Running Head: THE HEALTH BENEFITS OF ATHLETE LEADERSHIP

Making 'us' better: High-quality athlete leadership relates to health and burnout in professional Australian football teams.

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Abstract

Overtraining, exhaustion, and burnout are widely recognized problems amongst elite athletes. The present research addresses this issue by exploring the extent to which high-quality athlete leadership is associated with elite athletes' health and burnout. Participants (120 male athletes from three top-division Australian football teams) were asked to rate the quality of each of their teammates in four different leadership roles (i.e., as task and motivational leaders on the field and as social and external leaders off the field), and also to indicate their identification with their team as well as their self-reported health and burnout. Findings indicated that (a) *being* seen to be a good athlete leader by other members of the team and (b) *having* a good athlete leader on the team were both positively associated with better team member health and lower burnout. This relationship was mediated by athletes' identification with their team, suggesting that leaders enhance athletes' health and reduce athlete burnout by creating and maintaining a sense of shared identity in their team. This, in turn, suggests that coaches can foster an optimal team environment by developing the leadership potential of their athlete leaders – in particular, their skills that foster a sense of shared team identification. This is in the interests not only of team performance but also of team members' health and burnout.

Key words: Shared leadership, Peer leadership, Team identification, Social Identity Approach

Introduction

After 15 years as a professional football player, Arsenal captain and World Cup Winner Per Mertesacker recently revealed his harrowing personal battles with illness and self-doubt during his career [1]. The immense pressure he felt routinely caused nausea, violently choking before matches, and bouts of diarrhea. Plagued by injuries and stressed by the game, Mertesacker made the point that it is time for people to understand the human cost of elite sport, a point that was reinforced for him by the suicide of his friend Robert Enke in 2009.

While elite athletes have a similar risk of experiencing mental disorders (e.g., burnout) as the general population, athletes who are injured, transitioning to retirement, or experiencing performance slumps are at heightened risk [2]. Gouttebarge et al.[3] found that the prevalence of burnout (i.e., a syndrome characterized by emotional and physical exhaustion, reduced sense of accomplishments, and sport devaluation [4]) amongst professional football players ranged from 5% in current players to 16% in former players. Indeed, while it is well established that physical activity can have a positive effect on both physical and mental health [5], intense physical activity performed at the elite athlete level can also compromise mental wellbeing and thereby increase symptoms of burnout [6]. These findings confirm that Mertesacker and Enke are indeed mere illustrations of a much deeper and wide-spread problem.

Despite the relative high prevalence of burnout amongst elite athletes, to date, research in highly pressured sporting contexts has mainly focused on improving team functioning and effectiveness, rather than on the determinants of athletes' health (i.e., defined as a state of complete physical, mental, and social well-being, and not merely the absense of disease or infirmity[1]). Accordingly, several scholars in the field have noted the pressing need for studies

[1] When we talk about the health of athletes in this manuscript, we are adopting this definition of health, proposed by the World Health Organization. We will measure this construct by asking participants to evaluate these three aspects of health, namely their physical health, their state of mind, and their energy levels.

identifying the factors that contribute to athletes' well-being and mental health (e.g., by reducing or buffering against burnout) [2].

Responding to this call, the present study seeks to investigate the role that athlete leaders (i.e., athletes within the team who occupy a leadership role) play in improving team members' health, while buffering against burnout in elite sport settings. Although there is evidence that athlete leaders play a vital role in team functioning and performance [7], to date, no research has investigated the potential importance of these athlete leaders in improving the health of fellow team members while buffering them from burnout. In the present article, our attempt to provide greater insight into this issue has two key foci. First, we investigate the relationship between athletes' leadership abilities and their *own* health and burnout (i.e., the health benefits of *being* a good athlete leader). Second, we examine the relationship between the perceived quality of athlete leadership in a team and the health and burnout of team members (i.e., the health benefits of *having* a good athlete leader). In addition, we explore the mechanism (i.e., social identity) that underpins these relationships.

