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3 Is perceived athlete leadership quality related to team effectiveness? A comparison of three
4 professional sports teams

5 *Journal of Science and Medicine in Sport*, In press.

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Abstract

Objectives. Researchers have argued that leadership is one of the most important determinants of team effectiveness. The present study examined the extent to which the perceived quality of athlete leadership was related to the effectiveness of elite sports teams.

Design. Three professional football teams ($N = 135$) participated in our study during the preparation phase for the Australian 2016 season.

Methods. Players and coaching staff were asked to assess players' leadership quality in four leadership roles (as task, motivational, social, and external leader) via an online survey. The leadership quality in each of these roles was then calculated in a social network analysis by averaging the indegree centralities of the three best leaders in that particular role. Participants also rated their team's performance and its functioning on multiple indicators.

Results. As hypothesized, the team with the highest-quality athlete leadership on each of the four leadership roles excelled in all indicators of team effectiveness. More specifically, athletes in this team had a stronger shared sense of the team's purpose, they were more highly committed to realizing the team's goals, and they had a greater confidence in their team's abilities than athletes in the other teams. Moreover, this team demonstrated a higher task-involving and a lower ego-involving climate, and excelled on all measures of performance.

Conclusions. High-quality athlete leadership is positively related to team effectiveness. Given the importance of high-quality athlete leadership, the study highlights the need for well-designed empirically-based leadership development programs.

Key words: peer leadership; shared leadership; social network analysis; sports performance; football; rugby; leadership roles

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Introduction

65 It has long been argued that effective *leadership* is central to team functioning and
66 high performance in elite sport ¹. Historically, *vertical* leadership (i.e., where the leader is
67 positioned hierarchically above the team) has been foregrounded in both research and
68 practice. In line with this vertical approach, organizational leadership research has focused on
69 the influence of managers on employees and sports leadership research has examined the
70 impact of coaches on athletes.

71 In the last decade, however, a radical shift has occurred away from this traditional
72 emphasis on vertical leadership towards the idea that leadership can, and should, be *shared* ²,
73 ³. This approach asserts that leadership does not only emanate from the formal leader, but also
74 from team members more generally. In line with this alternative view, shared leadership is
75 argued to be a more powerful predictor of team effectiveness than vertical leadership ⁴. In
76 organizational research, a number of studies have corroborated these claims by demonstrating
77 an overall positive relationship between shared leadership and team performance ^{2, 5, 6}.

78 One of the first coaches to pioneer this shared leadership approach in sports teams
79 was Ric Charlesworth. This was something he achieved by abolishing the captaincy role in
80 the Australian women's hockey team and creating a leadership group instead ⁷. Amongst
81 other benefits, he observed that this strategy encouraged different people to make
82 complementary contributions to team functioning. As a result, members of the leadership
83 group had responsibilities for portfolios that covered a range of spheres — from on-field
84 tactics and training to off-field concerns, such as building a closely-knit team. More generally,
85 the creation of a shared leadership structure was a central aspect of a team culture that
86 promoted sharing of responsibility. Supported by his leadership group, Charlesworth steered
87 his teams to multiple successes, including World Cup titles, Commonwealth Games titles,
88 bronze and gold Olympic medals, and four Champions Trophy gold medals.

