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# Identity leadership in sport predicts healthy adolescent functioning across 11 countries

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**Abstract**

Adolescence is marked by identity disruption, which can challenge young people's mental and social health. Team sport provides a context in which adolescents navigate these challenges, yet sport environments can involve bullying and social exclusion. The quality of these environments is therefore likely to depend on how leaders shape them – particularly identity leaders, who represent, advance, create, and embed a shared sense of identity among those they lead. Using data from 3,540 athletes ($N$=395 teams) across 11 countries, this study examined whether coaches' and peer leaders' identity leadership supports adolescents' healthy functioning (well-being and team commitment) by strengthening team identification. The results showed that identity leadership predicted stronger team identification, which in turn predicted higher well-being and greater team commitment. This effect was consistent across countries, genders (boys and girls), and age groups (12–17 years). Study findings suggest that identity leadership in sport may support healthy adolescent development.

**Keywords** Social influence · Social identity · Cross-cultural · Wellbeing · Adolescent · Youth

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## Introduction

Adolescence is a developmental period that has long been recognised as involving challenges of identity[1]. These challenges manifest in two interrelated domains: increased vulnerability to mental health difficulties (e.g., higher rates of depression) and failures to build healthy social relationships (e.g., social exclusion)[2,3]. Team sport is often promoted as a context that can both help adolescents navigate these challenges and foster the positive development that buffers against them. Indeed, adolescents who participate in sport report higher self-esteem and well-being, better social interactions, and fewer depressive symptoms, benefits that appear to extend beyond those attributable to physical activity alone[4]. However, sport is not inherently beneficial for all adolescents and may, in some cases, exacerbate the difficulties it is assumed to alleviate[5]. Whether sport provides a nurturing or harmful context is likely to depend on adolescents' experiences within their teams[6]. One factor that may shape these experiences is the quality of leadership provided by coaches and peers[6–8].

In this regard, the *social identity approach to leadership* offers a useful framework for understanding how leaders can shape the social context of sport teams to support healthy adolescent functioning[9]. Central to this approach is the concept of *identity leadership*, which holds that leaders are effective to the extent that they represent, advance, create, and embed a shared sense of 'we' and 'us' within a group, in this case the sport team[9,10]. By cultivating this shared identity, identity leadership can strengthen adolescents' identification with their team and, in doing so, shape how they define themselves and experience their membership of the group[11]. Why this matters for health is explained by the *social identity approach to health*[12,13]. According to this approach, identifying with a group provides access to psychological resources such as social support, personal control, self-efficacy, and purpose[14–16], which help individuals cope with challenges and sustain and enhance their health. Integrating these two perspectives, we argue that identity leadership supports adolescent health by fostering team identification, thereby affording access to the psychological resources that group membership provides[12,16].

Against this background, the present study examines two aspects of healthy adolescent functioning: well-being and team commitment. Our focus on well-being reflects contemporary conceptualisations of mental health as encompassing individuals' capacity to realise their potential, cope with everyday stresses, function productively, and contribute to their community[17]. From this perspective, mental health entails not only the absence of psychological difficulties but also the presence of positive mental health, a state in which individuals feel good, are satisfied with their lives, function well, and regard themselves positively[18]. It is this positive dimension that we examine in our study, operationalised as well-being, a term often used interchangeably with positive mental health[19]. This focus is particularly pertinent in adolescence, given that well-being may equip young people to navigate the developmental challenges of this period and buffer them against the psychological difficulties to which they are especially vulnerable[2,20].

Alongside well-being, we examine commitment to one's team, defined as the desire and resolve to continue participating in the team[21]. This provides a complementary indicator of healthy adolescent functioning because making firm commitments to valued identities is widely regarded as a marker of psychological adjustment and has been associated with lower levels of anxiety[21,22].

Speaking first to the benefits of identity leadership for mental health, evidence from adult sport contexts indicates that identity leadership, whether provided by coaches or peer leaders (i.e., athletes within the team who hold leadership influence, such as team captains), is associated via team identification with higher well-being and lower burnout[16,23,24]. These associations have been observed across a range of national settings, including in Australia, Belgium, India, Iran, Poland, Spain, Japan, and the United Kingdom, and have been shown to hold even after accounting for age and gender. Moreover, studies that train team leaders (i.e., coaches and peer leaders) to develop identity leadership show that athletes in the corresponding intervention groups report greater post-intervention well-being and lower burnout than those in wait-list control groups[25,26].

With respect to our second marker of healthy functioning - commitment to one's team - no research, to our knowledge, has directly examined its relationship with identity leadership within or beyond sport. However,

research consistently shows that the stronger social identification (that identity leadership helps to foster) is associated with greater commitment across a range of contexts (e.g., organisational, educational, and sport settings)[27–29]. In youth sport specifically, adolescents who identify more strongly with their team report higher team commitment[29]. Consistent with these patterns, emerging research in adolescent sport suggests that identity leadership enacted by coaches and team captains is associated with stronger team identification, more moral behaviour, and/or higher collective efficacy (i.e., confidence in one's team's abilities)[11,30].

