in teams with higher consensus regarding their coaches' leadership. Overall, our results demonstrate the importance of integrating dispersion and contextual variables into research models, in particular, previous performance and leadership consensus.

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KEYWORDS

moderated mediation, objective sports performance, organizational climate, team cohesion, transformational leadership

INTRODUCTION

Organizational behavior scholars have studied transformational leadership in depth, but it has received relatively less attention in the sports psychology field (Arthur et al., 2017). Transformational leaders are considerate when building relationships with their associates through inspirational, personal, and emotional exchanges (Bass, 1999). Previous scholars have also highlighted that transformational leaders motivate their followers to perform beyond their initial expectations and to exceed normal performance levels (Bass, 1985), thus having a positive and significant effect on group-level outcomes (Smith et al., 2013). In a sporting context, leaders reflect their transformational leadership style by caring for, motivating and even trusting players, as well as sharing important life lessons, all of which influence team performance (Newland et al., 2015).

Although not widely researched, team cohesion is one of the mechanisms that scholars point to as serving to link transformational leadership to performance (e.g., Callow et al., 2009). For example, Bass et al. (2003) argue that transformational leaders help deepen team members' sense of identification with the team itself, its values, mission, and vision, which in turn has positive effects on performance. However, this relationship does not occur in a vacuum. Leadership is a complex interaction between leaders, teams, and the context in which they operate, and therefore, examining the characteristics of the performing context is essential when trying to understand leadership's effects on performance (Bass et al., 2003). Several contextual variables influence performance in sports and should be considered to develop useful models (Crewther et al., 2020). Our study thus aims to answer multiple calls to incorporate contextual variables into organizational phenomena studies (e.g., Howell et al., 1986; Johns, 2018; Kozlowski & Klein, 2000). This perspective is in line with Johns' (2018) argument that the context's impact on organizational behavior should be emphasized, as it may represent a situational opportunity or constraint that affects behavior and the functional relationships between variables.

Context can be defined "as situational opportunities and constraints that affect the occurrence and meaning of organizational behavior as well as functional relationships between variables. Context can serve as a main effect or interact with personal variables such as disposition to affect organizational behavior" (Johns, 2006, p. 386). As noted by Johns (2006), a single event or episode can sometimes determine the context. A relevant event within sports teams is previous performance, that is, a win or a loss, as it has a relevant impact on intra-team communication and cohesion (Algesheimer et al., 2011), thus constituting an opportunity or a constraint that affects the team's behavior. Therefore, we propose an indirect effect of transformational leadership on team performance via team cohesion which is contingent on previous performance (i.e., the result of the prior match). Winning or losing a game produces an effective response in players, which has a significant impact on team performance (Wilson & Kerr, 1999). The theory of psychological momentum (Iso-Ahola & Mobily, 1980) supports the use of the previous game's result as a moderating variable of future performance. Psychological

momentum can be conceptualized as a force or power that modifies interpersonal perceptions and impacts performance (Iso-Ahola & Mobily, 1980). According to this theory, subsequent behavior tends to be consistent with immediately preceding behavior, encompassing the perception that a future success or failure is a function of a recent success or failure, respectively (Hubbard, 2015).

Likewise, measuring transformational leadership requires a certain level of shared perceptions within the team (Chan, 1998). This reflects a climate-level variable, which aggregates individual perceptions at the team level. However, the theory of climate strength (Schneider et al., 2002) suggests that, despite this convergence in terms of perceptions, there may be some degree of variability within the team. This variability determines *climate strength*, which is the degree of consensus between individual climate perceptions within the team (Schneider et al., 2002). Therefore, it is important to distinguish between the level (average individual scores) of transformational leadership and its strength (consensus degree among team members).

The theory of climate strength establishes a relationship between climate level and strength, arguing that the latter positively moderates the relationship between climate level and its outcomes (Rego et al., 2017; Schneider et al., 2002). This theory allows us to understand the importance of increasing unified perceptions about several organizational contexts (i.e., leadership roles) in order to reduce behavioral variability among team members. Transformational leaders foster acceptance of group goals and promote teamwork, which contributes to increased team cohesion (Callow et al., 2009). However, if there are different perceptions within the team about the leader's transformational character, the effect on the team's acceptance of common goals and the promotion of teamwork may be compromised. As argued by González-Romá et al. (2002), shared climate perceptions shape team members' responses. Thus, consensus on the nature of leadership implies shared perceptions that affect employees' behaviors (Weller et al., 2020) and, consequently, enhance the impact of transformational leadership on team cohesion and future team performance (Filho et al., 2014).

Despite the relevance of consensus in explaining higher level outcomes (e.g., unit or team-level outcomes), we still need to provide empirical evidence on these effects within the sports team context. Therefore, we contend that the indirect effect of transformational leadership on team performance through cohesion is moderated by previous performance and by the consensus strength on leadership (see Figure 1).

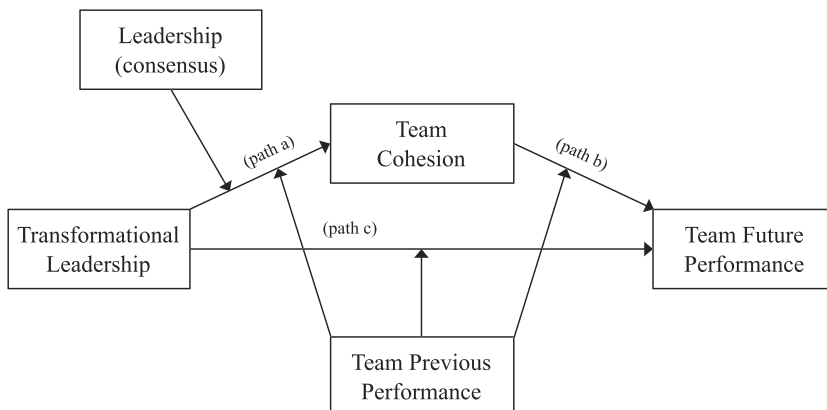


FIGURE 1 Framework of transformational leadership in context

This study makes at least three main contributions. First, drawing from the leadership and team effectiveness theoretical framework (Zaccaro et al., 2001), it strengthens the role of team cohesion as a mechanism through which transformational leadership affects team performance. Second, it brings the context to the theoretical spotlight by answering calls to integrate contextual variables in organizational behavior theory (Johns, 2018; Kozlowski & Klein, 2000). By studying the moderating effect of previous performance, we not only integrate a contextual variable into our model but also help address an understudied question in sports literature that relates the effect of previous team performance on both behavioral and performance outcomes (Nash et al., 2018). Third, this study contributes to climate strength literature (Schneider et al., 2002) and transformational leadership theories by shedding additional light on the joint and differential effect of leadership consensus and aggregated measures of transformational leadership on high performance teams (Cole, Bedeian, & Bruch, 2011).

THEORY AND HYPOTHESES

As mentioned, the mediating effect of cohesion does not occur in a vacuum. When performing their tasks, teams are subject to the simultaneous influence of several variables. These can be analyzed in isolation, but doing so only offers a partial picture of the team dynamics. Therefore, we choose to analyze this mediation when subject to the simultaneous moderating effect of leadership consensus among team members and previous performance. In the following sections, we will progressively introduce the various variables, culminating in the integrated model this research proposes.

Transformational leadership and team performance

Transformational leaders encourage their followers to realize their full potential and even surpass their own performance expectations (Bass, 1985; Newland et al., 2015). These leaders promote performance by reflecting on how to improve their teams' positive results. According to Bass (1985), we can associate a number of behaviors to transformational leadership: *Inspirational motivation* or the leader's ability to encourage teamwork and provide guidance through meaningful and challenging tasks; *idealized influence*, which occurs when leaders influence their subordinates and behave in ways so that they are perceived as role models by those subordinates (e.g., they maintain high ethical standards and share risks with their subordinates); *individual consideration* or the leader's capacity to interact with each subordinate and consider their individual needs and ambitions for personal growth; and *intellectual stimulation*, which refers to the leader's ability to empower and include followers in decision-making processes and provide opportunities for creativity and job craft. Compared with other organizational contexts, however, transformational leadership in sports contexts has some specificities due to this unique work environment, where the collective goal is clear and shared (i.e., winning) and there are clear and elaborated rules, as well as extremely well-defined tasks. The daily interaction between coaches and athletes and the coordination of members' efforts are vital and usually achieved through extensive training. The coach can have a tremendous impact on team effectiveness. Thus, transformational leaders' inspirational characteristics, as well as their willingness to work with their teams to find solutions, play a more relevant role in sports contexts. Coaches strive to promote team characteristics such as high interdependence, collective identity, and the need to develop a shared purpose and structured patterns of communication and decision-making

(Barker et al., 2010; Devine, 2002). By contrast, in organizational settings, there are different determinants of team effectiveness depending on the type of team task, determinants which serve to achieve the desired outcomes (i.e., diverse skills needed, authority and status, decision-making processes, temporal duration and task structure, and among others). Some of these determinants in professional sports teams are less common (Barker et al., 2010; Devine, 2002).