The Health Benefits of *Being* a Good Athlete Leader

As Dixon and Turner[8] revealed in interviews with coaches, positions of power and authority come not only with higher salaries, but typically also with numerous stressors, such as time pressures, conflicting tasks (e.g., administrative workload vs. on-field coaching), relationship management (e.g., with players or parents), and uncertainty (e.g., unexpected player non-attendance). At the same time, there is evidence that occupying leadership positions, and the heightened sense of control that comes along with it, might also have significant stress-buffering effects. For example, evidence suggests that military officers and government officials who occupy leadership positions report a greater sense of power and control in their relationships and, as a consequence, are less anxious and have lower levels of the stress hormone cortisol than their non-leader counterparts [9].

Although the link between athletes' leadership and their health has not been investigated quantitatively, there is some qualitative evidence that speaks to the positive benefits that being a (good) leader has for athletes' health. For example, a qualitative study of professional rugby players suggested that sharing leadership responsibilities can mitigate against burnout [10]. One reason for this might be that the opportunity to exert control [9; 11] and the sense of self-efficacy and mastery that flows from successful leadership [12] both have positive implications for a person's health. On this basis, we argue that being in a leadership position is most likely to deliver positive health benefits when an athlete in this position provides (and is recognized by followers as providing) *high-quality* leadership. More formally, we hypothesize that:

H1: Athletes' own leadership quality (as perceived by team members) is positively correlated with their health (H1a) and negatively correlated with their level of burnout (H1b).

The Health Benefits of *Having* a Good Athlete Leader

Although there is limited evidence that being an effective leader is good for one's health, there is ample evidence (albeit mainly in non-sporting contexts) that leaders can have an impact on the health and well-being of fellow team members. Indeed, meta-analyses synthesizing nearly 30 years of empirical research indicate that leaders have the potential to enable team members to flourish but also to inflict terrible misery upon them [13]. In organizational settings, supportive leader behavior has been linked to higher levels of employee intrinsic motivation, satisfaction, and better health and well-being [14]. Conversely, leaders have also the capacity to induce higher levels of stress [15], while reducing well-being which, in turn, contributes to increased absenteeism, sick leave, and early retirement [16].

In sport settings too, there is some evidence that leaders (and coaches in particular) can not only have an important positive impact on the health, but can also become a negative

source of stress for the athletes they lead with the capacity to induce those athletes' burnout [10]. The link between athlete leadership quality and team members' health has, however, not yet been investigated. Nevertheless, on the basis of the theorizing and evidence outlined above, we hypothesize that:

H2: The perceived quality of the athlete leader in a team will be positively correlated with team members' health (H2a) and negatively correlated with their burnout (H2b).

Team Identification Underpinning the Link between Athlete Leadership and Health

The third aim of this study is to provide more insight in the mechanisms underpinning the above relationships from a social identity perspective. *Social identity theory* [17] asserts that people can define themselves both in terms of their personal identity (i.e., as unique individuals) and in terms of a social identity (i.e., as group members who share goals, values, and interests). This suggests that how members of a team think and behave is shaped not only by their capacity to see themselves as individuals (i.e., as 'I' and 'me'), but also — and often more importantly — by their sense of themselves as group members (as 'we' and 'us'). We start with underpinning our hypotheses that both 'being a good leader' and 'having a good leader' will typically be related to one's identification with the team.

'Being a good leader' increasing one's team identification. To underpin this link, we rely on the group engagement model of Tyler and Blader [18], which originated from organizational psychology. This model proposes that individuals' evaluation of their own status within the organization (i.e., perceived internal respect) leads to stronger identification with their organization. Along the same lines, we hypothesize that when athletes are perceived as being good leaders by their teammates, they will also be more respected by their teammates. The increased perceptions of acknowledgements and recognition, will in turn cause these athletes to identify more strongly with their team. To date, however, we know of no published evidence that tested this theoretical assertion and that speaks to the importance

of high-quality (identity) leadership for identification in sports contexts. Nevertheless, a pilot study on archival datasets including 267 athletes in soccer, volleyball, handball, and basketball[19] provides initial support for this hypothesis. Specifically, athletes who were seen by their fellow teammates to be high-quality leaders identified more strongly with their team than other team members. This finding held not only for perceptions of leadership in general (r = .17; p < .01), but also for their leadership quality in four roles on and off the field (r's between .25 and .35; all p < .001).

