

Authentic leadership and task cohesion

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1 REVISION

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8 Authentic leadership and task cohesion: The mediating role of trust and team sacrifice

9 Comille Bandura, Maria Kavussanu, & Chin W. Ong

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1 Abstract

2 Objective: A large body of literature has examined the consequences of various leadership
3 styles. However, the concept of authentic leadership has received little attention. In this study,
4 we investigated whether authentic leadership predicted task cohesion and whether trust and
5 team sacrifice mediated this relationship.

6 Method: A total of 338 ($M_{age}=19.96$, $SD = 2.14$) team sport athletes completed question-
7 naires assessing the aforementioned variables.

8 Results: Multilevel Structural Equation Modeling (MSEM) indicated that authentic leader-
9 ship positively predicted task cohesion and this relationship was mediated by both trust and
10 team sacrifice.

11 Conclusions: Our findings draw attention to the importance of authentic leadership and high-
12 light the role of trust and team sacrifice on the identified relationships.

13 *Keywords:* cohesion, authenticity, integrity, teambuilding, group dynamics

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18 Highlights and Implications

- 19 • Athletes who perceived their coach to be an authentic leader indicated high levels of
20 task cohesion.
- 21 • Trust and team sacrifice may explain the relationship between athletes' perceptions of
22 authentic leadership and task cohesion.
- 23 • Coaches are encouraged to be authentic leaders as this style of leadership could influ-
24 ence task cohesion within the team.

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1 Authentic leadership and task cohesion: The mediating role of trust and team sacrifice

2 Due to the importance of leader behaviour in the success of organizations, a lot of in-
3 terest focusing on positive approaches to leadership has been evident in recent years, as re-
4 flected in the large number of proposed leadership models (see Hoch, Bommer, Dulebohn &
5 Wu, 2018 for a review). In the organizational context of sport, in particular, there has been a
6 resurgence in leadership research over the past decade (Morton, 2016). This is in response to
7 the need to understand the interactions between coaches and their athletes and how these in-
8 fluence group processes which underpin optimal performance in teams (Morton, 2016). In
9 this study, we examined whether a relatively new model of leadership, namely authentic
10 leadership (Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008) is related to task co-
11 hesion in team sport and the processes through which authentic leadership may influence task
12 cohesion.

13 Authentic leadership has been defined as a ‘‘pattern of leader behavior that draws
14 upon and promotes both positive psychological capabilities and a positive ethical climate, to
15 foster greater self-awareness, an internalized moral perspective, balanced processing of
16 information, and relational transparency on the part of leaders working with followers;
17 fostering positive self-development’’ (Walumbwa et al., 2008, p. 94). Walumbwa and
18 colleagues (2008) posit that authentic leadership comprises four related dimensions: self-
19 awareness, internalized moral perspective, relational transparency, and balanced processing.

20 Self-awareness refers to the extent to which a leader possesses accurate self-
21 knowledge and uses that knowledge to demonstrate he or she is cognizant of his or her impact
22 on others. Internalized moral perspective pertains to the extent to which leaders’ behaviors
23 are directed by, and are congruent with, their personal values and moral standards. It
24 represents a form of self-regulation which allows leaders to engage in ethical conduct even
25 against external pressures (e.g., group, organizational, societal pressures). Relational

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1 transparency is a leader's presentation of their true thoughts and emotions in an open and
2 transparent manner versus being fake or manipulative, while balanced processing is evident
3 when a leader who objectively considers and analyses all relevant information before making
4 decisions (see Walumbwa et al., 2008).

5 Demonstrating behavior that shows consistency between words and actions is a key
6 feature of authentic leaders' ability to develop positive environments (Rego, Sousa, Marques,
7 & Cunha, 2014). Such positive environments give direction to followers about how to remain
8 engaged emotionally, physically and cognitively (Avolio & Gardner, 2005; Braun & Nier-
9 berle, 2017; Gardner, Coglisier, Davis, & Dickens, 2011). Another defining trait of authentic
10 leaders is their ability to foster development and excellence among followers (Leroy et al.,
11 2015). Thus, authentic leadership represents a process of influence through leader behavior
12 aimed at positive follower development (Leroy, Anseel, Gardner, & Sels, 2015; Sagnak &
13 Kuruoz, 2016).

