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ABSTRACT

Although extensive sport research has been dedicated to understanding coach effectiveness, this work has largely explored how coaches' behaviours influence individual athletes rather than considering the total team. Accordingly, we sought to examine the breadth of existing research involving the influence of coaches on team dynamics. Adhering to PRISMA for Scoping Review guidelines, 9,454 peer–reviewed studies were identified using four electronic databases, with 82 ultimately meeting inclusion criteria. Studies were grouped based on interpersonal, intrapersonal, and professional coach behaviours. Within these groups, team dynamics frameworks were used to explore the team–level variables. The results demonstrated that the majority of research has focused on coaches' interpersonal behaviours on teams' emergent states, while largely overlooking the influence of coaches' intrapersonal or professional behaviours on teams' structures or processes. We advocate for the diversification of methodologies employed and targeted investigations guided by established frameworks to better understand coaches' influence on team dynamics.

Although sport encompasses a variety of activities across age ranges and skill levels, a consistent feature is the presence of groups. Even sports that are typically considered individual in nature (e.g., cycling, wrestling) contain salient social processes that shape experiences for those involved (Evans, Eys, & Bruner, 2012). Accordingly, a large body of literature is dedicated to exploring the social dynamics within sport teams, with the general purview of understanding their implications for both athlete and team-level outcomes (e.g., Eys, Bruner, & Martin, 2019). In addition to the consistent feature of groups in sport, is the omnipresence of coaches. Coaches represent critical social agents who aim to satisfy individual

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❶ Supplemental data for this article can be accessed here.

members' needs while ensuring effective team functioning (Carron & Eys, 2012; Chelladurai, 2007). Interestingly, despite the advancement of various definitions that entail what it means to be an effective coach (e.g., Côté & Gilbert, 2009), the vast majority of this research has emphasised the coach-athlete relationship, with less attention directed towards the coaches' influence on their teams as a whole.

It is important to recognise the unique position held by coaches in relation to how they can influence team dynamics. Decisions such as assigning dressing room seating or organising mentor opportunities are but several examples that demonstrate how coach behaviour can influence athlete interactions (e.g., Carron, Spink, & Prapavessis, 1997; Chelladurai, 2007). Similarly, decisions pertaining to athlete selection, team objectives, normative expectations, or the overemphasis on performance outcomes will all influence the general dynamics and functioning of a team (e.g., Cumming, Smoll, Smith, & Grossbard, 2007; Hodge, Henry, & Smith, 2014; Martin, Evans, & Spink, 2016). While it is clear that the role of the coach must be considered when examining team dynamics, every group represents a distinct collection of individuals who interact in novel ways (e.g., McGrath, 1964). Thus, it is critical to explore the different ways that coaches have been found to impact the dynamics within a team to help shed light on such a multifaceted process.

Due to the complexity of groups, sport researchers have advanced several conceptual frameworks to aid in the understanding of their dynamic nature. For example, researchers have considered various inputs of team effectiveness such as athlete attributes (e.g., age, skill level) and the environment (e.g., competitive level, team size), constructs pertaining to a team's structure (e.g., norms, roles, cliques), its processes (e.g., communication, cooperation), as well as emergent states (e.g., cohesion, collective efficacy, social identity; Carron & Eys, 2012; McEwan & Beauchamp, 2014). Numerous researchers have investigated the degree to which coaches impact the aforementioned elements. For instance, athlete selection practices by coaches shape the general team environment (e.g., Gould, Greenleaf, Guinan, & Chung, 2002; Hodge et al., 2014), and certain coach leadership styles can influence a team's structure pertaining to norms (e.g., Chen, Wang, Wang, & Huang, 2017), roles (e.g., Beauchamp, Bray, Eys, & Carron, 2005), and the formation of cliques (e.g., Martin et al., 2016). Further, coaches have been found to affect team processes such as moral behaviour (e.g., Bolter & Kipp, 2018) and emergent states including cohesion (e.g., McLaren, Eys, & Murray, 2015) and collective efficacy (e.g., Høigaard, De Cuyper, Fransen, Boen, & Peters, 2015).

Considering that most coaches have to satisfy the needs of their athletes while ensuring the successful functioning of the team (Chelladurai, 2007), it is not surprising that extensive research efforts have been directed towards

understanding coach characteristics (e.g., race, gender; Keathley, Himelein, & Srigley, 2013; LaFountaine & Kamphoff, 2016) and leadership styles/behaviours (e.g., Jowett & Chaundy, 2004; Vella, Oades, & Crowe, 2013). This bourgeoning body of research has greatly improved our understanding of the coach's role in influencing team-level constructs. However, given the complexity of sport teams and the range of coach characteristics and behaviours that can be observed, a comprehensive account of the literature is needed to develop a more coherent depiction of how coaches have been reported to influence team dynamics. Therefore, the purpose of this scoping review was to assess existing research that has explicitly examined the association between coach and team variables in sport. In addition, this scoping review explores the quality and quantity of existing literature by examining methodological and reporting-based practices.

Methods

This review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines extension for Scoping Reviews (PRISMA-ScR; Tricco et al., 2018). The review process involved the search of relevant studies, the screening and deletion of duplicates and irrelevant research at the title and abstract level, determining final study eligibility, and the analysis and synthesis of the final sample of studies (see Figure 1).

Search process

Inclusion and exclusion criteria

The initial search was conducted through four electronic databases (i.e., SportDiscus, ERIC, Physical Education Index, PsychINFO) expected to provide a comprehensive account of studies pertaining to the topic of interest and that aligned with established processes within the field (e.g., DiSanti & Erickson, 2019). To ensure that all relevant studies were identified, the following key words were used: "Coach*" AND "Sport" AND "Group OR Team". The key words were identified based on a preliminary review of existing research relevant to team dynamics in sport. The research team met to discuss potential search terms and through group discussion and consultation with a librarian, came to a consensus on key words for the search process. The inclusion criteria for this review required that studies (a) be written in English, (b) be published in a peer-reviewed journal, and (c) quantitatively measure variables involving both the coach and team. In relation to the latter, only quantitative studies were included as this methodology could draw explicit conclusions on the relationship between a manifestation of the coach and a team-level variable.
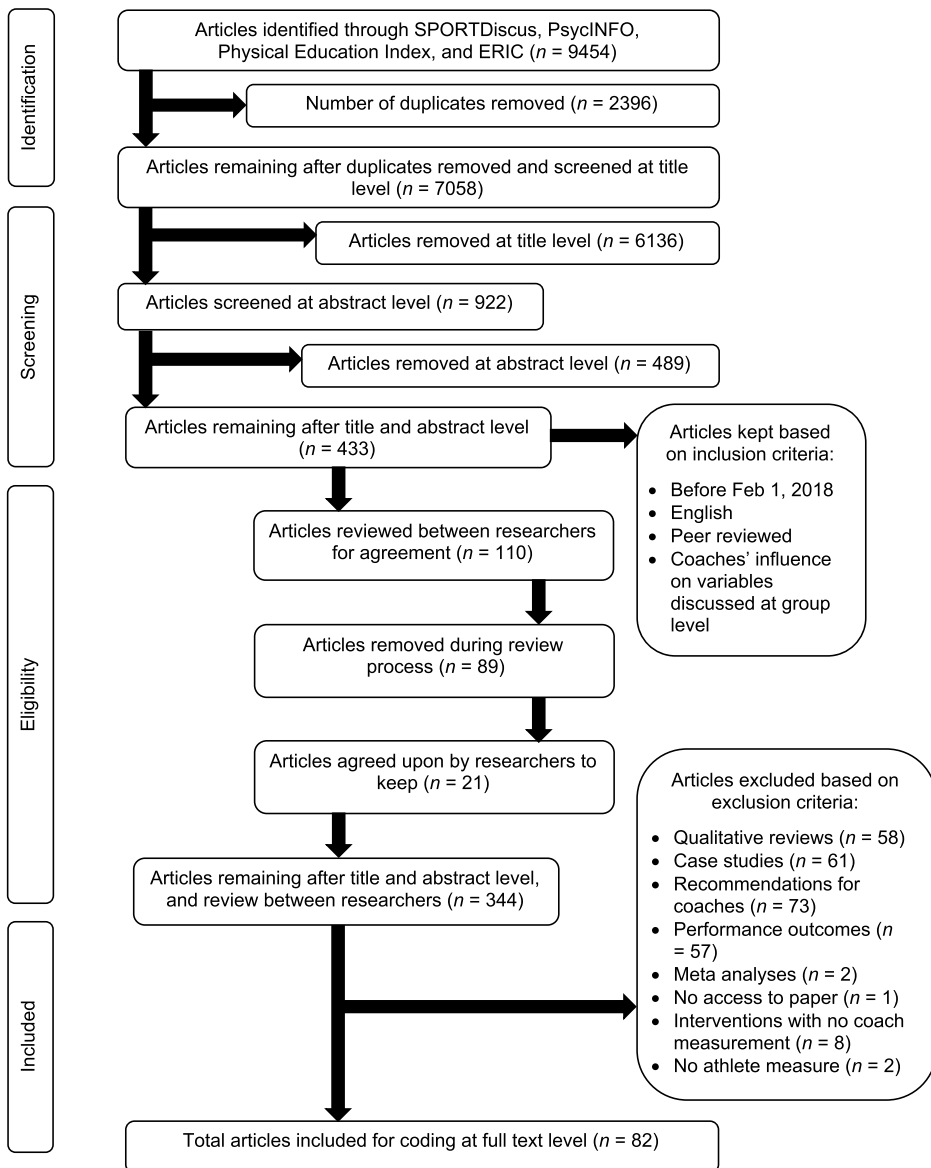
Figure 1. Flow chart representing article selection and review process.