Therefore, sports teams usually require greater social interaction between the team and the coach (Jones, 2002), which presupposes a more frequent use of transformational leadership characteristics to ensure successful team performance. Moreover, athletes may see coaches who provide support during transitional stages in their lives as mentors, parental figures, or even as role models, thus increasing the athletes' motivation, facilitating their acceptance of others, and improving the quality of their relationships with peers (Newland et al., 2015). This increased motivation will increase the effort and persistence that athletes apply to their tasks, which in turn increases their performance (Charbonneau et al., 2001).

The mediator role of team cohesion

Team cohesion refers to an emergent state (Marks et al., 2001) that consists of the degree to which team members demonstrate interpersonal attraction, pride, and commitment to the group (Zaccaro et al., 1995). Members of a cohesive team are committed to each other and the group, and they are motivated to stay in the group (Carron et al., 2002). When cohesion exists, team members work together to contribute to the team and achieve the group's goals (task orientation). Additionally, team members working together perceive personal enjoyment because they like each member of the group (social orientation). The cohesion concept includes both the social and task dimensions, encompassing individual and group behaviors that may affect external outcomes such as team performance.

Transformational leadership and team cohesion

Transformational leaders inspire their followers, and they care and show concern for each subordinate (Bass, 1999). They also promote their followers' intellectual development which, in the sports context, can be used to encourage team members to reexamine the assumptions about their performance and to create solutions for problems that arise; this, in turn, tends to promote cohesive behaviors (Callow et al., 2009; Smith et al., 2013). Leaders who develop a consideration-oriented role promote individual differences and undertake efforts to make players a cohesive group that works together to achieve common objectives. Through their modeling role, these leaders provide inspirational motivation that can lead to group cohesiveness. Moreover, transformational leaders can help create cohesion, facilitate the perception of interactional justice among team members, and heighten their perceptions of cohesion (Bosselut et al., 2018). There are reasons to believe that transformational leaders' impact on team performance is mediated by several mechanisms, including team cohesion.

Team cohesion and team performance

Previous research generally provides evidence that group cohesion is positively and significantly related to team performance (Carron et al., 2002; Filho et al., 2014). However, some studies

have provided inconsistent results. For example, a study on elite youth sports observed that good performance increased social cohesion among team members at an early stage of the season, but this increased cohesion did not translate into improvements in performance at a later stage (Benson et al., 2016). Also, Rovio et al. (2009) observed that high social cohesion in ice-hockey teams was detrimental to performance as it gave rise to a number of harmful group processes, such as team members' reluctance to express critical opinions towards their teammates and an unrealistically positive evaluation of the team's performance. However, as the authors noted, this is not a reason for leaders to stop investing in developing their teams' social cohesion. In highly stressful and task-oriented settings, team cohesion can be a critical element in promoting team performance (Kozachuk et al., 2016). In highly task-oriented environments, such as elite competitive sports, experiencing cohesion allows for a cognitive set, aligning people with the goal of achieving success. In other words, cohesion-building experiences may improve familiarity and comradeship between team members, lowering the levels of anxiety and increasing the expectation of success (Grieve et al., 2000).

Transformational leadership, cohesion, and performance

The mediating effect of cohesion between transformational leadership and performance has been supported by several leadership frameworks (e.g., Dionne et al., 2004; Zaccaro et al., 2001). For example, Zaccaro et al. (2001) describe how different roles inherent to leadership processes contribute to team effectiveness. According to this framework, the leader helps team members select and reduce the amount of relevant information, as well as develop shared mental models and the ability to understand each individual's role in the task. In addition, the leader also plays an important role in motivating individuals to work hard on behalf of the team. This is even more relevant in sports teams that require strong proximity to the leader and in which the leader plays a decisive role in developing shared goals, high interdependence, and a collective identity (Barker et al., 2010).

This model also considers that group cohesion is a consequence of the group climate that leaders are responsible for managing. Furthermore, the coordination process is also important to provide guidance and monitor activities for developing regulatory mechanisms within teams. Consequently, if a coach wishes to maximize team performance, he/she must promote the group's cohesiveness so that members share a commitment to the group task, attraction, and mutual bonding (Carron et al., 2002). For this to occur, the leader should adopt a transformational leadership style. Therefore, we argue that the emergence of team cohesion serves as a mechanism through which transformational leadership will have a positive effect on team performance. Consequently, we hypothesize that:

Hypothesis 1. Team cohesion mediates the relationship between transformational leadership and team performance.

The moderating role of previous team performance

According to the contingency theory of leadership (Pawar & Eastman, 1997), effectiveness is contingent on the context; thus, a leader can be effective in one circumstance and ineffective in a different one. For example, the literature suggests that the positive relationship between

transformational leadership and organizational commitment is contingent on different organizations' structural conditions (Kim & Shin, 2019). We propose that one of these contingencies is the most recent success or failure, that is, a win or loss in the previous game.

While serving as head coach for the Sporting soccer/football club in the Portuguese first-division league in 2014–2015, Marco Silva mentioned that “it’s easier to prepare the next game after wins; it makes the coach’s job a lot easier” (MaisFutebol, 2014). In fact, a variety of contextual influences resulting from previous performance, current circumstances and future perspectives mold a team’s behavior (Bateman & Zeithaml, 1989). All teams have experienced success or failure at some point in the past, and these experiences shape their decisions and performance. Thus, the psychological context that stems from previous performance constrains current and future actions.

Some studies have also noted that a previous win may reinforce present team processes (e.g., Passos & Caetano, 2005). In fact, the theory of psychological momentum reinforces this idea. Psychological momentum is “an added or gained psychological power that changes a person’s view of him/herself, or of others’ views of him/her and themselves” (Iso-Ahola & Mobily, 1980, p. 392). Thus, it refers to a psychological dynamic that comprises the perception that success or failure (e.g., winning or losing a game) is made more or less easily achievable depending on the most recent success or failure (Hubbard, 2015). This psychological phenomenon is particularly prevalent in team sports such as basketball and volleyball (Iso-Ahola & Dotson, 2014). For example, Burke et al. (1999) observed that basketball teams performed better than their opponents during periods of psychological momentum.

Indeed, psychological momentum can have a direct effect on future performance, but it may also have a moderating effect (Hubbard, 2015; Iso-Ahola & Dotson, 2014). As seen before, transformational leaders possess the capacity to represent an ideal role model and the optimism and confidence to inspire and motivate their followers (Bass, 1999). When a team wins and confidence in the coach increases, this also increases the coach’s ability to inspire and motivate the team. In this way, a victory reinforces not only the direct effect of transformational leadership on performance but also its indirect effect by increasing team cohesion.

Conversely, the opposite effect is expected in the face of defeat. Thus, if the team’s efficacy expectations increase when the previous performance was successful, we can expect that the team’s efficacy expectations will decrease if the previous performance was a failure (Chase et al., 1997). The same is also true for the coach’s expectations regarding team performance. When the team performs poorly in the previous match, the coach may reduce his/her expectations (e.g., depending on the level of the other competing team), and this could have an impact on the team’s performance (Chase et al., 1997). One explanation is that, in a context of failed previous performance, the coach will focus on the team’s weaknesses, affecting collective-efficacy and, subsequently, performance. Moreover, in contexts of success or failure, players are aware that only successful coaches can keep their jobs for a longer time (Filho & Rettig, 2018). In this sense, we suggest that it becomes incongruent for a leader to be inspirational or serve as a role model if the team does not produce good results. Faced with previous negative performance, the leader’s transformational characteristics become less inspirational for the team.

Conversely, winning the previous game may reinforce the coach’s impact on team performance through team cohesion. As recently mentioned by the F.C. Porto coach, Sérgio Conceição, playing various games without suffering goals is beneficial for the consistency of the team as a whole (News F. C. Porto, 2020). Therefore, we propose that previous performance plays a moderation role on the relationship between transformational leadership and future team performance via team cohesion. Given that a team victory will create psychological

momentum, we predict that positive previous performance (i.e., winning the previous match) reinforces the transformational leaders' inspirational role (e.g., by increasing message credibility) and the level of team cohesion among team members (e.g., by increasing self-esteem and social identity), consequently contributing to the team's future performance (paths a and c in Figure 1). On the other hand, after a loss, the transformational leader's role ceases to be as inspirational, contributing less to both the team's cohesion and its performance. Furthermore, the effect of team members' alignment with the group's goals, which is enhanced with cohesiveness (Kozachuk et al., 2016), is reinforced by the psychological momentum elicited by a recent win. Also, a recent win increases the expectation of success, which strengthens the effect of team cohesion on team performance (Grieve et al., 2000) (path b in Figure 1). In sum, drawing from the contingency theory of leadership (Pawar & Eastman, 1997) and the theory of psychological momentum (Iso-Ahola & Mobily, 1980), we hypothesize that transformational leadership (paths a and c) and team cohesion (path b) have different team outcomes depending on different past performance conditions. In other words, the impact transformational leadership and team cohesion have on team performance is more relevant when a team's previous performance is high. We thus propose:

Hypothesis 2. The team's previous performance will moderate the direct (path c) and indirect relationship between transformational leadership behaviors and the team's future performance through team cohesion (paths a and b). Specifically, high (or low) previous performance will (hypothesis 2a) strengthen (or weaken) the direct effect of transformational leadership behaviors on future performance and (hypothesis 2b) strengthen (or weaken) the mediating influence of cohesion on the effect of transformational leadership behaviors on performance.

