



## Prosocial and antisocial behaviour in sport

Maria Kavussanu & Ali Al-Yaaribi

To cite this article: Maria Kavussanu & Ali Al-Yaaribi (2019): Prosocial and antisocial behaviour in sport, *International Journal of Sport and Exercise Psychology*, DOI: [10.1080/1612197X.2019.1674681](https://doi.org/10.1080/1612197X.2019.1674681)

To link to this article: <https://doi.org/10.1080/1612197X.2019.1674681>



© 2019 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group



Published online: 25 Oct 2019.



Submit your article to this journal [↗](#)



Article views: 3034



View related articles [↗](#)



View Crossmark data [↗](#)

## REVIEW

### Prosocial and antisocial behaviour in sport

Maria Kavussanu<sup>a\*</sup> and Ali Al-Yaaribi<sup>b</sup>

<sup>a</sup>*School of Sport, Exercise & Rehabilitation Sciences, University of Birmingham, Birmingham, UK;*

<sup>b</sup>*Department of Physical Education, Sultan Qaboos University, Muscat, Oman*

*(Received 15 June 2018; accepted 5 September 2019)*

Research examining prosocial and antisocial behaviour in sport has proliferated in the past ten years. Prosocial and antisocial behaviours are behaviours that can have positive or negative consequences for the recipient's psychological or physical welfare. These acts are common in sport and can be directed toward teammates and opponents. As well as potentially affecting one's welfare, these behaviours can have a range of other consequences for the recipient. In this article, we review studies that have investigated these behaviours. We start by presenting the theoretical and empirical foundations of this scale. Then, we discuss research on predictors of prosocial and antisocial sport behaviour. Next, we consider the concept of bracketed morality as applied to prosocial and antisocial behaviour. Finally, we review studies on the consequences of prosocial and antisocial behaviour for the recipient. We conclude with some critical considerations and directions for future research.

**Keywords:** moral behaviour; moral disengagement; moral identity; team norms; bracketed morality

Sport by nature is a social context that provides many opportunities to engage in behaviours that can have positive consequences for others (Kavussanu, 2012). Many sport enthusiasts would remember Abbey D'Agostino helping Nikki Hamblin off the ground in a qualifying race at the Rio Olympics, and tennis player Jack Sock advising his opponent to challenge an umpire's (mistaken) call in the Hopman Cup, a few years ago. At the same time, sport offers numerous opportunities for behaviours that can have negative consequences for others, such as cheating and aggression (Kavussanu & Stanger, 2017). Some examples are the Australian cricketer Cameron Bancroft tampering the ball during a match to give his team an unfair advantage in 2018, and several incidents of verbal abuse of opponents by professional footballer Louis Suarez. Thus, in sport we witness both prosocial and antisocial acts. Given the consequences they can have for the recipient, these behaviours are important to understand. We use the term "moral behaviour" to refer to a broad range of intentional acts that could result in positive or negative consequences for others' psychological or physical welfare (Kavussanu, 2012).

In the last decade, numerous studies have investigated moral behaviour in sport. This has become possible through the development of the Prosocial and Antisocial Behaviour in Sport scale (PABSS; Kavussanu & Boardley, 2009). In this article, we discuss research examining

---

\*Corresponding author. Email: [M.Kavussanu@bham.ac.uk](mailto:M.Kavussanu@bham.ac.uk)

prosocial and antisocial behaviour using this scale.<sup>1</sup> We start by presenting the theoretical and empirical foundations of the PABSS and discuss a recent meta-analysis of relevant studies. Then, we provide an overview of research on predictors of prosocial behaviour in sport followed by predictors of antisocial sport behaviour. Next, we consider the concept of bracketed morality as applied to moral behaviour. Finally, we discuss research on consequences of teammate behaviour for the recipient. We conclude with some critical reflections and directions for future research. Although other reviews on moral behaviour have been conducted recently (e.g. Boardley, 2019; Kavussanu & Stanger, 2017), this is the first article that focuses exclusively on research that has used the PABSS and provides a comprehensive treatment of the topic of consequences of teammate behaviour for the recipient. In addition, we have included a summary of the findings of the main studies conducted in the past ten years (see [Appendix](#)).

### Prosocial and antisocial behaviour in sport: the PABSS

Few would question that the cornerstone of morality is action. Thoughts and emotions are important in influencing behaviour, but ultimately it is behaviour that matters (Blasi, 1980; Bredemeier & Shields, 1998; Kavussanu & Boardley, 2009). Moreover, behaviour can have positive or negative consequences for others, that is, morality can be proactive or inhibitive (Bandura, 1999): Proactive morality is manifested in the power to behave humanely (or do good things), whereas inhibitive morality is expressed in the power to refrain from behaving inhumanely (or avoiding doing bad things). In sport research, the terms *prosocial* and *antisocial* behaviour have been used to refer to proactive and inhibitive morality, respectively (Kavussanu, Seal, & Phillips, 2006; Sage, Kavussanu, & Duda, 2006), with low levels of antisocial behaviour reflecting inhibitive morality. Prosocial behaviour has been defined as voluntary behaviour intended to help or benefit another individual (Eisenberg & Fabes, 1998), and examples in sport are helping a player off the floor and congratulating a teammate. Antisocial behaviour is behaviour intended to harm or disadvantage another individual (Kavussanu et al., 2006; Sage et al., 2006), for instance, trying to injure an opponent and faking an injury.

Prior to the development of the PABSS, attempts were made to measure prosocial and antisocial behaviour in soccer players (e.g. Kavussanu, 2006; Sage & Kavussanu, 2007). Observational and self-report studies (e.g. Kavussanu et al., 2006; Kavussanu, Stamp, Slade, & Ring, 2009; Sage & Kavussanu, 2007) suggested that prosocial and antisocial behaviours can be directed not only toward opponents but also toward teammates. For example, Kavussanu et al. (2009) found that a large percentage of prosocial behaviours observed during soccer matches, such as congratulating another player were directed toward teammates. This finding makes sense, if we consider that soccer players compete in teams against other teams, and congratulating one's teammates for good performance, may be a natural expression of one's satisfaction about collective achievement. This observational research also revealed that most of the behaviours taking place during soccer matches were antisocial behaviours toward opponents.

Building upon this work, Kavussanu and Boardley (2009) identified several different prosocial and antisocial behaviours toward opponents and teammates. They developed the PABSS, which consists of four subscales measuring these behaviours (see [Table 1](#)). Based on a large sample of team sport athletes from 103 teams, their research showed that the specific behaviours directed toward opponents and teammates vary depending on the recipient. Specifically, the prosocial opponent behaviours are helping behaviours (e.g. helping an opponent off the floor, helping an injured opponent), possibly with an altruistic motive. In contrast, the prosocial teammate behaviours (e.g. congratulating and encouraging a teammate) are behaviours that could have achievement-related consequences, thus there may be a personal benefit in engaging in these behaviours.

Table 1. Behaviours assessed with the prosocial and antisocial behaviour in sport scale.

Prosocial Behaviour	Antisocial Behaviour
<i>Toward Teammates</i>	
1. Encourage a teammate	1. Verbally abuse a teammate
2. Congratulate a teammate for good play	2. Swear at a teammate
3. Give positive feedback to a teammate	3. Argue with a teammate
4. Give constructive feedback to a teammate	4. Criticise a teammate
	5. Show frustration at a teammate's poor play
<i>Toward Opponents</i>	
1. Help an injured opponent	1. Try to injure an opponent
2. Ask to stop play when an opponent is injured	2. Try to wind up an opponent
3. Help an opponent off the floor	3. Deliberately foul an opponent
	4. Intentionally distract an opponent
	5. Retaliate after a bad foul
	6. Intentionally break the rules of the game
	7. Physically intimidate an opponent
	8. Criticise an opponent

Note: In some recent studies (e.g. Al-Yaaribi & Kavussanu, 2018) the item “support a teammate” has been added to the prosocial teammate behaviour subscale.

For example, by encouraging a teammate after a mistake, one could help the teammate perform better, which would in turn benefit one's team.

A range of antisocial behaviours toward teammates and opponents were also identified (Kavussanu & Boardley, 2009). As can be seen in Table 1, these behaviours are distinct from each other. All teammate behaviours are verbal behaviours (e.g. arguing with a teammate), reflecting the nature of team sport, whereby in the pursuit of team goals, frustration is commonly expressed and disagreements between teammates take place. In contrast, the opponent behaviours are verbal and physical. Moreover, some of the opponent behaviours (e.g. intentionally distracting an opponent) can be considered gamesmanship (i.e. behaviour that is within the rules of sport but violates its spirit), some (e.g. trying to injure an opponent) are aggressive behaviours, and others (e.g. intentionally breaking the rules of the game) represent unfair play. Thus, the antisocial opponent behaviours measured by the PABSS are more diverse than their respective teammate acts.

Numerous studies have used the PABSS in the last ten years. A recent meta-analysis of some of this work examined the relationship between the two sets of behaviours (Graupensperger, Jensen, & Evans, 2018). Across 34 studies, prosocial behaviours toward teammates and opponents were moderately related to each other ( $\rho = .42$ , 95% CI [.40–.45]), whereas across 39 studies, the two antisocial behaviours had a strong relationship with each other ( $\rho = .70$ , 95% CI [.68, .71]). These findings suggest that the two antisocial behaviours are more similar to each other, whereas the two prosocial behaviours are more distinct from each other. In other research (e.g. Kavussanu & Boardley, 2009), fairly weak associations between prosocial and antisocial behaviours have emerged, indicating that these behaviours are relatively independent from each other, and one can act in both a prosocial and an antisocial manner toward both teammates and opponents. Therefore, both prosocial and antisocial behaviours need to be examined in order to gain a better appreciation of the social-moral conduct that takes place in sport.