Study screening and selection

All identified studies were imported into Zotero v5 software and duplicates were removed. The resulting list of studies was divided between the first (CH) and third (JC) authors, who screened the citations and abstracts and removed studies unrelated to sport coaches and/or team related variables. After this initial process, CH and JC conducted a 10% (n = 363) reliability check of studies from the other's list based on the inclusion/exclusion criteria. The researchers met to cross reference the resulting lists and to

determine reliability – discrepancies were discussed and agreement was required for article inclusion (Kitchenham, 2004). Although this type of review process is subject to bias (Staples & Niazi, 2007), it is a recommended practice and considered more reliable than unilateral evaluation (Fusaro, El Emam, & Smith, 1997). Once all potential studies were retained, both CH and JC reviewed the full-text versions independently to ensure that they adhered to the inclusion/exclusion criteria.

Data extraction and quality review

Although it is not an expected practice to include quality assessment within the scoping review process, the use of established or validated tools to conduct quality assessment can identify important gaps in the literature (Daudt, van Mossel, & Scott, 2013; Pham et al., 2014) and aid in the critical appraisal of methodologies employed that contributed to existing knowledge (Tricco et al., 2018). Thus, as we aimed to identify both the quality and quantity of existing studies, a coding tool was used to guide data extraction for each included study (see online supplemental file). CH and JC extracted data from the studies independently, meeting at intermittent points to ensure coherence throughout the data extraction process. The extracted data included: citation details, coach variable(s), team variable(s), sample characteristics, geographic location of research, sport and sport type, study methodology, and measurement description. The quality assessment feature was adapted from the Downs and Black (1998) guidelines and recent versions used in the sport context (Eime et al., 2013; Evans et al., 2017). This instrument involved 16 items that guided assessment for four general themes (i.e., research design, sampling information, measurement practices, and statistical analyses). More specifically, six items were retained from Downs and Black (1998), four were modified for the particular context, and six were added based on the purpose of the research. Each item was answered with a yes (1) or no (0), resulting in a quality score out of 16.

Analysis

Considering the range of possibilities pertaining to coach and team variables, the first step was to organise studies to facilitate a meaningful synthesis of the research. Given that coaches represented the main social agent of interest in this research, studies were first grouped based on the coaching effectiveness definition advanced by Côté and Gilbert (2009). Specifically, studies were categorised based on professional (sport specific and procedural), interpersonal (relational and interactional), and intrapersonal (introspection and reflection) behaviours. From there, team dynamics frameworks (Carron & Eys, 2012; McEwan & Beauchamp, 2014) informed the categorisation of group variables into those involving (a) structures (e.g.,

roles, norms), (b) processes (e.g., communication, conflict), and (c) emergent states (e.g., cohesion, collective efficacy). This process enabled us to broadly describe the literature involving coach and team variables, while incorporating methodological and reporting-based comments pertaining to the strength of the research.

Results

Although the initial search yielded 9,454 studies, 7,058 remained once duplicates were removed (see Figure 1). Based on a preliminary title review, 922 were reviewed at abstract level, and 433 were retained for full-text review. Following the application of the inclusion/exclusion criteria, 82 studies were ultimately included. As several examples, studies were excluded if they were qualitative reviews ($n = 58$), meta-analyses ($n = 2$), case studies ($n = 61$), recommendations for coaches ($n = 73$), an intervention with no coach measurement ($n = 8$), or focused on performance outcomes ($n = 57$).

In relation to the demographics of the research, athlete sample sizes ranged widely from 36 to 19,967 participants (*Median* = 258) and sport teams were composed of male ($n = 14$), female ($n = 11$), a combination of genders ($n = 53$), or were not stated ($n = 4$). Athletes were aged 10 to 36 years and varied greatly in level of competition (e.g., recreational to elite). In terms of geographic regions for the research, the studies took place in North America (i.e., Canada, United States; $n = 32$), Europe (i.e., United Kingdom, Norway, Spain; $n = 25$), Asia (i.e., China, Taiwan, Malaysia; $n = 8$), and the Middle East (i.e., Iran; $n = 2$). Studies either focused on one specific sport (e.g., soccer, $n = 16$; basketball, $n = 11$) or a combination of sports ($n = 36$).

Coaches' influence on team dynamics

Table 1 provides specific information pertaining to each study and is organised in relation to the coach variable of interest. Accordingly, within the following sections, we first discuss the coach variable, followed by the integration of team-level variables.

The majority of studies (93%; $n = 76$) involved some form of interpersonal coach behaviour. These studies focused on how coaches relate to, interact with, and behave towards their athletes, specifically through their general leadership style ($n = 21$), achievement goal orientation ($n = 17$), autonomy supportive behaviours ($n = 11$), relationship-oriented behaviours ($n = 12$), feedback style ($n = 5$), modelling ($n = 7$), and norm-related behaviours ($n = 3$). General leadership style refers to studies that surveyed a variety of interpersonal leadership qualities such as those measured in transformational leadership ($n = 5$; Bass & Riggio, 2006) or as defined by the

Table 1. Articles organised by coach behaviour, coach variable, and team variable.

Coach Behaviour	Behaviour Subtype	Coach Variable	Group Variable	Sport	Coach Demographics Stated?	Coach Measured Directly?	Citation
Professional	Instruction	Coach training and instruction	Shared mental models***; Role ambiguity***	Hockey and handball	No	No	Giske et al. (2015)
Interpersonal	Coach Leadership (General)	Coach communication	Team cohesion***	Soccer	No	Yes	Lefebvre & Cunningham (1977)
		Coach leadership behaviours	Team cohesion***	Football	No	No	Westre & Weiss (1991)
		Coach leadership behaviours	Team cohesion***	Baseball and softball	No	No	Gardner, Shields, Bredemeier, & Bostrom (1996)
		Coach leadership behaviours	Team cohesion***	Baseball and softball	No	Yes	Shields, Gardner, Bredemeier, & Bostrom (1997)
		Coach leadership behaviours	Team cohesion***	Over three sports	No	No	Jowett & Chaundy (2004)
		Coach leadership behaviours	Team cohesion***	Soccer and baseball	No	No	Murray (2006)
		Coach leadership behaviours	Team cohesion***	Over three sports	No	No	Yusof & Vasuthevan (2007)
		Coach leadership behaviours	Team cohesion***	Soccer	No	No	Heydarinejad & Adman (2010)
		Coach leadership behaviours	Team cohesion***; Team norms*	Baseball and softball	No	Yes	Shields, Gardner, Bredemeier, & Bostrom (1995)
		Coach leadership behaviours	Role ambiguity*	Over three sports	No	No	Beauchamp et al. (2005)
		Coach leadership behaviours; Coach closeness	Team goal orientation***	Swimming	No	No	Alfermann, Geisler, & Okade (2013)
		Coach leadership behaviours	Team goal orientation***	Over three sports	Yes	Yes	Barić & Bucik (2009)
		Coach leadership behaviours	Team cohesion***; Satisfaction with coach***	Swimming and handball	No	No	Gomes, Lopes, & Mata (2011)
		Coach competency	Role ambiguity*	Over three sports	No	No	Bosselut, Heuzé, Eys, Fontayne, & Sarrazin (2012)
		Coach competency	Trust in coach***	Basketball	Yes	No	Kao, Hsieh, & Lee (2017)
		Transformational leadership	Team cohesion***	Ultimate Frisbee	No	No	Callow, Smith, Hardy, Arthur, & Hardy (2009)
		Transformational leadership	Team goal orientation***	Basketball	No	No	Kao & Watson (2017)

(Continued)

Table 1. (Continued).