14 Empirical evidence from a range of samples, sectors, and countries provides support
15 for the idea that leaders who are seen to be authentic (in ways consistent with the above defi-
16 nition) are also effective in the sense that they can mobilize followers' energies to enhance
17 group and organizational success. For instance, research has shown that followers' percep-
18 tions of authentic leadership are positively related to organizational performance, job satisfac-
19 tion, satisfaction with leader, trust, work engagement, commitment, psychological capital,
20 team climate, team performance, and team reflexivity (e.g., Avolio & Walumbwa, 2014;
21 Lyubovnikova, Legood, Turner, & Mamakouka, 2017; Walumbwa et al., 2008).

22 Although many studies (see Gardner, Coglisier, Davis, & Dickens 2011 for a review)
23 have examined authentic leadership in business and other organizational settings, very little
24 research has been conducted in sport. This research shows that athletes' perceptions of their
25 coaches' authentic leadership were positively related to trust in coach, commitment, enjoy-

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1 ment and autonomy (Bandura & Kavussanu, 2018). These findings demonstrate that authen-
2 tic leadership is relevant in the context of sport and therefore warrants further research.

3 Authentic leadership could influence task cohesion, which involves team cooperation
4 toward achieving performance goals within practice and competition environments (Eys,
5 Loughead, Bray, & Carron, 2009a, 2009b). Authentic leaders accommodate individual
6 differences, which can blend talents of individuals into a high-task cohesive team (Gardner et
7 al., 2011). Peus and colleagues (2012) showed that promoting diverse behaviors related to the
8 bond among group members and was a major factor in developing task cohesion in followers.
9 Authentic leadership is characterized with an alignment between leader-follower goals and
10 self-development (Walumbwa et al., 2008). Therefore, if teammates accept team goals and
11 are encouraged to work together, it is likely that task cohesion will increase as athletes strive
12 toward achieving these common goals.¹ Indeed, one study found that authentic leadership
13 was positively associated with task cohesion in sport teams (Houchin, 2011). However, the
14 process through which authentic leadership may influence task cohesion has not been
15 examined.

16 This may occur in part via trust, which has been defined as athletes' perceptions of the
17 integrity, credibility, and benevolence of a coach (Dirks, 2000). Authentic behavior creates
18 transparent two-way relationships through positive social exchanges (Walumbwa et al.,
19 2008). It is reasonable to expect that athletes would trust their coach if he/she manifests
20 positive values, shows integrity consistently, is transparent, and accountable. Previous
21 research found an indirect relationship between authentic leadership and athletes'
22 commitment and satisfaction via trust (Bandura & Kavussanu, 2018). Given that authentic
23 leadership is characterized by behaviors related to creating high-quality relationships that
24 bond groups, it is reasonable to expect that if a coach is perceived to be authentic, athletes are
25 more likely to trust the coach and this may enhance the task cohesion within the team.

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1 Therefore, we expected that trust would mediate the relationship between authentic
2 leadership and task cohesion.

3 In their model, Walumbwa and colleagues (2008) propose that authentic leadership
4 would lead to team sacrifice, defined as “group members voluntarily initiating an action or
5 giving up prerogative or privilege for the sake of another person or persons” (Prapavessis &
6 Carron, 1997, p. 231). Prapavessis and Carron (1997) conceptualized sacrifice behaviors as
7 involving social sacrifice (i.e., sacrifices athletes make in their social lives), outside sacrifice
8 (i.e., sacrifices athletes make in their personal lives), and inside sacrifice (i.e., sacrifices
9 athletes make in practice and competition). In addition, they proposed that inside sacrifice
10 involves both personal (e.g., sacrifices I make) and team (e.g., sacrifices my teammates
11 make) sacrifice. In this study we focus on team sacrifice given that authentic leaders
12 encourage their followers to sacrifice their own interests to satisfy the collective (Valsania,
13 Leon, Alonso, & Cantisano, 2012).

14 Although no study has examined authentic leadership and team sacrifice in sport,
15 some research in organizational psychology provides evidence for the link between the two
16 variables. Organizational citizenship behaviors are similar to team sacrifice as they both
17 involve engaging in behaviors that go unrewarded but promote the functioning of the group.
18 Two studies reported a positive relationship between authentic leadership and organizational
19 citizenship behaviors (Valsania et al., 2012; Walumbwa et al., 2008). This research suggests
20 that if a coach treats each athlete as an individual and supports his or her personal
21 development, this could motivate the athlete to make sacrifices for the team (Walumbwa et
22 al., 2008). It is reasonable to expect that if a team has a shared identity with goals and values
23 because a coach is transparent, consistent and involves athletes in decision making, athletes
24 are more likely to make sacrifices. Authentic leadership is also characterized by positive role
25 modeling via self-awareness and internalized moral perspective (e.g., commitment to

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1 followers) (Emuwa, 2013), which could serve as a model for the sacrifices expected of
2 athletes.

