

# Tenure matters for team cohesion and performance: The moderating role of trust in the coach

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#### ABSTRACT

**Research question:** This study examines team performance as a function of team tenure, cohesion and trust in the coach. Specifically, we propose a moderated-mediation model to explain whether it translates into an objective measure of future team performance.

**Research methods:** The study sample consists of 668 players from 73 professional and top amateur basketball league teams in Catalonia, Spain. Data collection consisted of a survey performed during a regular training session held at the beginning of the second part of the season as well as objective and subjective team performance indicators.

**Results and findings:** Our findings suggest that the indirect effect of team tenure on performance through team cohesion is only significant for high and medium levels of cognitive trust in the coach and low levels of affective trust in the coach.

**Implications:** These findings provide evidence that explains trust's contribution to fostering team dynamics and how team tenure translates into future team performance. The practical implications of this study suggest that simply promoting team cohesion without taking into account the cognitive trust in the coach will not necessarily increase performance. Therefore, coaches and managers must invest in the amount of work they do with team members and their skills in order to ensure team members have high cognitive trust in them

#### KEYWORDS

Affective trust in the coach; cognitive trust in the coach; team cohesion; objective future performance; moderated-mediation

## TENURE MATTERS FOR TEAM COHESION AND PERFORMANCE: THE MODERATING ROLE OF TRUST IN THE COACH

Immediately after winning the 2019 Roller Hockey World Cup final, the hero of the game, the Portuguese keeper, Ângelo Girão (2019), said: ‘We are a real team. [...] We are a family.’ The idea that team cohesion is a fundamental aspect in sports is not only well established in the sports world but also well documented in research (Beal et al., 2003; Castaño et al., 2013). Team cohesion can be defined as ‘a dynamic process which is reflected in the tendency for a group to stick together and remain united in the pursuit of its goals and objectives’ (Carron, 1982, p. 124). Members of a team can develop strong bonds with other team members and to the team itself. This attachment to the group or attractiveness to its members tends to promote higher levels of team performance (Beal et al., 2003; Mullen & Copper, 1994). However, high cohesion in teams does not necessarily predict high productivity (e.g. Wise, 2014), and, although scholars have thoroughly analysed the relationship between cohesion and performance, its boundary conditions have been subject to little empirical research. We aim to address this gap by testing a model in which different facets of trust in the coach moderate the mediation of team cohesion between team tenure and performance.

Several scholars have identified team tenure’s positive effect on cohesion (Michel & Hambrick, 1992) and on performance (Kozlowski et al., 1999). We argue that cohesion serves as a mechanism to improve the performance of tenured teams. Additionally, in accessing the boundary conditions for the relation between cohesion and performance, scholars have focused on the nature and the size of the team (Mullen & Copper, 1994) and gender composition (Carron, Colman, Wheeler & Stevens, 2002). We argue that, beyond team characteristics, there are cognitive and affective elements influencing the relation between cohesion and performance. We claim that the type of trust – affective or cognitive – has different effects on the way cohesion influences performance.

We aim to continue to shed light on and elucidate how team dynamics translate into team effectiveness and performance. This study thus makes two contributions to team literature. First, it explores the extent to which team cohesion mediates the relationship between team tenure and performance in sports teams, suggesting that, when team members work together, they develop internal bonds that ultimately increase performance. Second, this study evaluates trust in the coach as a moderator on cohesion's effect on performance. In particular, we provide a more detailed perspective on trust's contribution in fostering positive team dynamics. We build on the literature that operationalises trust as a multifaceted construct comprised of cognitive and affective dimensions (Cummings & Bromiley, 1996; McAllister, 1995; Webber & Klimoski, 2004). This serves to argue that, in the context of interactive sports teams, where objective performance is most critical, the coach has to specifically work on the cognitive aspect of trust. While recent studies have suggested that the effects of incompetent behaviour resulting in poor performance are less detrimental to a leader than integrity in the public's eye (Lin et al., 2009), we offer a different explanation for the effect of trust on leaders within teams, further contributing to the literature on trust in leadership.

In a sports team, leadership is shared between the coach, the captain and informal leaders, who may be athletes who stand out for their experience or technical skill and are seen as leaders by other team members (Loughead et al., 2006). The coach has the power and the ability to influence the team. Its leadership role is mainly in relation to the task, which means a focus on goals and tactical decision making; and an external leadership role, which refers to a representative role between the team and the outside (Fransen et al., 2015). In this article, we conceptualise the coach not as the sole leader of the team, but as one of the diverse sources of leadership that exist within a sports team (Loughead et al., 2006). As such, the referent of our trust measures is not the leader but the coach.

## **Theoretical foundations and hypotheses development**

### ***Team tenure and performance***

Team tenure can be defined as the length of time team members interact with each other (Katz, 1982). Although several scholars argue that tenure has a positive impact on performance (e.g. Kozlowski et al., 1999), meta-analytical studies suggest that the implications of this relationship are still inconclusive (Bell et al., 2011). Unlike newly-formed teams who need to spend time acquiring interpersonal information, tenured teams have reduced these process losses and developed coordination mechanisms, allowing them to focus on task performance (Harrison et al., 2003). With time, team members develop a shared understanding of tasks and learn to anticipate others' reactions (Pelled et al., 1999). Moreover, tenure enables the development of common perspectives, facilitates knowledge-sharing and promotes specialisation amongst team members (Hirst, 2009). But there is also a negative side to team tenure.