These various findings provide initial support for the relevance of identity leadership during adolescence. Yet despite these advances, important gaps remain in our understanding of identity leadership in adolescent sport. In particular, no research has directly examined whether identity leadership enacted by coaches and peer leaders (i.e., team captains) is associated with adolescents' well-being or commitment to their team, nor whether these associations operate through team identification. Moreover, existing evidence on identity leadership in adolescent sport is limited in scope, having been conducted only in two WEIRD (Westernised, Educated, Industrialised, Rich, and Democratic) countries, namely, Canada and the United Kingdom[11,30]. Given the well-documented overreliance on WEIRD samples in psychology, including in developmental and sport psychology, greater inclusion of non-WEIRD samples is needed to ensure that psychological knowledge reflects the experiences of young people across diverse global contexts[31–33].

Beyond these issues, prior research has not examined whether the relevance of identity leadership varies across key demographic dimensions within adolescence. In particular, it remains unclear whether identity leadership has consistent associations with outcomes in both girls' and boys' sport, despite documented gender differences in adolescents' experiences of team sport. For example, girls, on average, report lower levels of mental health[34]. Moreover, existing work has not examined whether associations involving identity leadership are consistent across different stages of adolescence, commonly distinguished as early, middle, and late adolescence and corresponding here to ages 12–13, 14–15, and 16–17 years[35]. This is a notable omission, given that adolescence is characterised by substantial developmental change, particularly in identity formation[1].

Addressing these gaps, the general aim of the present study was to examine the relationship between identity leadership and healthy functioning in adolescent team sport. Specifically, the first objective was to examine whether coaches' and team captains' identity leadership was associated with adolescents' well-being and team commitment through team identification. The second objective was to examine whether these associations were evident across 11 national contexts (including both WEIRD and non-WEIRD countries), genders (boys and girls), and stages of adolescence (12–13, 14–15, and 16–17 years). Drawing on the evidence reviewed above, we formulated two hypotheses (one for each objective), represented schematically in Fig. 1.

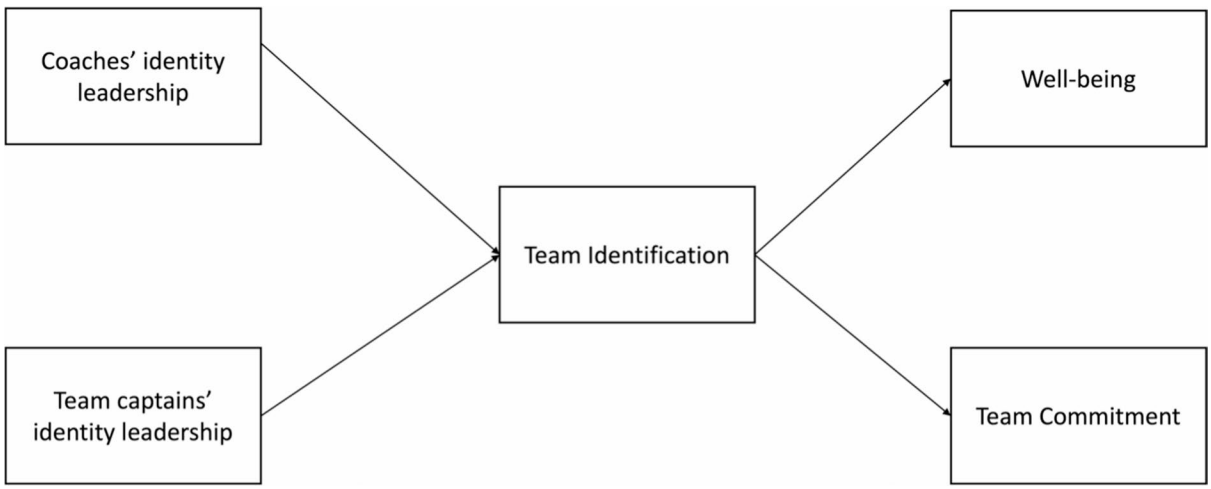



**Fig. 1** Hypothesised model.

**H1** Coaches' and team captains' identity leadership will be positively associated with team identification, which in turn will be positively associated with adolescents' healthy functioning (operationalised as wellbeing and team commitment).

**H2** The associations specified in H1 will be evident across (**a**) the 11 national contexts studied (including both WEIRD and non-WEIRD countries), (**b**) gender, and (**c**) stages of adolescence.

## Methods

### Transparency and openness

We report how we determined our sample size and the data cleaning procedures in Supplementary Materials. Furthermore, the preregistered analysis plan, including any documented deviations, along with the data, code, and additional project materials (e.g., questionnaire), can be accessed at: https://osf.io/ds39a/overview?view_only=71aaadeb182c48109cc909fb00bf44ac.

### Procedure and participants

We conducted a cross-sectional study with ethics approval obtained from the lead institution (G-2022-5771), being in line with the ethical principles of the Declaration of Helsinki. All participants provided informed consent. For participants who were considered minors, informed consent was also obtained from a parent or legal guardian. In accordance with EU regulations, this applied to participants under the age of 16. In addition, all participating countries adhered to their own national ethical and legal requirements. For example, in the United Kingdom, informed parental consent was obtained for all participants under the age of 18. Participants also consented to the publication of anonymised data and to open data sharing.