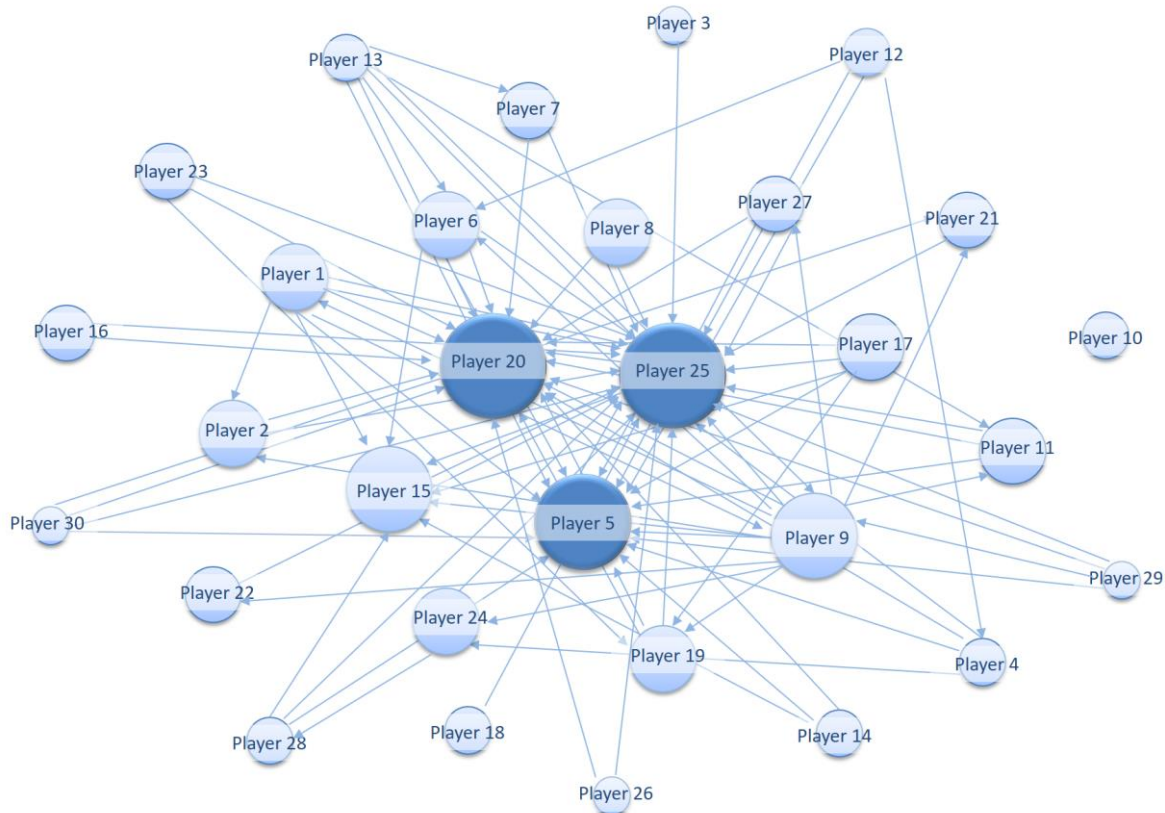
89 In line with such developments, researchers have also become increasingly interested
90 in the contribution of athletes to leadership (for a review on athlete leadership, see ⁸). In this
91 regard, several experimental studies have demonstrated that athlete leaders within the team
92 can impact their team members' confidence in the team, their intrinsic motivation, and their
93 objective performance ^{9, 10}. Furthermore, it has been shown that teams with high-quality
94 athlete leadership are characterized by high levels of team confidence ¹¹ and strong task and
95 social cohesion ^{11, 12}.

96 Given the beneficial effects of athlete leadership for team effectiveness, it seems
97 crucial to capitalize on the leadership potential of athletes. Traditionally, coaches and players
98 have tended to look to the team captain to provide leadership (at least in the first instance), but
99 a shared leadership perspective suggests that this might not always be the best strategy.
100 Consistent with this point, Fransen, Vanbeselaere, De Cuyper, et al. ¹³ found that often
101 informal leaders, rather than the team captain, were perceived to be the best athlete leaders of
102 the team. To ensure effective leadership it therefore seems to be crucial to take all team
103 members' views into account when appointing a leader.

104 Recent research has pointed to the value of using Social Network Analysis (SNA¹⁴).
105 Social network analysis views leadership relationships in terms of (a) nodes (representing the
106 individual athletes within the network) and (b) ties (representing athletes' leadership
107 perceptions; e.g., such that a tie directed from athlete A to athlete B indicates the extent to
108 which athlete A perceives athlete B to be a good leader). An example of such a leadership
109 network is presented in Figure 1. As a result, SNA can represent the distribution of leadership
110 among group members and can also identify the emergence of multiple leaders ¹⁵.
111 Furthermore, this technique allows researchers to map contours in the leadership *quality* of
112 athletes, thereby moving beyond previous studies which tended to make only binary
113 distinctions between designated leaders and non-leaders. This is important because designated

114 leaders do not necessary fulfill their leadership function well or better than other team
 115 members. More generally too, it is the quality with which a leadership role is enacted that is
 116 most critical for a leader's effectiveness. Accordingly, in the present study, the ties between
 117 the players in a leadership network represent perceptions of leadership *quality* (from very
 118 poor to very good). In other words, the strength of a tie in the network from Athlete A to
 119 Athlete B indicates the extent to which Athlete A perceives Athlete B to be a good leader.