The moderator role of leadership consensus

Although a few scholars have conceptualized organizational climate as an individual phenomenon (Schneider et al., 2013), currently, the consensus seems to be that climate is an attribute of organizations and teams. This perspective considers climate an aggregate measure. In this sense, a team's climate level refers to the average individual perceptions within the team. More recently, the theory of climate strength has emphasized the consensus perspective and the importance of shared perceptions among team members (e.g., LeBreton & Senter, 2008). According to this theory, although team members share some perceptions regarding the team climate, there is still room for a certain degree of variability (Schneider et al., 2002). This variability is what characterizes climate strength and represents a measure of dispersion relative to the climate perceptions of different team members (Rego et al., 2017). A strong climate reflects a high level of similarity among team members regarding their perceptions, beliefs, and values. In the case of favorable climate variables, this implies less ambiguity about practices, procedures, and goals (Pereira & Gomes, 2012); as a result, team members tend to act in favor of the organization.

Aggregated and consensus measures are important conceptual and methodological approaches to understand the organizational climate and its implications for organizational and team performance (Schneider et al., 2013). Both aggregated variables at the team level and consensus among team members are, in fact, two independent and different approaches that serve to analyze team dynamics. A team can experience high level of consensus about low leadership

performance or an average level of consensus regarding high leadership performance. Accordingly, team members can describe their leader as not being transformational (i.e., low level of transformational leadership), but the strength of the climate may be high because all members share a common understanding about the leader's weak role.

Conceptually, it makes sense to assume that this strength or consensus moderates and reinforces the relationship between the climate level and the team's subsequent outcomes (Schneider et al., 2013). However, when there is consensus about a negative aspect (e.g., the low level of transformational leadership), the negative impact on the outcome is also reinforced (Pereira & Gomes, 2012; Schneider et al., 2013). When team members perceive that they share (or not) a common vision (i.e., high/low climate strength), they will feel greater (or lower) team attraction, which may, in turn, facilitate (or hinder) the role of transformational leaders in motivating and reinforcing beliefs that all the members are aligned and committed to completing the team tasks (Harrison et al., 1998). Several empirical studies support this assumption (e.g., Rego et al., 2017; Schneider et al., 2002; Weller et al., 2020).

Transformational leadership represents an aggregate measure of individual perceptions at the team level, implying that there is more or less consensus among team members and that it can be seen as a variable of team climate (Rego et al., 2017; Schneider et al., 2013). In our research, we seek to understand how both approaches (level and consensus regarding transformational leadership) complement each other and provide a broader perspective of their effects on team performance through team cohesion. Therefore, based on the conceptual explanation of team climate (e.g., Schneider et al., 2013), we hypothesize that the indirect effects of transformational leadership on future team performance through team cohesion are contingent on different climate strength conditions (e.g., agreement or disagreement between team members). In fact, a strong climate (measured through the level of consensus about leadership) reflects low variability or a high level of similarity among team members about their shared beliefs, facilitating the role of transformational leaders in developing team cohesion and thus contributing to improve future performance. Accordingly, we hypothesize that:

Hypothesis 3. Team leadership consensus (climate strength) will moderate the relationship between transformational leadership and team cohesion (a-path), whereby transformational leadership will have a conditional indirect effect on future team performance through team cohesion and this indirect effect will be stronger when leadership consensus is high.

The integrative model: The leadership context and team performance

Sports documentaries (Tollin & Hehir, 2019) depict numerous examples of how team consensus (climate strength) regarding the coach's transformational leadership may not be enough to improve team performance even through increased cohesion. Sir Alex Ferguson (the legendary former coach of Manchester United) reinforced that players "need to be winners, because that massages their egos, so they will do what it takes to win" (Carmichael, 2015, pp. 3–4). Due to his charismatic profile, we can assume that there was consensus among team members about his leadership role. According to climate strength theory, the success of Ferguson's leadership style was apparently only possible because his team members shared the same perceptions about his role as coach. Contrarily, had the team members' perceptions about his role been different, the positive effect of his charismatic style on the entire team's cohesion and consequently on the

team's performance would have been weaker. However, the difference between playing on a team with a "culture of victories" versus a "culture of defeats" can make a difference in the path linking transformational leadership, team cohesion, and team performance. Therefore, in our study, we conceptualize that, despite the consensus regarding leadership, knowledge of previous positive performances facilitates the role of transformational leaders even further in achieving positive outcomes and increases team cohesion. Additionally, previous positive performances also increase the positive role of team cohesion in explaining the variance of team performance.

In line with this idea, Crewther et al. (2020) suggest that contextual variables must be integrated into research models if we really want to understand the dynamics of sports performance. As seen before, transformational leadership is a process of social influence manifested by the interaction between the perceived level of leaders' behavior and the strength (consensus) of that perception. But this effect should not be analyzed in isolation because, as suggested earlier, the indirect effect of transformational leadership on performance through cohesion is contingent on previous team performance. Therefore, the indirect effect of transformational leadership on performance, even if boosted by consensus on leadership, is still contingent on previous performance. We thus propose an integrated model that aggregates the previous three hypotheses but in which the variables act simultaneously.

Hypothesis 4. The mediating effect of team cohesion between transformational leadership behaviors and team performance will be moderated simultaneously by leadership consensus among members (a-path) and the team's previous performance. Specifically, the indirect effects will be stronger and significant when previous performance and leadership consensus are high.

METHODS

Participants

We collected data as a part of a large study on team effectiveness and performance from 66 different sports organizations in Spain. The final sample includes 690 professional players belonging to 59 different clubs playing in the regular top professional male leagues in four sports: Basketball (ACB), handball (ASOBAL), roller hockey (OK-Liga), and indoor football/soccer (FNFS). These official sports associations informed all their respective clubs that this research would take place and that a researcher would contact them to agree on the day for data collection. We assumed that the best way to contact all players would be to attend a regular training session and then administer the questionnaire. We visited the 59 clubs that agreed to participate. We obtained an answer rate of 89.4% among target teams and 100% among individual teams' members. This procedure allowed us to emphasize the confidentiality of the information provided by the respondents, because the exchange was directly between the researchers and the players. We chose these interactive team sports given their similar characteristics in terms of game rules and degree of professionalization.

Table 1 presents the sample profile for each sport. Players' average age is 25.5 ($SD = 1.6$ years), and the average tenure on the same team is 3.6 seasons ($SD = 1.4$ seasons). The average tenure with their head coach is 1.8 years ($SD = 0.9$), whereas the mean team size is 11.7 members ($SD = 2.3$), ranging from 9.9 members on basketball teams to 14.5 on handball teams.

TABLE 1 Sample characteristics by sport

	Roller hockey	Indoor football	Handball	Basketball	Totals
Teams surveyed	16 (100%)	16 (100%)	15 (93.8%)	12 (66.7%)	59 (89.4%)
Total number of players	170	183	218	131	690
Teams size (players) ^a	9.9 (0.7)	11.4 (1.8)	14.5 (2.0)	10.9 (1.2)	11.7 (2.3)
Average player age (years) ^a	24.6 (1.5)	26.0 (1.6)	25.1 (1.4)	26.4 (1.2)	25.5 (1.6)
Average tenure with same coach (seasons) ^a	1.9 (1.0)	1.7 (0.9)	2.1 (1.0)	1.5 (0.7)	1.81 (0.9)
Average player tenure on same team (seasons) ^a	4.1 (1.6)	3.4 (1.2)	3.6 (0.7)	3.0 (11.6)	3.6 (1.4)

Note: Study sample = 690 players, nested in 59 teams. % of teams with respect to the target sample.

^aMean and standard deviation by team.

Measures

We collected data from two different independent sources and at different points in time. We carried out field work for the predictor variables at the beginning of the second half of the season (between January and March) and for the criteria variable (objective future team performance) at the end of the season (June). We gathered data on previous performance from the match the weekend before the athletes completed the survey.

Objective team performance

We collected objective data from official sports federation records. We measured the teams' overall performance by a ratio using the points obtained at the end of the season relative to the total possible points in the teams' respective leagues (T_2). Thus, the higher the ratio, the better the teams' effectiveness.

Because we undertook data collection on the predictors during the season mid-point, we operationalized future performance as the results obtained only during the second half. Thus, we measured future performance by subtracting the ratio of points obtained at the mid-season (T_1). Future performance thus corresponds to the ratio of points in Time 2 minus those in Time 1.

Transformational leadership

Team members reported on their perceptions of the head coach's transformational leadership behaviors by using the 7-item "Global Transformational Leadership" scale developed by Carless et al. (2000). A sample item included: "Our coach communicates a clear and positive vision of the future".