Coach Behaviour	Behaviour Subtype	Coach Variable	Group Variable	Sport	Coach Demographics Stated?	Coach Measured Directly?	Citation
		Transformational leadership	Organizational citizen behaviour**	Handball	No	No	Lee, Kim, & Kang (2013)
		Transformational leadership	Team cohesion***; Collective efficacy***	Soccer	Yes	Yes	Price & Weiss (2013)
		Coach leadership quality	Team cohesion***; Team identification***; Team confidence***	Soccer, volleyball, and handball	No	No	Fransen, Decroos, Broek, & Boen (2016)
		Coach leadership quality	Team cohesion***	Not Stated	No	No	Gillham & Gillham (2014)
		Paternalistic leadership behaviour	Team cohesion***	Soccer	No	No	Chen (2013)
	Achievement Goal Orientation (AGT)	Coach goal orientations	Team cohesion***	Over three sports	No	No	Horn, Byrd, Martin, & Young (2012)
		Coach goal orientations	Team cohesion***	Over three sports	No	No	Eys et al. (2013)
		Coach goal orientations	Team cohesion***	Soccer	Yes	Yes	McLaren et al. (2015)
		Coach goal orientations	Team goal orientation***	Handball	No	No	Granero-Gallegos et al. (2017)
		Coach goal orientations	Team goal orientation***	Over three sports	Yes	Yes	Vazou (2010)
		Coach goal orientations	Team goal orientation***	Basketball	Yes	No	Smith, Smoll, & Cumming (2009)
		Coach goal orientations	Prosocial antisocial behaviours*	Hockey	No	No	Davies, Babkes Stellino, Nichols, & Coleman (2016)
		Coach goal orientations	Collective efficacy***	Cheerleading	No	No	Kao & Watson (2014)
		Coach goal orientations	Team satisfaction with coach***	Basketball	No	No	Cumming et al. (2007)
		Coach goal orientations; Caring climate	Sport and team commitment***	Soccer	No	No	Hall, Newland, Newton, Podlog, & Baucom (2017)
		Coach goal orientations	Team relatedness***	Handball	No	No	Sarrazin, Guillet, & Cury (2001)
		Coach goal orientations	Antisocial behaviour*	Over three sports	No	No	Leo, Sánchez-Miguel, Sánchez-Oliva, Amado, & García-Calvo (2015)
		Coach goal orientations	Team moral attitude*	Soccer, Basketball, Rugby	No	No	Ntoumanis, Taylor, & Thøgersen-Ntoumani (2012)

(Continued)

Table 1. (Continued).

Coach Behaviour	Behaviour Subtype	Coach Variable	Group Variable	Sport	Coach Demographics Stated?	Coach Measured Directly?	Citation
		Coach goal orientations	Team cohesion***; Peer created goal orientation***	Soccer	No	No	García-Calvo et al. (2014)
		Coach goal orientations; Perceived justice	Team cohesion***; Identification with team***, Social loafing***	Soccer, basketball, and volleyball	No	No	De Backer, Boen, De Cuyper, Høigaard, & Vande Broek (2015)
		Coach goal orientations	Team norms*; Antisocial behaviour*	Soccer	No	No	Miller, Roberts, & Ommundsen (2005)
		Coach goal orientations	Judgements about moral behaviour*	Soccer	No	No	Stephens & Bredemeier (1996)
	Autonomy-Supportive Coaching	Autonomy supportive coaching; Relatedness support	Team goal orientation***	Volleyball	No	No	Van Puyenbroeck, Stouten, & Vande Broek (2018)
		Autonomy supportive coaching	Team goal orientation***	Basketball, volleyball, and soccer	No	No	Hein & Jõesaar (2015)
		Autonomy supportive coaching	Prosocial antisocial behaviours*	Soccer	No	No	Delrue et al. (2017)
		Autonomy supportive coaching; Controlling behaviours	Prosocial antisocial behaviours*	Over three sports	No	No	Chen, Wang, Wang, Ronkainen, & Huang (2016)
		Autonomy supportive coaching; Controlling behaviours	Prosocial antisocial behaviour*, Moral engagement*	Over three sports	No	No	Hodge & Lonsdale (2011)
		Autonomy supportive coaching; Controlling behaviours	Moral disengagement*	Over three sports	No	No	Chen et al. (2017)
		Autonomy supportive coaching	Team environment***	Not stated	No	No	Noble, Vermillion, & Foster (2016)
		Controlling behaviour; Need thwarting	Team goal orientation***	Volleyball	No	No	Karjane & Hein (2015)
		Controlling interpersonal style	Team cohesion***	Basketball	No	No	Blanchard, Amiot, Perreault, Vallerand, & Provencher (2009)
		Need support; Perceived justice	Team cohesion***; Team identification***	Volleyball and handball	No	No	De Backer et al. (2011)

(Continued)

Table 1. (Continued).

Coach Behaviour	Behaviour Subtype	Coach Variable	Group Variable	Sport	Coach Demographics Stated?	Coach Measured Directly?	Citation
		Autocratic versus Democratic behaviour	Collective efficacy***	Handball	No	No	Høigaard et al. (2015)
	Relationship Oriented Behaviours	Coach-athlete compatibility	Team cohesion***	Basketball and wrestling	No	No	Carron & Chelladuari (1981)
		Coach-athlete relationship	Collective efficacy***	Volleyball	No	No	Lopes Vieira et al. (2015)
		Coach-athlete relationship; Coach leadership behaviours	Collective efficacy***	Soccer	No	No	Hampson & Jowett (2014)
		Coach-athlete relationship	Prosocial antisocial behaviours*; Moral atmosphere*	Over three sports	No	No	Rutten et al. (2011)
		Coach-athlete relationship	Prosocial antisocial behaviours*; Moral atmosphere*; Moral reasoning*	Soccer and Swimming	No	No	Rutten et al. (2007)
		Relational support	Team moral attitude*	Soccer	Yes	No	Rutten et al. (2008)
		Coach-athlete interactions	Team environment***	Basketball	No	Yes	Fisher, Mancini, Hirsch, Proulx, & Starowsky (1982)
		Immediacy behaviours	Team cohesion***	Football and basketball	Yes	No	Turman (2008)
		Trust in coach	Trust in team***	Basketball	No	Yes	Mach & Lvina (2017)
		Satisfaction with coach	Team cohesion***	Over three sports	No	No	Aghazadeh & Kyei (2009)
		Coach behaviour that leads to inclusive environment	Team inclusion***	Over three sports	No	No	Jones, Liu, & Bell (2017)
		Coach behaviours regarding supportiveness and "negative activation"	Role ambiguity*	Over three sports	No	No	Karamousalidis et al. (2010)
	Feedback	Coach feedback	Team goal orientation***	Basketball	No	No	Smith, Fry, Ethington, & Li (2005)
		Coach feedback, preferred coach feedback	Team goal orientation***	Ice Hockey	No	No	Stein, Bloom, & Sabiston (2012)
		Coach feedback, humour use	Team identification***	Soccer	No	No	Høigaard, Haugen, Johansen, & Giske (2017)

(*Continued*)

Table 1. (Continued).