'Having a good leader' increasing team members' team identification. The Social Identity Approach to Leadership [20] asserts that leaders will be more able to exert more influence over team members (i.e., making them want to contribute to the achievement of shared goals) to the extent that they engage in identity leadership [21; 22]. In other words, effective leaders succeed in making people think, feel, and behave as members of the same team (i.e., in terms of their social identity as 'us, members of Team X'), rather than as separate individuals (i.e., in terms of a personal identity as 'me'). This is a point that has been widely supported in organizational research [20]. In sports contexts too, evidence supports the claim that good athlete leaders are indeed capable of building and strengthening a collective sense of 'we' and 'us' in their teams [23-25]. Not least, this is because team members are more likely (and only able) to identify with a team if leaders have created a sense that there is a meaningful team (an 'us') to identify with.

The health benefits of team identification. There is good reason for expecting that higher levels of team identification (caused by 'being' or 'having' a good leader in the team) will have positive implications for health, while buffering against burnout. Indeed, the Social Identity Approach argues that when team members perceive themselves and others in terms of a shared group membership (i.e., in terms of their social identity as "us members of this team"), this makes them more open to influence from ingroup members, and more likely to

trust and cooperate with ingroup (rather than outgroup) members [26]. As a result, the feeling of "we" and "us" provides the platform for a range of other psychological resources [27]. In particular, to the extent that they define themselves in terms of shared social identity, team members should (a) be more willing to support each other when needed, (b) have an increased sense of control as they can now tackle challenges together as a team, and (c) have an increased sense of meaning and purpose as their own efforts will now be aligned with their team members and hence be more validated and valorized by those team members. Again, these theoretical assumptions have been broadly evidenced [20; 28-30]. Furthermore, meta-analytic reviews in the organizational contexts indicate that a shared sense of 'us' has a positive impact on members' feelings of social support, well-being, and resilience, while at the same time buffering against experiences of stress and burnout [26].

Team identification as the missing link between leadership and health.

Importantly, organizational research also provides evidence that social identification not only matters for health, but may be the 'missing link' *between* leadership and health [27]. Support for this claim emerged from a field study of employees from the US which found that when leaders acted as identity entrepreneurs (i.e., promoting employees' understanding of shared team identity), group members were more engaged at work and reported less burnout, which in turn led to improved group performance [31]. In addition, evidence from a longitudinal study of 140 industrial workers in China showed that leaders who had built a sense of shared social identity in the workplace had a positive impact on employees' health (when controlling for employees' initial levels of health Steffens et al.[32]).

Given the link between athlete leadership and team identification in sport [23] and the observed impact of social identity on health and burnout in other contexts [26], we propose that by creating a shared team identity, athlete leaders have the potential to enhance team

members' health, while buffering them from a sense of burnout. Specifically, we hypothesize that:

H3: Team identification will mediate the positive relationship between athletes' own leadership quality and their (a) health and (b) burnout.

H4: Team identification will mediate the positive relationship between athlete leaders' perceived leadership quality and team members' (a) health and (b) burnout.

Methods

Procedure

Being a major part of the Australian culture, football attracts the largest attendance and television audience of any Australian sport [33]. Moreover, the high stakes here create a highly pressurized environment, suited to the above research questions. Accordingly, after the study was approved by the ethics committee of the academic institution of the first author, three professional top-division male Australian football teams (i.e., one team in the National Rugby League and two teams in the Australian Football League) were approached to participate in the present research in the preparation phase of the 2016 season.

After the teams provided their consent, the first author set up the online questionnaire and provided the survey link to the sport psychologist working with the team. Next, the sport psychologist asked the players to complete the survey, which took about 30 minutes. Athletes who did not respond received a reminder two weeks later and a second reminder after four weeks. APA ethical standards were followed in the conduct of the study and full confidentiality was guaranteed. Data from this sample have been used in one other article [34], but this article examined a different research question (i.e., the link between leadership quality and team effectiveness), thereby focusing on different variables of interest.