We operationalized transformational leadership at the team level as the mean of all team members' responses. This averaged leadership level represents an additive team level construct according to Chan's (1998) typology. Respondents indicated their agreement with each statement on a 5-point Likert-scale, ranging from 1 (*not at all*) to 5 (*frequently*). Cronbach's alpha for this measure was .91. The interrater agreement was $rWG(j) = 0.84$, and the intraclass correlations were $ICC(1) = 0.43$ and $ICC(2) = 0.90$.

We opted for a shorter version of the transformation leadership scale, conceptualizing it as a one-dimensional construct despite the popularity of other multifactorial measures such as those implemented by Bass (1999) but that had been reported as presenting factorial and discriminant validity problems (Carless, 1998).

Leadership consensus

We conceptualized consensus among members' perceptions of coach leadership using the Chan's (1998) dispersion model as a configurational property of the team (Kozlowski & Klein, 2000). To capture within-group differences, we operationalized the team-level consensus index as the separation between a group member and all the other members regarding their perceptions of the coach's transformational leadership. This operationalization varies from one member to another by capturing lateral differences and highlighting dissimilarity (Harrison & Klein, 2007). To calculate the consensus measure for every team, we used the mean Euclidean distance: $\sum \sqrt{[\sum (S_i - S_j)^2/n]}/n$. This index averages the dyadic differences between each individual and all the other members within the group. We then aggregated all the scores for dissimilarities for each team (ranging from 0 to 0.99). Finally, we reversed this score to help read the findings; consequently, the higher the score, the greater the consensus.

Team cohesion

We assessed team cohesion using "The Group Environment Questionnaire" developed by Carron et al. (1985). Respondents indicated their agreement with each statement on a 9-point Likert-scale, ranging from 1 (*totally disagree*) to 9 (*totally agree*). A sample item included: "Our team is united in trying to reach its performance goals." Cronbach's alpha for this measure was .83. The interrater agreement was $rWG(j) = 0.69$, and the intraclass correlations were $ICC(1) = 0.45$ and $ICC(2) = 0.90$.

Previous match performance

We measured previous match performance by collecting data from the official sports federations. We operationalized this as follows: "1" for a team that lost at home or away from home, "2" for a draw/tie at home, "3" for a draw away from home, and "4" for a win either at home or away from home. The rationale behind this is the potential points that teams obtain from a win or a draw. Notice that a tie at home only represents 2 points while a draw away from home equals 3 points. From a psychological point of view, a tie at home has a more negative impact than a tie away (which can even be considered a positive result).

Control variables

At the team level, we controlled for the type of sport by creating three dummy variables and adding them as covariates. In line with previous studies (e.g., Timmerman, 2000), we also controlled for the average age of players and average tenure on the team.

Analysis

We collected constructs at the individual level and used them to create team-level variables. We aggregated data at the team level by averaging the scores for the different team members. We also computed a consensus measure for every team to capture differences among members' opinions, as previously recommended (Chan, 1998; Harrison & Klein, 2007). Furthermore, we used a split-sample technique that made the sources of the mediator and predictor independent. We randomly split the teams into two groups to allow us to test the links between transformational leadership rated by one half of the team members and team cohesion as rated by the other half. As such, we eliminated the possibility of within-person common method variance on correlations, which might be biased by collecting different measures from the same source and using the same method at the same time. In all the subsequent analyses performed, we used the two combinations (the subsample sequences: predictor A – mediator B and then predictor B – mediator A).

First, we analyzed the validity and reliability of the scales, followed by an assessment of aggregation analyses and a confirmatory factor analysis. Second, we tested our hypotheses with the team as our level of analysis ($N = 59$). We used the SPSS PROCESS macro (version 3.3) developed by Hayes (2013), which assesses the moderated mediation effects. PROCESS is a computational tool for path analyses-based moderations and mediation analyses as well as functioning as a “conditional process model” (Hayes, 2013). In addition to estimating the coefficients of the model using the ordinary least squared (OLS) regression-based path analytical framework, *PROCESS* can generate direct and indirect effects on mediation models and conditional indirect effects on moderated mediation models, among other things (Hayes, 2013). This macro also facilitates the recommended bootstrapping methods (Mackinnon et al., 2004) and provides a means to probe the significance of the conditional indirect effect. For our analyses, we used a 50,000 bootstrap resampling and a bias-corrected 95% confidence interval at each moderator level. In keeping with Hofmann's (2002) recommendation, we aggregated independent variables (with lower and higher level variance) to the group level in order to carry out an OLS regression analysis on the aggregated data. We chose a piecemeal approach for our statistical analysis strategy, breaking the different parts of the integrative conditional model into their components for more fine-grained analyses (Hayes, 2013) of the different hypotheses.

RESULTS

Measurement model

We performed confirmatory factorial analyses (CFAs) with maximum likelihood (ML) parameter estimation to evaluate the measurement model in the two self-reported scales. Less conservative simulation studies reveal that $N = 150$ is considered a reasonable sample size for a simple CFA model (Muthén & Muthén, 2002). Due to the reduced number of teams ($N = 59$) and a number of athletes per team below the recommended standards (see Kline, 2005, for more details), we followed the same procedure used in other recent studies (e.g., Sawyer et al., 2020) to run our CFA analyses at the individual level.

Therefore, for items measuring cohesion and transformational leadership, we tested a two-factor model at the individual level. Modification indices suggested five covariations with errors belonging to items measuring the same construct. We also tested an alternative model with a

single factor. Results suggested that the hypothesized two-factor model showed acceptable values ($\chi^2/df = 3.01$ for $\chi^2(269) = 810.90$, $p < .01$, CFI = 0.91, TLI = 0.90, RMSEA = 0.05, SRMR = 0.06). This model also had a better fit than the single-factor model ($\chi^2/df = 7.16$ for $\chi^2(271) = 1941.66$, $p < .01$, CFI = 0.72, TLI = 0.69, RMSEA = 0.10, SRMR = 0.11), which may suggest an absence of common method variance for the two constructs measured (Podsakoff et al., 2003).

Descriptive analyses

Table 2 reports the means, standard deviations and zero-order correlation for all the study variables at the team level. The table reveals a direct relationship between transformational leadership and team cohesion ($r_A = .50$, $r_B = .50$, $p < .01$) and between team cohesion and performance ($r_A = .33$, $p < .05$; $r_B = .31$, $p < .01$). Also, leadership consensus is positively associated with transformational leadership ($r_A = .45$, $r_B = .43$, $p < .01$). Finally, previous team performance positively correlates with cohesion ($r_A = .32$, $r_B = .30$, $p < .05$), leadership consensus ($r = .28$, $p < .05$) and future team performance ($r = .23$, $p < .056$).

The mediating role of team cohesion

The first hypothesis predicted that a coach's transformational leadership influences team performance through team cohesion. We conducted a simple mediation analysis using ordinary least squares path analyses and the bootstrapping technique. Our findings show that transformational leadership indirectly influences the future performance of the team through its effects on team cohesion. As shown in Table 3, team members reporting that their coach has a transformational leadership approach feel greater team cohesion ($a = 0.64$, $p < .001$, for both subsample sequences), and teams with strong cohesion among their members achieve greater future team performance ($b = 8.33$ and 7.76 , $p < .001$). The bias-corrected bootstrap confidence interval for the indirect effect ($ab = 5.36$ and 4.99 , $p < .05$) based on 50,000 bootstrap samples is entirely above zero (1.65 to 9.44 and 1.39 to 8.72). Therefore, we can conclude that transformational leadership indirectly affects team performance through team cohesion. Thus, our results support Hypothesis 1 in predicting team cohesion's mediation role.

The moderating effect of previous team performance

Hypotheses 2a and 2b predict the conditional mechanism linking the perception of coaches' transformational leadership to their teams' future performance when the direct and indirect effects through cohesion are contingent on previous performance. We tested these hypotheses using model 59 (Hayes, 2013). As seen in Table 4, we analyzed the conditional direct and indirect effects of transformational leadership on team performance at three levels of the previous team performance moderator. The 95% bootstrap confidence intervals indicate a direct but negative effect of leadership on future performance, which is contrary to our predictions, and an indirect and positive effect of leadership on future performance through cohesion, which is aligned with our expectations. In terms of previous performance, we only observed these effects when levels of previous team performance were average to high, but not when they were low.

TABLE 2 Mean, standard deviations, and correlations^a between study variables (N = 59 teams)

	Mean	SD	1	2	3(A)	3(B)	4(A)	4(B)	5	6
1. Average tenure on team	3.27	1.24								
2. Average age members	26.4	1.79	-.35**							
3. Transformational leadership	3.39	0.69	.05	-.15						
(A)										
(B)	3.40	0.68	.05	-.17						
4. Team cohesion	6.06	0.82	.28*	-.14	.50**					
(A)										
(B)	6.06	0.81	.28*	-.12	.50**					
5. Previous performance	2.69	4.15	-.14	.19	.18	.18	.32*	.30*		
6. Leadership (consensus)	0.70	0.08	-.23 [†]	-.03	.43**	.45**	.15	.13	.28*	
7. Team's future performance	27.03	12.9	.25 [†]	.19	-.10	-.12	.31**	.33*	.23 [†]	-.13

^aCorrelations, means, and standard deviation for the first half sample (Leadership A-measure and Cohesion B-measure) are displayed in the first row, and for the second half sample (Leadership B-measure and Cohesion A-measure) in the second row.