Coach Behaviour	Behaviour Subtype	Coach Variable	Group Variable	Sport	Coach Demographics Stated?	Coach Measured Directly?	Citation
		Coaching report	Teamwork**, Negative group dynamics**, Group process skills**	Over three sports	No	No	Gould & Carson (2010)
		Coach incivility; Race of coach	Team commitment***	Basketball	Yes	No	Cunningham, Miner, & McDonald (2013)
	Modelling	Coach prosocial/antisocial behaviours; Abusive coaching behaviours	Willingness to cheat*; Coach inclusion climate*	Over three sports	No	No	Yukhymenko–Lescroart, Brown, & Paskus (2015)
		Coach prosocial/antisocial behaviours	Prosocial/ antisocial behaviours*	Basketball	No	Yes	Šukys & Mankutė (2012)
		Coach prosocial/antisocial behaviours	Prosocial/ antisocial behaviours*	Basketball	Yes	Yes	Power & Seroczynski (2015)
		Coach behaviours and communication	Prosocial/ antisocial behaviours*	Soccer	Yes	Yes	Allan & Côté (2016)
		Coach sportsmanship behaviour	Prosocial/ antisocial behaviours*	Over three sports	No	No	Bolter & Kipp (2018)
	Setting Norms and Expectations	Coach aggression	Team aggressive behaviours*	Hockey	Yes	Yes	Loughead & Leith (2001)
		Coach mobbing behaviours	Team mobbing in soccer*	Soccer	No	No	Tuncel & Gökçe (2007)
		Coach norm behaviours	Team norms for morality*	Over three sports	No	No	Shields, LaVoi, Bredemeier, & Power (2007)
		Coach acceptance of moral behaviour	Team norms for morality*, Team moral climate*	Soccer	No	No	Guivernau & Duda (2002)
		Perceived justice	Team cohesion***	Futsall and volleyball	No	No	Nikbin et al. (2014)
Intrapersonal	Efficacy	Coaching efficacy	Collective efficacy***	Volleyball	Yes	Yes	Vargas-Tonsing, Warners, & Feltz (2003)
		Coaching efficacy; Gender	Team satisfaction with coach***	Over three sports	Yes	Yes	Myers et al. (2005)
		Coaching efficacy (moral character subscale)	Moral Norms*	Soccer	Yes	Yes	Chow et al. (2009)
	Other	Perceived program quality	Autonomy supportive environment***	Volleyball	Yes	Yes	Bean et al. (2016)

* denotes group variables that relate to team structure; ** denotes group variables that relate to team processes; *** denotes group variables that relate to emergent states

Multidimensional Model of Sport Leadership ($n = 4$; Chelladurai, 2007). In this subsection, 67% of studies ($n = 14$) focused on how different aspects of coaches' leadership styles affected team cohesion. When researchers specifically evaluated coach goal orientation (i.e., task or ego orientation), the majority of these studies also focused on team cohesion. Interestingly, only 18% of these studies ($n = 3$) examined whether a coach's goal orientation affected their team's goal orientation.

Studies that examined coaches' autonomy supportive behaviours, relationship-oriented behaviours, and feedback did not predominantly focus on one type of team-level variable. More generally, researchers examined a variety of team constructs ranging from a team's prosocial and antisocial behaviour (e.g., Delrue et al., 2017) to the level of trust a team had in their coach (e.g., Mach & Lvina, 2017). However, these studies did investigate how different interpersonal aspects of a coach affected the cognitive, motivational, and affective states of the team. Interestingly, only one study examined how coaches' interpersonal behaviours – specifically feedback – affected teamwork (i.e., a team process; Gould & Carson, 2010). The last two types of interpersonal behaviours examined were modelling and setting norms/expectations. With the exception of one study (Nikbin, Hyun, Albooyeh, & Foroughi, 2014), all examined how coach variables affected the subsequent moral behaviour of athletes. In summary, these studies sought to determine whether a team learned their moral behaviour from their coach's behaviour.

Only four articles (5%) explored coaches' intrapersonal behaviours. These studies focused on coaches' self-efficacy regarding their ability to influence their teams ($n = 3$) and their programme's quality ($n = 1$). The remaining two studies (2%) involved professional behaviours. Generally, both studies (i.e., Giske, Rodahl, & Høigaard, 2015; Lefebvre & Cunningham, 1997) explored how coaches' knowledge of their sport(s) and the implementation of this knowledge influenced the functioning of their team.

Methodological trends and reporting practices

The average quality score was 12.3 out of a possible 16 points ($SD = 2.80$; range = 5–16). As a whole, studies scored high on athlete sample size and description of findings. However, many studies ($n = 66$; 80%) omitted important coach demographic information such as coaches' age and years of experience. Those that did include coach demographic data reported on the following: gender ($n = 13$), race ($n = 6$), age ($n = 11$), and years of coaching experience ($n = 11$). Based on the methodologies employed, there was a general preference for cross-sectional approaches ($n = 71$; 86%). Eight studies (10%) were longitudinal in nature and three (4%) used an intervention that objectively measured both coach and team-level outcomes. Despite

the emphasis on coaches' interpersonal behaviours, only twelve of these papers (16%) measured the coaches' behaviours directly; instead, researchers relied on athletes' perceptions of their coaches' behaviours.

Discussion

The purpose of this scoping review was to (a) synthesise existing research that explored the influence of coaches on team dynamics and (b) assess the quality and quantity of this research by examining current methodological and reporting-based practices. Herein, we situate our findings within the sport literature and propose avenues for future direction.

The results demonstrate that a predominant number of studies have focused on how coaches' interpersonal behaviours and the quality of these behaviours, influence team dynamics. More specifically, these studies largely explored how interpersonal behaviours affected emergent states and in particular, team cohesion. Accordingly, this trend emphasises the important role that coaches' interpersonal behaviours appear to play in the overall functioning of a team (e.g., cohesion, team efficacy, commitment) and the environment of the team more generally (e.g., goal orientation, inclusiveness). In addition to emergent states, a second trend involved how interpersonal coach behaviours influenced team structure (e.g., moral norms, roles). In line with social learning theory (Bandura, 1977), researchers have sought to examine the level of influence that the modelling of the coach has on a team's behaviour. As coaches can greatly influence the norms and roles that athletes embody (e.g., Eys et al., 2019), it is critical to take into consideration what behaviours are being modelled, how these behaviours influence their athletes, and furthermore, how coaches communicate expectations to their teams. Notably, less research has been dedicated to understanding how coaches' interpersonal behaviours influence team processes such as communication and teamwork. Thus, future research could benefit from not only exploring a coach's influence on team structure but also, the processes that occur within the team that ultimately, influence the observed emergent states.

A finding worth noting is that despite the prominent focus on interpersonal coach behaviours, the practical application of this knowledge within sport training and coaching programmes is negligible. A systematic review by Lefebvre, Evans, Turnnidge, Gainforth, and Côté (2016) showed that coaching development programs (CDPs) were primarily aimed at improving professional skills and technical knowledge – with very few trying to improve interpersonal and intrapersonal coach behaviours. Moreover, a recent systematic review (Silva et al., 2020) identified only 10 CDPs that targeted intrapersonal coach behaviours despite self-reflection and awareness being key characteristics of effective coaching. The misalignment that exists between researchers and key sport

stakeholders highlights one of the many barriers between knowledge synthesis and knowledge translation (Pope et al., 2015). Further, the minimal focus directed towards interpersonal and intrapersonal coach behaviours potentially highlights the lack of evaluations that are occurring to subsequently render a program as being more or less effective (Silva et al., 2020). In the future, it is critical to involve key stakeholders throughout the research process (e.g., coaches, sport organisations) and ensure accessibility and maximise the impact research has on CDPs and within sport environments more generally (Pope et al., 2015).

The relationship between coaches' intrapersonal behaviours and team dynamics also emerged as a prominent gap in the literature. The four studies that did explore intrapersonal behaviours demonstrated a relationship between the cognitions and beliefs of the coach and emergent states. For example, researchers most commonly focused on how coach perceptions of their own competency impacted a team's collective efficacy (Vargas-Tonsing et al., 2003; Myers, Vargas-Tonsing, & Feltz, 2005), as well as moral norms and behaviours (Chow, Murray, & Feltz, 2009). With regard to program quality, Bean, Forneris, and Brunet (2016) explored the relationship between coaches' and researchers' perceived program quality scores and a supportive environment that fulfilled athletes' basic needs. Interestingly, no studies examined reflexivity – a coach's ability to reflect on their actions and modify future behaviours – which is considered an integral component of effective coaching (Côté & Gilbert, 2009). More specifically, while these studies involved the examination of how coaches' perceptions of their own ability influenced their team, none looked at the style of self-reflection used, the frequency of reflection, nor whether specific forms of reflection were more effective than others. Moreover, while existing research has primarily focused on how a change in coaching behaviour influences team dynamics, research could benefit from extending this line of research by longitudinally examining the self-reflection that induces the behaviour change itself (Cushion, 2018). A targeted focus on coaches' self-reflection strategies could provide a more holistic understanding of how self-reflection influences intrapersonal behaviour change in coaches and in turn, positively influences team dynamics.