Using data from the American National Basketball Association, Berman, Down and Hill (2002) found that tenure positively affects team performance through tacit knowledge accumulation. However, the authors argue that shared experience may also lead to knowledge ossification, whose negative effects on performance may outweigh the benefits of collective knowledge accumulation. Knowledge ossification occurs when the value of tacit knowledge declines over time. This leads to process routinisation around forms of interaction which team members take for granted, potentially limiting the teams' ability to perform in changing environments. In fact, some authors argue that there is a nonlinear relationship between team tenure and performance. For example, Katz (1982) asserts that teams that spend a long time working together might become less adaptive and innovative since they might increasingly rely on the group's own expertise. Ultimately, the influence of team tenure on performance depends on the extent to which it translates into constructive interpersonal interactions based on trust and social acceptance (Koopmann et al., 2016).

### ***Team tenure and cohesion***

The impact of team tenure on cohesion is less inconclusive. Team tenure duration can even be considered a proxy for the level of cohesion since, with time, team members share experiences and develop a common vocabulary, thereby increasing the level of socialisation (Michel & Hambrick, 1992). Members of teams that have been together for a longer time tend to be more attracted to the group and display a higher degree of social interaction (Smith, Smith et al., 1994). Over time and gradually, group members learn what works well and what causes task or relational problems; consequently, the result may be the development of habitual patterns to which members are most committed (Gersick & Hackman, 1990). The passage of time induces a self-selection process in teams, in which the members that stay on the team are those who adopt certain norms and perspectives, being willing or allowed to remain on the team (Michel & Hambrick, 1992).

### ***Team cohesion and performance***

Research has shown that team cohesion is critical for team performance when the teams work in highly stressful and task-oriented environments (Charbonneau & Wood, 2018). This explains why cohesion is such a vital ingredient for success in sports (Kozachuk et al., 2016). Sports team literature suggests that cohesion has a positive impact on all dimensions of team effectiveness, namely, on performance, satisfaction and viability (Hackman, 1983). Cohesive teams tend to perform better (Carron, Bray, & Eys, 2002) and exhibit satisfied members who are willing to remain on the team (Onağ & Tepeci, 2014).

In the particular case of performance, the evidence is solid with several meta-analyses positively linking cohesion to performance (Beal et al., 2003; Carron, Colman, et al., 2002; Castaño et al., 2013; Evans & Dion, 1991; Mullen & Copper, 1994). Cohesive group members are willing to exert more effort in performing tasks (Bray & Whaley, 2001) for the intrinsic pleasure of completing a task that group members enjoy (Mullen & Copper, 1994). Strong cohesion has also been shown to

accelerate individual effort and perseverance to achieve team goals so that group actions are in harmony (Mach et al., 2010). Also, from a task dimension perspective, cohesion has an impact on team processes and outputs by influencing every member's decision-making process and response rate (i.e. players will not need to spend time worrying about themselves if they are assured of their team members' skills/willingness to watch their back). In the process of fighting together and accomplishing tasks, sports team members start to develop camaraderie and a sense of belonging to the team, which further contributes to increase cohesion and performance (Freeman & Wohn, 2017). This effect is stronger when cohesion is driven from within the team as opposed to directed by coaches (Anderson & Dixon, 2019). According to Brawley, Carron and Widmeyer (1987), strong cohesion encourages sharing responsibility for failures and allows members to withstand the negative consequences of disruptive events.

### ***Tenure, cohesion and performance***

We have seen that tenured teams tend to perform well, mostly if they are able to base their interpersonal interactions on trust and social acceptance (Koopmann et al., 2016). In terms of the relationship between tenure and performance, the literature highlights not only the importance of human capital associated with tenure but also the social dynamics developed amongst team members (Steffens et al., 2016). Teams with high dispersion and low cohesion are characterised by poor patterns in terms of team communication which, in turn, negatively influences performance (Eisenberg et al., 2019). In line with Michel and Hambrick (1992), we argue that trust and high levels of socialisation are characteristic of cohesive teams and, therefore, team tenure will improve the likelihood of good performance through cohesiveness. Stated formally:

***Hypothesis 1:*** Team cohesion mediates the positive relationship between team tenure and team performance.

### ***Trust in the coach as a boundary condition***

As 'a psychological state comprising the intention to accept vulnerability based upon positive

expectations of the intentions or behaviour of another' (Rousseau et al., 1998, p. 395), trust in the leader has been argued to have a positive impact on team performance (e.g. Clapp-Smith et al., 2009; Dirks, 2000). When team members trust the leader, they reduce their doubts and personal motivations and focus on achieving the team's goals (Dirks, 2000). They also increase their psychological availability (Li & Tan, 2013) as well as the perception that they have resources (physical, emotional and intellectual) available to perform their tasks (Kahn, 1990). Building on this perspective and the argument that the team's relationship between cohesion and performance does not exist in a vacuum and that they are subject to pressure from a variety of influential sources (Mathieu et al., 2015), we propose that vertical and horizontal team dynamics are tightly inter-twined. The links amongst team members are not only related to performance; the sense of trust that the coach imbues and which influences this relationship is also important. In other words, we propose that trust in a coach can manifest itself as a moderator, setting the context for the team member dynamics-team performance relationship.

### ***Cognitive and affective trust in the coach***

Even though a one-dimensional approach to trust has dominated the literature (Dirks & Ferrin, 2002), researchers have increasingly proposed a competency-based (cognitive) and an emotionally-based (affective) trust typology (e.g. Cummings & Bromiley, 1996; McAllister, 1995; Webber & Klimoski, 2004). We conceptualise cognitive trust as the confidence in others' competence and affective trust as interpersonal care and affection (Cook & Wall, 1980; Cummings & Bromiley, 1996; McAllister, 1995; Yang & Mossholder, 2010). As proposed by Yang and Mossholder (2010), distinguishing the two types of trust can allow for a more subtle analysis of trust in leaders. While cognitive trust enables comfortable task-related exchanges, affective trust facilitates socio-emotional communication (Dirks & Ferrin, 2002). When teams trust their leader's competence (cognitive trust), they increase their confidence in their ability to perform (Schaubroeck et al., 2011). When teams display affective trust, they improve their commitment (Zhu et al., 2013). In keeping with this argument, we expect competency-based cognitive trust in the coach to demonstrate a



different pattern of influence on the relationship between cohesion and performance as compared to affective trust in the coach. As such, we propose examining these types of trust separately.