Participants were eligible if they were aged 12–17 years and participated in competitive team sports in one of the three most popular team sports in their country, trained at least twice per week, and had at least one coach. Sampling was structured to include girls' and boys' teams across three age brackets (12–13, 14–15, and 16–17 years). Based on a priori power analyses, we aimed to recruit approximately 360 participants per country. The questionnaire took approximately 20 min to complete and, wherever possible, was administered in person. The questionnaire was developed in English and back-translated for use across countries[36]. The final sample comprised 3,540 athletes nested within 395 teams across 11 countries (see Table 1 for demographic characteristics).

### Measures

#### Identity leadership

Athletes' perceptions of identity leadership enacted by their coach and team captain were assessed using the 16-item Identity Leadership Inventory – Youth, developed by Butalia et al. in 2024[11]. Items (e.g., "Our coach/team captain stands up for our team") were rated on a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*).

#### Team identification

Athletes' social identification with their team was measured using the nine-item Social Identity Questionnaire for Sport, validated by Bruner and Benson (2018)[37]. Items (e.g., "The fact that I am a member of my team often enters my mind") were rated on a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*).

**Table 1** Sample characteristics.

| | Sample *N* | *N* of teams | Sports | % Men/women | Mean age (SD) | Age group (% 12–13y/ 14–15y/ 16–17y) | Mean *N* of participants per team (SD) |
|---|---|---|---|---|---|---|---|
| Overall | 3,540 | 395 | | 63.54/36.46 | 14.53 (1.64) | 28.12/38.18/33.71 | 8.96 (7.42) |
| Belgium | 374 | 74 | Basketball = 72; Football = 109; Volleyball = 193 | 43.24/56.76 | 14.49 (1.69) | 29.00/36.00/35.00 | 5.05 (3.66) |
| Canada | 207 | 17 | Baseball = 40; Basketball = 68; Football = 99 | 41.18/58.82 | 15.07 (1.40) | 22.86/42.86/34.29 | 12.20 (8.27) |
| Finland | 760 | 55 | Floorball = 384; Ice-Hockey = 376 | 83.64/16.36 | 14.32 (1.58) | 29.67/41.76/28.57 | 13.80 (9.15) |
| Germany | 464 | 59 | Field Hockey = 126; Handball = 60; Football = 278 | 76.27/23.73 | 13.99 (1.53) | 37.65/38.82/23.53 | 7.86 (7.61) |
| India | 166 | 22 | Cricket = 153; Football = 13 | 95.45/4.55 | 14.51 (1.65) | 35.42/33.33/31.25 | 7.55 (6.67) |
| Iran | 351 | 21 | Basketball = 61; Football = 118; Volleyball = 172 | 61.90/38.10 | 14.49 (1.62) | 28.57/37.50/33.93 | 16.70 (7.40) |
| Japan | 280 | 44 | Basketball = 188; Football = 75; Volleyball = 17 | 65.91/34.09 | 15.33 (1.52) | 21.88/37.50/40.62 | 6.36 (6.22) |
| Poland | 344 | 32 | Basketball = 78; Football = 257; Volleyball = 9 | 43.75/56.25 | 14.51 (1.76) | 27.27/36.36/36.36 | 10.80 (7.18) |
| Singapore | 176 | 18 | Floorball = 80; Football = 83; Water Polo = 13 | 44.44/55.56 | 15.16 (1.47) | 14.29/42.86/42.86 | 9.78 (4.94) |
| Spain | 330 | 36 | Basketball = 114; Football = 107; Volleyball = 109 | 58.33/41.67 | 14.71 (1.65) | 22.22/38.89/38.89 | 9.17 (3.95) |
| UK | 88 | 17 | Cricket = 2; Football = 86 | 88.24/11.76 | 13.85 (1.68) | 23.81/33.33/42.86 | 5.18 (7.34) |

Gender percentages may not sum to 100%, as a proportion of respondents had missing values for this variable.

**Table 2** Means, standard deviations, correlations, intraclass correlations (ICC) and internal consistency.

| Variable | M | SD | α | ICC (1): Country level | ICC (1): Team level | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|
| 1. Coach identity leadership | 5.92 | 1.12 | 0.96 | 0.11 | 0.32 | | | | |
| 2. Team captain identity leadership | 5.35 | 1.39 | 0.96 | 0.10 | 0.26 | 0.49** | | | |
| 3. Team identification | 5.93 | 1.00 | 0.91 | 0.04 | 0.16 | 0.46** | 0.46** | | |
| 4. Well-being | 3.98 | 0.72 | 0.87 | 0.08 | 0.16 | 0.31** | 0.25** | 0.43** | |
| 5. Team commitment | 4.26 | 0.75 | 0.81 | 0.07 | 0.24 | 0.42** | 0.28** | 0.52** | 0.38** |

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

### Healthy functioning

**Well-being** Athletes' well-being was assessed using six items from the positive emotional states subscale of the Stirling Children's Well-being Scale, developed by Liddle and Carter in 2015[19]. Items (e.g., "Over the past couple of weeks, I've been feeling calm") were rated on a 5-point scale (1 = *never*, 5 = *all of the time*).

**Team commitment** Team commitment was assessed using the four-item sport commitment subscale of the Sport Commitment Model Questionnaire, developed in 1993 by Scanlan and colleagues[38]. Items were rated on a 5-point scale, with higher scores indicating greater commitment.