** $p < .01$.

* $p < .05$.

[†] $p < .1$ (two-tailed).

TABLE 3 Model coefficients for the mediation model^a

	Outcome			Outcome		
	Team cohesion (M)			Future team performance (Y)		
	Coefficient	SE	Boot CI	Coefficient	SE	Boot CI
X (leadership)	0.64***	0.14	[0.36, 0.92]	-6.60*	2.70	[-12.0, -1.18]
	0.64***	0.14	[0.36, 0.93]	-6.34*	2.73	[-11.8, -0.86]
M (team cohesion)	—	—	—	8.33***	2.26	[3.79, 12.86]
	—	—	—	7.76***	2.24	[3.26, 12.26]
Constant	2.79	1.69	[-0.61, 6.18]	-69.15*	28.31	[-125.9, -12.3]
	3.01	1.75	[-0.50, 6.51]	-68.41*	29.02	[-126.7, -10.2]
Hockey	0.18	0.28	[-0.36, 0.71]	-0.72	4.36	[-9.47, 8.02]
	0.12	0.27	[-0.43, 0.66]	-0.16	4.40	[-8.99, 8.67]
Handball	0.49	0.27	[-0.04, 1.01]	-6.38	4.39	[-15.2, 2.44]
	0.42	0.27	[-0.11, 0.95]	-5.62	4.40	[-14.5, 3.22]
Basketball	0.26	0.27	[-0.29, 0.80]	-8.09	4.47	[-17.07, 0.89]
	0.20	0.28	[-0.36, 0.76]	-7.46	4.52	[-16.53, 1.60]
Team's average permanence	0.15	0.09	[-0.03, 0.33]	1.89	1.49	[-1.10, 4.88]
	0.16	0.09	[-0.03, 0.34]	1.96	1.51	[-1.06, 4.98]
Average age	0.01	0.06	[-0.10, 0.13]	2.49**	0.92	[0.64, 4.34]
	0.01	0.06	[-0.11, 0.12]	2.53**	0.94	[0.65, 4.41]
F	5.068***			4.068**		
	4.739***			3.801**		
R ²	0.369			0.358		
	0.354			0.343		
Total, direct, & indirect effects of X on Y						
	Effect	Boot SE	Bias-corrected & accelerated CI			
Total effect of X on Y	-1.24	2.53	[-6.33, 3.84]			
	-1.35	2.55	[-6.47, 3.77]			
Direct effect of X on Y	-6.60	2.70	[-12.0, -1.18]			
	-6.34	2.73	[-11.8, -0.86]			
Indirect effect of X on Y	5.36	1.98	[1.65, 9.44]			
	4.99	1.81	[1.39, 8.72]			

Note: N = 59 teams. X = Antecedent variable; M = Mediator; Y = Dependent. Boot SE = Bootstrap standard error; CI = Confidence interval. CIs containing zero are interpreted as nonsignificant. Control variables included as covariates were average tenure on team, members' average age and type of sport operationalized as dummy variables. Results are based on 50,000 bootstrap samples.

^aThe subsample sequence to measure the hypothesized model (Leadership-Cohesion-Team Performance) is X_A → M_B → Y [first row], and X_B → M_A → Y [second row], respectively.

*p < .05.

**p < .01.

***p < .001.

TABLE 4 Moderated mediation model at values of the previous team performance moderator^a

	Outcome			Outcome		
	Team cohesion (M)			Future team performance (Y)		
	Coefficient	SE	Boot CI	Coefficient	SE	Boot CI
X (leadership)	0.57***	0.14	[0.30, 0.86]	-4.68	2.71	[-10.1, 0.77]
	0.56***	0.14	[0.28, 0.85]	-4.17	2.72	[-9.63, 1.30]
X*W	-0.03	0.10	[-0.23, 0.18]	-4.95*	1.97	[-8.91, -0.99]
	-0.03	0.10	[-0.24, 0.18]	-5.67**	1.99	[-9.67, -1.67]
M*W	—	—	—	3.85*	1.71	[0.42, 7.29]
	—	—	—	4.31*	1.70	[0.88, 7.73]
W (previous performance)	0.14*	0.07	[0.01, 0.27]	1.17	1.08	[-0.99, 3.33]
	0.16*	0.07	[0.03, 0.29]	1.26	1.08	[-0.92, 3.43]
M (team cohesion)	—	—	—	5.99*	2.33	[1.30, 10.68]
	—	—	—	4.94*	2.33	[0.27, 9.62]
Constant	-0.55	1.55	[-3.66, 2.56]	-44.7	24.7	[-94.4, 4.99]
	-0.22	1.57	[-3.37, 2.96]	-44.7	24.6	[-94.1, 4.75]
F	4.623***			4.036***		
	4.591***			4.012***		
R ²	0.425			0.457		
	0.424			0.462		
Conditional direct effect						
(W) Previous performance	Boot effect	Boot SE	Bias-corrected & accelerated CI			
-SD	2.34	4.27	[-6.25, 10.9]			
	3.87	4.26	[-4.69, 12.4]			
Mean	-4.68	2.71	[-10.1, 0.77]			
	-4.17	2.72	[-9.63, 1.30]			
+SD	-11.14	3.33	[-17.8, -4.45]			
	-11.57	3.40	[-18.4, -4.74]			
Conditional indirect effect of leadership on future team performance through team cohesion at values of moderator						
(W) Previous performance	Effect	Boot SE	Bias-corrected & accelerated CI			
-SD	0.32	2.58	[-5.92, 4.62]			
	-0.70	2.61	[-7.63, 2.94]			
Mean	3.44	1.83	[0.15, 7.24]			
	2.77	1.62	[-0.31, 6.07]			
+SD	5.97	2.71	[1.41, 11.92]			
	5.50	2.58	[1.13, 11.28]			

Note: $N = 59$ teams. X = Antecedent variable; M = Mediator; Y = Dependent; W = Moderator; SE = Standard error. CI = Confidence interval. CI s containing zero are interpreted as nonsignificant. Variables were mean-centered prior to the analyses. Control variables included as covariates were average tenure on team, members' average age and type of sport operationalized as dummy variables. Values for quantitative moderators are the mean and plus/minus one SD from the mean. Results are based on 50,000 bootstrap samples.

^aThe subsample sequence to test the hypothesized model (Leadership-Cohesion-Team Performance) is $X_A \rightarrow M_B \rightarrow Y$ [first row], and $X_B \rightarrow M_A \rightarrow Y$ [second row], respectively.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

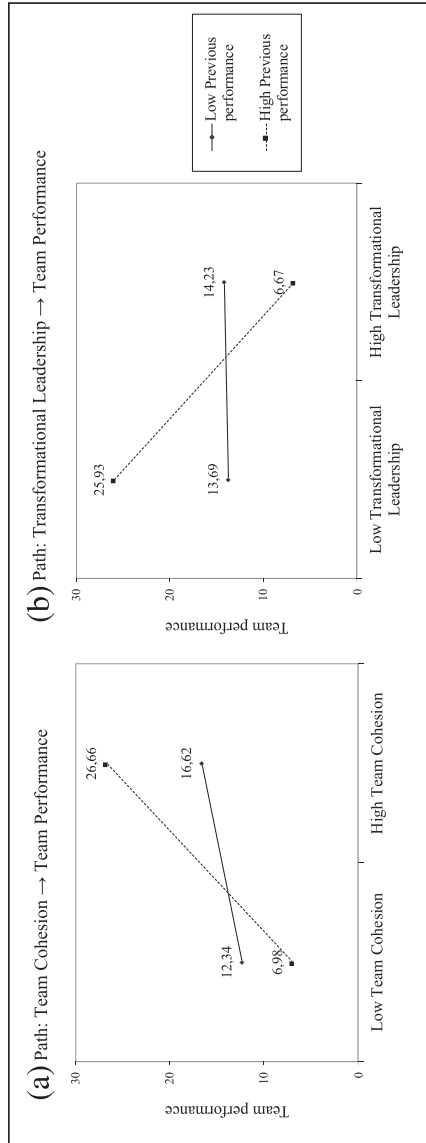


FIGURE 2 Single interaction effects

Specifically, the direct and indirect effects are not significant for low previous performance as the confidence intervals contain zero. This occurred in both subsample sequences. When considering high previous performance, all effects were significant, (e.g., boot effect: -11.14 ; SE: 3.33 ; CI: $[-17.84, -4.45]$ for the direct effect; and boot effect: 5.97 ; SE: 2.71 ; CI: $[1.41, 11.92]$ for the indirect effect), but, when considering average previous performance, only one of the alternative subsample sequences was significant (boot effect: 3.44 ; SE: 1.83 ; CI: $[0.15, 7.24]$) for the indirect effect. Furthermore, we also conducted pairwise comparisons between indirect effects, and several were significant. Thus, our results support our assumption regarding the previous performance conditional process. However, the conditional effect on the direct relationship of transformational leadership on performance was inverse to what was expected.

