The role of sport in moral development is a relevant topic in our society (Kavussanu and Stanger, 2017a; Weiss, Smith and Stuntz, 2008). Some researchers agree that the sport environment provides a great opportunity to foster moral development in young people (e.g., Cruz, Ramis and Torregrosa, 2016; Hodge and Gucciardi, 2015; Kavussanu, Roberts and Ntoumanis, 2002). Moreover, through practicing sport young people can acquire some virtues related to morality, (e.g., cooperation, fairplay or responsibility; Martin-Albo, Núñez, Navarro and González, 2009). There is also an incessant amount of information about substance abuse to enhance performance, or violence and cheating in order to win (Palou et al., 2013; Weiss et al., 2008).

Prosocial behaviors are defined as acts aimed at helping or benefiting others, such as congratulating the opponent when he/she wins (Kavussanu and Stanger, 2017b). In sport contexts, sportspersonship is considered an example of prosocial behavior (Cruz, Boixadós, Valiente and Torregrosa, 2001; Kavussanu and Stanger, 2017b; Palou et al., 2013). Vallerand, Brière, Blanchard and Provencher (1997) defined sportspersonship as a five-dimension operative construct: (a) Full commitment: valuing personal improvement through maximum effort and learning from mistakes; (b) Respect for social conventions: respect for the sport and engagement in prosocial behaviors; (c) Respect for rules and officials: respect for and willingness to abide by the rules and for those who enforce them; (d) Respect for the opponent: level of respect and concern for the opponents; and (e) Negative approach: extent to which the athlete reacts negatively to their participation.

Cheating is considered a form of antisocial behavior in sport. The term antisocial behavior is used to describe aspects that inhibit morality, acts intended to harm or disadvantage another (Kavussanu and Stanger, 2017b; Kavussanu, Stamp, Slade and Ring, 2009). Ponseti et al. (2012) defined cheating in sport as breaking the rules to obtain an incorrect benefit, if the action is successful. Not only actions that go against the rules manifestly should be considered (i.e., cheating or aggressions) but also behaviors that do not go against the regulations (e.g., trying to unnerve the opponent or wasting time) which result in negative consequences for the opponent and reflect an absence of fairplay (Cruz, 1998). These behaviors are known as the use of gamesmanship in sport (Ponseti et al., 2012).

Sport itself does not lead directly to developing prosocial and/or antisocial behaviors but it is the social context that will determine the role of sports in players’ morality (Boixadós, Cruz, Torregrosa and Valiente, 2004; Kavussanu, Roberts and Ntoumanis, 2002). Therefore, social context and the environment will affect players’ prosocial and antisocial behaviors (Kavussanu and Spray, 2006). Soccer is the sport with the greatest number of practitioners in Europe (Hulseen et al., 2017). In Spain, 26.3% of athletes play soccer; it is the most-played sport followed by basketball (9.7%; Consejo Superior de Deportes, 2017a). Moreover, 96% of violent acts reported in sport in Spain were found in soccer (Consejo Superior de Deportes, 2017b). According to this rationale, soccer is selected in this paper as it is a good example for exploring morality in sport.

As reported by Appleton and Duda (2016), there are different social agents that can influence the players’ sport participation...
In this study, we focus on the coach because this individual can impact young players emotionally (e.g., anxiety), cognitively (e.g., competence perception) and behaviorally (e.g., dropping out). Coach-created motivational climate has been studied using different theoretical approaches (i.e., achievement goal theory [AGT; Ames, 1992] and self-determination theory [SDT; Deci and Ryan, 1985, 2000]). Achievement goal theory (AGT; Ames, 1992) demonstrates that young players can judge their competence by using task or ego-involving criteria. A task-involved judgment means that players put emphasis on effort and individual improvement, while the use of an ego-involved criterion means that players think they are competent when they are better than other players (i.e., peers or opponents). Coaches can influence players’ perception of competence by fostering task and/or ego-involved motivational climates. Players perceive the coach-created motivational climate as task-involving when they think their coach rewards players who work hard and work together to do their best (Newton, Duda and Yin, 2000). In contrast, an ego-involving coach-created motivational climate implies that the coach treats players differently based on their levels of ability and performance (Duda and Appleton, 2016; Newton et al. 2000).