In the sporting context, we contend that team members' perceptions about their coaches' competences and technical skills (cognitive trust) play a critical role, which is different from the role of affective trust. Our argument is that objective performance remains the major, if not single, criterion for success in sports. As such, it is more important for the team members to believe that their coach is a top professional rather than only building social bonds with him or her. As we have seen, when teams trust in their coach's competence, they strengthen their confidence in their own capacity to perform, which means they will see more effort as directly contributing to team success. Therefore, cognitive trust in the coach will reinforce the relation between cohesion and performance. The moderating effect of cognitive trust in the coach constitutes the second hypothesis of this study.

***Hypothesis 2:*** Cognitive trust in the coach will moderate the strength of the mediated relationship between team tenure and team performance via team cohesion, such that the mediated relationship will be stronger when there is high cognitive trust in the coach compared to low cognitive trust in the coach.

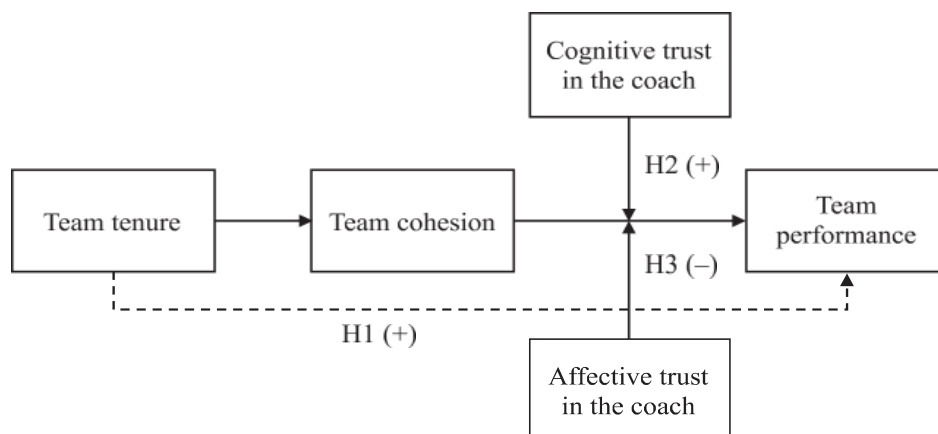
Some scholars have argued that affective trust improves follower-leader cooperation (Zhu et al., 2013) and within-team cooperation (Ng & Chua, 2006) and also promotes behavioural outcomes (Yang & Mossholder, 2010). When team members affectively trust their coach, they believe that he or she is concerned about their welfare (Dirks &

Ferrin, 2002). All these perspectives consider a positive situation – high affective trust. Let us now consider the opposite situation in which teams have low affective trust in their leader. This implies that the leader will have little effect on team cooperation and members' behavioural outcomes. There is some empirical evidence suggesting that leaders who score low

on affective trust show high visioning behaviour and higher intellectual stimulation behaviour (Jacoub, 2014). Contexts of low affective trust in leaders introduce new challenges and interpersonal dynamics within the group (Hogg & Terry, 2000) that strengthen cohesiveness in tenured teams, thus increasing performance. More experienced teams have established conflict management strategies, trust amongst members and increased perceptions of respect (Koopmann et al., 2016; Schulte et al., 2012). In scenarios with low affective trust in coaches, these tenured teams are better prepared to extend cooperation (and cohesion) within the group members in a way that complements the lack of affection provided by the coach. In these situations, the relevance of cohesiveness for performance becomes critical since, by sharing responsibility for failure, teams will be able to face adversity and reduce the negative consequences of potential threats. This means that, in the event that team members have little affective trust in their coach, the effects of team cohesion on performance become even more relevant. This negative interaction illustrates affective trust's moderation on the relationship between cohesion and performance. This represents the third hypothesis of this study.

**Hypothesis 3:** Affective trust in the coach will moderate the strength of the mediated relationship between team tenure and team performance via team cohesion, such that the mediated relationship will be stronger when there is low affective trust in the coach compared to high affective trust in the coach.

We depict our research model in Figure 1.



**Figure 1.** Research model. The dashed arrow represents the mediation effect.

## Methods

### *Participants and procedures*

The study sample consisted of 668 players from 73 basketball league teams in Catalonia, Spain (specifically, 22 women's teams and 51 men's teams). Thus, 69.86% of the team's sample were men. The average age of male players was 24.66 ( $SD = 4.73$ ), ranging from 18 to 37; and 22.97 amongst female players ( $SD = 4.22$ ), ranging from 18 to 36. The players' average tenure in the same team was 3.09 seasons ( $SD = 3.36$ ).

We surveyed the top basketball leagues playing under the umbrella of the Catalan Basketball Federation. These top leagues operating only in the Catalan region were fundamentally amateur, though some were also semi-professional (part-time). In order to have a sufficient number of teams, we decided to survey all these clubs and control by the type of league. As only one team refused to participate in this study, the response rate was 98.65%.

We collected data during a regular training session and at the beginning of the second part of the season. We asked for the sponsorship of the Catalan Basketball Federation, which informed clubs about the research project and asked for their cooperation and consent to participate. The federation also provided the list of each team's players for that season in order to assess the subjective perceived performance. We then agreed on the day to collect data with each of the 73 clubs. We visited and personally administered the paper-pencil survey to the entire group. Each player returned the questionnaire directly to the researcher in question to guarantee confidentiality. Consistent with the Declaration of Helsinki (World Medical Association, 2018), the players were asked for their informed consent in the study cover letter, provided together with the questionnaire. They were also informed of their right to refuse to participate in the study or to withdraw their consent at any time, without any reprisals. None of the potential respondents opted to withdraw.