Figure 2 provides a visual representation of the single interactions in the conditional model paths. The path between transformational leadership and previous performance impacting on team cohesion was not displayed as it does not show significance; however, “it does not change the fact that the indirect effect is still a product of paths of influence” (Hayes, 2013 p. 402). Nevertheless, the other single paths show significance, and there is a positive interaction between team cohesion and previous performance impacting on team performance (Figure 2a). Also, transformational leadership has a direct effect on performance, though this only occurs under conditions of high previous performance (Figure 2b), and the effect is negative.

But, more relevant for interpreting results is Figure 3, which is a visual representation of the conditional process (contingent on previous performance), that is, the direct effect of transformational leadership on team performance and the indirect effect via team cohesion. The horizontal line in the graph corresponds to an effect of zero and the vertical line corresponds to the boundaries of the regions of significance. This means that to the right of the vertical line, the confidence interval does not include zero and therefore, the effect is significantly different from zero (Preacher et al., 2007). The graph in Figure 3a shows that the effect of transformational leadership on performance through cohesion increases when previous performance is high and is significant for higher values of previous performance, providing support for hypothesis 2b. However, the direct negative effect of transformational leadership on performance

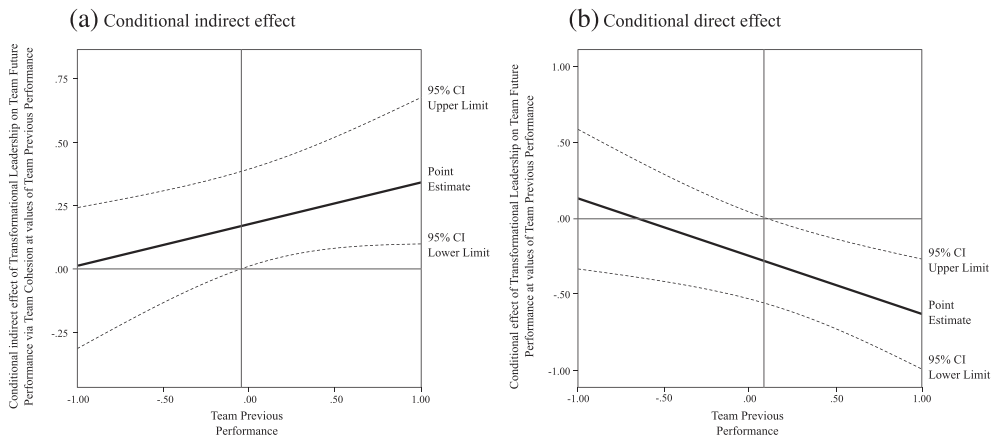


FIGURE 3 Plot of the direct and indirect effects of transformational leadership on team performance at values of the moderator “team previous performance,” with confidence bands (Horizontal line represents an effect of zero, vertical line the boundary of the region of significance. The indirect effect operates through team cohesion.)

when previous performance increases (Figure 3b), although significant for high values of previous performance, does not support hypothesis 2a and, in fact, contradicts it. We will address this issue in the discussion.

The strengthening role of leadership consensus

Our third hypothesis anticipates the intervening effect of leadership consensus and predicts the moderation effect of team member consensus on transformational leadership to be between leadership and team cohesion (path a). We tested this hypothesis using Model 7 (Hayes, 2013). The index of this specific moderated-mediation does not show significance for both subsamples (index: -11.54 ; SE: 16.48 ; CI: $[-48.18, 18.94]$; and index: -14.58 ; SE: 14.89 ; CI: $[-48.23, 11.03]$). Therefore, our results do not support Hypothesis 3 (see Table 5).

Hypothesis 4 tests the moderated-mediation model of leadership on team performance through cohesion, contingent on two moderators (leadership consensus and previous performance). We tested this hypothesis using Model 61 (Hayes, 2013). This hypothesis foresees that the indirect effect will be significant when previous performance is high and that it will be stronger when leadership consensus among team members increases.

Our findings (see Table 6) show the mechanism by which the hypothesized indirect effect is contingent on leadership consensus and previous team performance moderators. This effect on future team performance is stronger and significant when previous performance values are moderate to high (average and plus one SD) and when consensus between team members about coach leadership is also average to high. The 95% bootstrap confidence intervals reported for conditional indirect effects did not contain zero; therefore, they are significant and suggest that future team performance can be interpreted as a function of the interplay between leadership level and consensus among its members. Thus, when previous performance is high (plus one SD) and leadership consensus is mid to high (average and plus one SD), the effect is significant for both subsamples (e.g., for high previous performance and high consensus; effect: 7.37 ; SE: 3.27 ; CI: $[1.95, 14.75]$; and effect: 7.13 ; SE: 3.26 ; CI: $[1.80, 14.53]$); in addition, this effect becomes stronger as leadership consensus increases. We also performed a pairwise comparison among indirect effects, and few were significant. These findings support the hypothesized conditional effect, which predicts that team performance will be strengthened among teams that performed well in the past and leadership consensus is high. Thus, Hypothesis 4 is also supported.

Moreover, as can be seen in the visual representation of Figure 4, the effect of transformational leadership on team performance via team cohesion increases for higher values of leadership consensus. The graph clearly illustrates this effect, which is significant for medium and high values of leadership consensus.

DISCUSSION

Our study tested the indirect effects of coaches' transformational leadership on team performance via team cohesion, contingent on the strength (consensus) of the leadership perceptions, and previous team performance. We found empirical support for our overall theoretical framework, explaining how transformational leadership influences team performance through team cohesion conditioned upon contextual influences (Chan, 1998; Johns, 2018;

TABLE 5 Moderated mediation model at values of leadership consensus^a

	Outcome			Outcome		
	Team cohesion (M)			Future team performance (Y)		
	Coefficient	SE	Boot CI	Coefficient	SE	Boot CI
X (leadership)	0.64***	0.16	[0.32, 0.97]	-6.56*	2.69	[-11.96, -1.16]
	0.64***	0.17	[0.30, 0.97]	-6.19*	2.73	[-11.67, -0.72]
X*W	-1.42	2.03	[-5.50, 2.67]	—	—	—
	-1.93	2.01	[-5.97, 2.11]	—	—	—
W (leadership consensus)	0.73	1.43	[-2.14, 3.60]	—	—	—
	0.66	1.47	[-2.29, 3.62]	—	—	—
M (team cohesion)	—	—	—	8.15***	2.21	[3.71, 12.59]
	—	—	—	7.55***	2.20	[3.12, 11.97]
Constant	5.42***	0.47	[4.48, 6.36]	-40.47**	13.93	[-68.4, -12.5]
	5.47***	0.47	[4.52, 6.42]	-37.42**	14.04	[-65.6, -9.22]
F	0.485**			4.386***		
	3.487**			4.052***		
R ²	0.006			0.376		
	0.358			0.357		
Conditional indirect effect of leadership on future team performance through team cohesion at values of moderator (leadership consensus)						
(W) Leadership consensus	Effect	Boot SE	Bias-corrected & accelerated CI			
-SD	6.10	2.37	[1.99, 11.27]			
	5.91	2.29	[1.73, 10.75]			
Mean	5.24	2.05	[1.69, 9.73]			
	4.82	1.88	[1.40, 8.81]			
+SD	4.38	2.42	[0.18, 9.59]			
	3.73	2.08	[0.05, 8.18]			
Index of moderated-mediation						
(W) Leadership consensus	Index	Boot SE	Bias-corrected & accelerated CI			
	-11.54	16.48	[-48.18, 18.94]			
	-14.58	14.89	[-48.23, 11.03]			

Note: $N = 59$ teams. X = Antecedent variable; M = Mediator; Y = Dependent; W = Moderator; SE = Standard error. CI = Confidence interval. CI s containing zero are interpreted as nonsignificant. Variables were mean-centered prior to the analyses. Control variables included as covariates were average tenure on team, members' average age and type of sport operationalized as dummy variables. Values for quantitative moderators are the mean and plus/minus one SD from the mean. Results are based on 50,000 bootstrap samples.