Participants

The total number of athletes in the three teams was 120, of which 111 athletes completed the survey, representing a response rate of 92.5%. However, team members rated the leadership quality of all team members, and thus also the leadership quality of the non-responders (i.e., the athletes who did not fill out the questionnaire). As a result, the total sample size for our study was 120 athletes (30 athletes from Team 1; 43 athletes from Team 2; 47 athletes from Team 3). It is noteworthy that all players who were recruited are paid professionals on contracts. Most of the players who participated have played first division, with the remaining players categorized as emerging first division players, who play in the second division.

Athletes in Team 1 were on average 25.7 years old (*SD* = 3.5) and had been playing for their team for 4.03 years (*SD* = 3.24); athletes in Team 2 were on average 25.3 years old (*SD* = 4.8) and had been playing for their team for 6.00 years (*SD* = 4.37); and athletes in Team 3 were on average 23.3 years old (*SD* = 3.3) and had been playing for their team for 3.51 years (*SD* = 3.30).

Measures

Leadership quality. After reading the definitions of each role, participants rated each team member (apart from themselves) with respect to their leadership quality in each leadership role (i.e., task, motivational, social, and external leadership)[35]. The names of all athletes in the team were listed in the questionnaire. In contrast to previous research, which used a categorical binary rating scale (i.e., 'leader' or 'not a leader'), participants provided leadership ratings on 11-point Likert scales, ranging from 0 (*very poor leader*) to 10 (*very good leader*). Based on these data, four leadership networks were created for each team (i.e., one for each leadership role). For 'being a good leader', we used athletes' *indegree centrality*, which is the average strength of the incoming ties in the leadership network or, in other

words, their quality of leadership as perceived by others. This measure reflects athletes' importance in the team and their capacity to influence other team members. For 'having a good leader', we should note that in each of the three teams the athlete with the highest perceived leadership quality (i.e., the best leader as perceived by his teammates) was the team captain. Therefore, we used athletes' perceptions of the team captain's leadership quality on each of the four leadership roles.

Health. Participants' health was assessed using the measure suggested by Khan et al.[36], which is comprised of three items taken from the core module of the Centers for Disease Control and Prevention Health Related Quality of Life Measure (CDC HRQOL-14; 2000). All three items use the stem 'Since the start of the season, how would you describe your….' and ask participants to evaluate three aspects of their health, including their physical health, state of mind, and energy levels on 7-point Likert scales from 1 (*very poor*) and 7 (*very good*). This measure had acceptable internal consistency ($\alpha = .72$).

Burnout. To assess participants' burnout, we used the 9-item measure suggested by Jetten et al.[37]. The measure includes three subscales that correspond to the three core components of burnout: exhaustion, lack of accomplishment, and callousness. Responses were made on 7-point Likert scales, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Previous studies indicate that collapsing across the subscales provides a coherent single measure of burnout. In the present study, the three subscales also resulted in one internally consistent composite score for burnout ($\alpha = .78$).

Team identification. To assess participants' identification with the team, we used the 4-item measure originally suggested by Doosje et al.[38], and then further adapted by Cruwys et al.[29]. An example item from this scale is "Being a member of this team is an important part of how I see myself." Responses were made on 7-point Likert scales, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) and were aggregated to create a composite score ($\alpha = .75$).

Data Analysis

To examine the mediating role of team identification in the relationship between on the one hand the perceived leadership quality of the athletes themselves (H3) or the athlete leader (H4) and on the other hand health and burnout, we performed Structural Equation Modelling (SEM) in STATA, using the maximum likelihood estimation method. SEM was chosen because — especially when examining mediation effects and inclusion of a latent variable — this method provides information about the degree of fit of the entire model. The following fit indices were used to evaluate the model fit: the normed chi-square statistic ($\chi 2/df$), the Comparative Fit index (CFI), the Tucker-Lewis index (TLI) and the standardized root mean square residual (SRMR). While a non-significant chi-square (χ^2) implies a good fit of the data to the hypothesized model, the significance of this statistic increases with sample size. Accordingly, we used the normed chi-square statistic (χ^2/df), where a good fit is reflected by a value below 3 (Kline, 2005). Furthermore, a good fit of the model to the data is characterized by CFI and TLI values larger than .90 and an SRMR lower than .08 [39].