3 Drawing on Prapavessis, Carron, and Spink's (1997) conceptual model of team
4 building, authentic leadership could also be linked with task cohesion through sacrifice. It is
5 reasonable to suggest that since authentic leaders create bonds among group members, if "a
6 participant is asked to give up something of value for his/her group becomes, because of this
7 sacrifice, more attracted to that body" (Zander, 1985, p. 7). Given that task cohesion also
8 involves an athlete's attraction to his or her team (Widmeyer, Brawley, & Carron, 1985),
9 athletes making sacrifices for their team could experience higher task cohesion within that
10 team. Team sacrifice is related to helping behavior, loyalty, and virtue (Valsania et al., 2012).
11 In sport research, sacrifices have been positively related to task cohesion (Cronin, Arthur,
12 Hardy, & Callow, 2015; Prapavessis & Carron, 1997). Both team sacrifice, and task cohesion
13 have salience to the specific context of practice and competition in sport (Cronin et al., 2015).
14 Therefore, we expect team sacrifice to mediate the relationship between authentic leadership
15 and task cohesion.

16 The purpose of this study was to examine whether authentic leadership in sport teams
17 is related to task cohesion indirectly through trust in the coach and team sacrifice. We
18 hypothesized that coach authentic leadership would (a) positively predict task cohesion via
19 trust (e.g., Bandura & Kavussanu, 2018; Houchin, 2011) and (b) positively predict task
20 cohesion via team sacrifice (Walumbwa et al., 2008). We also examined whether the
21 relationship between authentic leadership and task cohesion via trust and team sacrifice
22 would be different in male and female athletes. Previous research suggests potential gender
23 differences in these relationships. For example, in one study, although both male and female
24 followers perceived authentic leaders as contributing to a positive work climate, the
25 contribution was perceived as greater by male followers (Braun & Nieberle, 2017).

1 **Method**

2 **Participants**

3 Participants were 338 athletes who competed in the British Universities and Colleges
4 Sport (BUCS) league at the time of data collection. Athletes competed for the same
5 University in a variety of team sports (netball $n = 55$, hockey $n = 51$, rugby union $n = 31$,
6 rugby league $n = 26$, cricket $n = 26$, American football $n = 25$, football $n = 22$, Gaelic football
7 $n = 19$, waterpolo $n = 18$, dodgeball $n = 15$, korfbal $n = 15$, basketball $n = 13$, ice hockey $n =$
8 12 , volleyball $n = 10$). Two athletes' responses (Gaelic football and American football) were
9 removed as they were the only ones in their team who rated their coach. Consequently, the
10 final sample consisted of 336 athletes aged between 18-44 years ($M_{age} = 19.96$, $SD = 2.14$)
11 who rated coaches (29 % female) from 25 teams ($M_{team\ size} = 13.4$ athletes). The sample
12 included both female ($n = 172$) and male ($n = 164$) athletes. Two hundred and forty athletes
13 had a male coach and 96 athletes had a female coach, played for their current team for a mean
14 of 1.66 years ($SD = .92$) and played for their current coach for 1.61 seasons ($SD = .95$).
15 BUCS consists of two regional leagues and each sport can have up to four teams according to
16 athletic ability from the same university or college competing. Data were collected across a
17 five-month (October to February) period when teams were actively involved in training and
18 competition.

19 **Measures**

20 **Authentic leadership.** Authentic leadership in sport was measured using an adapted
21 version of the 16-item Authentic Leadership Questionnaire that assesses the four dimensions
22 (Walumbwa et al., 2008). The stem "My coach..." was used before each statement. Example
23 items included "encourages everyone to speak their mind" (relational transparency, five
24 items), "demonstrates beliefs that are consistent with actions" and "makes decisions based on
25 high standards of ethical conduct" (internalized moral perspective, four items), "seeks

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1 feedback to improve interactions with players” (balanced processing, three items), and
2 “shows he or she understands how specific actions impact others” (self-awareness, four
3 items). Participants were asked to respond to each statement regarding their coach’s
4 leadership style on a scale ranging from 1 (*not at all*) to 5 (*frequently, if not always*).
5 McDowell and colleagues (2018) have provided evidence of the internal consistency of the
6 scale, $\alpha = .92$.