Given that only two studies focused on professional behaviours, this is an area of research that warrants greater attention. Giske et al. (2015) emphasised the existence of shared mental models and the positive relationship between role clarity, general training, and opponent-specific mental models. Lefebvre and Cunningham (1977) examined coaches' influences on athletes' perceptions of their performance and their team's level of cohesiveness. Results suggested that coach communication directly impacts athlete performance as well as team cohesion. While there exists anecdotal support for the importance of large amounts of technical instruction such as that done

on John Wooden of the UCLA Bruin's basketball team (Tharp & Gallimore, 1976), limited investigation has occurred using quantitative analysis. Preliminary efforts using observational techniques suggest a potential relationship between professional knowledge/behaviours and observed athlete interactions/outcomes (e.g., Erickson, Côté, Hollenstein, & Deakin, 2011) and thus, could serve as a future research avenue. As no studies in the review focused on coaches' sport specific knowledge or level of technical instruction and its subsequent effects on the moral behaviours of the team, team rules, motivational climate, or team trust – all of which could potentially influence team functioning, this area of research is also worth further exploring.

From a team dynamics perspective, emergent states – especially team cohesion – were most analysed. Whereas emergent states are important for team functioning, they are also by-products of team structures and processes (Eys et al., 2019). For example, enhancing team processes such as cooperation and teamwork can lead to an increase in team cohesion that subsequently, could further improve various team processes over the course of a season (McEwan & Beauchamp, 2014). Thus, by only focusing on the by-product of specific team experiences, there is a gap in our knowledge about potential variables such as team structures or processes that influence the observed emergent states. For example, studies suggest that the narrow focus on cohesion is problematic (e.g., Bruner, Eys, Beauchamp, & Côté, 2013), and that to enhance our breadth of knowledge within the field of team dynamics more generally, it is critical to consider the underlying mechanisms of cohesion such as the potential moderating and mediating variables (Eys & Brawley, 2018). Therefore, when examining team dynamics it is integral to explore the antecedents of emergent states to develop a more complete interpretation of what characteristics and behaviours lead to optimal team functioning.

Regarding the methodologies employed, a preference for a cross-sectional approach was apparent. While these types of studies are often easier and inexpensive to conduct (Prentice-Dunn & Prentice-Dunn, 2012), the predominant focus on emergent states poses a problem. Emergent states are dynamic entities that can evolve over the course of a season (McEwan & Beauchamp, 2014). By only measuring them at one time point, a biased perspective of how a coach is influencing their team's overall functioning could occur (Eys & Brawley, 2018). It would be beneficial when focusing on emergent states to employ longitudinal methods to develop a more accurate depiction of how changes in coach behaviour over the course of the season – as well as in various contexts (e.g., during practice versus a competition setting) – influence team dynamics. In addition, the majority of included studies were questionnaire-based and evaluated coach behaviours from the perspective of their athletes. While it is integral to evaluate athlete

perceptions when determining the success of coaching behaviours on athlete outcomes (Smoll & Smith, 1989), research could also benefit from directly evaluating the coach and their interpersonal behaviours. As retrospective designs potentially elicit recall bias, observational coding could provide a more accurate understanding and interpretation of employed coaching behaviours and their influence on the team (Partington & Cushion, 2013). For example, observational coding has been used to assess coaching behaviour tones (Erickson & Côté, 2015) as well as coach-athlete interactions in relation to athlete success (Erickson et al., 2011). Given that the direct observation of coach behaviours sheds light on how coaches influence individual athletes, observational coding may be a salient avenue to develop a better indication of the different coach behaviours that influence the dynamics of a team.

Finally, 80% of studies ($n = 66$) failed to include coach demographic information (i.e., gender, race, age, years of experience). Journal article reporting standards put forth by Appelbaum et al. (2018) highlight the importance of collecting and reporting major demographic participant information to maximise the understanding, replicability, and credibility of results. Details such as a coach's gender, race, age, and years of experience are just a few examples of demographic information that could dramatically change the interpretation of findings if not reported. For example, Myers et al. (2005) explored the effects of coach efficacy on coach behaviours and variables. Results highlighted that for female coaches, social support was a stronger predictor of efficacy in comparison to male coaches. Furthermore, coach efficacy predicted the behaviours of a coach, a team's level of satisfaction as well as win percentages for male teams but only predicted coaching behaviours for female teams. Thus, to ensure a comprehensive understanding of coaches' influence on team dynamics is obtained, it is critical to enhance the consistency of current demographic reporting practices. Robertson, Hague, Evans, and Martin (2019) highlight various reporting criteria for researchers to consider such as demographic information pertaining to sex, age, race, and ethnicity, type of involvement (e.g., competition level), program type or setting (e.g., sport type), and individual-level characteristics (e.g., tenure). Whereas we acknowledge that such characteristics may not be applicable to every study, these suggestions can serve as a baseline to enhancing reporting practices in future research.

To conclude, how coaches influence team dynamics has been explored through the lens of interpersonal behaviours and more specifically, the influence of these behaviours on teams' emergent states. While interpersonal relationships do play a critical role in the optimal functioning of a team, it is evident that intrapersonal and professional behaviours have been significantly overlooked. Moreover, team dynamic elements aside from emergent states such as team structures and processes have

also been neglected. As such, to further advance the field of team dynamics it is critical to develop a more well-rounded approach when examining how coaches influence teams. It is also pertinent that researchers diversify the methodologies employed as well as adopt consistent reporting practices of key coach demographic information to develop a complete understanding of a coach's influence on their team. Such an approach would aid in developing a more accurate and holistic understanding of the coach-team dynamics relationship to in turn, foster a sport environment conducive to optimal team functioning.

Disclosure statement

No potential conflict of interest was reported by the authors.

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References

Aghazadeh, S. M., & Kyei, K. (2009). A quantitative assessment of factors affecting college sports' team unity. *College Student Journal*, *43*(2), 294–303.

Alfermann, D., Geisler, G., & Okade, Y. (2013). Goal orientation, evaluative fear, and perceived coach behavior among competitive youth swimmers in Germany and Japan. *Psychology of Sport and Exercise*, *14*(3), 307–315.

Allan, V., & Côté, J. (2016). A cross-sectional analysis of coaches' observed emotion-behavior profiles and adolescent athletes' self-reported developmental outcomes. *Journal of Applied Sport Psychology*, *28*(3), 321–337.

Appelbaum, M., Cooper, H., Kline, R. B., Mayo-Wilson, E., Nezu, A. M., & Rao, S. M. (2018). Journal article reporting standards for quantitative research in psychology: The APA publications and communications board task force report. *American Psychologist*, *73*(1), 3.

Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice Hall.

Barić, R., & Bucik, V. (2009). Motivational differences in athletes trained by coaches of different motivational and leadership profiles. *Kinesiology*, *41*(2), 181–194.

Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership* (2 ed.). New York, NY: Psychology Press.

Bean, C., Forneris, T., & Brunet, J. (2016). Investigating discrepancies in program quality related to youth volleyball athletes' needs support. *Psychology of Sport and Exercise*, *26* (154), 163.

Beauchamp, M. R., Bray, S. R., Eys, M. A., & Carron, A. V. (2005). Leadership behaviors andmultidimensional role ambiguity perceptions in team sports. *Small Group Research*, *36*(1), 5–20.

Blanchard, C. M., Amiot, C. E., Perreault, S., Vallerand, R. J., & Provencher, P. (2009). Cohesiveness, coach's interpersonal style and psychological needs: Their effects on self-

determination and athletes' subjective well-being. *Psychology of Sport and Exercise*, *10*(5), 545–551.

Bolter, N. D., & Kipp, L. E. (2018). Sportspersonship coaching behaviours, relatedness need satisfaction, and early adolescent athletes' prosocial and antisocial behaviour. *International Journal of Sport and Exercise Psychology*, *16*(1), 20–35.

Bosselut, G., Heuzé, J. P., Eys, M. A., Fontayne, P., & Sarrazin, P. (2012). Athletes' perceptions of role ambiguity and coaching competency in sport teams: A multilevel analysis. *Journal of Sport and Exercise Psychology*, *34*(3), 345–364.