### Understanding prosocial sport behaviour

In this section, we review research that has investigated predictors of prosocial sport behaviour. We focus on those variables that have received most research attention. Specifically, we discuss

research that has examined task orientation, mastery motivational climate, autonomous motivation, autonomy supportive coaching style, sportsmanship coaching behaviour, and descriptive norms, as they relate to prosocial behaviour toward teammates and opponents.

The degree to which one acts prosocially toward other athletes in sport, largely depends on their achievement goal orientation. Two major achievement goals operate in sport and reflect the criteria one tends to use to define success and evaluate competence (Nicholls, 1989): task and ego orientation. Individuals high in task orientation tend to feel successful when they try hard and see improvement to result from their hard work. In contrast, those high in ego orientation tend to define success in normative terms and feel successful when they show superiority over others. Task orientation has been positively associated with prosocial behaviour toward both teammates and opponents (Kavussanu & Boardley, 2009; Kavussanu, Stanger, & Boardley, 2013) with a stronger link evidenced with prosocial teammate behaviour.

Similar stronger links with teammate rather than opponent prosocial behaviour, have been revealed for the situational manifestation of achievement goals: the motivational climate of the team. This involves the criteria of success prevalent in the achievement context, and communicated to athletes by significant others such as coaches (Ames, 1992). These individuals determine the evaluation procedures and distribution of rewards, and, via their behaviour, convey to athletes what is valued in that context (Ames, 1992). For example, coaches can create a mastery motivational climate – where personal progress is valued – by rewarding individual effort and improvement and creating opportunities for everyone to succeed, or a performance climate, where normative success is valued. Mastery motivational climate positively predicted prosocial behaviour toward teammates, but not opponents, in a study of field hockey and netball players (e.g. Boardley & Kavussanu, 2009). In a second study of young team sport players, mastery climate predicted prosocial teammate behaviour both directly and indirectly via perspective taking and social support (Stanger, Backhouse, Jennings, & McKenna, 2018). Indirect – but not direct – relationships were also evident between mastery climate and prosocial opponent behaviour. In both of these studies, the links between mastery climate and prosocial behaviour were stronger when behaviour was directed toward teammates rather than toward opponents.

Autonomous motivation and autonomy-supportive climate or coaching style are also conducive to prosocial behaviour. Autonomous motivation is evident when athletes choose to take part in sport because they value or enjoy the activity; the sport context is autonomy supportive when coaches provide athletes with choices, acknowledge their feelings, and offer opportunities to demonstrate initiative and independent problem solving (Deci & Ryan, 1985; Hodge & Lonsdale, 2011). Perceptions of an autonomy supportive coaching style positively predicted autonomous motivation, which in turn positively predicted prosocial behaviour toward teammates – but not opponents – in young athletes (Hodge & Lonsdale, 2011), while autonomous motivation was strongly and positively associated with prosocial behaviour toward both teammates and opponents in Masters athletes (Sheehy & Hodge, 2015). In other research, coach autonomy support positively predicted prosocial behaviour toward teammates indirectly via the satisfaction of relatedness and competence needs (Hodge & Gucciardi, 2015). The satisfaction of these psychological needs is the pathway through which autonomy support exerts its influence on desirable outcomes (Deci & Ryan, 1985).

In an important intervention study, Cheon, Reeve, and Ntoumanis (2018) implemented an Autonomy-Supportive Intervention Program (ASIP) to help physical education (PE) teachers become more autonomy-supportive and less controlling toward their students and examined whether changes in teaching styles influence students' behaviours during PE. Teachers who took part in the programme increased their autonomy support, and their students experienced greater need satisfaction and engaged in more prosocial behaviours. Increases in prosocial behaviour over time were attributed mostly to gains in need satisfaction.

A construct conceptually similar to prosocial and antisocial behaviour is good and poor “sportspersonship” also known as sportsmanship<sup>2</sup> (Bolter & Weiss, 2012). Bolter and Weiss (2013) identified six behaviours through which coaches can influence athletes’ sportspersonship: Setting expectations, reinforcing, teaching, and modelling good sportsmanship, punishing poor sportsmanship, and prioritising winning over good sportsmanship. In a study of middle-school boys and girls (Bolter & Kipp, 2018), setting expectations, reinforcing, teaching, and modelling good sportsmanship in team sport were positively associated with prosocial behaviour toward teammates and opponents, with stronger relationships evident with teammate behaviours. In addition, modelling good sportspersonship positively predicted relatedness with teammates, which in turn positively predicted prosocial behaviour toward both teammates and opponents. However, only the indirect relationship of modelling good sportsmanship with prosocial teammate behaviour via teammate relatedness was significant (Bolter & Kipp, 2018).

More recent research has identified variables that are linked *only* to teammate behaviour, for example descriptive norms and social identity (e.g. Bruner et al., 2018). Descriptive norms refer to the degree to which one’s teammates act prosocially (or antisocially) toward other members of their team. In a study of competitive youth ice hockey players, perceived prosocial teammate behaviour during the season positively predicted self-reported prosocial behaviour toward one’s teammates (Bruner et al., 2018). In another study, Benson and Bruner (2018) asked adolescent hockey players to complete daily diaries of prosocial and antisocial behaviour from their teammates as well as their own behaviour over a 10-day period. Athletes were asked if they had personally experienced any of the behaviours from their teammates on that day. The way athletes interacted with their teammates varied across time, and this variation was linked to their daily experiences of teammate behaviour; that is, daily experiences of prosocial behaviour from one’s teammates positively predicted daily self-reported prosocial behaviour (Benson & Bruner, 2018). An interesting interaction effect also emerged, with this positive relationship being stronger when daily experiences of antisocial teammate behaviour were less frequent. However, the relationship was positive and significant even at higher levels of teammate antisocial behaviour. Thus, experiencing prosocial behaviour from one’s teammates is likely to increase one’s own prosocial behaviour, even if one experiences antisocial behaviour from teammates. However, the largest benefits would be conferred when antisocial teammate behaviour is also less frequent (e.g. Benson & Bruner, 2018).

Another predictor of prosocial behaviour is social identity, which refers to “that part of an individual’s self-concept, which derives from his/her knowledge of his/her membership of a social group (or groups), together with the value and emotional significance attached to that membership” (Tajfel, 1981, p. 255). In sport studies (e.g. Benson & Bruner, 2018), social identity has been measured by asking athletes to indicate how they feel about being part of their team, using the Social Identity in Sport Questionnaire, which captures three aspects of this construct: cognitive centrality (e.g. I often think about the fact that I am a team member), in-group ties (e.g. I feel strong ties to other members of this team), and in-group affect (e.g. I am glad to be a member of this team). In their study of high school sport teams, Bruner, Boardley, and Côté (2014) found that ingroup ties and ingroup affect positively predicted prosocial teammate behaviour, but there was no relationship with prosocial opponent behaviour. Thus, athletes who feel strong ties and are glad to be a member of their team, are more likely to act prosocially toward their teammates. Ingroup ties and cognitive centrality positively predicted self-reported prosocial teammate behaviour, and this relationship was stronger when perceived norms for prosocial behaviour were high in ice hockey players (Bruner et al., 2018); however, ingroup affect positively predicted prosocial behaviour *only* at average and high levels of perceived norms.

In sum, much of the work conducted to date shows that prosocial behaviours toward teammates and opponents are distinct. Task orientation, mastery climate, autonomous motivation, autonomy



supportive coaching style, and social identity, evidence stronger relationships with prosocial behaviour toward teammates than opponents. In contrast, sportsmanship coaching behaviours are linked similarly to the teammate and opponent prosocial acts. Finally, the degree to which one acts prosocially toward one's teammates may influence the prosocial behaviour of these teammates.

### **Understanding antisocial behaviour in sport**

A great deal of research has aimed to identify the factors that facilitate or inhibit antisocial behaviour in sport (see Kavussanu & Stanger, 2017). In this section, we focus on those variables that have evidenced the strongest and most consistent associations with this behaviour. Variables that are likely to facilitate antisocial behaviour (i.e. positive predictors) are discussed first, followed by variables that are likely to inhibit such behaviour (i.e. negative predictors).

#### ***Positive predictors of antisocial behaviour***

Perhaps the construct most consistently associated with antisocial behaviour in the context of sport is moral disengagement; this refers to a set of psychological mechanisms that people use to disengage transgressive behaviour from the self-sanctions that typically keep behaviour in line with one's moral standards (Bandura, 1991, 1999). These mechanisms operate by cognitively restructuring transgressive behaviour, minimising or obscuring one's role in the harm one causes, disregarding or distorting the detrimental consequences of one's behaviour, and dehumanising or blaming the perpetrator's victim (Bandura, 1991, 1999). For example, antisocial behaviour could be justified as done for a higher social or moral purpose (moral justification); athletes may disguise antisocial behaviour by referring to it with a different name (euphemistic labelling); they could compare antisocial behaviour with more harmful acts, making bad behaviour appear relatively benign (advantageous comparison); displace responsibility for action on the coach, manager, or support staff (displacement of responsibility); downplay the harm they cause (distortion of consequences); and attribute blame for their behaviour onto their victim (attribution of blame). Numerous studies have consistently revealed strong positive relationships between moral disengagement and antisocial behaviour, particularly toward opponents (e.g. Boardley & Kavussanu, 2009, 2010; Hodge & Gucciardi, 2015; Hodge & Lonsdale, 2011; Stanger et al., 2018). As discussed below, some of these studies have also found support that moral disengagement mediates the effects of other variables on antisocial behaviour (e.g. Boardley & Kavussanu, 2009, 2010; Hodge & Gucciardi, 2015; Stanger et al., 2018).