7 **Trust.** The Trust in Leader questionnaire developed by McAllister (1995) and
8 adapted to sports settings by Dirks (2000) was utilized to measure perceptions of athletes’
9 trust in their coach. The scale consists of nine items, and example items are: “I trust and
10 respect my coach” and “Other players consider my coach to be trustworthy”. Participants
11 were asked to think about their experiences with their coach, and to indicate their level of
12 agreement with each statement on a Likert scale ranging from 1 (*strongly disagree*) to 7
13 (*strongly agree*). The scale demonstrated adequate internal consistency for the trust
14 questionnaire ($\alpha = .83$; McAllister, 1995) and the adapted version for sport ($\alpha = .92$; Dirks,
15 2000).

16 **Team sacrifice.** Athletes’ perceptions of sacrifice were measured using the 8 -item
17 subscale of the Group Sacrifice Scale (GSS; Prapavessis & Carron, 1997). Examples included
18 “My teammates are willing to put aside their own personal goals if they conflict with the
19 team’s goal” and “My teammates are willing to adopt a style of play not suited to their talents
20 for the good of the team.” Participants were asked to indicate the degree to which they
21 agreed with each statement on a scale ranging from 1 (*strongly disagree*) to 9 (*strongly*
22 *agree*). Cronin et al. (2015) have provided evidence of the internal reliability for teammate
23 sacrifice, $\alpha = .90$.

24 **Task cohesion.** Task cohesion was measured using the 9-item Group Environment
25 Questionnaire (Eys, Carron, Bray, & Brawley, 2007). Task cohesion is typically assessed

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1 across two dimensions with perceptions of attractions to task aspects of the group (ATG-T)
2 and group's integration regarding task objectives (GI-T). Example items include "I like the
3 style of play of this team" and "We all take responsibility for any loss or poor performance
4 by our team." Participants were asked to assess their perceptions of their current team. Each
5 item was scored on a scale ranging from 1 (*strongly disagree*) to 9 (*strongly agree*). The
6 psychometric properties of task cohesion as a subscale of the Group Environment
7 Questionnaire have repeatedly been verified (see Eys & Evans, 2018). The reliability of task
8 cohesion has been shown to be acceptable, $\alpha = .84$ (McLaren & Spink, 2018).

9 **Procedure**

10 Ethical approval to conduct this study was granted by the investigators' University
11 School ethics committee. Head coaches were initially contacted by phone, email, or post with
12 a brief description of the study purpose and permission to approach their athletes. Coaches
13 then received a follow-up letter via post or email reiterating the purpose of the study, proce-
14 dures for confidentiality, and example items to be used in the questionnaire pack. Upon re-
15 ceiving permission from the coach, athletes were approached by the primary investigator pri-
16 or to, or after a training session at their practice location (e.g., swimming pool, sports hall,
17 field). Prior to completing the questionnaires, the athletes provided written consent. Athletes
18 were instructed not to reveal any personal information (e.g., name) to ensure anonymity. The
19 researcher was present while athletes completed the questionnaire pack, which took approxi-
20 mately 15 minutes to complete, without the coach being present. The athletes were asked to
21 respond to the questionnaire as honestly as possible when thinking about their experiences
22 with their current coach and without interacting with each other. Upon completion, athletes
23 were instructed to return their questionnaire pack to the researcher.

24 **Data Analysis**

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1 Taking into account the nested nature of the data of athletes within teams, multilevel
2 modeling was used to test the hypotheses that trust, and team sacrifice independently mediat-
3 ed the relationship between authentic leadership and task cohesion. Indeed, the intraclass cor-
4 relation coefficients in this sample for authentic leadership (.17), team sacrifice (.24), trust
5 (.15) and task cohesion (.11) indicated that a meaningful proportion of variance was ex-
6 plained at the team level for each of the variables, and multilevel modeling was appropriate.
7 A 1-1-1 multilevel structural equation model (MSEM) for mediation with athletes at Level 1
8 and teams at Level 2 was specified and analyzed using Mplus (V.7; Muthén & Muthén,
9 2012). A 1-1-1 model was specified because the dependent, mediator and independent varia-
10 bles were all observed at the athlete level (i.e., Level 1). The MSEM approach was utilized
11 due to its superior ability to deal with the conflation of Within (athlete) and Between (team)
12 components of effects that are evident in mediation models that involve linkages between
13 Level 1 variables (e.g., the $M \rightarrow Y$ effect in a 2-1-1 mediation model; Preacher, Zyphur, &
14 Zhang, 2010). Essentially, MSEM enables the examination of indirect effects at both the ath-
15 lete and team levels independently of each other. The independent examination of effects al-
16 lows for the analysis of unbiased within (athlete) level effects.