We collected constructs at the individual level and used these to create the team level

constructs. In addition to the questionnaires, we also collected team performance indicators at the end of the season and several control variables.

### **Measures**

For the purpose of greater reliability and to avoid common method variance, we collected data from different sources and at two different points in time. We carried out the fieldwork for predictor variables at the beginning of the second half of the season (between mid-January to early March) and we obtained the criteria variable (objective performance) at the end of the season (June) from independent sources.

**Objective team performance.** We gathered objective performance data from official sources (Basketball Federation league records). The team's overall performance was measured by the number of matches won at the end of the season relative to the total possible in the team's respective leagues (T2) (see Berman et al., 2002). Due to the fact that data collection on the predictors was surveyed just at the mid-point of the championship (T1), we only used the ratio points obtained during the 2nd half of the regular league (T2-T1). Thus, the higher the ratio, the better the team's performance.

**Team tenure.** We measured team tenure by the average time all members had been with the team (see Koopmann et al., 2016).

**Cohesion.** To measure players' perceptions regarding team cohesion, we used a modified version of the Group Environment Questionnaire (Carron et al., 1985), specifically, the nine items from the *group integration task* and *group integration social* subscales, later aggregating these into a single dimension (Mach et al., 2010). The rationale behind this decision (see Hogg et al., 2004) was due to the wish to capture the group level processes, both social and task oriented, and the feelings and ties within the team as a single unit. Sample items included: 'We all take responsibility for any loss or poor performance by our team'; and 'members of our team would rather go out on their

own than go out together as a team.’ Respondents indicated their agreement with each statement on a nine-point Likert-scale ranging from 1 (strongly disagree) to 9 (strongly agree). Higher scores indicate higher levels of cohesion. The measure showed a good internal consistency ( $\alpha = .89$ ).

***Trust in the coach.*** We use the 9-item Trust Questionnaire developed by McAllister (1995) and adapted to sports settings by Dirks (2000) to assess team members’ perceptions of trust in the coach. Therefore, the referent person was the main coach. High scores represent a higher level of trust in the coach. Sample items included: ‘The coach approaches his/her job with professionalism and dedication’; and ‘I will have a sense of loss if the coach leaves to take a job elsewhere.’ Respondents indicated whether they agreed with the statements on a nine-point Likert scale, ranging from 1 (strongly disagree) to 9 (strongly agree). Both factors present excellent internal consistency ( $\alpha = .95$  for cognitive trust,  $\alpha = .95$  for affective trust).

***Control variables.*** We used several contextual variables affecting team performance in interactive sports as controls. We controlled for gender, average team members’ age and type of league. Additionally, to capture the potential influence of coach reputation on cognitive trust in the coach, we controlled for the average number of seasons the teams had been trained by the same main coach. Furthermore, given the reciprocal relation between cohesion and performance (Mathieu et al., 2015) and to avoid the effect of previous performance on the team’s cohesion, we also included a subjective performance assessment from three different sources during the first half of the season: peers, coaches and self-assessment. The *subjective perception of member’s performance* was assessed by the peers, the coaches and self-assessment with four statements designed by the authors as the result of a focus group with basketball experts. On a nine-point Likert-scale, the head coach and every team member provided an assessment of every other team member. We aggregated the results to the team level. Sample item included: ‘S/he is very effective and works together with teammates to accomplish team objectives.’

## **Analyses**

### ***Analytic strategy***

We report results in the order that we performed our analyses. First, we undertook a confirmatory factor analysis and analysed the validity and reliability of the scales, followed by an assessment of aggregation to the team level. Second, we tested the hypotheses with the level of analysis being the team ( $n=73$ ) and we used the *SPSS PROCESS* macro developed by Hayes to assess the moderated mediation effects (Hayes, 2018). *PROCESS* is a computational tool for path analyses-based moderations and mediation analyses, as well as their combination as a conditional *PROCESS* model. In addition to estimating the model coefficients using the ordinary least squared (OLS) regression-based path analytical framework, *PROCESS* can generate direct and indirect effects in mediation models, conditionals effects in moderation models and conditional indirect effects in moderated mediation models, amongst other things (Hayes, 2018). This macro analysis also facilitates the recommended bootstrapping methods (MacKinnon et al., 2004) and provides a means to probe the significance of the conditional indirect effect. We used 10,000 bootstrap re-samples and a bias-corrected 95% confidence interval at each level of the moderator for our analyses (Preacher et al., 2007).

### ***Confirmatory factor analysis***

To evaluate the underlying factor structure of trust measures and cohesion, we performed a confirmatory factor analysis (*CFA*) in R version 3.2.3, using the *lavaan* package. According to our *CFA* results, the two-factor structure was acceptable. For the cognitive and affective trust measures, we correlated the residuals of two items because the modification index was very high. The items belong to the same factor – affective trust –, and this correlation is theoretically justifiable. The items were: ‘I can freely talk to the coach about difficulties I have on the team and know that s/he will want to listen’; and ‘I have a sharing relationship with the coach and can freely share my ideas, feelings and hopes with him/her.’ Both items refer to how openly the

team member can talk to the coach. The items provided a good measure of trust for both dimensions. Both factors presented excellent Cronbach's alphas ( $\alpha = .95$  for cognitive trust;  $\alpha = .95$  for affective trust). As suggested by Hu and Bentler (1999) to test the fit of the two-factor model for samples smaller than 250, we used a combination of the comparative fit index (*CFI*) and the standardised root mean square residual (*SRMR*). Values of *CFI* above 0.95 and of *SRMR* below .08 are considered acceptable. The *CFA* yielded a good fit level with  $\chi^2(df = 25) = 68.20$ , *CFI* = .95, and *SRMR* = .06.