Self-determination theory states that motivation can be structured in a continuum, from externally regulated motivation (i.e., external regulation, introjected regulation) to more self-determined motivation (i.e., identified regulation, integrated regulation) and intrinsic motivation (Deci and Ryan, 2000). To foster self-determined motivation, three basic psychological needs (BPN) should be satisfied: (a) autonomy (i.e., perception that your opinion matters), (b) relatedness (i.e., feeling connected to others) and (c) competence (i.e., feeling you can do what your sport demands). Self-determination theory considers that a coach-created motivational climate can be autonomy-supportive (i.e., players’ opinions matter) or controlling (i.e., players feel intimidated and pressured), depending on the extent of satisfaction/frustration of the BPN.

In this research, Duda’s (2013) hierarchical conceptualization of the motivational climate is used because it integrates different aspects from both aforementioned theories. Duda reveals that motivational climate has to be considered multidimensional and it can be more empowering or disempowering (Appleton, Ntoumanis, Quested, Viladrich and Duda, 2016). An empowering climate is defined by being task-involved, autonomy supportive and fostering social relations. On the contrary, a disempowering climate is ego-oriented and controlling.

Research following the AGT perspective have found that, on the one hand, players more task-involved show more sportspersonship (Boixadós et al., 2004; Duda, Olson and Tempchin, 1991) and a more task-involved motivational climate is associated to prosocial behaviors (Kavussanu and Stanger, 2017b). On the other hand, a more ego-oriented climate is linked to antisocial behaviors (Bortoli, Messina, Zorba and Robazza, 2012; Leo, Sanchez-Miguel, Sanchez-Oliva, Amado and Garcia-Calvo, 2015). Garcia-Mas et al. (2010) also found that players who are more task-involved show more prosocial behaviors and those who are more ego-involved show more antisocial behaviors.

Kavussanu and Stanger (2017a) found that, from an SDT perspective, motivational variables are linked to prosocial and antisocial behaviors. In a previous study, Hodge and Lonsdale (2011), found that players with a more self-determined motivation also present more prosocial behaviors than those who have more externally regulated forms of motivation. To the best of our knowledge, these links have not been empirically generalized to climate measured as empowering or disempowering. The purpose of this study is to describe the relationship between prosocial (sportspersonship) and antisocial (cheating and gamesmanship) behaviors and the perception of a more empowering or disempowering climate in young soccer players.

**Method**

**Participants**

In this study, the sampling was incidental and non-probabilistic. One hundred and ninety-seven young soccer players (15.23% female) from a club in Barcelona participated. Players’ ages ranged from 13 to 19 years old ($M = 15.14, SD = 2.37$) and they were playing in the Catalan Soccer Federation (Federación Catalana de Fútbol).

**Measures**

**Sportspersonship.** To assess sportspersonship in soccer the Multidimensional Sportspersonship Orientations Scale (MSOS; Vallerand et al., 1997) was administered. We used the Spanish version (Martín-Albo et al., 2006) which has 25 items describing sportspersonship on a Likert scale (1 = strongly disagree to 5 = strongly agree), with five items to evaluate each dimension of the sportspersonship construct: (a) Full commitment towards sport participation (i.e., “In competition, I go all out even if I’m almost sure to lose”); (b) Respect for social conventions (i.e., “When I lose, I congratulate the opponent whoever she/he is”); (c) Respect and concern for rules and officials (i.e., “I respect the rules”); (d) Respect for the opponent (i.e., “I help the opponent get up after a fall”) and (e) Negative approach to sportspersonship (i.e., “I compete for personal honors, trophies and medals”).