17 The indirect effects of the a (authentic leadership predicting trust or team sacrifice)
18 and b (trust or team sacrifice predicting task cohesion) paths (cf. Bauer, Preacher, & Gil,
19 2006) were tested with the Monte Carlo Method for Assessing Mediation (MCMAM; Bauer
20 et al., 2006; MacKinnon, Lockwood, & Williams, 2004) via a calculator developed by Selig
21 and Preacher (2008). MCMAM was used to test the indirect effects of a multilevel mediation
22 model because it has demonstrated unbiased indirect effects under most conditions and re-
23 turns robust confidence interval coverage (Bauer et al., 2006). The MCMAM calculator was
24 specified at the 95% confidence interval and 20,000 repetitions of simulated indirect effects.
25 In coherence with previous leadership research (e.g., Cronin et al., 2015), we also explored

1 potential gender effects on the independent indirect effects of trust and team sacrifice on the
2 relationship between authentic leadership and task cohesion by specifying separate MSEM
3 mediation models for male and female athletes.

4 **Results**

5 **Descriptive Statistics, Alpha Coefficients, and Zero-Order Correlations**

6 Descriptive statistics, Cronbach's alpha coefficients, and zero-order correlations for
7 all variables are presented in Table 1. On average, participants perceived their coach to dis-
8 play authentic leadership behavior 'sometimes' to 'fairly often'. They also reported 'high'
9 trust and task cohesion and perceived their teammates to make sacrifices 'moderately' to
10 'highly'. All scale scores showed good to excellent internal consistency (alpha range = .77 –
11 .94; Kline, 2016), and all variables had medium-to-large correlations with each other (see
12 Cohen, 1992).

13 **Multilevel Mediation Analysis**

14 Both MSEM models of trust mediating the relationship between authentic leadership
15 and task cohesion, and team sacrifice mediating the relationship between authentic leadership
16 and task cohesion were modeled with fixed Level 2 effects, where the explanatory coeffi-
17 cients are not allowed to vary across teams. Models with fixed Level 2 effects were retained
18 since models with random Level 2 effects (where explanatory coefficients were allowed to
19 vary across teams) did not significantly improve model fit and yielded non-significant be-
20 tween-group variances across all main effects of the models. As recommended by Bauer et al.
21 (2006), the indirect effects of the MSEM mediation models with fixed Level 2 effects were
22 quantified with the product term $a \times b$. For the hypothesis that trust would mediate the rela-
23 tionship between authentic leadership and task cohesion, multilevel mediation analysis re-
24 vealed a significant indirect effect ($\beta_a = .66$, $SE = .05$, $p = .00$; $\beta_b = .22$, $SE = .08$, $p = .01$; β_{In-}
25 $direct\ Effect = .14$, $SE = .06$, $p = .01$, 95% CI [.03, .26]) (see Figure 1). Multilevel mediation

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1 analysis also revealed a significant indirect effect of authentic leadership on task cohesion
2 through team sacrifice ($\beta_a = .28$, $SE = .06$, $p = .00$; $\beta_b = .31$, $SE = .04$, $p = .00$; $\beta_{\text{Indirect Effect}} =$
3 $.09$, $SE = .03$, $p = .00$, 95% CI [.04, .15]) (see Figure 2). The effects for the *a* and *b* paths
4 were positive and significant across both mediation models.

5 Although athlete gender did not significantly correlate with any of the variables speci-
6 fied in the mediation model, we tested the effects of athlete gender on the independent medi-
7 ating effects of trust and team sacrifice on the relationship between authentic leadership and
8 task cohesion. To this end, separate MSEM mediation models were specified for male and
9 female athletes. The indirect effect of trust mediating the relationship between authentic lead-
10 ership and task cohesion was significant for male athletes but non-significant for female ath-
11 letes (see Table 2). The indirect effect of team sacrifice mediating the relationship between
12 authentic leadership and task cohesion was significant for both male and female athletes (see
13 Table 2).