## Results

### Preliminary analyses

Missing data (0.02%) were handled using pairwise deletion for preliminary analyses. All measures demonstrated acceptable (a) internal consistency (Cronbach's $\alpha > 0.70$; see Table 2 and Supplementary Table S1–S3) and (b) measurement invariance across countries, genders, and age categories (see Supplementary Table S4). Descriptive statistics and correlations are presented in Table 2 and Supplementary Table S1–S3.

## Hypothesis testing

The data were hierarchically structured, with participants nested within teams and teams nested within countries. Intraclass correlations (ICCs > 0.01) supported the use of multilevel analyses to account for clustering at both the country and team levels (see Table 2). Model fit was evaluated using standard criteria (RMSEA ≤ 0.07, SRMR ≤ 0.08, CFI and TLI ≥ 0.90), and missing data were handled using full information maximum likelihood. Separate models were estimated for well-being and team commitment to reduce potential cross-outcome dependencies that could obscure interpretation of the structural paths.

### H1

Results of the multilevel structural equation models supported H1 (see Table 3). Identity leadership on the part of coaches and team captains was positively associated with team identification. Team identification, in turn, was positively associated with both well-being and team commitment. Team identification also significantly mediated the associations between identity leadership and both outcomes.

### H2

To test H2, we employed multigroup multilevel structural equation modelling. For each outcome (well-being and team commitment), we first estimated the hypothesised unconstrained model, allowing all regression paths to vary freely across (a) all 11 countries, (b) gender (girls and boys), and (c) age groups (12–13, 14–15, and 16–17 years). Across all models, the unconstrained models demonstrated inadequate fit, and inspection of modification indices indicated the need to include a direct regression path from coaches' identity leadership to the respective outcome. These unconstrained models were revised accordingly, after which they demonstrated good fit and were retained for subsequent testing.

We then specified a constrained model in which all regression paths were fixed to be equal across groups (i.e., across all 11 countries, both genders, or all three age groups). Constrained and unconstrained models were compared using the Satorra–Bentler scaled chi-square difference test. A non-significant difference indicated that regression paths were invariant across groups. Where constrained models fit the data significantly worse than unconstrained models, this suggested that at least some paths varied across groups. In such cases, equality constraints were sequentially relaxed until a parsimonious partially invariant model was identified (additional information on model selection is available in the Supplementary Materials). Final models are reported in the relevant sections below (see also Tables 3 and 4).

**H2a—country** For well-being, the specified regression paths were non-invariant across countries, except for the direct positive path from team identification to well-being ($\beta = 0.24$). On this basis, the partially invariant model was retained. Specifically, across most countries, identity leadership enacted by coaches was positively associated with team identification ($\bar{\beta} = 0.30$), with the magnitude of this association smallest in Spain ($\beta = 0.06$) and largest in Iran ($\beta = 0.53$). Identity leadership enacted by team captains was likewise positively associated with team identification in most countries ($\bar{\beta} = 0.24$), with weaker associations observed in Poland ($\beta = 0.09$) and Spain ($\beta = 0.12$) and the strongest association observed in India ($\beta = 0.40$). The added direct path from coaches' identity leadership to well-being was generally positive but modest in magnitude across countries ($\bar{\beta} = 0.12$), with stronger associations observed in Iran ($\beta = 0.31$) and comparatively weaker associations observed in Finland ($\beta = 0.05$) and India ($\beta = 0.05$). Consistent with these patterns, the indirect associations of identity leadership provided by coaches ($\bar{\beta} = 0.07$) and team captains ($\bar{\beta} = 0.06$) with well-being via team identification were positive across most countries. Nevertheless, they tended to be weaker in the same countries where the corresponding leadership–identification paths were smaller in magnitude.

For team commitment, the final retained model was also partially invariant. Specifically, with the exception of the direct path from coaches' identity leadership to team commitment (which was positive and invariant

**Table 3** Summary of Identity Leadership Associations with Well-being and Team Commitment (via Team Identification) Across the Overall Sample, Age, and Gender.