**Disposition to cheating.** To assess cheating and gamesmanship the Disposition to Cheating in Sport Questionnaire (CDED; Ponsetti et al., 2012), based on the Attitudes to moral Decision-Making in Youth Sport Questionnaire (AMDYSPQ-1; Lee, Whitehead and Ntoumanis, 2007), was used. This questionnaire consists of six items measured on a Likert scale (1 = strongly disagree to 5 = strongly agree), with three items to evaluate the Predisposition to acceptance of cheating in sport (e.g., “I would cheat if I thought it would help the team win”) and three items to measure the Predisposition to acceptance of gamesmanship (e.g., “It is not against the rules to psych people out so it’s OK to do it”).

**Coach-created motivational climate.** To assess the motivational climate, the Empowering and Disempowering Motivational Climate Questionnaire (EDMCQ-C; Appleton et al., 2016) was administered. This questionnaire has 34 items and participants were asked to indicate the accuracy of some statements related to their coach behavior through a Likert scale (1 = strongly disagree to 5 = strongly agree) to assess information about the coach-created motivational climate: (a) Empowering (e.g., “My coach encourages players to try new skills”) and (b) Disempowering (e.g., “My coach gives most attention to the best players”). Validity and reliability evidence for all measures will be presented in the Results section.

**Procedure**

After obtaining approval for the study from our university, we contacted the soccer club and they agreed to participate in this
research. Questionnaires were administrated to players at the club facilities after players and their legal representatives signed informed consent forms. During questionnaire administration, researchers reminded the players that their participation was anonymous, and data were confidential and would be used only for research purposes and that they could leave if they wished to.

Data Analysis

We used free software R for all the analysis (version 3.4.3; R Core Team, 2017). Bubble graphs were carried out using function freqbubble from the SubscaleExplorer package (Angulo-Brunet and Viladrich, 2017). We conducted confirmatory factor analysis (CFA) using the lavaan package (version 0.5-23.1097; Rosseel, 2012). Considering data distribution, we used the weighted least squares mean and variance corrected (WLSMV) estimator. In order to assess goodness of fit we used the χ² test, the comparative fit index (CFI), the Tucker-Lewis index (TLI) and the root mean square error of approximation (RMSEA). We considered indicators of excellent fit CFI and TLI values >.95 RMSEA <.06 (Hu & Bentler, 1999). Fit was considered acceptable when CFI and TLI >.90 and RMSEA <.08 (Marsh, Hay and Wen, 2004).

Results

The proportion of cell-missingness was below 8% and only 2% of cases showed some missing data. Descriptive statistics for all studied variables are depicted in Figure 1. Most item distributions presented floor or ceiling effects, the exceptions being some CDED items (Figure 1A) which were homogeneously distributed.

According to Viladrich, Angulo-Brunet and Doval’s (2017) recommendations, we computed nonlinear SEM based reliability coefficient (ρNL, Green and Yang, 2009) with semTools package (semTools Contributors, 2016). Additionally, for comparison purposes with previous research, we also obtained mean, standard deviation and ordinal alpha (αo, Elousa and Zumbo, 2008; Gadermann, Guhn and Zumbo, 2012).

Revised relationships between motivational climate, sportspersonship and disposition to cheating in young soccer players

![Figure 1. Descriptive statistics of all variables studied](image-url)
Based on the theoretical approach presented in the introduction, we tested a 5-factor model for MSOS but convergence was not achieved. We obtained non-satisfactory solutions with a 3-factor model that did not include both the Negative approach like other research suggested (e.g., Martín-Albo et al., 2006; Miller, Roberts and Ommundsen, 2005) and the Opponents subscale due to the type of sport included in this study (i.e., football). Again, shared specific item content suggested allowing two correlations between errors, one between the two items (i.e., “obey the referee” and “respect the referee when not good”) mentioning the referee and another one between the two items (i.e., “respect the rules” and “obey all rules”) mentioning respect and obedience for the rules so we considered a third model with correlated errors and the goodness of fit indexes were satisfactory.