Bruner, M. W., Eys, M. A., Beauchamp, M. R., & Côté, J. (2013). Examining the origins of team building in sport: A citation network and genealogical approach. *Group Dynamics: Theory, Research, and Practice*, *17*(1), 30.

Callow, N., Smith, M. J., Hardy, L., Arthur, C. A., & Hardy, J. (2009). Measurement of transformational leadership and its relationship with team cohesion and performance level. *Journal of Applied Sport Psychology*, *21*(4), 395–412.

Carron, A. V., & Chelladurai, P. (1981). The dynamics of group cohesion in sport. *Journal of Sport Psychology*, *3*(2), 123–139.

Carron, A. V., & Eys, M. A. (2012). *Group dynamics in sport* (4th ed.).Morgantown, WV: Fitness Information Technology.

Carron, A. V., Spink, K. S., & Prapavessis, H. (1997). Team building and cohesiveness in the sport and exercise setting: Use of indirect interventions. *Journal of Applied Sport Psychology*, *9*(1), 61–72.

Chelladurai, P. (2007). Leadership in sports. In G. Tenenbaum & R. C. Eklund (Eds.), *Handbook of sport psychology* (3rd ed., pp. 113–135).New York, NY: John Wiley and Sons. .

Chen, C-C.. (2013). How does paternalistic style leadership relate to team cohesiveness in soccer coaching?. *Social Behavior and Personality: an international journal*, *41*(1), 83–94.

Chen, Z., Wang, D., Wang, K., & Huang, T. (2017). Coaching style and attitudes toward doping in Chinese athletes: The mediating role of moral disengagement. *International Journal of Sports Science & Coaching*, *12*(3), 312–318.

Chen, Z., Wang, D., Wang, K., Ronkainen, N. J., & Huang, T. (2016). Effects of coaching style on prosocial and antisocial behavior among Chinese athletes. *Social Behavior and Personality: an international journal*, *44*(11), 1889–1900.

Chow, G. M., Murray, K. E., & Feltz, D. L. (2009). Individual, team, and coach predictors of players' likelihood to aggress in youth soccer. *Journal of Sport & Exercise Psychology*, *31*(4), 425–443.

Côté, J., & Gilbert, W. (2009). An integrative definition of coaching effectiveness and expertise. *International Journal of Sports Science & Coaching*, *4*(3), 307–323.

Cumming, S. P., Smoll, F. L., Smith, R. E., & Grossbard, J. R. (2007). Is winning everything? The relative contributions of motivational climate and won-lost percentage in youth sports. *Journal of Applied Sport Psychology*, *19*(3), 322–336.

Cunningham, G. B., Miner, K., & McDonald, J. (2013). Being different and suffering the consequences: The influence of head coach–player racial dissimilarity on experienced incivility. *International Review for the Sociology of Sport*, *48*(6), 689–705.

Cushion, C. J. (2018). Reflection and reflective practice discourses in coaching: A critical analysis. *Sport, Education and Society*, *23*(1), 82–94.

Daudt, H. M., van Mossel, C., & Scott, S. J. (2013). Enhancing the scoping study methodology: A large, inter-professional team's experience with Arksey and O'Malley's framework. *BMC Medical Research Methodology*, *13*(1), 48.

Davies, M. J., Babkes Stellino, M., Nichols, B. A., & Coleman, L. M. (2016). Other-initiated motivational climate and youth hockey players' good and poor sport behaviors. *Journal of Applied Sport Psychology, 28*(1), 78–96

De Backer, M., Boen, F., Ceux, T., De Cuyper, B., Høigaard, R., Callens, F., ... & Broek, G. V. (2011). Do perceived justice and need support of the coach predict team identification and cohesion? Testing their relative importance among top volleyball and handball players in Belgium and Norway. *Psychology of Sport and Exercise, 12*(2), 192–201.

De Backer, M., Boen, F., De Cuyper, B., Høigaard, R., & Vande Broek, G. (2015). A team fares well with a fair coach: Predictors of social loafing in interactive female sport teams. *Scandinavian Journal of Medicine & Science in Sports, 25*(6), 897–908.

Delrue, J., Vansteenkiste, M., Mouratidis, A., Gevaert, K., Broek, G. V., & Haerens, L. (2017). A game-to-game investigation of the relation between need-supportive and need thwarting coaching and moral behavior in soccer. *Psychology of Sport and Exercise, 31*, 1–10.

DiSanti, J. S., & Erickson, K. (2019). Youth sport specialization: A multidisciplinary scoping systematic review. *Journal of Sports Sciences, 37*(18), 2094–2105.

Downs, S. H., & Black, N. (1998). The feasibility of creating a checklist for the assessment of the methodological quality both of randomized and non-randomized studies of health care interventions. *Journal of Epidemiology and Community Health, 52*(6), 377–384.

Eime, R. M., Young, J. A., Harvey, J. T., Charity, M. J., & Payne, W. R. (2013). A systematic review of the psychological and social benefits of participation in sport for children and adolescents: informing development of a conceptual model of health through sport. *International Journal of Behavioral Nutrition and Physical Activity, 10*(1), 98.

Erickson, K., & Côté, J. (2015). The intervention tone of coaches' behaviour: Development of the assessment of coaching tone (ACT) observational coding system. *International Journal of Sports Science & Coaching, 10*(4), 699–716.

Erickson, K., Côté, J., Hollenstein, T., & Deakin, J. (2011). Examining coach–athlete interactions using state space grids: An observational analysis in competitive youth sport. *Psychology of Sport and Exercise, 12*(6), 645–654.

Evans, M. B., Allan, V., Erickson, K., Martin, L. J., Budziszewski, R., & Côté, J. (2017). Are all sport activities equal? A systematic review of how youth psychosocial experiences vary across differing sport activities. *British Journal of Sports Medicine, 51*(3), 169–176.

Evans, M. B., Eys, M. A., & Bruner, M. W. (2012). Seeing the "we" in "me" sports: The need to consider individual sport team environments. *Canadian Psychology/Psychologie Canadienne, 53*(4), 301–308.

Eys, M., Bruner, M. W., & Martin, L. J. (2019). The dynamic group environment in sport and exercise. *Psychology of Sport and Exercise, 42*, 40–47.

Eys, M. A., & Brawley, L. R. (2018). Reflections on cohesion research with sport and exercise groups. *Social and Personality Psychology Compass, 12*(4), 1–15.

Eys, M. A., Jewitt, E., Evans, M. B., Wolf, S., Bruner, M. W., & Loughead, T. M. (2013). Coach-initiated motivational climate and cohesion in youth sport. *Research Quarterly for Exercise and Sport, 84*(3), 373–383.

Fisher, A. C., Mancini, V. H., Hirsch, R. L., Proulx, T. J., & Staurowsky, E. J. (1982). Coach-athlete interactions and team climate. *Journal of Sport Psychology, 4*(4), 388–404.

Fransen, K., Decroos, S., Broek, G. V., & Boen, F. (2016). Leading from the top or leading from within? A comparison between coaches' and athletes' leadership as predictors of team identification, team confidence, and team cohesion. *International Journal of Sports Science & Coaching, 11*(6), 757–771.

Fusaro, P., El Emam, K., & Smith, B. (1997). Evaluating the interrater agreement of process capability ratings. *Proceedings of the Fourth International Software Metrics Symposium.* 2–11.

García-Calvo, T., Leo, F. M., Gonzalez-Ponce, I., Sánchez-Miguel, P. A., Mouratidis, A., & Ntoumanis, N. (2014). Perceived coach-created and peer-created motivational climates and their associations with team cohesion and athlete satisfaction: Evidence from a longitudinal study. *Journal of Sports Sciences*, *32*(18), 1738–1750.

Gardner, D. E., Shields, David L. Light.., Bredemeier, Brenda Jo Light.., & Bostrom, A. (1996). The relationship between perceived coaching behaviors and team cohesion among baseball and softball players. *The Sport Psychologist*, *10*(4), 367–381.

Gillham, E., & Gillham, A. D. (2014). Identifying athletes' sources of competitive state anxiety. *Journal of Sport Behavior*, *37*(1), 37–55.

Giske, R., Rodahl, S. E., & Høigaard, R. (2015). Shared mental task models in elite ice hockey and handball teams: Does it exist and how does the coach intervene to make an impact? *Journal of Applied Sport Psychology*, *27*(1), 20–34.