Discussion

15 Over the past two decades, a large body of literature has emerged focusing on positive
16 forms of leadership in organizational contexts and in sport (e.g., Cronin et al., 2015; Hoch et
17 al., 2018; Leroy et al., 2015; Lybonikova et al., 2015). However, to date, very few studies
18 have examined authentic leadership in team sport. The present study sought to fill this gap in
19 the literature by investigating whether authentic leadership in sport teams is related to task
20 cohesion indirectly through trust in the coach and team sacrifice.

21 As expected, trust mediated the relationship between authentic leadership and task
22 cohesion, such that the more coaches were viewed to be authentic, the greater the trust ath-
23 letes had in them, and this in turn was positively related to task cohesion. This is in line with
24 the social exchange theory (Blau, 1964), which suggests that trusting relationships mediate
25 the effects of leadership style on followers' behaviors. Previous work also found links be-

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1 tween authentic leadership in coaches and trust (e.g., Bandura & Kavussanu, 2018). Our find-
2 ings suggest that the mechanism through which authentic leadership may influence task cohe-
3 sion is by increasing trust in the coach. These findings provide further support for the as-
4 sumption that athletes' trust in coaches perceived to be authentic could have profound effects
5 on task cohesion in teams (Houchin, 2011).

6 It is worth noting that trust mediated the relationship between authentic leadership and
7 task cohesion only in male athletes. This provides initial support for Korabik and Ayman's
8 (2007) integrative model of gender and leadership, whereby gender affects the relationship
9 between leader behaviors and follower outcomes. According to these researchers, leader be-
10 haviors and follower outcomes are influenced by intrapsychic processes (e.g., gender role
11 orientation in both parties), sociodemographic gender (e.g., expectations of role behaviors),
12 and contextual cues (e.g., the gender make-up of the group). It may be that when tasks require
13 high levels of interdependence, cooperation, information sharing and above all trust, as is the
14 case in sport teams, authentic leadership practices which engender trust are central to team
15 functioning (Morton, 2016). Although this process was evident in male athletes, it was not
16 evident in female athletes. Further research is needed to explore this issue.

17 We also found that authentic leadership was indirectly related to task cohesion
18 through team sacrifice. The positive relationship between authentic leadership and team sacri-
19 fice is in line with previous research, which has shown that authentic leadership positively
20 predicts organizational citizenship behaviors (Valsania et al., 2015, Walumbwa et al., 2008).
21 Our findings suggest that coaches should display relational transparency (i.e. being open and
22 honest), self-awareness (i.e. understanding how they may influence athletes), internalized
23 moral perspective (i.e. resolving ethical dilemmas within the team consistency) and balanced
24 processing (i.e. evaluate and critically reflect on team tasks) as these behaviors are related to
25 team sacrifice. For example, coaches could role model sacrifice behaviors they expect from

1 the team (e.g., extra practice sessions for individuals outside of scheduled sessions) or set
2 ambitious yet realistic goals for the team.

3 Our findings point to the important role of team sacrifice in the relationship between
4 authentic leadership and task cohesion. Athletes who felt their teammates made sacrifices re-
5 ported higher levels of task cohesion. That is, authentic leadership, for example coaches say-
6 ing exactly what they mean could raise awareness of sacrifices made (e.g., athletes carrying
7 out responsibilities they do not like for the good of the team). Previous research in sport
8 (Cronin et al., 2015; Prapavessis & Carron, 1997) has also shown that team sacrifice was pos-
9 itively related to task cohesion, thus our findings are in line with previous research. This re-
10 sult also supports the view that making a sacrifice for the group causes individuals to be at-
11 tracted to the group (Zander, 1985). Our findings suggest that coach authentic leadership
12 could increase task cohesion indirectly by increasing team sacrifice and provide initial evi-
13 dence consistent with the hypothesized model. The relationship between authentic leadership
14 and task cohesion via team sacrifice was significant in both male and female athletes.