The way one approaches sport has implications for one's behaviour. One of the variables that shape this approach is goal orientation (Nicholls, 1989). Athletes high in ego goal orientation need to win in order to feel competent, and this may facilitate antisocial behaviour. Boardley and Kavussanu (2010) found that, in male soccer players, ego orientation positively predicted antisocial behaviour toward opponents and teammates indirectly via moral disengagement, and this relationship was stronger for opponent behaviour; ego orientation had an additional direct effect on antisocial opponent behaviour. In another study (Kavussanu, Stanger, et al., 2013) ego orientation was positively related to antisocial opponent but not teammate behaviour. The stronger link of ego orientation with opponent compared to teammate antisocial behaviour makes sense, if one considers that athletes high in ego orientation typically strive to outperform their opponents rather than their teammates when taking part in sport, and antisocial behaviour could be the outcome of these efforts.

The criteria of success reflected in ego goal orientation are also evident in the team performance motivational climate (Ames, 1992). Performance motivational climate is created by significant others such as coaches, who convey to the athletes that normative ability

and doing better than others are valued within the team. In this type of climate, coaches reward only the top athletes and give normative feedback, thus communicating to their athletes that they value winning over personal progress (Ames, 1992). Performance motivational climate was a direct positive predictor of antisocial behaviour toward teammates but not opponents in adult field hockey and netball players (Boardley & Kavussanu, 2009), while in young team-sport athletes, this climate predicted antisocial behaviour toward teammates both directly and indirectly via moral disengagement (Stanger et al., 2018).

A more explicit focus on winning has been the feature of a coaching behaviour examined in relation to antisocial behaviour, in a recent investigation (Bolter & Kipp, 2018). Specifically, prioritising winning over good sportsmanship was the coach behaviour that evidenced the strongest link with antisocial behaviour toward teammates and opponents. It may be that features of the social environment that are undesirable and contribute to a negative sport experience also bring the worst in athletes by leading them to act in an antisocial manner.

Controlled motivation (Deci & Ryan, 1985) has also been linked to antisocial behaviour (Hodge & Lonsdale, 2011). Controlled motivation is evident when athletes take part in sport for extrinsic reasons, for instance, to obtain rewards and prizes, to show others how good they are, or to avoid feelings of guilt and shame. Athletes with controlled motivation focus on the outcome of the game or race, and they are more likely to engage in antisocial behaviour to achieve their extrinsic goals. Hodge and Lonsdale (2011) found that controlled motivation predicted antisocial behaviour toward teammates and opponents indirectly via moral disengagement, with stronger links with behaviour toward opponents than teammates.

The social environment can also be controlling, and this is manifested in the behaviour of the coach. In a controlling climate, coaches use coercive practices and pressure participants, for example, by using controlling language and extrinsic rewards for performance. They behave in a coercive, pressuring, and authoritarian way, and employ strategies such as manipulation, obedience, guilt induction, controlling competence feedback, and conditional regard to impose a specific and preconceived way of thinking and behaving on their athletes (Bartholomew, Ntoumanis, & Thøgersen-Ntoumani, 2009). In a study of university athletes, perceived controlling coach behaviour positively predicted moral disengagement, which in turn positively predicted antisocial behaviour toward opponents and teammates; the link was stronger with opponent behaviour (Hodge & Gucciardi, 2015).

Finally, the behaviour of one's teammates can influence athletes' behaviour toward their teammates. Daily experienced antisocial behaviour from one's teammates predicted self-reported antisocial behaviour toward teammates (Benson & Bruner, 2018), in adolescent hockey players. The latter was most frequent when participants experienced high antisocial *combined* with low prosocial behaviour from their teammates. In other work, athletes who perceived that their teammates engaged in more antisocial behaviours toward one another during practices, also reported more antisocial behaviour toward their teammates (Benson, Bruner, & Eys, 2017; Bruner et al., 2018).

In sum, ego orientation, controlled motivation, performance climate, controlling coaching style, and coaching behaviour that prioritises winning over sportspersonship are likely to lead to antisocial behaviour within the sport context. Interestingly, some constructs have stronger links with opponent than with teammate behaviours, reinforcing the point that the two antisocial behaviours are distinct from each other. Moreover, perceiving one's teammates to act in an antisocial manner is a strong predictor of self-reported antisocial behaviour toward teammates.

### ***Negative predictors of antisocial behaviour***

Another line of research has focused on identifying factors that inhibit antisocial behaviour (see Kavussanu & Stanger, 2017). Moral identity and empathy are the two variables that have shown



the strongest links to antisocial behaviour and are discussed in this section. Some of the variables discussed in previous sections (e.g. mastery climate, autonomy motivation, autonomy supportive climate) have also been related to antisocial behaviour, but the links are generally weak. This research is also briefly reviewed in this section.

Moral identity refers to the cognitive schema that people hold about their moral character and is a self-conception organised around a set of moral traits (Aquino & Reed, 2002); people who have a strong moral identity, consider being moral a central part of who they are. This construct originated from the work of Blasi (1984), who proposed that a common set of moral traits are likely to be central to most people's moral self-definitions and that being a moral person may occupy different levels of importance in each person's self-concept. Aquino and Reed (2002) identified nine traits (i.e. caring, compassionate, fair, friendly, generous, helpful, hardworking, honest, and kind) as being characteristic of a moral person and found variation in the degree to which these traits were central to one's self-concept. The extent to which the moral self-schema is experienced as being central to one's self-definition has been referred to as the internalisation dimension of moral identity (Aquino & Reed, 2002) and has been the main focus of empirical research. Moral identity has been inversely associated with antisocial sport behaviour toward both teammates and opponents in cross-sectional research (e.g. Kavussanu, Stanger, et al., 2013; Kavussanu, Stanger, & Ring, 2015; Shields, Funk, & Bredemeier, 2018). Some evidence also suggests that the inhibiting effect of moral identity on antisocial opponent behaviour may occur via increased anticipated guilt (Kavussanu, 2019; Kavussanu et al., 2015).

Empathy involves the sharing of someone else's emotional experience; people who are high in empathy are able to take another person's perspective and tend to experience concern for unfortunate others (Davis, 1983). Empathy is an other-oriented response, which is congruent with another person's situation or perceived welfare and has been inversely associated with antisocial behaviour toward both opponents and teammates (e.g. Kavussanu, Stanger, et al., 2013; Kavussanu & Boardley, 2009; Stanger, Kavussanu, & Ring, 2017). In one study, its effects on antisocial opponent behaviour were negatively mediated by moral disengagement (Stanger et al., 2018). Thus, empathy is likely to lower moral disengagement which in turn should decrease antisocial behaviour toward opponents.

Weaker relationships have been revealed between antisocial behaviour and some of the variables discussed in the previous section. Specifically, an autonomy-supportive coaching climate was inversely associated with antisocial behaviour toward both teammates and opponents (Hodge & Lonsdale, 2011), while an autonomy-supportive teammate environment negatively predicted antisocial teammate (but not opponent) behaviour (Hodge & Gucciardi, 2015). Finally, in the Autonomy-Supportive Intervention Program implemented with PE teachers (Cheon et al., 2018), students of teachers who took part in the programme reported a decrease in their antisocial behaviour over time; these decreases were attributed to declines in psychological need frustration.

In sum, athletes who have high empathy and feel that being a moral person is a central part of their identity are less likely to behave in an antisocial manner toward both their opponents and their teammates. Therefore, devising activities that would strengthen empathy and moral identity should reduce the frequency of antisocial sport behaviour. This behaviour could also be reduced by strengthening the autonomy supportive aspects of the coaching environment.

### **Bracketed morality**

An interesting issue to which we now turn is the degree to which moral behaviour is "bracketed" within the context of sport. The term bracketed morality was coined by Bredemeier and Shields (1986) based on their seminal work on moral reasoning (see Shields & Bredemeier, 1995). These researchers found that high school and college basketball players displayed less mature moral

reasoning, when they responded to moral dilemmas set in sport compared to those set in daily life (Bredemeier & Shields, 1986). They argued that sport is a world within a world: When one enters the realm of sport, the responsibility to act in a moral manner is temporarily suspended, and egocentrism becomes a valued principle. They used the term bracketed morality to refer to the adoption of less mature patterns of moral exchange observed in sport compared to daily life.

Kavussanu, Boardley, Sagar and Ring (2013) extended this work from moral reasoning to moral behaviour. They asked university student athletes to indicate how often they engaged in prosocial and antisocial behaviours toward their teammates and opponents in sport and toward their fellow students at university. The behaviours assessed by the PABSS were used to refer to behaviour toward other students; these behaviours varied not only as a function of the context (sport vs university), but also as a function of the recipient (teammate vs opponent), in line with findings in sport (Table 1; Kavussanu & Boardley, 2009). Results showed that participants reported more frequent prosocial behaviour toward their teammates in sport than toward other students at university (e.g. encouraging more often a teammate than a student) and less prosocial acts toward their opponents in sport than toward other students (e.g. helping less often an opponent off the floor than a student in need). Antisocial behaviour was more frequent toward opponents than other students (e.g. more often intimidating an opponent than a student), but there was no difference between contexts in antisocial teammate behaviour (e.g. arguing with a teammate or a student).