Regarding the cohesion scale, we removed two items that were not loading adequately (see Ayoko & Chua, 2014), one from the social cohesion dimension and the other from task cohesion. The remaining 7 items provided an adequate measure of team cohesion with a good Cronbach's alpha ( $\alpha = .89$ ). We also correlated the residuals of two social cohesion items. The modification index was high and theoretically justifies the correlation. The items were: 'Our team members rarely party together'; and 'members of our team stick together outside of practices and games.' Both items refer to how team members get together outside of the work environment. The results from the factor analysis revealed one distinct factor, with a  $\chi^2(df = 13) = 19.98$ , and showed *CFI*/*SRMR* values within an acceptable range (*CFI* = .98, *SRMR* = .04).

### ***Data aggregation***

We needed to confirm our model at the team level so we evaluated whether responses from individual team members could be aggregated at the team level. First, we evaluated the degree to which the ratings of different people within a team were interchangeable. For

this we calculated the inter-rater agreement indexes ( $r_{wg(j)}$ ) for each measure (James et al., 1984, 1993; Klein et al., 2000). We then used interclass correlations [*ICC*(1) and *ICC*(2)] to evaluate inter-rater reliability and group mean reliability, respectively (Bliese, 2000; Klein et al., 2000). Aggregation is justified when  $r_{wg(j)}$  values are above .70 (Klein et al., 2000), *ICC*(1) is above .20 and *ICC*(2) is higher than .50 (Bliese, 2000). All indicators met the adequate criteria, justifying

their aggregation to a team level of cohesion ( $r_{wg(j)} = .86$ ,  $ICC(1) = .40$ ,  $ICC(2) = .86$ ), cognitive trust ( $r_{wg(j)} = .82$ ,  $ICC(1) = .43$ ,  $ICC(2) = .87$ ) and affective trust ( $r_{wg(j)} = .71$ ,  $ICC(1) = .26$ ,  $ICC(2) = .76$ ). We computed all team level variables using the mean of the individual level scores.

## Results

Table 1 reports the means, standard deviations and correlations for the research variables at the team level ( $n = 73$  teams). We can observe that cognitive ( $B = .54$ ,  $p < .01$ ) and affective ( $B = .36$ ,  $p < .01$ ) trust in the coach are both positively related to team cohesion and that team performance ( $B = .26$ ,  $p < .05$ ) is also correlated with team cohesion.

----- Insert Table 1 about here -----

### ***The mediating role of cohesion***

Hypothesis 1 proposed that team cohesion mediates the relationship between team tenure and team performance. Table 2 shows the results of the mediation using the *PROCESS* macro model 4 (Hayes, 2018). Team tenure has a significant direct effect on team cohesion ( $B = 0.15$ ,  $p < .01$ ) but not on team performance ( $B = 0.01$ ,  $p = .52$ ). Team cohesion also does not have a significant effect on team performance ( $B = 0.05$ ,  $p = .20$ ). Moreover, the bootstrap procedure does not reveal an indirect effect of team tenure on team performance through team cohesion ( $B = 0.01$ ,  $CI = [-.001, .022]$ ). These results do not support the hypothesis that there is an indirect effect of team tenure on team performance through team cohesion. Therefore, hypothesis 1 is not supported.

### ***The moderating role of cognitive trust in the coach***

To test hypotheses 2 and 3, we analysed the hypothesised moderated mediations with the *PROCESS* macro model 16 (double moderation) (Hayes, 2018). Team cohesion, cognitive

----- Insert Table 2 about here -----



trust in the coach and affective trust in the coach were centred to avoid multicollinearity with their product terms (Aiken & West, 1991). Hypothesis 2 suggests that cognitive trust in the coach positively moderates the mediation of team cohesion between team tenure and future team performance. The results show that team tenure has a direct effect on team cohesion ( $B = 0.15, p < .01$ ). The results also reveal that the effect of the interaction between cognitive trust in the coach and team cohesion is significant and positive ( $B = 0.12, p < .05$ ) in predicting team performance, corroborating the importance of cognitive trust. Furthermore, the indirect effect is significant only when considering teams with a high or mean level of cognitive trust (mean and one standard deviation above the mean). 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 cognitive trust in the coach and team cohesion amongst its members.

Finally, our findings reveal that the index of moderated mediation is significant and positive ( $Index = 0.02; SE = .01; [CI = .002, .043]$ ) when considering the moderation role of cognitive trust in the coach (see Table 3 for details).

Figure 2 shows the interaction effect, represented by the slopes for the effect of high and low team cohesion depending on high and low cognitive trust in the coach (Dawson, 2014). When cognitive trust in the coach is high, the effect of team cohesion on team performance is significantly positive. These findings suggest that when teams have cognitive-based trust in their coach, they will strongly benefit from being cohesive. This benefit does not exist when teams have low or any cognitive-based trust in their coach. Therefore, hypothesis 2 was supported.

----- Insert Table 3 about here -----

### ***The moderating role of affective trust in the coach***

Hypothesis 3 specifies that affective trust in the coach negatively moderates the mediation of team cohesion between team tenure and team performance. The results suggest that the effect

of the interaction between affective trust in the coach and team cohesion on team performance is significant and negative ( $B = -0.14, p < .05$ ). Moreover, as can be seen in Table 3, we analysed the conditional indirect effect of team tenure on team performance at three levels of the moderator, affective trust in the coach. The 95% bootstrap confidence intervals indicate the indirect and negative effect of team tenure on future team performance through cohesion when affective trust in the coach exists. However, we only observed this when affective trust in the coach is average to low and not when affective trust is high. Finally, our results indicate that the index of the moderated mediation is significant and negative ( $Index = -0.02; SE = .01; [CI = -.051, -.003]$ ).