Gomes, A. R., Lopes, H., & Mata, R. T. (2011). Leadership, cohesion and satisfaction: Differences between swimming and handball Portuguese teams. *Revista Mexicana de Psicología*, *28*(1), 31–42.

Gould, D., & Carson, S. (2010). The relationship between perceived coaching behaviors and developmental benefits of high school sports participation. *Hellenic Journal of Psychology*, *7*(3), 298–314.

Gould, D., Greenleaf, C., Guinan, D., & Chung, Y. (2002). A survey of U.S. olympic coaches: Variables perceived to have influenced athlete performances and coach effectiveness. *The Sport Psychologist*, *16*(3), 229–250.

Granero-Gallegos, A., Gómez-López, M., Rodríguez-Suárez, N., Abraldes, J. A., Alesi, M., & Bianco, A. (2017). Importance of the motivational climate in goal, enjoyment, and the causes of success in handball players. *Frontiers in Psychology, 8*, 2081.

Guivernau, M., & Duda, J. L. (2002). Moral atmosphere and athletic aggressive tendencies in young soccer players. *Journal of Moral Education*, *31*(1), 67–85.

Hall, M. S., Newland, A., Newton, M., Podlog, L., & Baucom, B. R. (2017). Perceptions of the Social Psychological Climate and Sport Commitment in Adolescent Athletes: A Multilevel Analysis. *Journal of Applied Sport Psychology*, *29*(1), 75–87.

Hampson, R., & Jowett, S. (2014). Effects of coach leadership and coach–athlete relationship on collective efficacy. *Scandinavian Journal of Medicine & Science in Sports*, *24*(2), 454–460.

Hein, V., & Jõesaar, H. (2015). How perceived autonomy support from adults and peer motivational climate are related with self-determined motivation among young athletes. *International Journal of Sport and Exercise Psychology*, *13*(3), 193–204.

Heydarinejad, S., & Adman, O. (2010). Relationship between coaching leadership styles and team cohesion in football teams of the Iranian university league. *Studies in Physical Culture and Tourism*, *17*(4), 367–372.

Hodge, K., Henry, G., & Smith, W. (2014). A case study of excellence in elite sport: Motivational climate in a world champion team. *The Sport Psychologist*, *28*(1), 60–74.

Hodge, K., & Lonsdale, C. (2011). Prosocial and Antisocial Behavior in Sport: The Role of Coaching Style, Autonomous vs. Controlled Motivation, and Moral Disengagement. *Journal of Sport and Exercise Psychology*, *33*(4), 527–547.

Høigaard, R., De Cuyper, B., Fransen, K., Boen, F., & Peters, D. (2015). Perceived coach behavior in training and competition predicts collective efficacy in female elite handball players. *International Journal of Sport Psychology*, *46*(4), 321–336.

Horn, T., Byrd, M., Martin, E., & Young, C. (2012). Perceived motivational climate and team cohesion in adolescent athletes. *Sport Science Review*, *21*(3-4), 25.

Jones, W. A., Liu, K., & Bell, L. F. (2017). Examining the inclusiveness of intercollegiate team climate and its influence on student-athletes' cross-racial interactions. *Journal of College Student Development*, *58*(4), 564–582.

Jowett, S., & Chaundy, V. (2004). An investigation into the impact of coach leadership and coach-athlete relationship on group cohesion. *Group Dynamics: Theory, Research, and Practice*, *8*(4), 302.

Kao, S. F., & Watson, J. C. (2017). A multilevel study of transformational leadership and motivational climates in university basketball teams. *International Journal of Sport Psychology*, *48*(1), 50–69.

Kao, S-F., Hsieh, M-H.., & Lee, P-L.. (2017). Coaching competency and trust in coach in sport teams. *International Journal of Sports Science & Coaching*, *12*(3), 319–327.

Kao, S-F.., & Watson, J. C. (2014). The multilevel effects of motivational climate on the collective efficacy in a cheerleading team. *International Journal of Sports Science & Coaching*, *9*(4), 593–603.

Karamousalidis, G., Galazoulas, C., Mousaridou, E., Bebetsos, E., Grammatikopoulou, M., & Alexaki, A. (2010). Relation of coaching behavior and role ambiguity. *Journal of Physical Education & Sport/Citius Altius Fortius*, *28*(3), 45–50.

Karjane, K., & Hein, V. (2015). Controlling coaches' behaviour, psychological need thwarting, motivation and results of the volleyball competitions. *Acta Kinesiologiae Universitatis Tartuensis*, *21*(1 0), 51–60.

Keathley, K., Himelein, M. J., & Srigley, G. (2013). Youth soccer participation and withdrawal: Gender similarities and differences. *Journal of Sport Behavior*, *36*, 2.

Kitchenham, B. (2004). Procedures for performing systematic reviews. *Keele, UK, Keele University*, *33*, 1–26.

LaFountaine, J., & Kamphoff, C. S. (2016). Coaching boys' high school teams: Female coaches' experiences and perceptions. *International Journal of Sports Science & Coaching*, *11*(1), 27–38.

Lee, Y., Kim, S-H.., & Joon-Ho, K.. (2013). Coach leadership effect on elite handball players' psychological empowerment and organizational citizenship behavior. *International Journal of Sports Science & Coaching*, *8*(2), 327–342.

Lefebvre, J. S., Evans, M. B., Turnnidge, J., Gainforth, H. L., & Côté, J. (2016). Describing and classifying coach development programmes: A synthesis of empirical research and applied practice. *International Journal of Sports Science & Coaching*, *11*(6), 887–899.

Lefebvre, L. M., & Cunningham, J. D. (1977). Successful football team: Effects of coaching and team cohesiveness./La reussite de l' equipe de football. Effets de l'entrainement et de la cohesion de l'equipe. *International Journal of Sport Psychology*, *8*(1), 29–41.

Lefebvre, L. M., & Cunningham, J. D. (1997). Successful football team: effects of coaching and team cohesiveness. / La reussite de l' equipe de football. Effets de l'entrainement et de la cohesion de l'equipe. *International Journal of Sport Psychology*, *8*(1), 29–41.

Leo, M. F., A Sánchez-Miguel, P., Sánchez-Oliva, D., Amado, D., & García-Calvo, T. (2015). Motivational climate created by other significant actors and antisocial behaviors in youth sport. *Kinesiology*: *International Journal of Fundamental and Applied Kinesiology*, *47*(1), 3–10.

Lopez Vieira, J. L., Ferreira, L., Cheuczuk, F., Flores, P. P., Vissoc, J. R. N., Rocha, F. F. D., ... & Vieira, L. F. (2015). Impact of coach-athlete relationship on the collective efficacy of young volleyball players. *Revista Brasileira de Cineantropometria & Desempenho Humano, 17*(6), 650–660.

Loughead, T. M., & Leith, L. M. (2001). Hockey coaches' and players' perceptions of aggression and the aggressive behavior of players. *Journal of Sport Behavior*, *24*(4), 394–407.

Mach, M., & Lvina, E. (2017). When trust in the leader matters: The moderated-mediation model of team performance and trust. *Journal of Applied Sport Psychology*, *29*(2), 134–149.

Martin, L. J., Evans, M. B., & Spink, K. S. (2016). Coach perspectives of "groups within the group": An analysis of subgroups and cliques in sport. *Sport, Exercise, and Performance Psychology*, *5*(1), 52.

McEwan, D., & Beauchamp, M. R. (2014). Teamwork in sport: A theoretical and integrative review. *International Review of Sport and Exercise Psychology*, *7*(1), 229–250.

McGrath, J. E. (1964). *Social psychology: A brief introduction*. New York, NY: Holt, Rinehart & Winston.

McLaren, C. D., Eys, M. A., & Murray, R. A. (2015). A coach-initiated motivational climate intervention and athletes' perceptions of group cohesion in youth sport. *Sport, Exercise, and Performance Psychology*, *4*(2), 113–126.

Miller, B. W., Roberts, G. C., & Ommundsen, Y. (2005). Effect of perceived motivational climate on moral functioning, team moral atmosphere perceptions, and the legitimacy of intentionally injurious acts among competitive youth football players. *Psychology of Sport and Exercise*, *6*(4), 461–477.

Murray, N. P. (2006). The differential effect of team cohesion and leadership behavior in high school sports. *Individual Differences Research*, *4*(4), 216–225.