120 Figure 1. *Visual representation of the task leadership quality network of Team 1, in which*
 121 *only the strongest ties (i.e., scores of 9 or 10, or in other words, very good task*
 122 *leadership) are shown.*



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124 When it comes to leadership of professional teams, the expectations of players and
 125 coaches are understandably high: they expect the leader to give tactical advice, to motivate
 126 other team members, to provide a good atmosphere off the field, and to represent the team to
 127 external bodies (e.g., club management, sponsors, and media) ¹⁶. Yet because these tasks
 128 require quite different qualities, it is unlikely that one player will excel in all these different
 129 leadership tasks. Moreover, appointing only one leader to perform them might carry the risk

130 that if that leader is absent (e.g., due to injury or suspension), the team will find itself without
131 leadership in these various domains. Accordingly, sharing leadership responsibilities among
132 team members would seem to be a sounder and more sustainable strategy ⁸.

133 In an attempt to address these issues, Fransen, Vanbeselaere, De Cuyper, et al. ¹³
134 distinguished between four leadership roles that players can occupy (i.e., two ‘on-field’ and
135 two ‘off-field’ roles): (1) the task leader, who helps the team to focus on the team goals and
136 who gives his/her teammates tactical advice during the game; (2) the motivational leader, who
137 motivates his/her teammates to perform at their best and who channels teammates’ emotions
138 effectively; (3) the social leader, who builds a good team atmosphere and serves as a
139 confidant for his/her teammates; and (4) the external leader, who represents the team when
140 dealing with external parties. More comprehensive definitions of these roles can be found in
141 Appendix A. Fransen, Vanbeselaere, De Cuyper, et al. ¹³ also observed that a shared
142 leadership structure in which different players are appointed to these four different leadership
143 roles leads (a) to higher levels of team confidence, (b) to higher identification with the team,
144 and (c) to higher team ranking, compared to a single team captain model. Furthermore, shared
145 leadership *within* each leadership role (such that each is performed by a number of individuals
146 rather than just one) has been found to be positively related to both task and social cohesion
147 ¹⁷. Accordingly, it has been suggested that SNA can be used to inform the appointment of
148 high-quality athlete leadership teams into each of the distinct leadership roles ⁸.

149 With this in mind, the present study used SNA to identify the leadership structure in
150 three professional sports teams and sought to identify the relationship between the quality of
151 athlete leadership and the team’s effectiveness. When examining a team’s athlete leadership
152 quality, previous studies have focused on the average leadership quality of all team members
153 ^{18, 19}. However, not all players have the skills required to lead, and more importantly, as
154 Hardy, Eys, and Loughhead ²⁰ observed, when a team has a large number of leaders this can

155 prove to be problematic (e.g., because it leads to confusion and miscommunication). At a
156 methodological level too, a measure of average leadership quality in a team can be distorted
157 by a varying number of team members who exert little or no leadership. Accordingly, in the
158 present study, we did not examine average team leadership, but rather the leadership quality
159 of the leadership team in each of the four distinct roles identified above. In light of the above
160 reasoning, our main hypothesis was that team functioning and performance — which are the
161 most critical indices of leadership effectiveness²¹ — would be enhanced to the extent that
162 teams had high-quality athlete leadership teams across these four domains of leadership
163 activity.

164 **Methods**

165 **Procedure**

166 In the preparation phase of the 2016 season, three top-division Australian football
167 teams, one from the Australian National Rugby League (NRL; playing Rugby League
168 Football) and two from the Australian Football League (AFL; playing Rugby League
169 Football), were contacted to enquire about their willingness to participate in the present
170 research. After providing consent, the players and coaching staff of the three teams were
171 given a questionnaire that was tailored to their team (i.e., listing the names of all the team
172 members whose leadership was to be assessed), and took about 30 minutes to complete.
173 Coaching staff and players who did not respond received a reminder two weeks later and a
174 second reminder after four weeks. Data collection took place over a six-week period between
175 December 2015 and January 2016. As a reward for participating in this study, we provided the
176 coaching staff of the three teams with a feedback report at the end of the study that included
177 the results from the leadership analyses. APA ethical standards were followed in the conduct
178 of the study and full confidentiality was guaranteed. The study was approved by the ethics
179 committee of the academic institution of the first author.