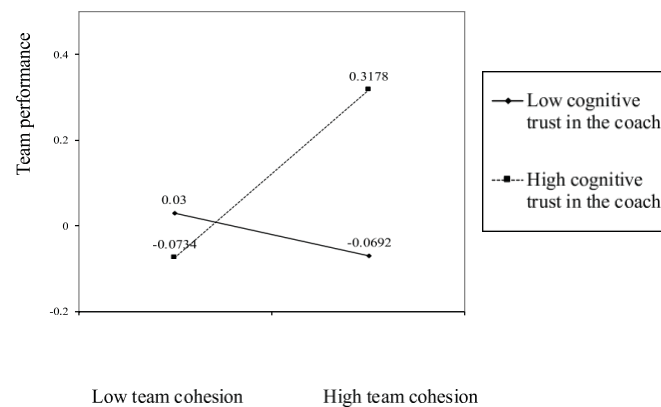


Figure 2. The interaction effect between cognitive trust in the coach and team cohesion on team performance.

Figure 3 below illustrates the interaction effect, represented by the slopes for the effect of high and low team cohesion according to high and low affective trust in the coach (Dawson, 2014). When affective trust in the coach is low, the effect of team cohesion on team performance is significant. In contrast to what we observed for cognitive trust, when teams do not have affective-based trust in their coach, they will strongly benefit from being cohesive. Therefore, hypothesis 3 was supported.

### Discussion

Previous research has shown evidence of the relationship between team tenure and performance (e.g. Kozlowski et al., 1999). However, some doubts remain regarding the inter- mediate

paths explaining the relationship between these constructs (Bell et al., 2011). In order to shed light on some inconsistencies found in the literature, the present study aimed to fill this gap by studying whether team tenure in sports could be related to objective measures of future team performance through team cohesion, considering different levels of trust in the coach.

Contrary to hypothesis 1, the overall patterns of our findings showed that the relationship between tenure and performance is not explained by the level of cohesion amongst team members. These unexpected results may be attributed to the inconclusive (Bell et al., 2011) and non-linear (Katz, 1982; Koopmann et al., 2016) relationship between tenure and performance. In fact, previous studies have emphasised the complexity of this relationship, showing that there is an indirect curvilinear effect between team tenure and average performance through the role of team psychological safety (Koopmann et al., 2016). Apparently, the linear indirect effect between tenure and performance is conditioned upon different levels of psychological safety climate strength. According to social identity theory (Tajfel & Turner, 1979), moderate and longer tenured teams may perceive different roles for cohesion, thus explaining the indirect relationship between team tenure and performance. For example, new teams tend to develop a shared group membership which reinforces distinctiveness between the in – and out-group (Hogg & Terry, 2000). Moderately and longer tenured team members are characterised by deeper task expertise and interpersonal knowledge with increased perceptions of respect, psychological safety and trust (Koopmann et al., 2016; Schulte et al., 2012). These complex dynamics explain why other contextual variables (e.g. trust in the coach) may be required to understand the complex role of team cohesion in the relationship between tenure and performance.

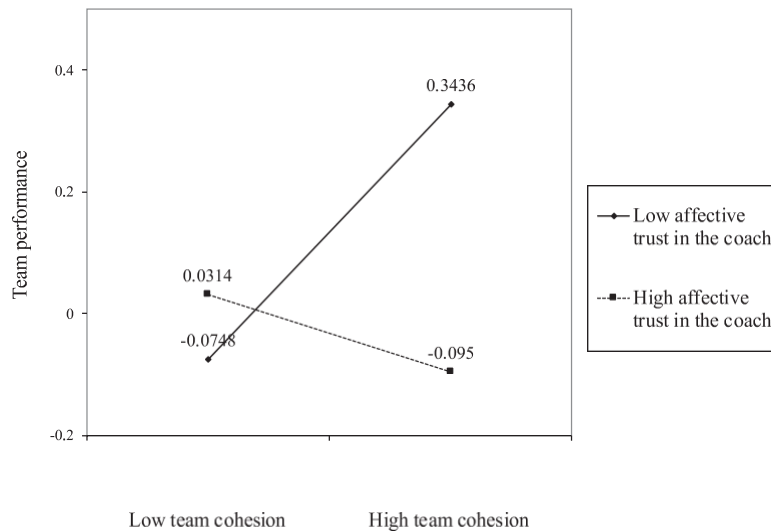


Figure 3. The interaction effect between affective trust in the coach and team cohesion on team performance.

Another explanation for why team cohesion did not mediate the relationship between tenure and performance may be related to the way performance was measured. When performance is conceptualised as a behaviour and not as an outcome, group cohesion is more beneficial for performance (Beal et al., 2003). This can be explained because task cohesion is more closely linked to performance behaviours, since these are antecedents of performance outcomes. Performance behaviours, such as interplay, passing or shooting ratio quotes, may be influenced differently by cohesion and tenure. However, we conceptualised performance as an outcome (Beal et al., 2003) using the number of wins over the total possible wins as a measure of performance, which may explain our findings regarding the mediation effects of cohesion.

Previous studies have shown that trusting the coach is positively related to team cohesion (Mach et al., 2010). The literature has also shown that trusting the coach has a positive impact on team performance (Clapp-Smith et al., 2009). As expected, our findings suggested that the indirect effect of tenure on performance through team cohesion was only significant for high and medium values of cognitive trust in the coach. This is in line with hypothesis 2 and reinforces empirical evidence suggesting that cognitive trust in coaches enables comfortable task exchange (Dirks & Ferrin, 2002) and increases confidence in others' competences (Yang & Mossholder, 2010). This

evidence provides further support for the assumption that team members' perceptions about their coaches' competences is a required condition to understand the path between tenure and performance through the role of team cohesion. In other words, in contexts of medium/high levels of cognitive trust in the coach, team cohesion is the missing path that explains the linear relationship between team tenure and performance.