| Well-being | Overall β (SE) | B (SE) Age Group Final Model | | | Invariance Age (✓/✗) | B (SE) Gender Final Model | | Invariance Gender (✓/✗) |
|---|---|---|---|---|---|---|---|---|
| Direct effects | | 12–13 | 14–15 | 16–17 | | Male | Female | |
| Coaches' identity leadership → Team identification | 0.33 (0.03)*** | 0.35 (0.03)*** | 0.23 (0.04)*** | 0.29 (0.03)*** | ✗ | 0.28 (0.03)*** | | ✓ |
| Team captains' identity leadership → Team identification | 0.30 (0.03)*** | 0.21 (0.02)*** | | | ✓ | 0.21 (0.02) *** | | ✓ |
| Team identification → Well-being | 43 (0.02)*** | 0.26 (0.02)*** | | | ✓ | 0.26 (0.02)*** | | ✓ |
| Coaches' identity leadership → Well-being | | 0.08 (0.01)*** | | | | 0.08 (0.01)*** | | |
| Indirect effects | | | | | | | | |
| Coaches' identity leadership → Well-being | 0.14 (0.02)*** | 0.09 (0.01)*** | 0.06 (0.01)*** | 0.07 (0.01)*** | | 0.07 (0.01)*** | | |
| Team captains' identity leadership → Well-being | 0.13 (0.01)*** | 0.05 (0.01)*** | | | | 0.05 (0.01) *** | | |
| $R^2$ | | | | | | | | |
| Team identification | 0.30 | 0.35 | 0.24 | 0.29 | | 0.29 | 0.31 | |
| Well-being | 0.18 | 0.19 | 0.20 | 0.19 | | 0.21 | 0.18 | |
| *Model Fit Indices* | | | | | | | | |
| CFI/TLI | 0.98/0.95 | 1.00/0.99 | | | | 1.00/1.00 | | |
| RMSEA/SRMR | 0.07/0.04 | 0.04/0.02 | | | | 0.02/0.02 | | |
| Team commitment | Overall β (SE) | B (SE) Age Group Final Model | | | Invariance Age (✓/✗) | B (SE) Gender Final Model | | Invariance Gender (✓/✗) |
| Direct effects - B (SE) | | 12–13 | 14–15 | 16–17 | | Male | Female | |
| Coaches' identity leadership → Team identification | 0.33 (0.03)*** | 0.35 (0.03)*** | 0.24 (0.04)*** | 0.28 (0.03)*** | ✗ | 0.29 (0.03)*** | | ✓ |
| Team captains' identity leadership → Team identification | 0.30 (0.03)*** | 0.21 (0.02)*** | | | ✓ | 0.21 (0.02)*** | | ✓ |
| Team identification → Team commitment | 0.51 (0.03)*** | 0.30 (0.02)*** | | | ✓ | 0.31 (0.02)*** | | ✓ |
| Coaches' identity leadership → Team commitment | | 0.12 (0.02)*** | | | ✓ | 0.13 (0.02)*** | | ✓ |
| *Indirect Effects - B (SE)* | | | | | | | | |
| Coaches' identity leadership → Team commitment | 0.17 (0.02)*** | 0.11 (0.02)*** | 0.07 (0.01)*** | 0.09 (0.01)*** | | 0.09 (0.01)*** | | |
| Team captains' identity leadership → Team commitment | 0.16 (0.02)*** | 0.06 (0.01)*** | | | | 0.07 (0.01)*** | | |
| $R^2$ | | | | | | | | |
| Team identification | 0.30 | 0.36 | 0.24 | 0.29 | | 0.29 | 0.31 | |
| Team commitment | 0.26 | 0.29 | 0.31 | 0.28 | | 0.30 | 0.31 | |
| *Model Fit Indices* | | | | | | | | |
| CFI/TLI | 0.98/0.96 | 0.99/0.98 | | | | 0.99/0.99 | | |
| RMSEA/SRMR | 0.07/0.05 | 0.04/0.02 | | | | 0.03/0.02 | | |

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

across countries; β = 0.14), the remaining hypothesised paths were non-invariant. To elaborate, across countries, coaches' identity leadership showed a generally positive association with team identification (β̄ = 0.30), although this association was substantially stronger in some countries (e.g., Iran; β = 0.53) and notably weaker in others (e.g., Spain; β = 0.06). A similar pattern was observed for team captains' identity leadership, which was positively related to team identification in most countries (β̄ = 0.24), with comparatively larger associations in India (β = 0.40) and smaller associations in Poland (β = 0.09) and Spain (β = 0.12). Next, the association between team identification and team commitment was also positive across countries (β̄ = 0.33), with comparatively stronger

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**Table 4** Summary of identity leadership associations with well-being and team commitment (via team identification) in each of the 11 countries.

| Well-being | Belgium | Canada | Finland | Germany | India | Iran | Japan | Poland | Singapore | Spain | UK | Invariance Country (✓/✗) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Direct effects | B (SE) | | | | | | | | | | | |
| Coaches' identity leadership → Team identification | 0.25 (0.08)** | 0.39 (0.10)*** | 0.24 (0.04)*** | 0.30 (0.05)*** | 0.36 (0.12)** | 0.53 (0.09)*** | 0.28 (0.05)*** | 0.44 (0.07)*** | 0.22 (0.14) | 0.06 (0.07) | 0.21 (0.12) | ✗ |
| Team captains' identity leadership → Team identification | 0.28 (0.05)*** | 0.17 (0.05)*** | 0.22 (0.04)*** | 0.24 (0.04)*** | 0.40 (0.09)*** | 0.20 (0.05)*** | 0.21 (0.08)** | 0.09 (0.06) | 0.36 (0.08)*** | 0.12 (0.06) | 0.30 (0.10)** | ✗ |
| Team identification → Well-being | 0.24 (0.02)*** | | | | | | | | | | | ✓ |
| Coaches' identity leadership → Well-being | 0.07 (0.05) | 0.20 (0.05)*** | 0.05 (0.03) | 0.08 (0.04)* | 0.05 (0.08) | 0.31 (0.06)*** | 0.09 (0.03)** | 0.15 (0.04)*** | 0.09 (0.06) | 0.09 (0.05) | 0.10 (0.07) | ✗ |
| *Indirect Effects* | | | | | | | | | | | | |
| Coaches' identity leadership → Well-being | 0.06 (0.02)** | 0.09 (0.02)*** | 0.06 (0.01)*** | 0.07 (0.01)*** | 0.09 (0.03)** | 0.13 (0.02)*** | 0.07 (0.01)*** | 0.11 (0.02)*** | 0.05 (0.03) | 0.01 (0.02) | 0.05 (0.03) | |
| Team captains' identity leadership → Well-being | 0.07 (0.01)*** | 0.04 (0.01)*** | 0.05 (0.01)*** | 0.06 (0.01)*** | 0.09 (0.02)*** | 0.05 (0.01)*** | 0.05 (0.02)** | 0.02 (0.01) | 0.09 (0.02)*** | 0.03 (0.02) | 0.07 (0.02)** | |
| $R^2$ | | | | | | | | | | | | |
| Team identification | 0.29 | 0.21 | 0.28 | 0.33 | 0.55 | 0.31 | 0.30 | 0.28 | 0.19 | 0.05 | 0.36 | |
| Well-being | 0.14 | 0.25 | 0.20 | 0.16 | 0.19 | 0.22 | 0.16 | 0.25 | 0.14 | 0.10 | 0.20 | |
| *Model Fit Indices* | | | | | | | | | | | | |
| CFI/TLI | 0.99/0.98 | | | | | | | | | | | |
| RMSEA/SRMR | 0.04/0.04 | | | | | | | | | | | |