180 **Participants**

181 Players and coaches from three Australian professional sports teams participated in the
182 study. All were male. One team was from the National Rugby League (playing Rugby League
183 Football: Team 1; $N = 35$; 30 players and 5 coaching staff) and two teams were from the
184 Australian Football League (playing Australian Rules Football: Team 2; $N = 50$; 43 players
185 and 7 coaching staff; and Team 3; $N = 59$; 47 players and 12 coaching staff). In total, the full
186 coaching staff of all teams completed the questionnaire, as well as 29 players from Team 1
187 (response rate of 97%), 37 players from Team 2 (response rate of 86%), and 45 players from
188 Team 3 (response rate of 96%). Team members rated the leadership quality of all team
189 members, including non-responders.

190 Players in Team 1 were on average 25.7 years old ($SD = 3.5$) and had been playing for
191 their team for 4.03 years ($SD = 3.24$); players of Team 2 were on average 25.3 years old (SD
192 $= 4.8$) and had been playing for their team for 6.00 years ($SD = 4.37$); and players of Team 3
193 were on average 23.3 years old ($SD = 3.3$) and had been playing for their team for 3.51 years
194 ($SD = 3.30$). The average team tenure of the coaching staff was 5.40 years ($SD = 5.08$) for
195 those in Team 1; 5.00 years ($SD = 3.00$) for those in Team 2; and 2.92 years ($SD = 1.73$) for
196 those in Team 3.

197 **Measures**

198 The questionnaire included measures of leadership quality, team functioning, and
199 performance.

200 **Leadership quality.** With regard to leadership quality, we created four leadership
201 quality networks for each team, one for each leadership role (task, motivational, social, and
202 external). As noted above, previous research has tended to make binary distinctions between
203 leaders and followers²². In such binary networks the leadership perceptions are represented
204 by either a tie (Athlete A perceives Athlete B as a leader) or no tie (Athlete A does not

205 perceive Athlete B as a leader), without providing any information on the quality of that
206 leadership.

207 As an alternative to this, we therefore sought to create networks in which ties can vary
208 in strength. In such leadership networks, the strength of a tie represents the perceived quality
209 of a person's leadership, ranging from very poor to very good leadership. After reading the
210 definitions of each role (as presented in Appendix A), this involved participants rating the
211 leadership quality of each player in each leadership role on an 11-point Likert scale, from 0
212 (*very poor leader*) to 10 (*very good leader*). Our data thus yielded four role-specific
213 leadership quality networks for each team (i.e., a task, motivational, social, and external
214 leadership quality network). Figure 1 presents the task leadership quality network of one of
215 the participating teams (Team 1). Although we used all the scores in our calculations, for the
216 sake of clarity we only present the strongest ties (i.e., scores of 9 or 10 representing very good
217 task leadership) in Figure 1.

218 To identify the team's best leaders in a particular leadership role, we used *indegree*
219 *centrality*, a node-specific measure that refers to the average strength of a node's incoming
220 ties (i.e., the average leadership quality of an athlete, as perceived by his teammates). This
221 measure reflects leaders' importance in the team and their capacity to influence other team
222 members²³. As presented in the task leadership network in Figure 1, the larger the node of a
223 particular athlete and the more central its position, the higher the quality of the individual's
224 leadership as perceived by other team members (i.e., the higher the athlete's *indegree*
225 *centrality*). To account for the possibility that the perceptions of players and coaching staff
226 differ, we assessed the perceptions of players and coaching staff separately (in contrast to
227 previous research which has tended to focus only on athletes' perceptions¹⁹).

228 Furthermore, in contrast to previous research, we did not assess the average leadership
229 quality in the entire team for reasons outlined in the Introduction. Instead, we focused on a

230 limited set of key leaders by investigating the leadership quality of leadership teams.
231 Specifically, to ensure an equal and reliable comparison across the three teams, we chose to
232 compare the leadership quality of the three best leaders in each role. As an example, with
233 respect to the task leadership quality for Team 1 (presented in Figure 1), we used the average
234 leadership quality of Players 25, 20, and 5, who are positioned most centrally (as a result of
235 their high indegree centrality) and thus are perceived to be the best task leaders in their team.