Results

Table 1 presents the mean values and standard deviations of all variables, as well as their correlations with one another. In a first stage of our analysis we examined the health benefits of being a good leader by determining the extent to which leaders who were recognized by their team members as providing high-quality leadership felt healthier and less burnt out than other team members (H1). Table 1 presents the correlations between athletes' leadership quality on the four leadership roles (as perceived by their teammates) and their reported health and burnout. In line with H1, findings indicate that athletes who were perceived to be good leaders did indeed feel healthier (H1a) and reported lower levels of burnout (H1b) than other athletes. Moreover, the observed pattern was consistent across the four leadership roles, with correlations between the four leadership roles and health ranging

between $r = .20$ and $r = .27$ (all p's $< .05$), and correlations between the four leadership roles and burnout ranging between $r = -.28$ and $r = -.30$ (all p's $< .01$).

Furthermore, providing insight into the underlying mechanism here, there were positive correlations between athletes' leadership quality and their identification with the team. In line with social identity theorizing [40], this team identification was in turn positively related to leaders' health, while also being negatively related to leaders' burnout. To examine the mediating role of team identification, we performed Structural Equation Modelling (SEM) using STATA. Here the perceived leadership quality of an athlete is a latent variable inferred from that athlete's task, motivational, social, and external leadership quality. The final model, including the standardized variables, is shown in Figure 1 (χ^2/df = 2.00; *CFI* = .98; *TLI* = .97; *SRMR* = .07).

In line with H3, these findings show that the model is in line with our prediction that team identification mediates the relationship between athletes' leadership quality and their (a) health and (b) burnout, as indicated by a significant indirect effect (*IE*) of athlete leadership quality on both health (*IE* = .13; *SE* (standard error) = .05; *p* = .01; *CI* (95% confidence interval) = [.03 ─ .24]) and burnout (*IE* = -.12; *SE* = .05; *p* = .02; *CI* = [-.22 ─ -.02]). These patterns are consistent with the claim that being seen as a good leader is associated with improved health and reduced burnout among athletes because it goes hand in hand with stronger team identification.

In a second stage of our analysis we examined the health benefits of having a good leader on the team. Consistent with H2, it can be seen from Table 1 that the perceived quality of the leader in the team as task, motivational, and social leader tended to be positively correlated with team members' health (H2a; all *r*'s = .17) and negatively correlated with their burnout (H2b; all *r*'s between .16 and .20). However, only one of these relationships was significant, namely the correlation between leaders' motivational qualities and team members' burnout ($r = -.20$; $p <$

.05). For external leadership, no link was observed between the quality of the leader and team members' health and burnout, thereby providing no support for H2 in this case. Despite these largely insignificant results, Structural Equation Modelling (SEM) of the data provided overall support for our hypothesized meditational model, which is presented in Figure 2 (χ^2/df = .75; *CFI* = 1.00; *TLI* = 1.02; *SRMR* = .04).

More specifically, in line with H4, the model supported predictions that team identification would mediate the relationship between athlete leaders' leadership quality and team members' (a) health and (b) burnout as shown by a significant indirect effect of athlete leaders' leadership quality via team members' team identification on both team members' health (*IE* = .22; *SE* = .07; *p* = .002; *CI* = [.08 ─ .36]) and burnout (*IE* = -.19; *SE* = .06; *p* = .003; *CI* = [-.31 ─ -.06]). In other words, these patterns are consistent with the suggestion that having a good team leader is predictive of team members' health, while reducing their burnout because that leader increases members' identification with the team.

Discussion

The present study is, to our knowledge, the first to report quantitative evidence of a relationship between athletes' leadership and both their own and team members' health in a sporting context. In line with emergent work on the social identity approach to sport [23; 41], our findings also indicate that leaders' capacity to build a sense of shared social identification ─ a sense of 'us' ─ within their team is an important mechanism that accounts for their capacity to have an impact on their own and others' health.