| Team commitment | Belgium | Canada | Finland | Germany | India | Iran | Japan | Poland | Singapore | Spain | UK | Invariance Country (✓/✗) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Direct effects | B (SE) | | | | | | | | | | | |
| Coaches' identity leadership → Team identification | 0.25 (0.08)** | 0.39 (0.10)*** | 0.24 (0.04)*** | 0.30 (0.05)*** | 0.35 (0.12)** | 0.53 (0.09)*** | 0.28 (0.05)*** | 0.44 (0.07)*** | 0.22 (0.14) | 0.06 (0.07) | 0.21 (0.11) | ✗ |
| Team captains' identity leadership → Team identification | 0.28 (0.05)*** | 0.17 (0.05)*** | 0.22 (0.04)*** | 0.24 (0.04)*** | 0.40 (0.09)*** | 0.20 (0.05)*** | 0.21 (0.08)** | 0.09 (0.06) | 0.36 (0.08)*** | 0.12 (0.06) | 0.31 (0.09)*** | ✗ |
| Team identification → Team commitment | 0.45 (0.04)*** | 0.24 (0.06)*** | 0.26 (0.04)*** | 0.34 (0.04)*** | 0.22 (0.09)* | 0.28 (0.04)*** | 0.37 (0.04)*** | 0.32 (0.04)*** | 0.41 (0.05)*** | 0.37 (0.07)*** | 0.32 (0.07)*** | ✗ |
| Coaches' identity leadership → Team commitment | 0.14 (0.02)*** | | | | | | | | | | | ✓ |
| *Indirect Effects* | | | | | | | | | | | | |
| Coaches' identity leadership → Team commitment | 0.11 (0.04)** | 0.09 (0.04)** | 0.06 (0.01)*** | 0.10 (0.02)*** | 0.08 (0.05) | 0.15 (0.03)*** | 0.10 (0.02)*** | 0.14 (0.03)*** | 0.09 (0.06) | 0.02 (0.03) | 0.07 (0.03)* | |
| Team captains' identity leadership → Team commitment | 0.13 (0.03)*** | 0.04 (0.02)* | 0.06 (0.01)*** | 0.08 (0.01)*** | 0.09 (0.04)* | 0.06 (0.02)** | 0.08 (0.03)** | 0.03 (0.02) | 0.15 (0.04)*** | 0.05 (0.02)* | 0.10 (0.04)* | |
| $R^2$ | | | | | | | | | | | | |
| Team identification | 0.29 | 0.21 | 0.28 | 0.33 | 0.56 | 0.30 | 0.30 | 0.28 | 0.19 | 0.05 | 0.38 | |
| Team commitment | 0.39 | 0.27 | 0.25 | 0.28 | 0.28 | 0.26 | 0.36 | 0.33 | 0.42 | 0.23 | 0.32 | |

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**Table 4** (continued)

| Team commitment | Belgium | Canada | Finland | Germany | India | Iran | Japan | Poland | Singapore | Spain | UK | Invariance Country (✓/ ✗) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Model Fit Indices* | | | | | | | | | | | | |
| CFI/TLI | 0.99/0.97 | | | | | | | | | | | |
| RMSEA/SRMR | 0.05/0.04 | | | | | | | | | | | |

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

associations observed in Belgium (β = 0.45) and weaker associations in India (β = 0.22). Reflecting this pattern, the indirect effects of coaches' (β = 0.09) and team captains' (β = 0.08) identity leadership on team commitment via team identification were generally positive across countries. Again, though, they were attenuated in contexts where the corresponding leadership–identification associations were smaller in magnitude. Taken together, these findings provide partial support for H2a. Across most of the national contexts that we studied, the identity leadership provided by both coaches and team captains was positively associated with team identification, and this in turn was positively associated with adolescents' well-being and team commitment. Identity leadership was also indirectly associated with both outcomes via team identification. Although this pattern was evident across all the countries that we studied, the magnitude of several associations varied across national contexts.