236 **Team functioning.** We included five different indicators of team functioning. To
237 assess participants' sense of shared purpose in their team, we used the three-item scale
238 developed by Carson, Tesluk, and Marrone²⁴ (sample item: "In our team, we discuss our
239 team's main tasks and objectives to ensure that we have a fair understanding"; Cronbach's α
240 = .81). To assess participants' determination to reach team goals, we used the five-item scale
241 developed by Klein, Wesson, Hollenbeck, et al.²⁵ (sample item: "I am strongly committed to
242 pursuing the team's goals"; Cronbach's α = .75). To assess team confidence, we used a short
243 version of the Collective Efficacy Questionnaire for Sports²⁶, which included the highest-
244 loading item on each of the five subscales: Ability, Effort, Persistence, Preparation, and Unity
245 (e.g., "To what extent do you believe that, in the next part of the season, your team has the
246 ability to demonstrate a strong work ethic"; Cronbach's α = .91). To assess task- and ego-
247 involving climate, we used the 20-item Peer Motivational Climate in Youth Sport
248 Questionnaire²⁷ (sample item relating to task-involving climate: "On this team, most athletes
249 help each other to improve"; sample item relating to ego-involving climate: "On this team,
250 most athletes make negative comments that put their teammates down"). Cronbach's alphas
251 for the subscales of task- and ego-involving climate were .92 and .68, respectively. Finally,
252 based on previous work²⁴, we used a four-item scale to measure participants' perceptions of
253 voice in their team (e.g., "Everyone on our team has a chance to participate and provide
254 input"; Cronbach's α = .76). Responses on all items were made on 7-point Likert scales

274 *Table 1.* Leadership quality of the appointed athlete leadership teams in the three teams,
 275 including the associated standard deviations in parentheses.

	Perceived by...	Team 1	Team 2	Team 3
Task leadership quality	Players	8.94 (.42)	8.13 (.16)	<i>8.12 (.40)</i>
	Staff	9.67 (.12)	8.95 (.46)	<i>8.22 (.83)</i>
Motivational leadership quality	Players	8.74 (.39)	8.28 (.17)	<i>7.67 (.22)</i>
	Staff	9.47 (.31)	8.48 (.72)	<i>8.08 (.38)</i>
Social leadership quality	Players	8.24 (.48)	7.78 (.63)	<i>7.10 (.13)</i>
	Staff	9.07 (.70)	<i>7.81 (.46)</i>	<i>7.81 (.38)</i>
External leadership quality	Players	8.69 (.07)	8.08 (.13)	<i>7.72 (.71)</i>
	Staff	9.67 (.12)	<i>8.14 (.29)</i>	<i>8.42 (.67)</i>

276 *Note.* The highest mean values across teams are highlighted in **bold**. The lowest are in *italics*.

277 ¹ The athlete leadership team on a particular role includes the three athletes with the highest
 278 perceived leadership quality (i.e., highest indegree centrality) on that particular role. The
 279 perception of the players reflects the average of the three highest-scoring athlete leaders as
 280 perceived by the players, whereas the perception of the coaching staff reflects the average of the
 281 three highest-scoring leaders in their perception.

282 Next, we examined whether the leadership quality of each of the athlete leadership
 283 teams was associated with team effectiveness. Appendix B presents the correlations between
 284 all the included indicators of team functioning and performance perceptions, as well as their
 285 mean values and standard deviations, with Cronbach's alphas on the diagonal. Table 2
 286 presents the mean values and standard deviations of all indicators of team effectiveness for
 287 the three assessed teams. We used one-way ANOVAs and LSD post-hoc tests to assess the
 288 significance of the differences between the three teams. Findings confirmed our hypothesis in
 289 demonstrating that Team 1 — which was perceived as having the best athlete leadership
 290 quality — excelled on all indicators of team effectiveness and on player-reported
 291 performance, coach-reported performance, and objective performance. Indeed, the only
 292 measure on which there was not a significant difference between the three teams was
 293 perceived provision of voice.

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295 Table 2. Indicators of the team's effectiveness across the three teams, including the associated standard deviations in parentheses.