Myers, N. D., Vargas-Tonsing, T. M., & Feltz, D. L. (2005). Coaching efficacy in intercollegiate coaches: Sources, coaching behavior, and team variables. *Psychology of Sport and Exercise*, *6*(1), 129–143.

Nikbin, D., Hyun, S. S., Albooyeh, A., & Foroughi, B. (2014). Effects of perceived justice for coaches on athletes' satisfaction, commitment, effort, and team unity. *International Journal of Sport Psychology*, *45*(2), 100–120.

Noble, J., Vermillion, M., & Foster, K. (2016). Coaching environments and student-athletes: Perceptions of support, climate and autonomy. *The Sport Journal*, *19*.

Ntoumanis, N., Taylor, I. M., & Thøgersen-Ntoumani, C. (2012). A longitudinal examination of coach and peer motivational climates in youth sport: Implications for moral attitudes, well-being, and behavioral investment. *Developmental Psychology*, *48*(1), 213–223.

Partington, M., & Cushion, C. (2013). An investigation of the practice activities and coaching behaviors of professional top-level youth soccer coaches. *Scandinavian Journal of Medicine & Science in Sports*, *23*(3), 374–382.

Pham, M. T., Rajić, A., Greig, J. D., Sargeant, J. M., Papadopoulos, A., & McEwen, S. A. (2014). A scoping review of scoping reviews: Advancing the approach and enhancing the consistency. *Research Synthesis Methods*, *5*(4), 371–385.

Pope, J. P., Stewart, N. W., Law, B., Hall, C. R., Gregg, M. J., & Robertson, R. (2015). Knowledge translation of sport psychology to coaches: Coaches' use of online resources. *International Journal of Sports Science & Coaching*, *10*(6), 1055–1070.

Power, F. C., & Seroczynski, A. D. (2015). Promoting character development through coach education. *Journal of Character Education*, *11*(2), 87–107.

Prentice-Dunn, H., & Prentice-Dunn, S. (2012). Physical activity, sedentary behavior, and childhood obesity: A review of cross-sectional studies. *Psychology, Health & Medicine*, *17*(3), 255–273.

Price, M. S., & Weiss, M. R. (2013). Relationships among Coach Leadership, Peer Leadership, and Adolescent Athletes' Psychosocial and Team Outcomes: A Test of

Transformational Leadership Theory. *Journal of Applied Sport Psychology*, *25*(2), 265–279.

Robertson, M., Hague, C., Evans, M. B., & Martin, L. J. (2019). Do participant reporting practices in youth sport research adequately represent the diversity of sport contexts? *Psychology of Sport and Exercise*, *45*, 101559.

Rutten, E. A., Deković, M., Stams, G. J. J., Schuengel, C., Hoeksma, J. B., & Biesta, G. J. (2008). On-and off-field antisocial and prosocial behavior in adolescent soccer players: A multilevel study. *Journal of Adolescence*, *31*(3), 371–387.

Rutten, E. A., Schuengel, C., Dirks, E., Stams, Geert Jan J. M.., Biesta, Gert J. J.., & Hoeksma, J. B. (2011). Predictors of antisocial and prosocial behavior in an adolescent sports context. *Social Development*, *20*(2), 294–315.

Rutten, E. A., Stams, Geert Jan J. M.., Biesta, Gert J. J.., Schuengel, C., Dirks, E., & Hoeksma, J. B. (2007). The contribution of organized youth sport to antisocial and prosocial behavior in adolescent athletes. *Journal of Youth and Adolescence*, *36*(3), 255–264.

Sarrazin, P., Guillet, E., & Cury, F. (2001). The effect of coach's task- and ego-involving climate on the changes in perceived competence, relatedness, and autonomy among girl handballers. *European Journal of Sport Science*, *1*(4), 1–9.

Shields, D. L., LaVoi, N. M., Bredemeier, B. L., & Power, F. C. (2007). Predictors of Poor Sportspersonship in Youth Sports: Personal Attitudes and Social Influences. *Journal of Sport and Exercise Psychology*, *29*(6), 747–762.

Shields, D. L. L., Gardner, D. E., Bredemeier, B. J. L., & Bostro, A. (1997). The relationship between leadership behaviors and group cohesion in team sports. *The Journal of Psychology*, *131*(2), 196–210.

Shields, David Lyle Light.., Gardner, D. E., Bredemeier, Brenda Jo Light.., & Bostrom, A. (1995). Leadership, cohesion, and team norms regarding cheating and aggression. *Sociology of Sport Journal*, *12*(3), 324–336.

Silva, E. J. D., Evans, M. B., Lefebvre, J. S., Allan, V., Côté, J., & Palmeira, A. (2020). A systematic review of intrapersonal coach development programs: Examining the development and evaluation of programs to elicit coach reflection. *International Journal of Sports Science & Coaching*, 1–20. doi:10.1177/1747954120943508

Smith, R. E., Smoll, F. L., & Cumming, S. P. (2009). Motivational climate and changes in young athletes' achievement goal orientations. *Motivation and Emotion*, *33*(2), 173–183.

Smith, S. L., Fry, M. D., Ethington, C. A., & Li, Y. (2005). The effect of female athletes' perceptions of their coaches' behaviors on their perceptions of the motivational climate. *Journal of Applied Sport Psychology*, *17*(2), 170–177.

Smoll, F. L., & Smith, R. E. (1989). Leadership behaviors in sport: A theoretical model and research paradigm. *Journal of Applied Social Psychology*, *19*(18,Pt 2), 1522–1551.

Staples, M., & Niazi, M. (2007). Experiences using systematic review guidelines. *Journal of Systems and Software*, *80*(9), 1425–1437.

Stephens, D. E., & Bredemeier, Brenda Jo Light.. (1996). Moral Atmosphere and Judgments about Aggression in Girls' Soccer: Relationships among Moral and Motivational Variables. *Journal of Sport and Exercise Psychology*, *18*(2), 158–173.

Tharp, R. G., & Gallimore, R. (1976). What a coach can teach a teacher. *Psychology Today*, *9*(8), 75–78.

Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., . . . Hempel, S. (2018). PRISMA extension for scoping reviews (PRISMA-ScR): Checklist and explanation. *Annals of Internal Medicine*, *169*(7), 467–473.

Tuncel, S. D., & Gökçe, A. T. (2007). Mobbing in soccer. *International Journal of Physical Education, 44*(4), 153.

Turman, P. D. (2008). Coaches' immediacy behaviors as predictors of athletes' perceptions of satisfaction and team cohesion. *Western Journal of Communication*, 72(2), 162–179.

Van Puyenbroeck, S., Stouten, J., & Vande Broek, G. (2018). Coaching is teamwork! The role of need-supportive coaching and the motivational climate in stimulating proactivity in volleyball teams. *Scandinavian Journal of Medicine & Science in Sports*, 28(1), 319–328.

Vargas-Tonsing, T. M., Warners, A. L., & Feltz, D. L. (2003). The predictability of coaching efficacy on team efficacy and player efficacy in volleyball. *Journal of Sport Behavior*, 26(4), 396–407.

Vazou, S. (2010). Variations in the perceptions of peer and coach motivational climate. *Research Quarterly for Exercise and Sport*, 81(2), 199–211.

Vella, S. A., Oades, L. G., & Crowe, T. P. (2013). The relationship between coach leadership, the coach–athlete relationship, team success, and the positive developmental experiences of adolescent soccer players. *Physical Education and Sport Pedagogy*, 18(5), 549–561.

Westre, K. R., & Weiss, M. R. (1991). The relationship between perceived coaching behaviors and group cohesion in high school football teams. *The Sport Psychologist*, 5(1), 41–54.

Yukhymenko-Lescroart, M. A., Brown, M. E., & Paskus, T. S. (2015). The relationship between ethical and abusive coaching behaviors and student-athlete well-being. Sport, Exercise, and *Performance Psychology, 4*(1), 36–49.

Yusof, A., & Vasuthevan, M. (2007). Group cohesion of Malaysian national junior athletes. Journal-International Council For Health Physical Education Recreation Sport and Dance, *43*(1), 12–16.

Šukys, S., & Mankutė, G. (2012). Manifestation of prosocial and antisocial behaviour in a youth girls basketball match. *Baltic Journal of Sport and Health Sciences*, 4(87), 72–79.