**H2b–gender** The fully constrained models were retained, indicating that the pattern of relationships specified in the hypothesised model did not differ significantly for girls and boys across either outcome (well-being or team commitment). Consistent with H2b, identity leadership enacted by coaches and team captains was positively associated with team identification for both girls and boys, and this in turn was positively associated with well-being and team commitment (all indirect associations were positive and significant).

**H2c—age** For both well-being and team commitment, the final retained models were partially invariant across age groups. In particular, all hypothesised paths were invariant with the exception of the path from coaches' identity leadership to team identification, which varied in strength across age groups, being strongest among 12–13-year-olds and weakest among those aged 14–15 years.

Overall, results supported H2c. Across age groups, the identity leadership provided by both coaches and team captains was positively associated with team identification, although the magnitude of the coach identity leadership–identification association differed by age. Team identification was, in turn, positively associated with both well-being and team commitment. Correspondingly, identity leadership (of coaches and captains) had positive indirect associations with both outcomes via team identification across all age groups.

## Discussion

Using a cross-national sample of 3,540 adolescent athletes, the present study had two objectives. The first, addressed by H1, was to examine whether identity leadership provided by coaches and team captains was associated with well-being and team commitment through team identification. The second, addressed by H2, was to examine whether these relationships were evident across 11 national contexts, among girls and boys, and across early (12–13), mid (14–15), and late (16–17) adolescence.

The findings supported H1: both coaches' and captains' identity leadership was positively associated with team identification, which in turn was positively associated with both indicators of healthy functioning (i.e., well-being and team commitment). Also, in line with H2, the relationships specified in H1 were generally evident (albeit with some differences in the strength of association) across countries, genders, and age groups.

### Theoretical implications

The present study extends evidence linking identity leadership to healthy functioning in adult samples to adolescence[11,30]. Specifically, our findings accord with previous research showing that identity leadership is associated with better mental health (e.g., reduced burnout and higher well-being) through stronger social identification in adult populations[16,25,26]. Beyond this, our study shows that identity leadership predicts stronger team identification, which in turn predicts greater commitment to the team. This latter relationship is consistent with previous research[27–29] and is relevant to adolescent functioning because commitment to valued identities is a key indicator of psychological adjustment and is associated with better mental health in young people[21,22].

These findings matter because adolescence is a developmental period in which young people are particularly vulnerable to mental health difficulties and challenges in social adjustment[2]. In this context, identity leadership may help young people develop a shared sense of "we" and "us" that provides access to psychological resources, including social support, self-efficacy, and purpose. In turn, these resources may support healthy functioning and help young people navigate the challenges associated with development[12].

At a theoretical level, study findings also provide converging support for the social identity approaches to leadership and health by showing that identity leadership is important for health and explaining why this is so (i.e., because it builds a sense of "we" and "us")[9,12]. In this way, they strengthen the empirical foundations of these approaches[15,23] and broaden their potential impact.

This study also supports the view that young people are not merely recipients of adult leadership, but active participants in leadership processes that shape social identities in ways that may support adolescent development. The relevance of peers' (i.e., team captain) identity leadership aligns with developmental theory emphasising adolescents' heightened sensitivity to peer influence[39] and with neurodevelopmental evidence indicating increased responsiveness to peers during this period[40]. More broadly, the fact that both coaches and peer leaders were important for healthy adolescent functioning in our study highlights the distributed nature of leadership in youth sport, as in adult sport[24].

At the same time, our findings advance a more inclusive and representative science of leadership and health by showing that the associations between identity leadership and healthy adolescent functioning are generally evident across countries (in line with prior work) and for both girls and boys[16]. These patterns also held across early, middle, and late adolescence, indicating that identity leadership functions as a developmental resource across the full span of adolescence. Taken together, our findings suggest that the social identity approach to leadership provides a broadly applicable framework for understanding adolescent development across diverse national and demographic contexts.

Broad applicability does not, however, imply uniformity. The strength of the studied associations varied across countries, and the patterns differed for coaches and captains. For example, Iran showed the strongest association between coaches' identity leadership and team identification across the countries studied ($\beta = 0.53$), whereas the corresponding association for captains was weaker than those observed in most other countries ($\beta = 0.20$). One possible explanation for these cross-national differences lies in cultural values, such as power distance, that shape how leadership is enacted and received[41,42]. Although we did not test this explanation directly (see Limitations), in countries high on power distance (i.e., where inequalities in power are expected and accepted)[41], coaches may be both expected and permitted to shape the team's identity in ways that captains, given their lower status, are not, and so may engage in identity leadership to a greater extent. At the same time, coaches' efforts to cultivate a shared sense of "us" may carry greater weight with athletes. If so, coaches' identity leadership would relate more strongly to team identification (and thereby to the outcomes that follow from it) than in lower power distance countries, and more strongly than captains' identity leadership within the same country.

It is important to note, however, that although our findings suggest that leadership which cultivates a shared social identity is effective across diverse contexts, the specific behaviours through which leaders achieve this are likely to vary across teams differing in national culture, age, and gender[43]. For example, in some countries a coach who uses highly emotive, confrontational language may be seen by adolescents as passionately "fighting for us" (i.e., as an identity leader), whereas in other countries the same behaviour may be experienced as threatening, eroding a sense of belonging and, in turn, health.