15 The empirical contributions of this study go beyond confirming the relevance of au-
16 thentic leadership theory to the context of sport. The highly interactive nature of many sports
17 teams can provide an informative setting parallel to organizational contexts where the majori-
18 ty of authentic leadership studies have been conducted. Within sport, the athletes (followers)
19 have close and frequent interaction with their coaches (leaders). As such, results complement
20 a plethora of research which has provided strong evidence for the positive influence leaders
21 perceived to be authentic have on followers (see Avolio & Walumbwa, 2014).

22 **Practical Implications**

23 Our results have important practical implications. The findings enhance our under-
24 standing of the mechanisms through which authentic leadership may influence task cohesion.
25 They suggest that leaders should try to engage in authentic behaviors (e.g., encouraging eve-

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1 ryone to speak their mind, making decisions based on high standards of ethical conduct,
2 showing he or she understands how specific actions impact others and seeking feedback to
3 improve interactions with players) as these behaviors could influence trust, team sacrifice and
4 in turn task cohesion. Coaches ought to put great emphasis on the quality of relationships be-
5 tween themselves and their athletes and *among* athletes. Authentic coaches could help ath-
6 letes by highlighting the importance of team goals associated with task cohesion (e.g., dis-
7 cussing goals to be achieved in a practice session and reflecting on them at the end of the ses-
8 sion). Authentic leadership should be included as a component of leadership training, to assist
9 coaches and athletes in gaining confidence, clarity about their role, self-awareness, and estab-
10 lishing quality relationships within sports teams.

11 **Study Limitations and Future Research Directions**

12 The present study revealed some interesting findings; however, it also has some limi-
13 tations. First, with any self-report data, there is concern about social desirability and the truth-
14 fulness of responses. However, we believe that because the questionnaires were completed
15 without the coach present or conversing with one's teammates, we obtained truthful respons-
16 es. Second, our data are cross-sectional, which means causality cannot be established be-
17 tween variables; our results simply provide evidence that our data are consistent with the
18 hypothesized model. Prospective longitudinal or experimental studies should be conducted to
19 investigate causality in the relationships identified in this study. Finally, we examined only
20 athlete perceptions of the effects of authentic leadership on task cohesion. Future studies can
21 examine the perspective of the coach as well as the dyadic relationships between athlete and
22 coach, and whether various gender pairings between athlete and coach (e.g., male-male, fe-
23 male-female, male-female, and female-male) influence the findings. Researchers could also
24 evaluate authentic leadership together with servant, transformational and ethical leadership

1 given the potential overlap and importance of trust within these paradigms (e.g., Hoch et al.,
2 2018)

3 **Conclusion**

4 Our findings extend recent research (Bandura & Kavussanu, 2018;) by identifying
5 athletes' trust and team sacrifice as potential mediators in the relationship between authentic
6 leadership and task cohesion. The present study makes a significant contribution to the litera-
7 ture by showing that authentic leadership could influence task cohesion via trust and team
8 sacrifice. Coaches are encouraged to display behaviours that reflect authentic leadership in
9 their coaching practices with sports teams.

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Footnote

¹Although perceptions of social cohesion have been linked to performance, in this study we focus on task cohesion given that it is relevant to team outcomes in training and competition (McLaren & Spink, 2018). Indeed, there have been concerns revolving social cohesion in sport teams and its detrimental effects on commitment to team goals, decreased focus, communication problems, anxiety and commitment (e.g., Borego, Cid & Silva, 2012).

AUTHENTIC LEADERSHIP AND TASK COHESION

1 Table 1

2 *Descriptive Statistics, Cronbach's Alpha Coefficients, and Bivariate Correlations among all*
 3 *Variables*

4

Variables	<i>M</i>	<i>SD</i>	1	2	3	4
1. Authentic leadership	3.81	.59	(.87)			
2. Trust	5.70	1.08	.70**	(.94)		
3. Team sacrifice	6.30	1.10	.33**	.28**	(.77)	
4. Task cohesion	5.63	.80	.43**	.45**	.47**	(.84)
5. Athlete gender	-	-	-.05	-.09	.10	.05

5 *Note.* Possible range of scores: 1 to 5 for authentic leadership; 1 to 7 for trust; and 1-9 for
 6 team sacrifice and task cohesion. Gender was coded as 1 = *male*, 2 = *female*. Cronbach α co-
 7 efficients are presented in parentheses.