The 2-factor model for the EDMCQ-C showed acceptable goodness of fit indexes. They were even better when the item co09 (i.e., “my coach lets us do something we like at the end of the training only when we train well”) was excluded following the recommendations by Appleton et al. (2016).

Correlations between all latent variables were estimated from a whole measurement model including all items and factors (see goodness of fit indices in the last line in Table 1 and correlations in Table 2). Considering the sample size and the number of parameters of the model, the results should be interpreted with caution due to power issues.

In Table 2 the number of items, mean, standard deviation, and reliability coefficients for each subscale and correlations between subscale scores are presented. For the CDED, results showed that soccer players were far more willing to accept the use of gamesmanship (M = 3.18; SD = 1.08) than cheating (M = 2.42; SD = 1.16). The three subscales of MSOS showed high scores ranging from 3.77 to 4.43 and, lastly, soccer players tend to perceive the coach-created motivational climate as more empowering (M = 4.17; SD = 0.67) than disempowering (M = 2.46; SD = 0.74).

### Table 1. Goodness of fit indexes for the tested models.

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$ (df)</th>
<th>p</th>
<th>CFI</th>
<th>TLI</th>
<th>RMSEA</th>
<th>90%CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDED</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-factor</td>
<td>30.36 (8)</td>
<td>&lt;.001</td>
<td>.97</td>
<td>.942</td>
<td>.120</td>
<td>.08-.17</td>
</tr>
<tr>
<td>2-factor correlated errors (item ch01 – item ch02)</td>
<td>11.24(7)</td>
<td>.13</td>
<td>.99</td>
<td>.99</td>
<td>.056</td>
<td>0-.11</td>
</tr>
<tr>
<td>MSOS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-factors Model has</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-factors</td>
<td>210.10 (87)</td>
<td>&lt;.001</td>
<td>.92</td>
<td>.90</td>
<td>.09</td>
<td>.07-.10</td>
</tr>
<tr>
<td>3 factors correlated errors(item ru01 – item ru04</td>
<td>144.800 (85)</td>
<td>&lt;.001</td>
<td>.96</td>
<td>.95</td>
<td>.06</td>
<td>.04-.07</td>
</tr>
<tr>
<td>and item ru02 – item ru03)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDMCQ-C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-factors</td>
<td>708.952(404)</td>
<td>&lt;.001</td>
<td>.925</td>
<td>.919</td>
<td>.06</td>
<td>.05-.07</td>
</tr>
<tr>
<td>5-factors</td>
<td>568.33(376)</td>
<td>&lt;.001</td>
<td>.986</td>
<td>.985</td>
<td>.05</td>
<td>.04-.06</td>
</tr>
<tr>
<td>Whole measurement model</td>
<td>1464.24 (1151)</td>
<td>&lt;.001</td>
<td>.932</td>
<td>.928</td>
<td>.04</td>
<td>.03-.04</td>
</tr>
</tbody>
</table>

Note: CFI = Comparative fit index, TLI = Tucker-Lewis index, RMSEA = Root mean square error of approximation. CDED = Cuestionario de Disposición al Engaño en Deporte, MSOS = Multidimensional Sportpersonship Orientation Scale, EDMCQ-C = Empowering and Disempowering Motivational Climate Questionnaire, ch01 = cheat to help win, ch02 = cheat if others cheat, ru01 = obey the referee, ru04 = respect the referee when not good, ru02 = respect the rules, ru03 = obey all rules.
Relationship between motivational climate, sportspersonship and disposition to cheating in young soccer players

Table 2. Correlations and internal reliability consistency coefficients.