First, with respect to the health benefits of *being a good athlete leader*, our findings are consistent with previous research demonstrating that leaders have a greater sense of control than their non-leader counterparts, a psychological factor that is known to have stress-buffering effects [9]. Furthermore, our findings provide quantitative corroboration of earlier

interview-based findings [10], which suggested that occupying a leadership role has the capacity to promote health and prevent burnout among professional athletes.

Second, with respect to the health benefits of *having a good athlete leader*, the observed correlations revealed an (albeit mostly non-significant) tendency for there to be (a) a positive relationship between the athlete leader's task, motivational, and social leadership quality and team members' health and (b) a negative relationship between these aspects of leadership quality and team members' burnout. This positive tendency reveals that, besides unlocking the team's performance potential [23; 24], athlete leaders are also key agents in preserving athletes' health, while buffering against feelings of burnout. The lack of significance might be a result of the study's relatively small sample size, as the fact that only 120 athletes from three teams took part limits the variability in ratings of athlete leaders' leadership quality. Alternatively, this finding may reflect the fact that an athlete leader's leadership quality does not have a direct impact on team members' health but rather an indirect impact via other variables.

To elaborate on the foregoing analyses, we also sought to explore the possibility that shared social identification is implicated in the link between leadership and health in team sports (H3 and H4). Consistent with these hypotheses, team identification was found to mediate the relationship between both an athlete's leadership quality and their own health and burnout (H3) and a leader's leadership quality and the health and burnout of their fellow team members (H4). Corroborating previous evidence in organizational settings [27], these findings suggest that in sports contexts too, team identification provides the missing link between leadership and health

Strengths, Limitations, and Avenues for Future Research

An important strength of the present study is that it is the first to explore the relationship between athlete leadership quality and health and burnout. By gaining access to

elite football teams for our data collection, we directly addressed the health issues that are particularly apparent in this highly-pressurized environment [1]. Furthermore, we not only assessed athletes' on-field leadership quality (as task and motivational leaders), but also took into account their off-field leadership quality (as social and external leader).

The study's primary limitation is its one-shot design, preventing causal conclusions to be drawn. In addition, although a recent meta-analysis has revealed that the systematic associations between leadership and mental health outcomes generally remain constant over time [13], it is possible that the prevalence of burnout is much lower at the beginning of the season (and specifically in the preparation phase in which the current study took place), than during or at the end of the season. Athlete leaders are also likely to be under more pressure and stress during the season than in the preparation phase, which could affect the quality of their leadership. Further research is needed to provide more insight into these longitudinal changes over the course of a season.

Second, the cross-sectional design limits our ability to infer causality from the results. For example, DeRue et al.[42] suggested that the relationship between perceived leadership quality and team identification could be reversed such that members who identify more strongly with their team tend to make a greater leadership contribution over time. This is an interesting possibility that future experimental and/or longitudinal research needs to explore. That said, additional analyses on the current data revealed no acceptable fit with the reversed model (identification → leadership quality → health and burnout), either for athletes' own leadership or for the athlete leader's leadership quality.

A third limitation relates to the study's relatively small sample size (i.e., 120 athletes). Although it should be noted that previous studies at this highest competitive level typically only take the form of case studies (as this elite sports population is generally hard to access), future research should nevertheless aim to examine the focal relationships we have

studied in larger samples. Furthermore, future research could test the generalizability of our findings by examining the relationship between athlete leadership and health in other sporting contexts (e.g., in other sports, in female teams, at different competitive levels). A final avenue for future research is to complement our self-report data on health with objective health measures, such as cardiovascular stress reactivity measures [15].

Practical Implications

In light of increasing concern about athletes' well-being, the present study offers some important insights into ways to foster athletes' health, while also buffering them against burnout. Given that our findings point to the importance of high-quality athlete leadership, coaches might be well advised to strengthen the quality of the leadership in their team. Given that informal leaders, rather than the captain, are often perceived as the best leaders in each of the four roles (i.e., task, motivational, social, and external leadership) [35; 43], there would seem to be value in mapping the complete leadership structure in the team with a view to identifying and appointing the best athlete leaders in each role (e.g., by using social network analysis [19]). Having done this, coaches can invest time and energy to further develop the leadership potential of the identified leaders. In particular, given that our findings point to the importance of team identification as an underlying mechanism of leaders' impact — in line with the new psychology of leadership [20] — a key goal here would likely be to improve leaders' capacity to engage in identity leadership that serves to represent, advance, create, and embed a sense of shared social identity among team members (e.g., as assessed by Steffens et al.[21]).