	Team 1 (Highest athlete leadership quality)	Team 2 (Moderate athlete leadership quality)	Team 3 (Lowest athlete leadership quality)	One-way Anova <i>F</i>	Post hoc test T1 – T3 <i>p</i>	Post hoc test T1 – T2 <i>p</i>	Post hoc test T2 – T3 <i>p</i>
Indicators of team functioning							
Shared purpose	6.12 (.72)	5.66 (.80)	5.57 (.90)	5.00**	0.003	0.02	0.57
Goal commitment	6.69 (.59)	6.30 (.94)	6.35 (.79)	2.74 ^o	0.05	0.03	0.73
Team confidence	6.51 (.51)	6.37 (.63)	5.70 (.89)	16.83***	< 0.001	0.39	< 0.001
Task-involving climate	5.95 (.51)	5.45 (.65)	5.06 (.74)	19.39***	< 0.001	0.001	0.004
Ego-involving climate	3.81 (.83)	4.39 (.74)	4.08 (.58)	6.49**	0.08	< 0.001	0.03
Voice ^a	5.30 (.84)	5.37 (.89)	5.26 (.94)	.18	0.83	0.75	0.55
Perceptions of current performance (2016 season)							
Players' perception of their own performance (0-10)	7.03 (.98)	6.65 (1.75)	6.24 (1.38)	2.74 ¹	0.02	0.28	0.21
Players' perception of the team's performance (0-10)	8.59 (1.12)	7.78 (.76)	5.82 (1.92)	37.62***	< 0.001	0.03	< 0.001
Staff's perception of each player's performance (0-10)	8.01 (1.17)	5.05 (2.37)	6.09 (1.12)	25.82***	< 0.001	< 0.001	0.004
Objective performance 2015 season							
Place in the overall league ranking	Top 3	Mid 3	Bottom 3				
Last game in the finals series	Finals	Semi-finals	Not qualified				

296 * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; ^o $p = 0.07$

297 ^a Further scale reliability analyses revealed that the Cronbach's alpha of this scale (.76) would be further improved up to .82 if one item of the scale was deleted. When using
 298 the improved voice scale, the mean values would be 5.53 ($SD = .84$) for Team HR; 5.49 ($SD = .87$) for Team MR; and 5.47 ($SD = 1.01$) for Team LR. These values do
 299 confirm our hypotheses.

300 Note. With exception of the performance ratings, the mean values are based on the perceptions of both athletes and coaching staff. All scores range between 1 and 7, except
 301 the three performance ratings, which range between 0 and 10. The highest mean values across teams are highlighted in **bold** (with exception of ego-oriented climate for
 302 which the lowest values are highlighted, as this variable is negatively valenced); the lowest values are in *italics*.

Discussion

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The present findings support the hypothesis that professional sporting teams that have the highest-quality athlete leadership outperform other teams on various indicators of team effectiveness. More specifically, in the team with the best leadership group the athletes (a) had a clearer shared sense of the team's purpose, (b) were more highly committed to realizing the team's goals, and (c) had greater confidence in their team's abilities. In addition, this team had (d) a more task-involving climate (i.e., players supported each other to improve) and (e) a less ego-involving climate (i.e., there were fewer conflicts between players). Furthermore, this team excelled on (f) player-reported, (g) coach-reported, and (h) objective performance measures.

These findings corroborate previous research that has highlighted the importance of athlete leaders for team effectiveness (for a review, see ⁸). For example, leadership quality in a team has previously been linked to team members' identification with their team, team cohesion, and team performance (as assessed by competition ranking ^{13, 18}). Experimental studies have corroborated these correlational findings by demonstrating that when an athlete leader is confident (rather than unconfident), this confidence spreads throughout the team so that other team members are not only more confident themselves but also perform better ^{9, 10}.

Yet speaking more particularly to the importance of *shared* leadership, it would appear that establishing a structure in which different leadership teams take responsibility for different leadership roles (task, motivational, social, and external) helps to create an optimal team environment. Thus it was not the old-fashioned model of vertical leadership that delivered positive outcomes, but rather a new model of leadership in which these responsibilities were distributed within the team ^{4, 28}.

In this regard, the present study is the first to assess the leadership structure on four different roles in professional sporting teams and to demonstrate the link between the quality

328 of leadership in these roles and various indicators of team effectiveness. Because the
329 perceptions of all team members were taken into account when deciding on the best leaders
330 on each role, these leaders are very likely to be accepted as leaders by the team and hence the
331 effectiveness of their leadership interventions will be maximized.

332 We should emphasize that, in contrast to previous research, we did not assess the
333 average leadership quality in the entire team both because this measure may be skewed by the
334 presence of players who do not have the skills or the motivation to lead and because research
335 has shown that the presence of too many leaders in a team can be problematic ²⁰. Accordingly,
336 we opted to study leadership teams, by focusing on the three best leaders in each role. As
337 such, our work adopts a hybrid approach, combining the strengths of both shared leadership
338 (e.g., shared responsibility), and vertical leadership (e.g., consistent communication).