8 ** $p < .01$

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AUTHENTIC LEADERSHIP AND TASK COHESION

1 Table 2
 2 *Within (athlete) level multilevel mediation analyses*

	<i>a</i> path		<i>b</i> path		<i>ab</i>		95% CI	
	β	SE	B	SE	β	SE	LL	UL
Mediator: Trust								
All Athletes	.66**	.05	.22**	.08	.14**	.06	.03	.26
Male Athletes	.70**	.05	.25*	.10	.17**	.07	.03	.30
Female Athletes	.66**	.07	.18	.10	.12	.07	-.01	.26
Mediator: Team Sacrifice								
All Athletes	.28**	.06	.31**	.04	.09**	.03	.04	.15
Male Athletes	.24*	.09	.29**	.06	.07*	.03	.01	.14
Female Athletes	.35**	.07	.33**	.04	.11**	.03	.06	.17

3 *Note.* *a* path = independent variable (authentic leadership) and mediator variable; *b* path =
 4 mediator variable and dependent variable (task cohesion); *ab* = indirect effect SE = Standard
 5 Error; CI = Confidence Interval; LL = Lower Limit; UL = Upper Limit.

6 ** $p < .01$; * $p < .05$.

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AUTHENTIC LEADERSHIP AND TASK COHESION

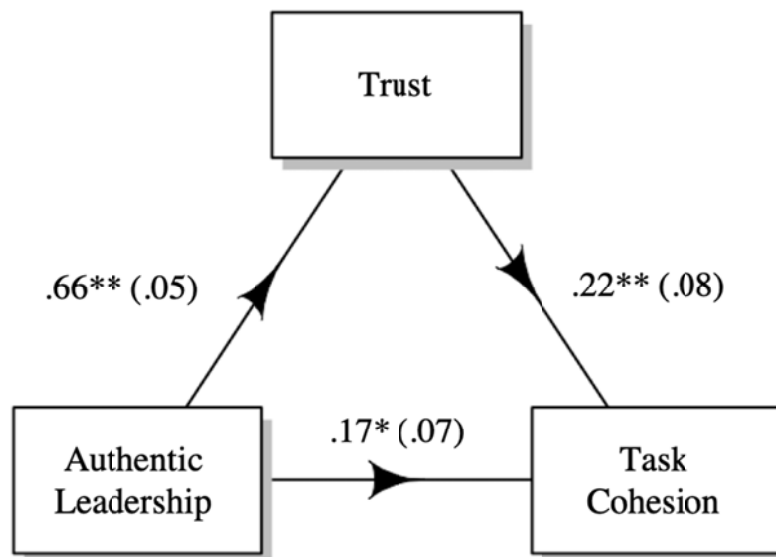
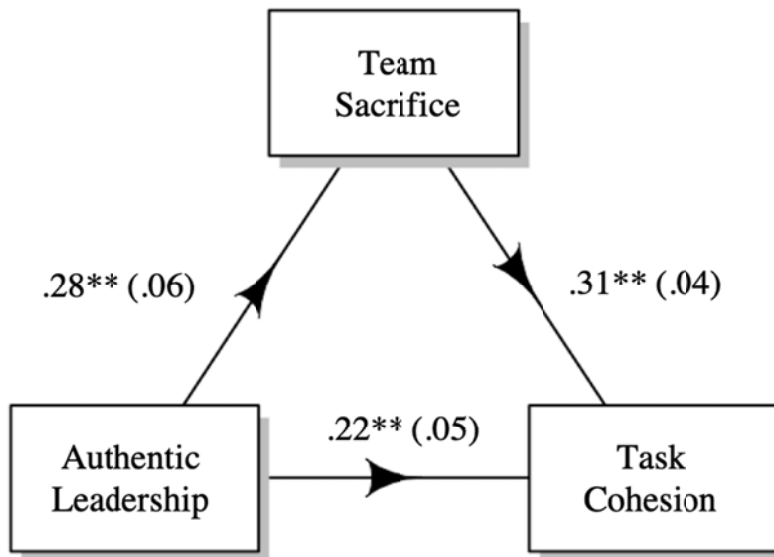


Figure 1. Trust as a mediator of the relationship between Authentic Leadership and Task Cohesion.

Note. β coefficients and standard errors (in parentheses) presented for each of the paths.

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

AUTHENTIC LEADERSHIP AND TASK COHESION



1 *Figure 2.* Team Sacrifice as a mediator of the relationship between Authentic Leadership and
2 Task Cohesion.

Note. β coefficients and standard errors (in parentheses) presented for each of the paths.

3 ** $p < .01$.

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