<table>
<thead>
<tr>
<th>Items</th>
<th>M</th>
<th>SD</th>
<th>GA</th>
<th>CH</th>
<th>CM</th>
<th>RU</th>
<th>SC</th>
<th>EM</th>
<th>DI</th>
</tr>
</thead>
<tbody>
<tr>
<td>GA</td>
<td>3</td>
<td>1.08</td>
<td></td>
<td></td>
<td>0.52</td>
<td>0.00</td>
<td>-0.38</td>
<td>-0.10</td>
<td>-0.11</td>
</tr>
<tr>
<td>CH</td>
<td>3</td>
<td>2.42</td>
<td>0.38</td>
<td></td>
<td>0.70</td>
<td>-1.16</td>
<td>-0.54</td>
<td>-0.25</td>
<td>-0.29</td>
</tr>
<tr>
<td>CM</td>
<td>5</td>
<td>4.43</td>
<td>0.64</td>
<td>0.06</td>
<td>0.70</td>
<td>0.73</td>
<td>0.60</td>
<td>0.51</td>
<td>0.07</td>
</tr>
<tr>
<td>RU</td>
<td>5</td>
<td>3.77</td>
<td>0.70</td>
<td>-0.24</td>
<td>0.70</td>
<td>0.68</td>
<td>0.51</td>
<td>0.33</td>
<td></td>
</tr>
<tr>
<td>SC</td>
<td>5</td>
<td>4.01</td>
<td>0.76</td>
<td>-0.17</td>
<td>0.70</td>
<td>0.46</td>
<td>0.16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EM</td>
<td>17</td>
<td>4.17</td>
<td>0.67</td>
<td>-0.04</td>
<td>0.70</td>
<td>0.92</td>
<td>0.46</td>
<td>0.16</td>
<td>0.48</td>
</tr>
<tr>
<td>DI</td>
<td>17</td>
<td>2.46</td>
<td>0.74</td>
<td>0.23</td>
<td>0.70</td>
<td>0.85</td>
<td>0.16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Pearson’s correlations below diagonal. Correlations from confirmatory factor analysis above diagonal. \( \rho_{NL} \) = nonlinear based SEM reliability coefficient (Green and Yang, 2009), \( \alpha_o \) = ordinal alpha (Elousa and Zumbo, 2008). Items = number of items of each questionnaire, GA = Predisposition to acceptance of gamesmanship, CH = Predisposition to acceptance of cheating, CM = Full commitment, RU = Respect for rules and officials, SC = Respect for social conventions, EM = empowering, DI = disempowering. In boldface the most appropriated reliability coefficient for each subscale.

Previous research, we obtained similar values as the Palou et al. (2013) study with soccer, basketball and handball players of similar ages and lower Predisposition to acceptance of cheating and gamesmanship values than in Cruz et al. (2018; see this issue for more information). We also obtained higher values than in the Bermejo, Borrás, Haces-Soutullo, and Ponseti (2018) study with younger male and female soccer, basketball and handball players. The results of the aforementioned studies could be explained by the different ages of participants and the different levels of professionalization (i.e., amateur and professional) of the clubs involved in this research. We would like to point out that Predisposition to acceptance of gamesmanship scores are higher than Predisposition to acceptance of cheating in our research and in the aforementioned studies. This could mean that young players are more accepting of those acts that do not directly infringe upon the rules but give them an unfair advantage against their opponents. This may be due to the fact that these kinds of behaviors are often seen as inherent to professional soccer in our society (Cruz, 1998). It is for this reason that grassroots coaches should work on young players’ perceptions of what is acceptable and what is not acceptable in terms of moral behavior.