^aThe subsample sequence to test the hypothesized model (Leadership-Cohesion-Team Performance) is $X_A \rightarrow M_B \rightarrow Y$ [first row], and $X_B \rightarrow M_A \rightarrow Y$ [second row], respectively.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

TABLE 6 Conditional indirect effects of moderated mediation model at values of previous team performance and leadership consensus^a

	Outcome			Outcome		
	Team cohesion (M)			Future team performance (Y)		
	Coefficient	SE	Boot CI	Coefficient	SE	Boot CI
X (leadership)	0.60***	0.16	[0.28, 0.91]	-4.68	2.71	[-10.1, 0.77]
	0.58***	0.16	[0.26, 0.90]	-4.17	2.72	[-9.63, 1.30]
W (previous performance)	0.15*	0.07	[0.01, 0.28]	1.17	1.08	[-0.99, 3.33]
	0.16*	0.07	[0.02, 0.30]	1.26	1.08	[-0.92, 3.43]
X*W	-0.04	0.11	[-0.25, 0.18]	-4.95*	1.97	[-8.91, -0.99]
	-0.05	0.11	[-0.27, 0.17]	-5.67**	1.99	[-9.66, -1.67]
Z (leadership consensus)	-1.23	1.43	[-4.11, 1.65]	—	—	—
	-1.16	1.47	[-4.11, 1.79]	—	—	—
X*Z	1.65	2.06	[-2.49, 5.79]	—	—	—
	2.17	2.02	[-1.89, 6.23]	—	—	—
M (team cohesion)	—	—	—	5.99*	2.33	[1.30, 10.68]
	—	—	—	4.94*	2.33	[0.26, 9.62]
M*W	—	—	—	3.85*	1.71	[0.42, 7.29]
	—	—	—	4.31*	1.70	[0.88, 7.73]
Constant	-0.11	1.61	[-3.55, 3.13]	-44.7	24.7	[-94.4, 4.99]
	0.23	1.62	[-3.02, 3.48]	-44.7	24.6	[-94.1, 4.75]
F	3.757***			4.036***		
	3.792***			4.123**		
R ²	0.439			0.457		
	0.441			0.462		
Conditional indirect effects of moderated mediation model at values of previous team performance and leadership consensus						
Moderators		Conditional indirect effect				
(W) Previous performance	(Z) Leadership consensus	Effect	Boot SE	95% BCa bootstrap CI		
-SD	-SD	0.28	2.36	[-5.11, 4.92]		
		-0.57	2.32	[-6.54, 2.59]		
-SD	Mean	0.34	2.81	[-6.15, 5.03]		
		-0.76	2.93	[-8.17, 3.32]		
-SD	+SD	0.40	3.42	[-7.86, 6.00]		
		-0.95	3.68	[-10.2, 4.40]		
Mean	-SD	2.82	2.13	[-0.55, 7.69]		
		2.06	1.71	[-0.57, 6.07]		
Mean	Mean	3.56	1.00	[0.12, 8.00]		
		2.86	1.76	[-0.28, 6.53]		

(Continues)

TABLE 6 (Continued)

Conditional indirect effects of moderated mediation model at values of previous team performance and leadership consensus				
Moderators		Conditional indirect effect		
(W) Previous performance	(Z) Leadership consensus	Effect	Boot SE	95% BCa bootstrap CI
Mean	+SD	4.30	2.33	[0.14, 9.29]
		3.66	2.18	[-0.32, 8.32]
+SD	-SD	4.65	4.13	[-2.97, 13.6]
		3.70	3.83	[-3.22, 12.31]
+SD	Mean	6.01	3.25	[0.61, 13.47]
		5.42	3.15	[0.22, 12.57]
+SD	+SD	7.37	3.27	[1.95, 14.75]
		7.13	3.26	[1.80, 14.53]

Note: $N = 59$ teams. X = Antecedent variable; M = Mediator; Y = Dependent; W = Moderator; Z = Moderator; SE = Standard error; $Effect$ = Conditional effects; $Boot SE$ = Bootstrap Standard Error; BCa = Bias corrected & accelerated; CI = Confidence interval. CIs containing zero are interpreted as nonsignificant. Variables were mean-centered prior to the analyses. Control variables included as covariates were average tenure on team, members' average age and type of sport operationalized as dummy variables. Values for quantitative moderators are the mean and plus/minus one SD from the mean. Results are based on 50,000 bootstrap samples.

^aThe subsample sequence to measure the hypothesized model (Leadership–Cohesion–Team Performance) is $X_A \rightarrow M_B \rightarrow Y$ [first row], and $X_B \rightarrow M_A \rightarrow Y$ [second row], respectively.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

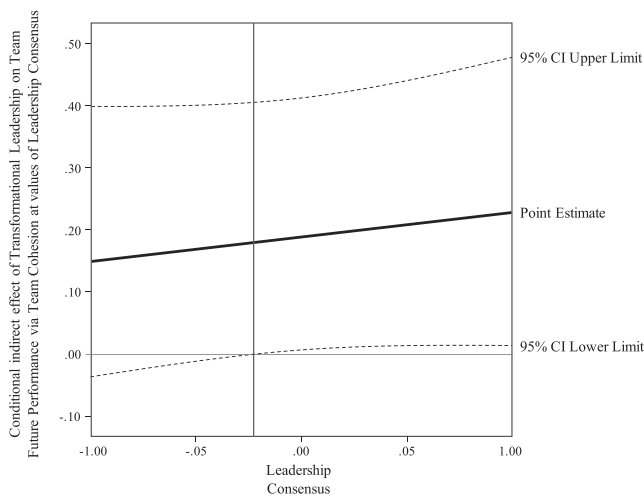


FIGURE 4 Plot of the indirect effect of transformation leadership on team performance at values of the moderator “leadership consensus,” with confidence bands. (Horizontal line represents an effect of zero, vertical line the boundary of the region of significance. The indirect effect operates through team cohesion.)

Schneider et al., 2002). Consistent with our hypotheses, our findings suggest that team cohesion mediates the relationship between transformational leadership and team performance. Likewise, previous performance plays a vital contextual role (Johns, 2018) in explaining the leadership–cohesion–performance relationship. Moreover, although our findings do not support the isolated role of consensus in leadership as a moderator, our results do suggest that consensus within the team regarding transformational leadership moderates the relationship between transformational leadership and future team performance through team cohesion contingent on previous performance.

Theoretical implications

Our study makes several contributions to team and sports literature. First, we advance the literature by providing evidence on the role of transformational leadership in relation to team performance via the mediation role of team member cohesion. Although some scholars have theorized about the positive effect of leadership on team effectiveness (Zaccaro et al., 2001), there are still some inconsistencies regarding the relationship between team cohesion and performance (e.g., Grieve et al., 2000). Whereas previous research has focused on the impact of transformational leadership on group performance, our study adopts robust methodologies and clarifies some previous inconsistencies while also highlighting the important role team cohesion plays. Previous theoretical frameworks have conceptualized the importance of leadership processes for team effectiveness through the integration of team cohesion (e.g., Zaccaro et al., 2001), but they have not yet examined this idea empirically with regard to the specific measurement of previous performance in the context of interactive team sports. Moreover, our research overcomes existing methodological limitations by using a quasi-longitudinal design, multisource approach and data aggregated at the team level, as this encourages more robust findings in the sports domain (Arthur et al., 2017; Benson et al., 2016).

Although not hypothesized, an unexpected finding from our research is that transformational leadership has a direct negative effect on future team performance. This means that by keeping cohesion constant, transformational leadership hurts performance. This result contradicts a majority of studies that attribute a positive role to transformational leadership in terms of its impact on team performance (e.g., Dionne et al., 2004; Zhang et al., 2011). However, these studies highlight the effect of transformational leadership on team performance through teamwork mechanisms such as cohesion (Dionne et al., 2004) or cooperation (Zhang et al., 2011). Nevertheless, transformational leadership also has significant effects at the individual level, for example, promoting commitment and applied efforts to complete the task (Judge & Piccolo, 2004) that has a positive effect on individual performance (Wang et al., 2005). One explanation for our results may be that, when transformational leadership operates at the individual level without operating at the collective level, its effects may be negative for team performance. This means that transformational leadership has a dark side (Tourish, 2013) and that, under certain conditions, its consequences might be adverse.

Chen et al. (2018) found an inverted U-shaped relationship between transformational leadership and performance. One of the explanations given by authors for their findings lies in the too-much-of-a-good-thing principle (Pierce & Aguinis, 2011) that can lead to poor results. Too-much of transformational leadership may thus lead to overconfidence, with negative effects on performance. Transformational leadership increases the levels of team-efficacy (Ayoko & Chua, 2014), meaning that it leads team members to believe that they can collectively achieve

their goals. However, too much team-efficacy can worsen team performance (Park et al., 2017). Overconfidence can generate complacency, and teams may become less critical of their own performance and less predisposed to change their strategies and processes, thus leading to reduced collective effort. This brings us to the findings regarding hypothesis 2a which were not supported and directly contradicted our hypothesis. That is, previous performance has a negative moderating effect on the direct relationship between transformational leadership and team performance. What we observed was that, in situations with low previous performance, transformational leadership has no direct effect on performance; however, in contexts with high previous performance, transformational leadership has a negative effect on team performance (Figure 2b). These results are in line with the too-much-of-a-good-thing principle. Team-efficacy is enhanced by good prior performance (Martin et al., 2021), an effect that is heightened by transformational leadership behaviors (Ayoko & Chua, 2014). Together, these two elements can lead to overconfidence and complacency, with negative effects on future team performance (Park et al., 2017), thus explaining our unexpected findings.