These findings extend the phenomenon of bracketed morality from moral reasoning to moral behaviour. The findings also point to the unifying role team sport can have on athletes. That participants reported more prosocial behaviour toward their teammates than toward other students, suggests that team sport can have a positive influence on intra-team behaviour. Athletes are part of a team and strive for the same goal, which might lead them to act prosocially toward each other, more so than they would do toward other students at university, where there are no common goals. These findings also highlight the important role groups play on moral behaviour. A large body of literature (e.g. Hewstone, Rubin, & Willis, 2002) indicates that individuals tend to respond differently to others depending on whether these others are members of their own group (the in-group) or members of a different group (the out-group). The bracketed morality phenomenon may be, at least in part, a manifestation of this tendency. Sport is a unique context, where one is typically part of a team (the in-group) competing against others (the out-group). The differential findings for teammates and opponents reported by Kavussanu, Boardley, et al. (2013) underline the importance of making this distinction, when examining bracketed morality in sport.

Although context differences were revealed in prosocial behaviour, the largest discrepancy between contexts was observed in antisocial opponent behaviour (Kavussanu, Boardley, et al., 2013). This discrepancy was further explored by examining moral disengagement and ego orientation as potential mediators; these two constructs have been consistently and positively associated with antisocial behaviour toward opponents (see Kavussanu, 2012). Even though opportunities for moral disengagement also exist in one's interactions with others, certain conditions in sport may facilitate its occurrence. For example, in the pursuit of victory, coaches may ask players to cheat or injure their opponents, and players may see their teammates doing this. It may be easier to morally disengage in sport because responsibility for one's inappropriate actions can be displaced onto others. Similarly, ego orientation tends to be higher in competition, which is an integral part of sport, compared to training. Kavussanu, Boardley, et al. (2013) found that participants reported higher moral disengagement and ego orientation in sport than university. Mediation analysis revealed that these context differences, in part, could explain context differences in athletes' antisocial behaviour toward their opponents (Kavussanu, Boardley, et al., 2013).

In sum, bracketed morality exists in the context of team sport. This context could influence prosocial and antisocial behaviour toward teammates and opponents in distinct ways. Team

sport athletes tend to act more prosocially toward their teammates and more antisocially toward their opponents than they do toward their fellow students. Moreover, they tend to help their fellow students more than they do their opponents. The more frequent antisocial behaviour toward opponents in sport compared to students at the university may be due to the comparatively higher ego orientation and moral disengagement reported in the context of sport.

### **Consequences of teammate behaviour for the recipient**

The defining feature of prosocial and antisocial behaviours is that they can have consequences for the psychological and physical well-being of the recipient (Kavussanu, 2012). Some of these behaviours can also have other consequences. In this section, we review studies that have empirically examined consequences of teammate behaviour for the recipient. First, we discuss consequences of prosocial teammate behaviour, followed by consequences of antisocial teammate behaviour.

#### ***Prosocial teammate behaviour***

Prosocial teammate behaviours such as giving positive or constructive feedback, supporting, congratulating, and encouraging one's teammates should contribute to a more pleasant sport experience and lead the recipient of these behaviours to try harder and perform better (Kavussanu, 2012; Kavussanu & Boardley, 2009). In the first study to investigate consequences of prosocial teammate behaviour for the recipient, Al-Yaaribi, Kavussanu, and Ring (2016) asked adult soccer and basketball players to think about their experiences during the match they just played and indicate how often they perceived their teammates to engage in prosocial behaviour toward them (e.g. my teammates encouraged *me*). In two independent samples, athletes who perceived their teammates acting prosocially toward them during a match, reported experiencing more enjoyment, applied more effort, perceived better performance, and were more committed to continue playing for their team.

These findings were replicated in a second study of adolescent male soccer players (Al-Yaaribi & Kavussanu, 2018), who were asked about their experiences during training and competition over the course of the season. Two interesting interactions also emerged in this second study: Prosocial teammate behaviour had a stronger relationship with both enjoyment and perceived performance, when coaches were perceived to create a mastery motivational climate in their team. That is, the stronger the mastery climate, the stronger the effect of prosocial teammate behaviour on enjoyment and perceived performance. Thus, mastery climate and prosocial teammate behaviour may be operating in a synergistic fashion to promote enjoyment and performance in sport.

The effects of prosocial teammate behaviour on emotion and sport performance have also been examined in a recent experiment, that simulated competitive sport conditions (Al-Yaaribi, Kavussanu, & Ring, 2018). Participants were randomly assigned to a prosocial, antisocial, or control group, were paired with a "teammate" (i.e. the confederate), and took part in a competitive task, where the goal was to make as many baskets as possible in two minutes. The participant was always the shooter, while the confederate was always the rebounder, whose task was to pass the ball to the "teammate" as quickly as possible. After a baseline was established, participants took part in the experimental phase, in which their teammate (i.e. the confederate) verbalised prosocial (e.g. you can do it, great performance), antisocial (e.g. you are letting me down, terrible performance), or neutral (e.g. the floor is hard, the basket is black) statements. The prosocial group reported greater happiness and performed better (i.e. made more baskets) than the control group.

Prosocial teammate behaviour may also influence team members' task and social cohesion and social identity. Task cohesion refers to the degree to which team members are united in working together toward achieving team goals, whereas social cohesion reflects the degree to which team members like each other, get along, and consider one another to be friends (Eys, Loughhead, Bray, & Carron, 2009). In two studies of team sport athletes, prosocial teammate behaviour positively predicted both task and social cohesion (Al-Yaaribi & Kavussanu, 2017; Pizzi & Stanger, 2019); in one of these studies, the relationship with task cohesion was partially mediated by positive affect (Al-Yaaribi & Kavussanu, 2017). In other research, participants reported that their social identity was strengthened when they perceived their teammates engaging in prosocial behaviours (Bruner et al., 2017), while adolescent hockey players' social identity was stronger on days in which they experienced more prosocial behaviours from their teammates (Benson & Bruner, 2018).

Prosocial teammate behaviour could also prevent burnout, defined as a psychological, emotional, and physical withdrawal from a previously enjoyable activity in response to chronic stress (Smith, 1986). This behaviour may enhance the recipient's ability to deal with stress and can play a role in both the development and the prevention of burnout. Prosocial teammate behaviour negatively predicted burnout both directly and indirectly via (greater) positive affect, in team sport athletes (Al-Yaaribi & Kavussanu, 2017). Those players who perceived that their teammates displayed prosocial behaviour toward them – during training sessions and in matches throughout the season – experienced more positive affect; in turn, this positive affective experience may have decreased their vulnerability to burnout.

In sum, prosocial teammate behaviour can have important achievement-related consequences. Several studies show that this behaviour positively predicts enjoyment, effort, perceived and actual performance, positive affect, social identity, and task and social cohesion and negatively predicts negative affect and burnout. Prosocial behaviour within the team could contribute to creating a more positive sport experience, with subsequent long-term consequences for one's commitment to continue participation in sport.

### ***Antisocial teammate behaviour***

Verbally abusing, swearing, arguing, criticising, and expressing frustration at one's poor play are antisocial teammate behaviours with potentially negative consequences for the recipient. These behaviours should lead the recipient to feel angry, and in general experience negative affect, as they can offend the recipient and make the overall sport experience unpleasant. Indeed, antisocial teammate behaviour has been positively related to anger and negative affect and inversely associated with both effort and perceived performance in cross-sectional research (e.g. Al-Yaaribi et al., 2016; Al-Yaaribi & Kavussanu, 2017, 2018). The positive link between antisocial teammate behaviour and anger has been particularly strong.

The relationship between antisocial teammate behaviour and performance is less clear, with some inconsistent findings: This behaviour was a negative predictor of perceived performance in both adolescent and adult soccer players (Al-Yaaribi et al., 2016; Al-Yaaribi & Kavussanu, 2018) but did not predict performance in adult basketball players (Al-Yaaribi et al., 2016). This behaviour was also a stronger negative predictor of perceived performance in adolescent male footballers, when coaches were perceived to create a performance motivational climate in the team (Al-Yaaribi & Kavussanu, 2018). However, in experimental research, the antisocial behaviour group (i.e. the recipients of antisocial behaviour from their teammate) performed better than the control group in a two-minute basketball free-throw shooting competition (Al-Yaaribi et al., 2018), suggesting that this type of behaviour may be beneficial for performance under certain circumstances. It may be that antisocial teammate behaviour confers some temporary

benefits to performance; however, it is unlikely that these benefits would continue in the long term. Research is needed to shed light on this issue.

Antisocial teammate behaviour can also influence task cohesion and burnout. Repeatedly expressing frustration at a teammate's (poor) performance could lead the recipient to think that he or she is unable to contribute to team goals, causing them to experience a reduced sense of team unity. Similarly, the negative experience of antisocial teammate behaviour could diminish athletes' ability to cope with the demands of their sport (Kavussanu, 2012; Kavussanu & Boardley, 2009). Antisocial teammate behaviour negatively predicted task and social cohesion (Pizzi & Stanger, 2019) and positively predicted burnout (Al-Yaaribi & Kavussanu, 2017) in team-sport athletes. The relationships with cohesion and burnout were both direct and indirect via negative affect, underlining the importance of affect as a mechanism through which antisocial teammate behaviour may influence cohesion and burnout. At the same time, the direct effects suggest that other variables may also explain these relationships.

Finally, antisocial teammate behaviour had weaker effects on other variables. For example, in experimental research, during a basketball free throw shooting competition, the antisocial group reported lower attention than the control group (Al-Yaaribi et al., 2018). Antisocial teammate behaviour also had an indirect negative effect on commitment via effort and performance (Al-Yaaribi et al., 2016; Al-Yaaribi & Kavussanu, 2018) and a detrimental effect on athletes' perceptions of social identity (Bruner et al., 2017).