339 Despite these strengths, the study is not without limitations. First, the power of our
340 analysis at the team level is limited as a result of the fact that we only studied three teams.
341 Nevertheless, we note that finding elite teams that are willing to participate in such research is
342 extremely challenging. Indeed, for this reason, many previous studies have examined only one
343 team ²².

344 Second, our study is cross-sectional in nature, which prevents us from inferring
345 causality from the results. As a result, we cannot establish whether it is high-quality athlete
346 leadership that drives team effectiveness or the other way around (e.g., in ways suggested by
347 research on the romance of leadership ²⁹). Going forward, this is an issue that could fruitfully
348 be addressed through longitudinal research to examine how changes in leadership quality over
349 time feed into unfolding changes in team effectiveness.

350 A third limitation is that the present study did not control for differences in team size.
351 In particular, Team 1, which was participating in the National Rugby League of Australia, had
352 considerably fewer team members than either Team 2 or Team 3, both of which were

377 the leaders is the strength of the group, and that it is the inter-relationship of these elements
378 that is the key to team performance.

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Practical Implications

- The quality of the athlete leadership teams is related to team effectiveness and performance.
- Establishing a structure of shared leadership, in which different leadership teams take responsibility for different leadership roles, can help coaches create an optimal team environment.
- Because social network analysis takes into account the perceptions of all team members, using this technique to identify the leadership structure in a team can ensure that appointed leaders are accepted as leaders by their team and this in turn will generally enhance the effectiveness of their leadership.
- Because the quality of athlete leaders' leadership is directly related to team effectiveness, this is important to address through structured leadership development programs.

393

Acknowledgments

394 Each of the participating teams financially contributed to the project, thereby covering part of
395 the research costs. In return, they received an elaborate report including the detailed
396 leadership structure within their team on the four roles. The authors confirm that there are no
397 conflicts of interest associated with this publication.

398

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474 Appendix A. *The definition of the four leadership roles, as presented to the participants, based*
 475 *on the research of Fransen, Vanbeselaere et al. [13].*

Leadership role	Definition
Task leader	A task leader is in charge on the field; this person helps his team to focus on the team goals and helps in tactical decision making. Furthermore, the task leader gives his teammates tactical advice during the game and gives them guidance if necessary.
Motivational leader	The motivational leader is the biggest motivator on the field; this person encourages teammates to go to any extreme; this leader also puts fresh heart into players who are discouraged. In short, this leader steers all the emotions on the field in the right direction in order to maximize team performance.
Social leader	The social leader has a leading role off the field; this person promotes good relations within the team and cares about having a good team atmosphere, for example, in the dressing room, on the bus, or during social activity. Furthermore, this leader helps with conflicts between teammates off the field. They are a good listener and are trusted by their teammates.
External leader	The external leader is the link between his team and the people outside the team; this leader is the representative of the team when dealing with the club management. If communication is needed with media or sponsors, this person will take the lead. This leader will also communicate the views of the club management to the team, for example, regarding sponsoring, club events, and contracts.

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478 Appendix B. *Correlation matrix including means and standard deviations of all included*
 479 *indicators of team effectiveness. Cronbach's alphas are presented in italics on the diagonal.*

	<i>M (SD)</i>	1.	2.	3.	4.	5.	6.	7.
1. Shared purpose	5.77 (.82)	<i>(.81)</i>						
2. Goal commitment	6.34 (.85)	.18	<i>(.75)</i>					
3. Team confidence	6.20 (.77)	.18***	.37***	<i>(.91)</i>				
4. Task-involving climate	5.49 (.74)	.47***	.38***	.59***	<i>(.92)</i>			
5. Ego-involving climate	4.19 (.71)	-.03	-.38***	-.06	-.06	<i>(.68)</i>		
6. Voice	5.23 (.90)	.44***	.18	.30**	.49***	-.04	<i>(.76)</i>	
7. Perception of the own performance	6.59 (1.46)	.11	.16	.27**	.23*	-.08	.27**	
8. Perception of the team's performance	7.20 (1.84)	.34***	.21*	.38***	.47***	.16	.12	<i>.37***</i>

480 * $p < .05$; ** $p < .01$; *** $p < .001$.

481 *Note.* Only the scores of the athletes are included in the current analysis. All scores range
 482 between 1 and 7, except the two performance ratings, which range between 0 and 10.

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