We also found in hypothesis 3 that, when affective trust in the coach was low, the indirect effect of team cohesion in the relationship between tenure and performance was positive. Team cohesion appeared as a compensatory mechanism that helped athletes to deal with a perceived lack of emotional bonds and reduced care provided by the coach (McAllister, 1995). Accordingly, when players perceived low affective trust in the coach, they tended to develop interpersonal relationships and increased ties with the group (Hogg & Terry, 2000). These dynamics benefit the role of team cohesion in explaining why longer team tenure (i.e. a team with high task expertise and interpersonal knowledge) increases team performance.

This study has gone beyond previous research on sports performance in several ways. Firstly, concerns associated with common method bias were minimised because we included objective measures of team tenure and performance, as well as including several distinct sources of information (players, peers and coaches). Secondly, we eschewed the one-dimensional approach of trust in leadership (e.g. Dirks & Ferrin, 2002) and conceptualised cognitive and affective trust as distinct constructs. Thirdly, our study went further than previous studies, suggesting the need to distinguish between affective and cognitive dimensions of trust in moderating established relationships when explaining team performance (Schaubroeck et al., 2011). Therefore, our study reinforces the need to understand the role of each dimension of trust in moderating the indirect relationship between team tenure and performance.

### ***Limitations and future research***

Our study has several limitations. Firstly, our sample included 73 teams from women and

men's leagues playing in Catalonia, Spain. Therefore, cultural and gender biases may have contributed to explaining the hypothesised relationships. Considering Spain as an average collectivist country (Hofstede, 2001), future research could seek to understand how these variables contribute to team performance in other cultural contexts (e.g. the United States or Indonesia), along with other less tenured sports (e.g. soccer). Despite the absence of significant differences between professional and non-professional players in terms of their interpersonal relations with their coaches (e.g. Sæther, 2017), the relationship between the team's characteristics and performance seems to be moderated (amongst others) by the setting type (i.e. university athletics programmes, professional sports leagues or non-profit sports) (Lee & Cunningham, 2019). Therefore, future studies should test whether our hypotheses remain invariant for athletes in professional clubs and university programmes.

Secondly, our data included self-reported measures of team cohesion and trust in the coach, which may raise concerns regarding common method bias. However, as previously mentioned, the self-reported measures included in this study presented good psychometric evidence. As described in Siemsen, Roth and Oliveira (2010), interaction effects cannot be artefacts of common method effects. To deal with these potential limitations, we applied two remedies. First, the study included objective measures of team tenure and team future performance, and, second, we controlled for perceived performance measures that were assessed by a round robin amongst peers and the head coach and aggregated at the team level, which provided additional support for the study's results.

As we measured the self-reported predictor variables only at one point in time, the measure of within-team variance throughout the basketball season was limited. We recommend that future research studies the role of team cohesion and trust in the coach at different stages of the season to better understand the slopes of the effects (linear and curvilinear) (e.g. Katz, 1982; Koopmann et al., 2016) and unveil whether they remain stable over time.

Thirdly, we collected data either prior to or after a team's training session. This may imply that the quality of the training, the coach's behaviour during the session and the interaction between players, as well as between players and coach, may have affected participants' ratings of cohesion and trust in their coach. Future research should control whether these contextual conditions have an effect on findings.

Lastly, since we use a modified one-dimensional scale for team cohesion (Carron et al., 1985), comprising items from the task and social group integration dimensions, further research could be designed specifically to capture the contribution of task and social cohesion separately and to test their differential mediating role in fostering team performance (e.g. Carless & De Paola, 2000, suggested that task cohesion was more strongly related to job performance than social cohesion).

### ***Practical implications***

This research raises a couple of practical questions: Can team tenure improve team performance? What are the main variables explaining this relationship? The results show that team tenure plays an important role in team performance through the development of team cohesion; and that this relationship is conditioned upon scenarios of high cognitive trust and low affective trust in the coach. In order to enhance team performance, sports teams (and other) organisations should start encouraging their coaches and managers to dedicate greater efforts to improving the amount of work they do with team members and their competences to ensure their high cognitive trust. Our results showed that it would not be relevant to simply promote team cohesion without taking cognitive trust in the coach into account. In leadership training programmes, more attention should be paid to developing strategies that can be adopted to increase cognitive trust amongst team members. As a transformational leadership style promotes cognitive trust (Chou et al., 2013), leaders can be trained to adopt behaviours typical of transformational leadership such as leading by example or giving individualised attention to

each team member. This should really be a major concern for coaches and managers in developing their teams.

In contexts with low affective trust in the coach, our results provide evidence supporting the need to encourage team cohesion in teams with long tenures. Accordingly, managers and teams could take advantage of periodic performance management and measurement tools (see, for example, O'Boyle & Hassan, 2014) in order to identify scenarios (i.e. high cognitive trust and low affective trust in coaches) where team tenure may contribute to higher team performance through the existence of team cohesion. These tools are also important to identify different trust profiles for coaches considering

how tenured the team is as well as the level of cohesion amongst team members. Coaches and managers could be encouraged to develop intervention strategies to increase empathy, autonomous motivation and moral identity, thus promoting prosocial behaviour and the adoption of norms and greater cohesion within teams (Pizzi & Stanger, 2019). Increasing cohesion will positively impact the development of shared knowledge states which, in turn, explain the importance of team experience in increasing objective performance. While promoting knowledge/information sharing and the development of mutual trust, socio-emotional communication amongst team members may increase (Dirks & Ferrin, 2002), hence, compensating for the lack of affective trust in coaches and managers.