In sum, antisocial teammate behaviour could have a range of negative consequences for the recipient, most notably increasing anger, negative affect, and burnout, and decreasing social identity and task and social cohesion. Although positive effects on performance have been observed in one experiment (Al-Yaaribi et al., 2018), it is unlikely that these effects would be maintained over a long period of time. The overall available evidence is clear that antisocial teammate behaviour should be discouraged.

### **Critical thoughts and future research directions**

The research reviewed in the previous sections is testament to the progress made in the last decade in our understanding of the potential causes and consequences of prosocial and antisocial behaviour in sport. In this section, we offer some critical thoughts on the current state of the literature as well as some suggestions on how to move the field forward.

The development of the PABSS (Kavussanu & Boardley, 2009) has enabled much progress in our understanding of moral behaviour in sport. However, the scale could be developed further by exploring more dimensions of moral behaviour. For example, the antisocial opponent behaviour subscale consists of items assessing gamesmanship, aggression, and cheating. These behaviours could be assessed with a larger number of items and form separate dimensions of antisocial opponent behaviour. It is also possible that these different forms of antisocial behaviour have different antecedents. Similarly, prosocial teammate behaviour could include a dimension of helping acts – similar to the prosocial opponent behaviour. Researchers could also investigate prosocial and antisocial behaviours in sport that are directed toward referees or coaches.

A consistent finding of past research is the strong link between self-reported moral behaviour and moral behaviour of one's teammates (e.g. Benson & Bruner, 2018). However, the direction of causality is not clear. That is, although it is assumed that perceptions of the behaviour of one's teammates influence individual behaviour, the latter could also lead athletes to "see" their teammates in a certain way. For example, athletes who act antisocially toward their teammates may perceive them as antisocial due to their own antisocial behaviour, that is, they may project their own antisocial behaviour onto their teammates. People tend to perceive higher similarity between themselves and others, and social projection is one explanation for this similarity

(Cho & Knowles, 2013). Longitudinal and experimental studies are needed to shed light on this issue.

Much of the research conducted using the PABSS is cross-sectional (e.g. Al-Yaaribi & Kavussanu, 2018; Bolter & Kipp, 2018; Hodge & Lonsdale, 2011), and does not provide evidence for the direction of causality between variables. Future research could examine reciprocal relationships between moral behaviour and some of the constructs discussed in this article, particularly performance. It could be argued that performance is the most important outcome in sport, however, research findings so far are inconsistent: Cross-sectional studies reveal a negative link between antisocial teammate behaviour and perceived performance (e.g. Al-Yaaribi et al., 2016), whereas experimental research in the laboratory shows a positive effect of this behaviour on basketball free-throw shooting performance (Al-Yaaribi et al., 2018). Longitudinal field studies and well-designed experiments are needed to clarify the causal relationship between the variables discussed in this article.

Although we have a good understanding of “motivational” predictors of moral behaviour in sport (i.e. goal orientation, motivational climate), we know much less about the importance of “moral” predictors, particularly with respect to coaching behaviour. The work of Bolter and Weiss (2012) on the ways coaches are perceived to promote sportsmanship, is a promising step in this direction. However, there are other aspects of coaching behaviour, which could influence athlete behaviour. For instance, coaches could explicitly promote antisocial behaviour toward opponents, as a way to gain a competitive advantage. Similarly, coaches could encourage prosocial and discourage antisocial behaviour toward teammates, or behave in a prosocial or antisocial manner toward their athletes. It would be interesting to investigate the effects of these aspects of coaching behaviour on athlete prosocial and antisocial behaviour in sport.

Other aspects of coaching behaviour could also be examined. For example, the degree to which coaches act in an ethical manner and treat players with respect, that is the degree to which they are ethical leaders. Ethical leadership refers to normatively appropriate conduct that is demonstrated through interpersonal relationships and actions, and the promotion of this type of conduct to followers (Brown, Trevino, & Harrison, 2005). To be perceived as an ethical leader, one must be seen as both a *moral person* (i.e. honest, trustworthy, caring, open to input, principled, and respectful of others), and a *moral manager*, by setting and communicating ethical standards, and holding others accountable when those standards are violated (Trevino, Brown, & Hartman, 2003). It would be interesting to investigate the relationship between ethical leadership and moral behaviour in sport (see Yukhymenko-Lescroart, Brown, & Paskus, 2015).

As well as identifying relationships with new variables, such as ethical leadership, researchers could investigate moderators of previously identified relationships. Current research has revealed that a mastery motivational team climate could strengthen the potentially positive effects of prosocial teammate behaviour on enjoyment and performance (Al-Yaaribi & Kavussanu, 2018). It would be interesting to examine whether the relationships between prosocial and antisocial behaviours and their predictors and outcomes are influenced by other variables such as age, gender, sport type, and features of the social environment. For example, it may be that in young athletes, who may be more sensitive to peer criticism, antisocial teammate behaviour may have more profound effects on enjoyment and sport commitment, than it would have in older players. Such moderating influences are important to be identified, as they would provide guidance on how the sport environment could be structured for different age groups or for athletes with different characteristics. It may also be that in sports like basketball, where interaction is more frequent among players, prosocial teammate behaviour may have stronger effects on enjoyment, effort and performance, compared to sports with a larger number of players (e.g. soccer, rugby), where intrateam interaction may be less frequent.



We also need more studies that assess the moral dimensions of the sport experience in the real world of sport. Even though the experimental studies reveal interesting findings and have high internal validity, like any laboratory study, they cannot fully capture the real-world sport experience and the dynamics that develop in teams over time. Field studies employing methodologies, that are new in this field are needed, such as daily diaries (e.g. Benson & Bruner, 2018) and studies that measure athlete behaviour at different points in the game (e.g. Vansteenkiste, Mouratidis, Van Riet, & Lens, 2014). More qualitative studies that help us better understand the sport experience from the perspective of the participants (e.g. Bruner et al., 2017) would also be enlightening, as would be studies employing multilevel modelling that take into consideration group membership. More research is also needed on bracketed morality in sport to enhance our understanding of how behaviour varies across contexts. Finally, the complex interaction between coaches and athletes, and the coach-athlete relationship could be examined as well as how behaviours change over the course of the season.

## Conclusion

In conclusion, our understanding of the factors that lead to (or deter) prosocial and antisocial behaviour in sport has been considerably enhanced in recent years. In addition to the potential consequences moral behaviour can have on other athletes' welfare, some evidence indicates that teammate behaviours could have important achievement-related consequences. Although longitudinal (e.g. Vansteenkiste et al., 2014) and experimental (e.g. Al-Yaaribi et al., 2018; Kavussanu et al., 2015) designs have been used in some studies, more research is needed employing such designs to provide stronger evidence for the direction of causality in the identified relationships. This work could be used to inform the development and testing of interventions aimed at promoting prosocial and reducing antisocial behaviours in sport.

## Notes

1. We focused on studies that have used the PABSS to ensure that our manuscript is coherent. In addition, due to the very large number of studies using this scale and journal space restrictions, it was impossible to conduct an exhaustive review of relevant literature. The reader can consult other sources for broader reviews (e.g. Boardley, 2019; Kavussanu, 2012).
2. The term sportsmanship is used when referring to the Sportsmanship Coaching Behaviours Scale because this is the term used in that scale.

## Acknowledgement

The authors would like to thank an anonymous reviewer for his/her helpful comments during the revision process.

## References

- Al-Yaaribi, A., & Kavussanu, M. (2017). Teammate prosocial and antisocial behaviors predict task cohesion and burnout: The mediating role of affect. *Journal of Sport & Exercise Psychology*, 39, 199–208. doi:10.1123/jsep.2016-0336
- Al-Yaaribi, A., & Kavussanu, M. (2018). Consequences of prosocial and antisocial behaviors in adolescent male soccer players: The moderating role of motivational climate. *Psychology of Sport & Exercise*, 37, 91–99. doi:10.1016/j.psychsport.2018.04.005
- Al-Yaaribi, A., Kavussanu, M., & Ring, C. (2016). Consequences of prosocial and antisocial behavior for the recipient. *Psychology of Sport and Exercise*, 26, 102–112. doi:10.1016/j.psychsport.2016.06.012