When examining the results of the MSOS questionnaire, our results showed that three subscales have adequate internal consistency (i.e., Full commitment, Respect for social conventions and Respect for rules and officials) but we did not obtain good results in the other subscales (i.e., Negative approach and Respect for opponents). The Negative approach did not show adequate internal consistency; these results are in line with previous investigations (e.g., Martin-Albo et al., 2006; Miller, Roberts and Ommundsen, 2005; Vallerand et al., 1997). We have also found that there are problems with the Opponents subscale. Originally, Vallerand et al. (1997) administered the MSOS to athletes from six sports (i.e., badminton, basketball, track and field, swimming, hockey and volleyball), none of which were soccer. It would be necessary to adapt the following items to the soccer context (e.g., “If I can, I ask the referee to allow the opponent who has been unjustly disqualified to keep on playing”; “If I see that the opponent is unjustly penalized, I try to rectify the situation”) because these types of situations are not usual in soccer.

Regarding motivational climate, our results reinforce the idea of overlapping between key features of AGT and SDT and the existence of two factors (i.e., empowering and disempowering) that describe the coach-created motivational climate (Appleton and Duda, 2016; Duda and Appleton, 2016). We have also found that empowering is linked to the sportspersonship subscales (i.e., Full commitment, Respect for rules and officials and Respect for social conventions). These results, using EDMCQ-C, are in consonance with other research that found a link between a task-involved and autonomy-supportive climate and prosocial behaviors (Boixadós et al., 2004; Boardley and Kavussanu, 2009; Kavussanu, 2006). Lastly, the perception of a disempowering climate is linked to the acceptance of antisocial behaviors (i.e., Cheating and Gamesmanship). These results are similar to the ones found in Bortoli et al. (2012) and Leo et al. (2015).

Limitations and future directions

We have used Vallerand’s (1997) and Pontseti et al.’s (2012) approach to define what sportspersonship, cheating and gamesmanship are in soccer. This does not directly mean that all the participants in this study had the same idea of what implications these concepts have or if everybody agreed on the definitions of prosocial or antisocial behaviors in soccer. For future investigations, researchers should introduce qualitative methodology (e.g., focus group, interviews) to try to learn what those concepts mean to soccer players.

In this sense, qualitative methods would help us adapt questionnaires to other cultural settings and sport culture.

Moreover, when answering questions about topics such as sportspersonship, fairplay or other morality aspects, there is a tendency to respond with what you think is socially acceptable. This phenomenon is called the social desirability response bias (Triki, Cook and Bay, 2017), and it is important that future investigations include different types of measures (e.g., observations) or procedures to reduce the bias (e.g., surveys to capture the bias or indirect approaches).

In future studies, more attention has to be paid to antecedents
of moral behavior. Kavussanu and Stanger (2017a) identified two types of variables that can be potential antecedents of moral behavior in sport (i.e., moral and motivational). In this study, we have only focused on motivational variables (i.e., motivational climate), so future research should also include the role of moral variables (e.g., moral emotion, moral disengagement, empathy, moral identity and moral atmosphere) to get a better understanding of moral behavior. Moreover, in this study we have only considered the influence of one social agent (i.e., the coach) but future investigations should take into account parents, siblings and peers who also play important parts in shaping young athletes’ attitudes, beliefs and values (Partridge, Brustad and Babkes-Stellino, 2008).

Even though Empowering and Disempowering are considered two factors, they should not be situated at either end of a continuum. Appleton and Duda (2016) showed that coaches can create at some degree both Empowering and Disempowering climates during training, so further research aiming to examine and understand the interaction between both dimensions is needed.

In conclusion, regarding prosocial and antisocial behaviors in soccer, it is important that soccer organizations become aware of the acceptance of gamesmanship due to young players imitating what they see professional players do in games. Soccer organizations should consider modifying the rules of the game because professional players do not behave according to the principle of justice for all, but they act within a simple cost-profit calculation principle. Hence, as long as the costs of unfair behavior (e.g., wasting time) are less than the profit obtained, they will use these behaviors to attain their goal of success, as Silva (1981) and Cruz (1998) have outlined. Furthermore, a better understanding of how coaches and the environment they create can influence young athletes’ behavior is important to ensure that intervention programs are focusing on relevant aspects that can foster players’ positive outcomes while practicing sport.

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