Conclusion

Although billions of euros, dollars, and pounds are spent each year to produce successful performance outcomes in the form of sporting victory, far less is spent on the health of the athletes who deliver these sought-after outcomes. With increasing levels of

burnout in professional elite athletes [1], this discrepancy is becoming increasingly problematic. Moreover, given the importance of athletes' health not only for their current performance but also for their future careers and lives, it is essential to invest in research that understands the bases of, and helps to improve athletes' health, while reducing their feelings of burnout.

In this regard, the key contribution of the present research is to highlight the important role that athlete leadership plays in fostering team members' health while also buffering them against burnout. Yet as well as demonstrating that leadership and health are linked, the study sheds light on the possible mechanisms that underpin this relationship. In particular, it suggests that it is by bolstering a sense of shared social identification (a sense of 'us') that leaders are able not only to feel healthier themselves, but also to enhance the health and reduce the burnout of their fellow team members. Furthermore, to the extent that this is a recipe not only for health but also for team success [20; 23; 34], it would appear that this is a particularly potent brew. For when athletes provide leadership to each other, their team is not forced to choose between doing well and being well, but can reasonably aspire to both.

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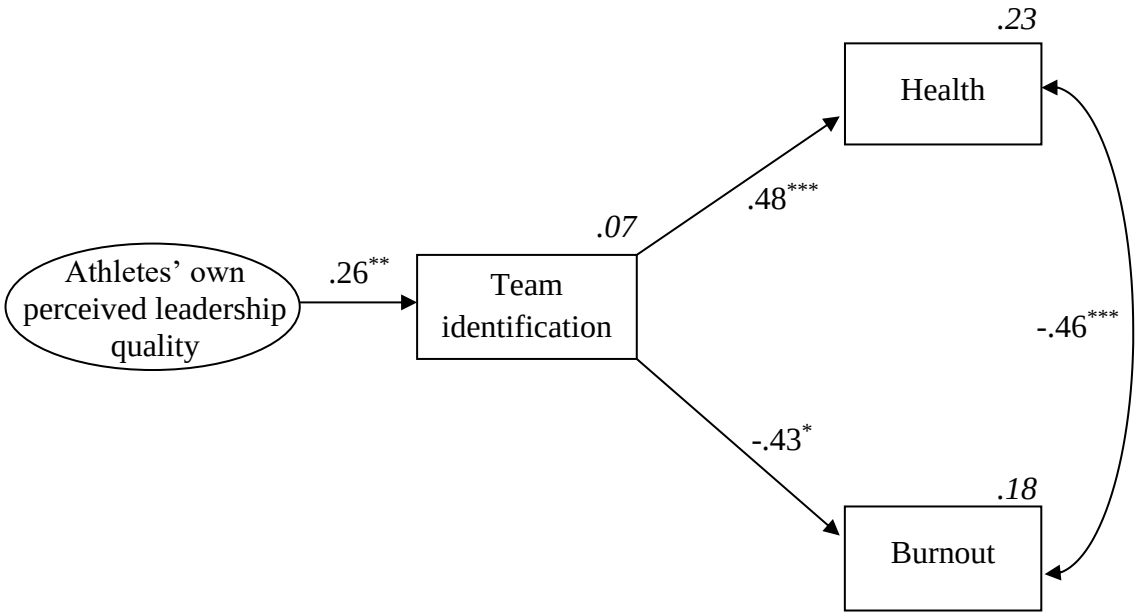

Figure 1. Structural model of athletes' own leadership quality and their own health and well-being, with team identification as mediator. Standardized regression coefficients are included, as well as the proportions of explained variance (in italics).

Note: $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$. The athlete's perceived leadership quality is a latent variable inferred from the athlete's task, motivational, social, and external leadership quality, as perceived by his team members.