- Al-Yaaribi, A., Kavussanu, M., & Ring, C. (2018). The effects of prosocial and antisocial behaviors on emotion, attention, and performance during a competitive basketball task. *Journal of Sport & Exercise Psychology, 40*, 303–311. doi:10.1123/jsep.2017-0179
- Ames, C. (1992). Achievement goals, motivational climate, and motivational processes. In G. C. Roberts (Ed.), *Motivation in sport and exercise* (pp. 161–176). Champaign, IL: Human Kinetics
- Aquino, K., & Reed, A. (2002). The self-importance of moral identity. *Journal of Personality and Social Psychology, 83*, 1423–1440. doi:10.1037/0022-3514.83.6.1423
- Bandura, A. (1991). Social cognitive theory of moral thought and action. In W. M. Kurtines & J. L. Gewirtz (Eds.), *Handbook of moral behavior and development* (pp. 45–103). Hillsdale, NJ: Erlbaum.
- Bandura, A. (1999). Moral disengagement in the perpetration of inhumanities. *Personality & Social Psychology Review, 3*, 193–209. doi:10.1207/s15327957pspr0303\_3
- Bartholomew, K., Ntoumanis, N., & Thøgersen-Ntoumani, C. (2009). A review of controlling motivational strategies from a self-determination theory perspective: Implications for sports coaches. *International Review of Sport and Exercise Psychology, 2*, 215–233. doi:10.1080/17509840903235330
- Benson, A. J., & Bruner, M. W. (2018). How teammate behaviors relate to athlete affect, cognition, and behaviors: A daily diary approach within youth sport. *Psychology of Sport & Exercise, 34*, 119–127. doi:10.1016/j.psychsport.2017.10.008
- Benson, A. J., Bruner, M. W., & Eys, M. (2017). A social identity approach to understanding the conditions associated with antisocial behaviors among teammates in female teams. *Sport, Exercise, and Performance Psychology, 6*, 129–142. doi:10.1037/spy0000090
- Blasi, A. (1980). Bridging moral cognition and moral action: A critical review of the literature. *Psychological Bulletin, 88*, 1–45. doi:10.1037/0033-2909.88.1.1
- Blasi, A. (1984). Moral identity: Its role in moral functioning. In G. G. Naom & T. E. Wren (Eds.), *The moral self* (pp. 99–122). Cambridge, MA: MIT Press.
- Boardley, I. D. (2019). Moral behavior in sport and physical activity. In T. S. Horn & A. L. Smith (Eds.), *Advances in sport and exercise psychology* (pp. 191–210). Champaign, IL: Human Kinetics.
- Boardley, I. D., & Kavussanu, M. (2009). The influence of social variables and moral disengagement on prosocial and antisocial behaviors in field hockey and netball. *Journal of Sports Sciences, 27*, 843–854. doi:10.1080/02640410902887283
- Boardley, I. D., & Kavussanu, M. (2010). Effects of goal orientation and perceived value of toughness on antisocial behavior in soccer: The mediating role of moral disengagement. *Journal of Sport & Exercise Psychology, 32*, 176–192. doi:10.1123/jsep.32.2.176
- Bolter, N. D., & Kipp, L. E. (2018). Sportspersonship coaching behaviors, relatedness need satisfaction, and early adolescent athletes' prosocial and antisocial behavior. *International Journal of Sport & Exercise Psychology, 16*(1), 20–35. doi:10.1080/1612197X.2016.1142461
- Bolter, N. D., & Weiss, M. R. (2012). Coaching for character: Development of the sportsmanship coaching behaviors scale (SCBS). *Sport, Exercise, and Performance Psychology, 1*, 73–90. doi:10.1037/a0026300
- Bolter, N. D., & Weiss, M. R. (2013). Coaching behaviors and adolescent athletes' sportspersonship outcomes: Further validation of the sportsmanship coaching behaviors scale (SCBS). *Sport, Exercise, and Performance Psychology, 2*, 32–47. doi:10.1037/a0029802
- Bredemeier, B. J., & Shields, D. L. (1986). Game reasoning and interactional morality (pp. 257–276). *The Journal of Genetic Psychology, 147*, 257–275. doi:10.1080/00221325.1986.9914499
- Bredemeier, B. J. L., & Shields, D. L. (1998). Moral assessment in sport psychology. In J. L. Duda (Ed.), *Advances in sport and exercise psychology measurement* (pp. 257–276). Morgantown, WV: FIT Press.
- Brown, M. E., Trevino, L. K., & Harrison, D. (2005). Ethical leadership: A social learning perspective for construct development and testing. *Organizational Behavior and Human Decision Processes, 97*, 117–134. doi:10.1016/j.obhdp.2005.03.002
- Bruner, M. W., Boardley, I. D., Allan, V., Root, Z., Buckham, S., Forrest, C., & Cote, J. (2017). Examining social identity and intrateam moral behaviors in competitive youth ice hockey using stimulated recall. *Journal of Sports Sciences, 35*, 1963–1974. doi:10.1080/02640414.2016.1243797
- Bruner, M. W., Boardley, I. D., Benson, A. J., Wilson, K. S., Root, Z., Turnidge, J., ... Cote, J. (2018). Disentangling the relations between social identity and prosocial and antisocial behavior in competitive youth sport. *Journal of Youth and Adolescence, 47*, 1113–1127. doi:10.1007/s10964-017-0769-2
- Bruner, M. W., Boardley, I. D., & Côté, J. (2014). Social identity and prosocial and antisocial behavior in youth sport. *Psychology of Sport and Exercise, 15*(1), 56–64. doi:10.1016/j.psychsport.2013.09.003
- 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. doi:10.2224/sbp.2016.44.11

- Cheon, S. H., Reeve, J., & Ntoumanis, N. (2018). A needs-supportive intervention to help PE teachers enhance students' prosocial behavior and diminish antisocial behavior. *Psychology of Sport & Exercise, 35*, 74–88. doi:10.1016/j.psychsport.2017.11.010
- Cho, J. C., & Knowles, E. D. (2013). I'm like you and you're like me: Social projection and self-stereotyping both help explain self-other correspondence. *Journal of Personality and Social Psychology, 104*, 444–456. doi:10.1037/a0031017
- Danioni, F., & Barni, D. (2017). The relations between adolescents' personal values and prosocial and antisocial behaviors in team sports. *International Journal of Sport and Exercise Psychology, 16*, 1612197X.2017.1367951
- Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology, 44*, 113–126. doi:10.1037/0022-3514.44.1.113
- Deci, E. L., & Ryan, R. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Springer.
- Eisenberg, N., & Fabes, R. A. (1998). Prosocial development. In N. Eisenberg (Ed.), *Handbook of child psychology, Vol 3: Social, emotional, and personality development* (pp. 701–778). New York, NY: Wiley.
- Eys, M. A., Loughhead, T. M., Bray, S. R., & Carron, A. V. (2009). Development of a cohesion questionnaire for youth: The youth sport environment Questionnaire. *Journal of Sport & Exercise Psychology, 31*, 390–408. doi:10.1123/jsep.31.3.390
- Graupensperger, S. A., Jensen, C. J., & Evans, M. B. (2018). A meta-analytic review of studies using the prosocial and antisocial behavior in sport scale: Associations among intergroup moral behaviors. *Sport, Exercise, and Performance Psychology, 7*(2), 186–204. doi:10.1037/spy0000121
- Graupensperger, S., & Tisak, M. S. (2018). Moral behavior in the locker room predicts perceptions of task cohesion in youth ice hockey players. *Journal of Human Kinetics, 65*, 273–280. doi:10.2478/hukin-2018-0047
- Hewstone, M., Rubin, M., & Willis, H. (2002). Intergroup bias. *Annual Review of Psychology, 53*, 575–604. doi:10.1146/annurev.psych.53.100901.135109
- Hodge, K., & Gucciardi, D. F. (2015). Antisocial and prosocial behavior in sport: The role of motivational climate, basic psychological needs, and moral disengagement. *Journal of Sport & Exercise Psychology, 37*, 257–273. doi:10.1123/jsep.2014-0225
- 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 & Exercise Psychology, 33*, 527–547. doi:10.1123/jsep.33.4.527
- Kavussanu, M. (2006). Motivational predictors of prosocial and antisocial behaviour in football. *Journal of Sports Sciences, 24*, 575–588.
- Kavussanu, M. (2012). Moral behavior in sport. In S. Murphy (Ed.), *The Oxford handbook of sport and performance psychology* (pp. 364–383). New York: Oxford University Press.
- Kavussanu, M. (2019). Toward an understanding of transgressive behavior in sport: Progress and prospects. *Psychology of Sport and Exercise, 42*, 33–39. doi:10.1016/j.psychsport.2019.01.009
- Kavussanu, M., & Boardley, I. D. (2009). The prosocial and antisocial behavior in sport scale. *Journal of Sport & Exercise Psychology, 31*, 97–117. doi:10.1123/jsep.31.1.97
- Kavussanu, M., Boardley, I. D., Sagar, S. S., & Ring, C. (2013). Bracketed morality Revisited: How Do athletes behave in Two contexts? *Journal of Sport & Exercise Psychology, 35*, 449–463. doi:10.1123/jsep.35.5.449
- Kavussanu, M., Seal, A. R., & Phillips, D. R. (2006). Observed prosocial and antisocial behaviors in male soccer teams: Age differences across adolescence and the role of motivational variables. *Journal of Applied Sport Psychology, 18*, 326–344. doi:10.1080/10413200802624292
- Kavussanu, M., Stamp, R., Slade, G., & Ring, C. (2009). Observed prosocial and antisocial behaviors in male and female soccer players. *Journal of Applied Sport Psychology, 21*, S62–S76. doi:10.1080/10413200802624292
- Kavussanu, M., & Stanger, N. (2017). Moral behavior in sport. In P. Beek, R. Oudejans, & V. Hutter (Eds.), Special Issue in Sport Psychology, *Current Opinion in Psychology, 16*, 185–192. doi:10.1016/j.copsyc.2017.05.010
- Kavussanu, M., Stanger, N., & Boardley, I. D. (2013). The prosocial and antisocial behavior in sport scale: Further evidence for construct validity and reliability. *Journal of Sports Sciences, 31*, 1208–1221. doi:10.1080/02640414.2013.775473
- Kavussanu, M., Stanger, N., & Ring, C. (2015). The effects of moral identity on moral emotion and antisocial behavior in sport. *Sport, Exercise and Performance Psychology, 4*, 268–279. doi:10.1037/spy00000040