These results only emphasize the need for scholars to always consider mediator variables to understand the “black box” regarding the effectiveness of transformational leadership on team performance. Transformational leadership's influence on objective sports team performance in complex contexts (such as top professional competitions) may be channeled through team cohesion and conditioned upon some of the moderators studied in our research. In fact, the effectiveness of any type of leadership is always embedded in context and is conditioned upon several group and boundary conditions.

Second, scholars have devoted scarce attention to the conditions under which transformational leadership influences performance. In fact, from the literature we know that leadership as a human behavior is a function of individual and contextual variables (Luria et al., 2019). Previous studies on leadership theory (e.g., contingency theories) recognize the importance of contextual variables (House & Aditya, 1997). However, there is a need to identify contexts in which leaders are more likely to be effective. By including within-team member perceptions (consensus on coach leadership) and other contextual variables as moderators (previous team performance), this study advances some prior empirical studies on leadership (e.g., Rego et al., 2017), thus contributing to climate strength literature (Schneider et al., 2002). In other words, our research proposes a more elaborate conceptual framework that adds to previous studies (e.g., Cole, Bedeian, & Bruch, 2011; Cole, Bedeian, Hirschfeld, et al., 2011), explaining how coaches' transformational leadership influences performance in interactive team sports contexts. The application of a dispersion–composition model strengthens our study's contributions by providing a new perspective on past findings (Cole, Bedeian, Hirschfeld, et al., 2011) and allowing for a more comprehensive understanding of team climate consensus mechanisms.

The consensual perception among players reflects the quality of a group's shared social environment. In fact, the greater the consensus regarding the perception that the coach is a transformational leader, the more team members will perceive that they share a common vision. This serves to reinforce beliefs that all individuals are aligned to achieve high levels of performance (Harrison et al., 1998; Rego et al., 2017). Furthermore, normative pressure is exerted within the group to maintain cohesion on matters relevant to the group (Zohar & Luria, 2004), and these perceptions about team cohesion result in better within-group bonds and, therefore, enhance group goal achievement. However, contrary to our hypothesis, this effect does not reveal itself in isolation. It only becomes evident as contingent on previous performance. Our study revealed that consensus about the coach's transformational leadership behaviors is only relevant when the team's previous performance is medium to high and not when it is low. That is, when

previous results are negative, the latter have a greater effect on performance through team cohesion but not because there is more consensus among team members about the coach's leadership behaviors. This may be due to the fact that, under these conditions, the team really needs the leader's intervention and consensus is no longer necessary. However, when previous performance is positive, the indirect effect of transformational leadership on performance through cohesion is quite high when there is consensus among the team. These results highlight the importance of the theory of psychological momentum (Iso-Ahola & Mobily, 1980) as a moderating variable of future performance.

Our study also has implications for group dynamics and psychological momentum literatures. For example, Lewin (1935) developed a theory of group processes almost a century ago, taking into account the concepts of "locomotion" and "maintenance." The former explains that teams are goal-oriented by nature and strive to increase their performance; the latter refers to the efforts undertaken to achieve team cohesion and the need to develop a positive team climate over time. Regarding the psychological momentum perspective (Iso-Ahola & Mobily, 1980), our findings highlight the importance of previous performance and its influence on future performance and that the momentum (victory or defeat) that athletes currently experience conditions the indirect influence of transformational leadership roles. In line with previous studies (e.g., Hubbard, 2015), our findings highlight that experiencing (positive) previous performance and having a shared perception of transformational leadership are related to locomotion, and, as long as they also contribute to maintain group processes, they are equally important for team success. As discussed above, the direct effect of transformational leadership on performance is negative when coupled with positive previous performance. Therefore, for its effect to be positive, ensuring that transformational leadership contributes to increasing team cohesion is necessary, because its effect on performance through cohesion becomes positive under conditions of both consensus in leadership and positive previous performance. In sum, our study represents an interesting contribution by emphasizing the benefit of examining the interplay between organizational climate and psychological momentum. Consensus (or the strength of shared perceptions) seems to be an important approach to increase the contribution of team-level aggregated measures to enhance team or organizational outcomes; however, this effect is contingent on previous performance.

Practical implications

In the highly competitive sports environment with clear performance criteria, sports organizations must purposely develop and support team member perceptions about their leaders' capabilities. To achieve high team performance, coaches need to focus on both the level and consensus regarding team member perceptions. It is not only important for coaches to ensure the positive benefits of being transformational leaders (i.e., with the capacity to encourage and inspire team members to innovate and create change that will help the team); coaches also need to assess whether there is a lack of consensus among team members about the coaches' own roles as leaders (Mach & Lvina, 2017).

We also provide evidence that, in the context of interactive team sports where objective performance is most critical, a coach has to pay attention to the contextual influence of previous performance. Additionally, sports organizations should develop and provide the best conditions possible to ensure consensual perceptions about leadership management to avoid the likelihood of misunderstandings, a loss of focus and the ensuing decrease in their team's outputs.

Our study also emphasizes the role of transformational leadership in increasing team cohesion and that the performance of teams with high consensus is not conditioned upon the transformational characteristics of coaches to achieve high team performance. With this in mind, coaches should be aware of the importance of consensus regarding their roles as leaders and that this shared perception among team members will reinforce their roles as transformational leaders in developing more cohesive teams. Our data suggest that transformational coaches with cohesive groups, with high consensus about their roles as leaders and with a positive track record of previous team performance can be free to tackle more strategic tasks.

The findings of our study might also be relevant for teams working in other types of organizations. However, this generalization should be taken with caution, as we warn in the limitations section below. Nonetheless, there are communalities between the sporting context and business organizations, allowing us to speculate on such a connection. In both contexts, teams are extremely performance oriented, and leadership effectiveness is one of the cornerstones of such performance (Jones, 2002). However, it is likely that our findings are more relevant in business organizations whose contexts, like those of sports organizations, are characterized by unpredictability and rapid change, given that transformational leadership is most advantageous in these contexts (Waldman et al., 2001).

Limitations and future research

This study is not without potential limitations. First, our results may be context specific. Generalizing these findings should be done with caution, and replications in other organizational contexts and interactive team sports are needed to corroborate their robustness and external validity. However, applied psychology recognizes that “the principles of elite performance in sport are easily transferable to the business context” (Jones, 2002, p. 268).

Second, our conceptual model is not exhaustive when considering all possible moderator variables. We only focus on team consensus regarding leadership and cohesion. Future research should explore other within-team factors that might explain dispersion in members' perceptions (e.g., time played in matches, salary, and type of contract), as well as exploring other antecedents and outcomes associated with team consensus perceptions about transformational leadership and team cohesion. Third, although considering objective team-level performance represents a step forward in capturing the dynamic of team outputs, further research could refine the objective measure of team performance (e.g., using other team performance statistics or incorporating expert external ratings/assessments) to capture other process intangibles and their contributions to overall team performance and effectiveness.

Finally, another limitation of our study is that we used an overall transformational leadership score instead of looking at transformational leadership at the dimensional level. This might be important because there are aspects of transformational leadership that foster cohesion (group-oriented) and other aspects that focus on individual behavior. Moreover, the absence of longitudinal models does not allow us to test the possible lagged effect or causal inferences, because reverse causality may be problematic (e.g., team cohesion may make the coach adopt more transformational leadership behaviors). Therefore, future research designs to examine the leadership–cohesion–performance relationship should consider the use of longitudinal models to further explore the group-level phenomenon (variance) in interactive team sports settings, taking into account psychological and physical multi-wave metrics (Jones & Hardy, 1990).

Despite these limitations, our research concurs with previous studies (e.g., Peachey et al., 2015) that leadership research in management and sports psychology domains will advance by incorporating more robust research designs and boundary conditions to further explore, theorize, and empirically test leadership outcomes. We addressed these calls by designing a team-level, aggregated data and quasi-longitudinal design and by using objective scores of previous and future performances.

CONCLUSION

Our results advance the literature by studying the role of climate strength (consensus about leadership) and previous performance in the well-established transformational leadership–team cohesion–future performance chain. This study contributes to organizational climate literature on the conceptual and measurement arguments (e.g., Schneider et al., 2013) because we find that climate strength is fundamental to enhance the role of transformational leaders in developing team cohesion. Furthermore, this study adopts the theory of psychological momentum (Iso-Ahola & Mobily, 1980) and the contingency theory of leadership (Pawar & Eastman, 1997) to explain the importance of context. Specifically, this study reveals how positive past performance is crucial to leverage the benefits of transformational leadership and team cohesion. Hence, this study opens new avenues for further research in climate strength and psychological momentum literatures by explaining under what conditions transformational leaders may have a greater impact on their teams' performance.

CONFLICT OF INTEREST

The authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article. An early version of this article was presented at the 2019 Academy of Management meeting in Boston, Massachusetts, and was selected for inclusion in the 2019-proceedings as one of that year's best papers (top 10%).

ETHICS STATEMENT

This research obtained consent from the Research Ethics Committee of the Universitat Ramon Llull with approval number/ID: CER URL_2019_2020_012. Informed consent was obtained from the participants of the study.

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DATA AVAILABILITY STATEMENT

Data available on request from the authors -The data that support the findings of this study are available from the corresponding author upon reasonable request.

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