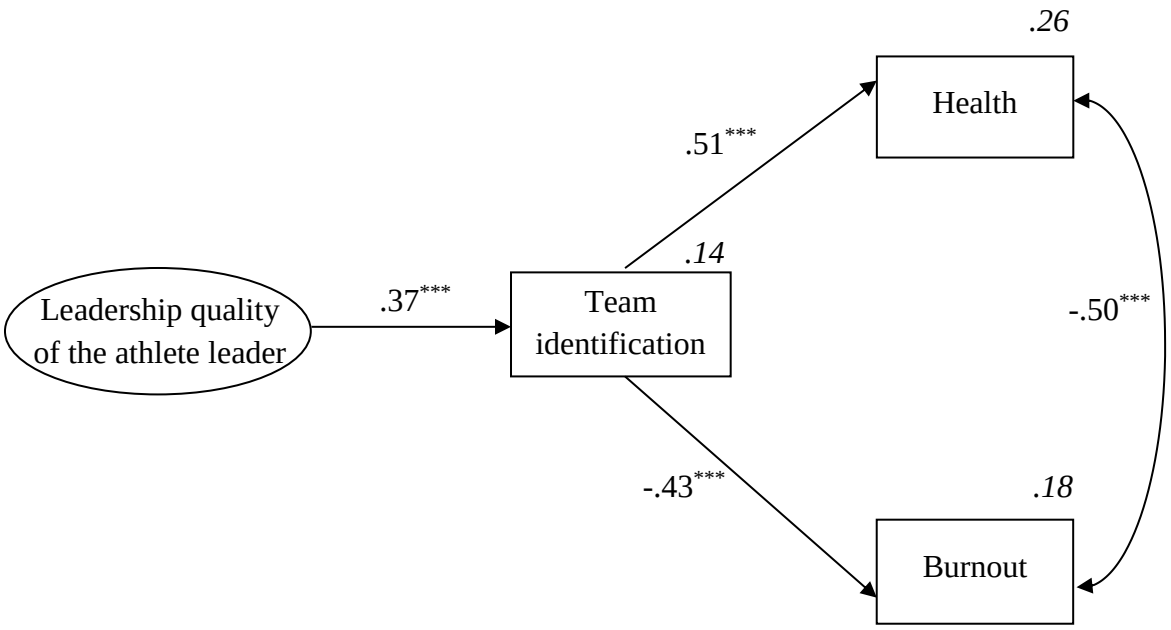

Figure 2. Structural model of the perceived leadership quality of the athlete leader and team members' health and well-being, with team identification as mediator. Standardized regression coefficients are included, as well as the proportions of explained variance (in italics).

Note: $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

Table 1. *Correlation matrix including means and standard deviations of all assessed variables.*

	M (SD)	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Athletes' task leadership quality	5.16 (1.69)										
2. Athletes' motivational leadership quality	5.20 (1.58)	.98***									
3. Athletes' social leadership quality	5.48 (1.33)	.85***	.86***								
4. Athletes' external leadership quality	5.02 (1.46)	.95***	.94***	.83***							
5. Athlete leader's task leadership quality	8.56 (1.19)	.11	.10	.16	.16						
6. Athlete leader's motivational leadership quality	8.18 (1.23)	.15	.16	.20*	.16	.67***					
7. Athlete leader's social leadership quality	7.11 (1.73)	.15	.15	.10	.20*	.57***	.50***				
8. Athlete leader's external leadership quality	8.28 (1.56)	.20*	.20*	.18	.21*	.48***	.42***	.49***			
9. Team identification	6.24 (.64)	.25**	.26**	.24*	.32***	.33***	.25**	.29**	.23*		
10. Health	5.32 (1.07)	.23*	.27**	.20*	.22*	.17	.17	.17	.00	.48***	
11. Burnout	2.69 (.81)	-.30**	-.30**	-.28**	-.29**	-.16	-.20*	-.18	-.03	-.43***	-.57***

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

Note. Athletes' leadership quality (1 – 4) constitutes the average of the ratings by all team members (with exceptions of the athlete himself) (i.e., the indegree centrality in the leadership network).

Athlete leaders' leadership quality (5 – 8) refers to an athlete's perception of the leadership quality of their team captain (who was perceived as best athlete leader in all three teams)