- Nicholls, J. G. (1989). *The competitive ethos and democratic education*. Cambridge, MA: Harvard University Press.
- Pizzi, G., & Stanger, N. (2019). Consequences of teammate moral behavior: Linking team moral norms with cohesion and collective efficacy. *International Journal of Sport and Exercise Psychology*. doi:10.1080/1612197X.2019.1593215
- Sage, L., & Kavussanu, M. (2007). Multiple goal orientations as predictors of moral behavior in youth soccer. *The Sport Psychologist*, 21, 417–437. doi:10.1123/tsp.21.4.417
- Sage, L. D., Kavussanu, M., & Duda, J. L. (2006). Goal orientations and moral identity as predictors of pro-social and antisocial functioning in male association football players. *Journal of Sports Sciences*, 24(5), 455–466. doi:10.1080/02640410500244531
- Sheehy, T., & Hodge, K. (2015). Motivation and morality in masters athletes: A self-determination theory perspective. *International Journal of Sport & Exercise Psychology*, 13, 273–285. doi:10.1080/1612197X.2014.956326
- Shields, D. L., & Bredemeier, B. J. L. (1995). *Character development and physical activity*. Champaign, IL: Human Kinetics.
- Shields, D. L., Funk, C. D., & Bredemeier, B. L. (2018). Relationships among moral and contesting variables and prosocial and antisocial behavior in sport. *Journal of Moral Education*, 47(1), 17–33. doi:10.1080/03057240.2017.1350149
- Smith, R. (1986). Toward a cognitive-affective model of athletic burnout. *Journal of Sport Psychology*, 8, 36–50. doi:10.1123/jsp.8.1.36
- Stanger, N., Backhouse, S. H., Jennings, A., & McKenna, J. (2018). Linking motivational climate with moral behavior in youth sport: The role of social support, perspective taking, and moral disengagement. *Sport, Exercise, and Performance Psychology*, 7(4), 392–407. doi:10.1037/spy0000122
- Stanger, N., Kavussanu, M., & Ring, C. (2017). Gender moderates the relationship between empathy and aggressiveness: The mediating role of anger. *Journal of Applied Sport Psychology*, 29, 44–58. doi:10.1080/10413200.2016.1196764
- Tajfel, H. (1981). *Human group social and categories: Studies in social psychology*. Cambridge: Cambridge University Press.
- Trevino, L. K., Brown, M. E., & Hartman, L. P. (2003). A qualitative investigation of perceived executive ethical leadership: Perceptions from inside and outside the executive suite. *Human Relations*, 56, 5–37. doi:10.1177/0018726703056001448
- van de Pol, P. K. C., Kavussanu, M., & Claessens, B. (in press). Moral functioning across training and competition in sport. *International Journal of Sport and Exercise Psychology*. doi:10.1080/1612197X.2018.1511623
- Vansteenkiste, M., Mouratidis, A., Van Riet, T., & Lens, W. (2014). Examining correlates of game-to-game variation in volleyball players' achievement goals pursuit and underlying autonomous and controlling reasons. *Journal of Sport & Exercise Psychology*, 36, 131–145. doi:10.1123/jsep.2012-0271
- Yildiz, M., Şenel, E., & Yıldiran, I. (2018). Prosocial and antisocial behaviors in sport: The roles of personality traits and moral identity. *The Sport Journal*, 21, 1–13.
- 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, 36–49. doi:10.1037/spy0000023

---

**A. Predictors of Prosocial Behaviour (PB)**


---

Variable and direction of relationship	Authors	Design and sample	Key findings
Task orientation (+)	Kavussanu, Stanger, et al. (2013)	Cross-sectional; university student athletes ( $N = 89$ )	Link with PB toward teammates and opponents ( $r_s = .24, .22$ )
	Kavussanu and Boardley (2009)	Cross-sectional; team sport athletes ( $N = 106$ )	Link with PB toward teammates ( $r = .30$ ) and opponents ( $r = .18$ )
Mastery climate (+)	Boardley and Kavussanu (2009)	Field hockey and netball ( $N = 179$ )	Link with PB toward teammates ( $r = .49$ ), and opponents ( $r = .13$ )
	Stanger et al. (2018)	Cross sectional; youth team sport players ( $N = 275$ )	Link with PB toward teammates ( $r = .44$ ); relationship mediated by social support and perspective taking
Autonomous motivation (+)	Hodge and Lonsdale (2011)	Cross sectional; university athletes ( $N = 292$ )	Link with PB toward teammates ( $r = .30$ ), but not opponents ( $r = .08$ )
	Sheehy and Hodge (2015)	Cross-sectional; masters team sport athletes ( $N = 147$ ).	Link with PB toward teammates and opponents ( $r_s = .35, .34$ )
Autonomy supportive climate (+)	Hodge and Gucciardi (2015)	Cross-sectional; team sport athletes ( $N = 272$ )	Coach and teammate autonomy supportive climate associated with PB toward teammates ( $r_s = .14$ to $.35$ ); relationships mediated by satisfaction of relatedness and competence needs. Teammate autonomy supportive climate associated with PB toward opponents ( $r = .17$ ).
	Cheon et al. (2018)	Intervention in secondary-grade PE teachers ( $N = 33$ ); pupils ( $N = 1824$ ) completed measures at 3 time points	Autonomy-Supportive Intervention Program (ASIP) predicted students' end-of-semester PB. Increased mid-semester need satisfaction and decreased mid-semester need frustration explained the effects.
	Chen, Wang, Wang, Ronkainen, and Huang (2016)	Cross-sectional; team sport athletes ( $N = 203$ )	Indirect link with PB via autonomous motivation

Coach sportsmanship behaviour (+)	Bolter and Weiss (2013)	Cross-sectional; youth team sport players ( $N=418$ )	Link with PB toward teammates ( $r_s = .19-.28$ ) and opponents ( $r_s = .16-.28$ )
	Bolter and Kipp (2018)	Cross-sectional; youth team sport players ( $N=246$ )	Teammate relatedness associated with PB toward teammates and opponents ( $r_s = .23, .47$ ) and mediated relationship between modelling good sportsmanship and PB toward teammates
Prosocial teammate behaviour (+)	Bruner et al. (2018)	Cross-sectional; youth ice hockey players ( $N=376$ )	Link with reported PB toward teammates ( $r = .46$ )
	Benson and Bruner (2018)	Daily-diary study; youth hockey players ( $N=100$ )	Link with within-person variance of daily PB ( $r = .70$ )
Social identity (+)	Bruner et al. (2014)	Longitudinal design, 3 time points; youth team sport players ( $N=426$ )	In-group ties and in-group affect (time 1) related to PB toward teammates (time 3) ( $r_s = .26, .37$ ); task cohesion (time 2) mediated effect of in-group ties on PB toward teammates
	Bruner et al. (2018)	Cross-sectional; youth ice hockey players ( $N=376$ )	In-group ties and cognitive centrality associated with PB toward teammates ( $r_s = .33, .31$ )
Moral disengagement (-)	Boardley and Kavussanu (2009)	Cross-sectional; field hockey and netball players ( $N=179$ )	Link with PB toward opponents ( $r = -.21$ )
Moral reasoning, moral value evaluation, moral identity, and partnership orientation (+)	Shields et al. (2018)	Cross-sectional; intercollegiate student athletes ( $N=1066$ )	Moral reasoning ( $r = .61$ ), moral value evaluation ( $r = .25$ ), moral identity ( $r = .34$ ), and partnership orientation ( $r = .27$ ) associated with PB
Extraversion (+)	Yildiz, Şenel, and Yildiran (2018)	Cross-sectional; individual and team sports players ( $N=296$ )	Link with PB toward teammates and opponents ( $r_s = .22$ and $.13$ ); relationships mediated by internalisation



---

**B. Predictors of Antisocial Behaviour (AB)**


---

Positive Predictors			
Variable	Authors	Design and sample	Key findings
Ego orientation	Boardley and Kavussanu (2010)	Cross-sectional; male soccer players ( $N=275$ )	Link with AB teammate ( $r=.17$ ) and opponent ( $r=.39$ ); both relationships mediated by moral disengagement
	Kavussanu et al. (2013)	Cross-sectional; university student athletes ( $N=89$ )	Link with AB opponent ( $r=.20$ )
Performance climate	Boardley and Kavussanu (2009)	Cross sectional; field hockey and netball players ( $N=179$ )	Link with AB teammate ( $r=.40$ ) and opponent ( $r=.21$ )
	Stanger et al. (2018)	Cross sectional; youth team sport players ( $N=275$ )	Link with AB teammate ( $r=.36$ ); indirect relationship via moral disengagement
	van de Pol, Kavussanu, and Claessens (in press)	Cross sectional; adolescent team sport players ( $N=137$ )	Link with (combined) AB in training and competition contexts ( $r_s=.42, .43$ ); relationship mediated by moral disengagement
Controlled motivation	Hodge and Lonsdale (2011)	Cross sectional; university athletes ( $N=292$ )	Link with AB teammate and opponent ( $r_s=.34$ to $.43$ ); indirect link via moral disengagement
Controlling climate	Hodge and Gucciardi (2015)	Cross sectional; team sport athletes ( $N=272$ )	Coach and teammate climate linked with AB teammate and opponent ( $r_s=.34, .43$ )
	Chen et al. (2016)	Cross-sectional; team sport athletes ( $N=203$ ).	Controlling coaching style indirectly associated with AB ( $r=.33$ ) via controlled motivation and moral disengagement.
Coach prioritising winning over sportsmanship	Bolter and Kipp (2018)	Cross-sectional; youth team sport players ( $N=246$ )	Link with AB opponent ( $r=.28$ )
	Bolter and Weiss (2013)	Cross-sectional; youth team sport players ( $N=418$ )	Link with AB teammate and opponent ( $r_s=.28, .33$ )
Antisocial teammate behaviour	Benson and Bruner (2018)	Daily diary study; youth hockey players ( $N=100$ )	Daily AB experiences from teammates linked to within-person variance of reported daily AB toward teammates ( $r=.73$ ); relationship stronger when greater daily experienced AB, and lower daily experienced PB, from teammates
	Bruner et al. (2018)	Cross-sectional; youth ice hockey players ( $N=376$ )	Link with AB teammate and opponent ( $r_s=.69, .45$ )
	Benson et al. (2017)	Cross-sectional; university female soccer players ( $N=213$ )	Link with own AB teammates ( $r=.55$ ); relationship stronger the more the athletes identified with their team