Moreover, the content of the social identities that leaders cultivate warrants closer attention. Not all identity norms and values are equally beneficial for health: some foster belonging and healthy functioning, whereas others may promote harmful practices (e.g., normalising alcohol use) or exclusion (e.g., when the boundaries of "us" are drawn too narrowly)[44,45]. To develop a fuller understanding, future research should examine not only how identity leaders build shared identities, but also which kinds of identities they create - and under what conditions these identities support, rather than undermine, young people's development.

### Practical implications

These findings have clear implications for practice and policy worldwide. Specifically, sport federations and clubs could embed identity-based leadership principles in coach education and peer-leader training to promote healthy adolescent development. Programs such as the $5R^S$ and 3R show that identity leadership can be systematically developed[25,46,47], but adaptation to adolescent sport will require a focus on belonging, healthy development, and sustained participation. These principles also extend beyond sport, with identity-based leadership training for teachers and youth workers in schools and community settings providing a practical route to promoting adolescent health.

### Limitations and future directions

First, this study's cross-sectional design prevents causal conclusions. Future research should therefore use longitudinal designs to establish the temporal ordering of the proposed relationships and experimental designs to test whether developing coaches' and captains' identity leadership leads to stronger team identification and, in turn, healthier adolescent functioning.

Second, there are important questions concerning the generalisability of our findings beyond the specific populations examined. For example, because data were collected from different sports in different countries, we were unable to test whether identity leadership is equally effective across sports. This is a limitation, as sports vary in their structure, culture, and leadership hierarchies. For instance, the role of the captain in cricket is far more central to on-field decision-making (e.g., field placement and bowling changes) than it is in football, which may shape how identity leadership is enacted and experienced. Future research should therefore recruit sufficiently large samples from different sports to establish whether the associations between identity leadership and healthy adolescent functioning are consistent across them.

Our focus on team sports also means that we cannot draw conclusions about individual sports or other youth group contexts such as schools and community programmes (e.g., scouts). Research in individual sports would help address the limited attention given to group dynamics in settings where athletes compete individually but often train together[48]. Extending this work to schools and community programmes would clarify whether the relationships observed here also hold in other settings central to young people's development[49,50].

Finally, although we examined the cross-national generalisability of our focal relations, we did not explore the contextual factors that may explain between-country differences. Cultural values are an aspect of context that warrants particular attention because they feature prominently in accounts of cross-national variation[51]. However, examining whether cultural values shape the associations between identity leadership, team identification, and healthy adolescent functioning presents a challenge: dominant frameworks of cultural values are grounded in adult populations and provide limited insight into how such dynamics unfold in adolescence[52]. For this reason, we did not assess cultural values here. Moving forward, collaboration between cross-cultural and developmental researchers is needed to establish whether existing frameworks (e.g., Schwartz's cultural value orientations and Hofstede's cultural dimensions)[52,53] adequately capture adolescents' experiences or require adaptation. Such work would strengthen the basis for examining cultural influences on the associations studied here and on adolescent development more broadly.

## Conclusion

Adolescence is a period in which young people are deeply engaged with questions of "who am I?" and "where do I belong?" These questions lie at the heart of many of their challenges with mental health and social relationships. Team sport provides one important context in which these challenges can be addressed. However, these dynamics are likely shaped by leadership and, in particular, by identity leadership. Drawing on data from 3,540 athletes,

we examined whether coaches' and captains' identity leadership was associated with well-being and team commitment (i.e., healthy functioning) through team identification (H1), and whether these relationships were evident across 11 countries, genders (boys vs. girls), and stages of adolescence (categorised as 12–13 vs. 14–15 vs. 16–17; H2). In support of both hypotheses, we found that coaches' and captains' identity leadership was positively associated with team identification, which in turn was associated with higher well-being and stronger team commitment. These relationships were generally evident across countries, genders, and age groups. Together, the findings suggest that identity leadership which fosters a strong "we" may support the development of a healthy "me" in adolescence. For youth sport policy and practice, they point to the value of developing, implementing, and evaluating programmes that equip coaches and peer leaders to build a shared sense of "us" and, through this, support young people's health.

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**Data availability** The preregistered analysis plan, including any documented deviations, along with the data, code, and additional project materials, can be accessed at: https://osf.io/ds39a/overview?view_only=71aaadeb182c48109cc909fb00bf44ac.

## Declarations

**Competing interests** The authors declare no competing interests.

**Ethical approval** The questionnaire and methodology for this study was approved by the Human Research Ethics Committee of KU Leuven (G-2022-5771) and conducted in accordance with the core principles of the Declaration of Helsinki and the General Data Protection Regulation (GDPR) stipulated by the European Union.

**Informed consent** All participants provided informed consent. For participants who were considered minors, informed consent was also obtained from a parent or legal guardian. In accordance with EU regulations, this applied to participants under the age of 16. In addition, all participating countries adhered to their own national ethical and legal requirements. For example, in the United Kingdom, informed parental consent was obtained for all participants under the age of 18. Participants also consented to the publication of anonymised data and to open data sharing.

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