### ***Conclusion***

Studies examining mediators and moderators of the relationship between team tenure and performance have been scarce. Our study introduces a novel perspective in understanding the mediating role of team cohesion conditioned upon different levels of trust in the coach, considering a trust typology that distinguishes competency-based (cognitive) and emotionally-based (affective) trust. Our results underscore a new perspective in which the role of team cohesion in explaining that tenured teams have higher team performance is conditioned upon different



scenarios of trust in the coach (high cognitive and low affective trust in the coach). Accordingly, our research provides interesting implications for sport club managers, coaches, leaders and policymakers on the consequences that team characteristics (e.g. tenure) and team dynamics (e.g. team cohesion and trust in the coach) have in explaining the performance of successful teams.

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**Table 1.** Means, standard deviations and correlations for the research variables.

Constructs	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1. Perceived performance <sup>a</sup>	4.73	.36									
2. Gender	.30	.46	.01								
3. Seasons trained by coach	2.60	1.06	.11	-.01							
4. Age	24.12	2.28	.13	-.37**	.19						
5. League	4.95	1.39	-.22	.71**	.07	-.25*					
6. Team tenure	3.10	1.47	-.05	.01	.39**	.01	.09				
7. Team cohesion	6.60	.84	.63**	.11	.07	-.07	.03	.21			
8. Cognitive trust in the coach	6.99	1.06	.38**	.11	.03	-.13	-.03	.01	.54**		
9. Affective trust in the coach	7.01	1.00	.27*	-.15	.10	.85	-.18	.06	.36**	.81**	
10. Team performance <sup>b</sup>	.50	.21	.18	-.01	-.12	.05	.01	.06	.26*	.15	.04

Note:  $N = 73$ , \*  $p < .05$ , \*\*  $p < .01$ , two-tailed;

<sup>a</sup>Control variable measured at the season midpoint; <sup>b</sup>Dependent variable – objective performance during the second half of the season.

**Table 2.** Mediation effect of team cohesion between tenure and performance.

Direct effects on team cohesion					
Variables	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>	
Intercept	-.88	1.36	-.64	.522	
Team tenure	.15	.05	2.84	.006	
Perceived performance	1.71	.22	7.63	.000	
Gender	-.20	.25	-.82	.413	
Seasons trained by coach	-.16	.15	-1.05	.298	
Age	-.06	.04	-1.42	.160	
League	.13	.08	1.66	.102	
Direct effects on team performance					
Variables	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>	
Intercept	-.23	.46	-.50	.616	
Team tenure	.01	.02	.65	.515	
Team cohesion	.05	.04	1.3	.199	
Perceived performance	.05	.10	.49	.628	
Gender	-.03	.08	-.38	.707	
Seasons trained by coach	-.08	.05	-1.54	.127	
Age	.01	.01	.68	.499	
League	.01	.03	.53	.601	
Total, direct and indirect effect of team tenure on team performance					
	<i>B</i>	<i>SE</i>	<i>p</i>	Boot LL	Boot UL
Total effect	.02	.02	.258	-.016	.058
Direct effect	.01	.02	.515	-.026	.051
Indirect effect (team cohesion)	.01	.01		-.001	.022

Note. *N* = 73 teams. Process macro (model 4), 10,000 bootstrap samples; 95% level of confidence for all confidence intervals in output.

**Table 3.** Moderated mediation effects of cognitive and affective trust in the coach.

Outcome variable: Team Cohesion								
Variables	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>			
Constant	-7.48	1.365	-5.481	.000				
Team tenure	.15	.054	2.843	.006				
Perceived performance	1.71	.224	7.631	.000				
Gender	-.20	.247	-.825	.413				
Seasons trained by coach	-.16	.152	-1.049	.298				
Age	-.05	.036	-1.423	.160				
League	.13	.081	1.660	.101	.504			
Outcome variable: Team Performance								
Variables	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>				
Constant	.051	.543	.094	.925				
Tenure	.017	.020	.848	.400				
Team cohesion (TC)	.073	.047	1.550	.126				
Cognitive trust in the coach (CTiC)	.071	.050	1.432	.157				
TC x CTiC	.123	.050	2.126	.037				
Affective trust in the coach (ATiC)	-.083	.048	-1.724	.090				
TC x ATiC	-.136	.058	-2.343	.022	<i>R</i> <sup>2</sup>			
Perceived performance	.057	.102	.564	.575				
Gender	-.073	.086	-.843	.402				
Seasons trained by coach	-.073	.052	-1.421	.161				
Age	.010	.012	.816	.418				
League	.016	.027	.601	.550	.199			
Conditional indirect effects of Tenure on Team performance at values of ATiC and CTiC								
Mediator	Cogn. trust in the c.	Affect. trust in the c.	Effect	<i>SE</i>	<i>t</i>	<i>p</i>	<i>Boot LL</i>	<i>Boot UL</i>
Team cohesion	-1.025	-.908	.071	.053	1.328	.189	-.036	.178
	-1.025	.167	-.075	.070	-1.074	.287	-.216	.065
	-1.025	1.047	-.195	.112	-1.750	.085	-.419	.028
	.213	-.908	.223	.090	2.479	.060	.043	.403
	.213	.167	.076	.048	1.585	.118	-.020	.173
	.213	1.047	-.044	.058	-.744	.560	-.160	.073
	1.013	-.908	.321	.130	2.470	.016	.061	.581
	1.013	.167	.174	.078	2.243	.028	.019	.330
1.013	1.047	.055	.055	0.998	.322	-.055	.164	
Indices of partial moderated mediation								
Moderators	<i>Index</i>	<i>SE</i>	<i>Boot LL</i>	<i>Boot UL</i>				
Cognitive trust in the coach (ATiC)	0.019	0.011	.002		.043			
Affective trust in the coach (CTiC)	-0.021	0.012	-.051		-.003			

Note. *N* = 73 teams. Process macro (model 16), 10,000 bootstrap samples; 95% level of confidence for all confidence intervals in output.