Moral disengagement	Boardley and Kavussanu (2010)	Cross-sectional; male soccer players ( $N = 307$ )	Link with AB teammate ( $r = .37$ ) and opponent ( $r = .69$ )
	Hodge and Gucciardi (2015)	Cross sectional; team sport athletes ( $N = 272$ )	Link with AB teammate ( $r = .56$ ) and opponent ( $r = .65$ )
	Hodge and Lonsdale (2011)	Cross sectional; university athletes ( $N = 292$ )	Link with AB teammate ( $r = .51$ ) and opponent ( $r = .74$ )
	Stanger et al. (2018)	Cross sectional; youth team sport players ( $N = 275$ )	Link with AB teammate ( $r = .49$ ) and opponent ( $r = .63$ )
War orientation	Shields et al. (2018)	Cross-sectional; intercollegiate student athletes ( $N = 1066$ )	Link with AB ( $r = .19$ )
Self-enhancement and openness to change	Danioni and Barni (2017)	Cross sectional; adolescent team sport players ( $N = 172$ )	Self-enhancement linked with AB teammate and opponent ( $r_s = .29, .35$ ); openness to change linked to AB opponent ( $r = .24$ ). Relationship between self-enhancement and AB opponent stronger when greater parental pressure
Negative Predictors			
Mastery climate	van de Pol et al. (in press)	Cross sectional; adolescent team sport players ( $N = 137$ )	Link with AB in training and competition ( $r_s = -.20, -.32$ ); relationship mediated by moral disengagement
Autonomy supportive climate	Hodge and Lonsdale (2011)	Cross sectional; university athletes ( $N = 292$ )	Link with AB teammate and opponent ( $r_s = -.19, -.25$ )
	Hodge and Gucciardi (2015)	Cross sectional; team sport athletes ( $N = 272$ )	Link with AB teammate ( $r = -.19$ )
	Cheon et al. (2018)	Intervention aimed to promote autonomy support in PE teachers ( $N = 33$ ); students ( $N = 1824$ ) completed measures three times	Autonomy-Supportive Intervention Program predicted decreases in students' end-of-semester AB ( $r = -.27$ ); this explained by decreased mid-semester need frustration
Coach sportsmanship behaviour	Bolter and Kipp (2018)	Cross-sectional; youth team sport players ( $N = 246$ )	Link with AB opponent ( $r = -.19$ to $-.22$ ); mediation via coach relatedness
	Bolter and Weiss (2013)	Cross-sectional; youth team sport players ( $N = 418$ )	Link with AB teammate and opponent ( $r_s = -.20$ to $-.30$ )
Moral identity	Kavussanu, Stanger, et al. (2013)	Cross sectional; university student athletes ( $N = 129$ )	Link with AB teammate ( $r = -.32$ ) and opponent ( $r = -.27$ )
	Kavussanu et al. (2015)	Cross sectional; team sport players; Study 1 ( $N = 866$ ), Study 2 ( $N = 246$ )	Link with AB teammate and opponent ( $r_s = -.33$ to $-.49$ )
	Shields et al. (2018)	Cross-sectional; intercollegiate student athletes ( $N = 1066$ )	Link with AB ( $r = -.28$ )

Empathy	Kavussanu, Stanger, et al. (2013)	Cross sectional; university student athletes ( $N=129$ )	Link with AB teammate and opponent ( $r = -.42, -.38$ )
	Kavussanu and Boardley (2009)	Cross-sectional; team sport athletes ( $N=106$ )	Link with AB teammate and opponent ( $r = -.33, -.35$ )
	Stanger et al. (2017)	Cross sectional; university team sport players ( $N=128$ )	Perspective taking ( $r = -.34$ ) and empathic concern ( $r = -.39$ ) linked with antisocial opponent behaviour. Anger mediated the relationship between perspective taking and AB only in women
Moral value evaluation and partnership orientation	Shields et al. (2018)	Cross-sectional; intercollegiate student athletes ( $N=1066$ )	Moral value evaluation ( $r = -.21$ ) and partnership orientation ( $r = -.12$ ) associated with AB
Self-transcendence and conservation	Danioni and Barni (2017)	Cross sectional; adolescent team sport players ( $N=172$ )	Link with AB teammate and opponent ( $r_s = -.18$ to $-.30$ ). Link between self-transcendence and AB teammate weaker when lower perceived maternal pressure
Extraversion	Yildiz et al. (2018)	Cross-sectional; individual and team sports players ( $N=296$ )	Extraversion linked with AB toward teammates and opponents ( $r_s = -.16, -.07$ ); relationships mediated by internalisation

---

### C. Consequences of Prosocial and Antisocial Teammate Behaviour

Prosocial Teammate Behaviour (PTB)			
Variable	Authors	Design and sample	Key findings
Enjoyment	Al-Yaaribi et al. (2016)	Cross sectional; Study 1 soccer ( $N=203$ ) Study 2 basketball ( $N=281$ ) youth players	Link with enjoyment ( $r_s = .26, .41$ )
Happiness	Al-Yaaribi et al. (2018)	Experiment; undergraduate sport science students assigned to a prosocial ( $n=34$ ), antisocial ( $n=34$ ), or control ( $n=34$ ) group	Prosocial group reported more happiness than the other groups
Effort, performance, and commitment	Al-Yaaribi et al. (2016)	Cross sectional; Study 1 soccer ( $N=203$ ) Study 2 basketball ( $N=281$ ) youth players	Link with effort ( $r_s = .35, .27$ ), performance ( $r_s = .44, .34$ ); both relationships mediated by enjoyment; in Study 2, link with commitment ( $r = .45$ ) directly and indirectly via enjoyment and performance
	Al-Yaaribi and Kavussanu (2018)	Cross sectional; adolescent male soccer players ( $N=358$ )	Link with effort ( $r = .34$ ) and performance ( $r = .36$ ); stronger relationship with performance at high levels of mastery climate;
	Al-Yaaribi et al. (2018)	Experiment; undergraduate sport science students assigned to a prosocial ( $n=34$ ), antisocial ( $n=34$ ), or control ( $n=34$ ) group	Prosocial group reported more happiness than the other groups and performed better than the control group
Cohesion, collective efficacy, and burnout	Pizzi and Stanger (2019)	Cross sectional; team sport players ( $N=144$ )	Link with task and social cohesion ( $r_s = .24-.33$ ), as well as with collective efficacy ( $r_s = .26$ ) directly and indirectly via task cohesion
	Al-Yaaribi and Kavussanu (2017)	Cross sectional; team sport players ( $N=272$ )	Link with task cohesion ( $r = .41$ ) and burnout ( $r_s = -.23$ to $-.40$ ); relationships mediated by positive affect this relationship mediated by positive affect
	Graupensperger and Tisak (2018)	Cross sectional; youth ice hockey players ( $N=238$ )	Link with task cohesion ( $r = .50$ )
Social identity	Bruner et al. (2017)	Stimulated recall interview; youth ice hockey players ( $N=23$ )	PTB perceived to strengthen social identity
	Benson and Bruner (2018)	Daily diary study; youth ice hockey players ( $N=100$ )	Daily experiences of PTB linked with a strong social identity

Antisocial Teammate Behaviour (ATB)			
Variable	Authors	Design and sample	Key findings
Anger, anxiety, and attention	Al-Yaaribi et al. (2016)	Cross sectional; Study 1 soccer ( $N=203$ ) Study 2 basketball ( $N=281$ ) youth players	Link with anger ( $r_s = .30$ and $.28$ )
	Al-Yaaribi and Kavussanu (2018)	Cross sectional; adolescent male soccer players ( $N=358$ )	Link with anger ( $r = .40$ )
	Al-Yaaribi et al. (2018)	Experiment; undergraduate sport science students assigned to a prosocial ( $n=34$ ), antisocial ( $n=34$ ), or control ( $n=34$ ) group	ATB group reported higher anger and lower attention than the other two groups, and more anxiety than the prosocial group
Effort, performance, and commitment	Al-Yaaribi et al. (2016)	Cross sectional; Study 1 soccer ( $N=203$ ) Study 2 basketball ( $N=281$ ) youth players	Link with effort ( $r_s = -.34, -.21$ ) and performance ( $r_s = -.32, -.34$ ); indirect link with commitment via effort and performance
	Al-Yaaribi and Kavussanu (2018)	Cross sectional; adolescent male soccer players ( $N=358$ )	Link with effort ( $r = -.32$ ), and performance ( $r = -.34$ ); relationships between ATB and performance mediated by effort. Stronger relationship between ATB and performance at higher levels of performance climate
Cohesion, collective efficacy, and burnout	Pizzi and Stanger (2019)	Cross sectional; team sport players ( $N=144$ )	Link with task cohesion ( $r_s = -.19$ to $-.20$ ) and collective efficacy ( $r = -.18$ )
	Al-Yaaribi and Kavussanu (2017)	Cross sectional; team sport players ( $N=272$ )	Link with task cohesion ( $r = -.36$ ) and burnout ( $r_s = .29$ to $-.37$ ); relationships mediated by negative affect
	Graupensperger and Tisak (2018)	Cross sectional; youth ice hockey players ( $N=238$ )	Link with task cohesion ( $r = -.44$ )
Social identity	Bruner et al. (2017)	Stimulated recall interview; youth ice hockey players ( $N=23$ )	ATB perceived to undermine social identity only for players who reported low and median frequencies of intra-team antisocial behaviour
	Benson and Bruner (2018)	Daily diary study; youth ice hockey players ( $N=100$ )	Daily experiences of ATB linked with a weak social identity