

**What Encourages Prosocial Behaviour in Soccer: The Difference Between Gender and
the Influence of Morality**

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Abstract

Research suggests that prosocial behaviour in soccer is positively influenced by morality, particularly empathy and mastery motivational climate. Additionally, there is a difference between the genders generally, as well as in soccer, where women tend to display higher levels of empathy and are also more likely to behave in a prosocial manner. Therefore, this study aims to investigate if empathy, mastery motivational climate and gender influence if people behave prosocial or not in order to then find ways to enhance prosocial behaviour in the best way for each gender. This is done in the context of sports, namely soccer as it is one of the most popular sports worldwide. An online questionnaire was designed that measured the prosocial behaviour in sports, empathy, and the perceived motivational climate in the team of 20 male and 20 female individuals of various nationalities. The results of this study found that there is a positive relationship between empathy and prosocial behaviour in soccer. However, no moderating effect of gender was found. Furthermore, this study found that women tend to have higher levels of empathy compared to males and that women tend to behave more prosocial in soccer. Lastly, high perceptions of mastery motivational climate led to more prosocial behaviour in soccer. This is in line with what the literature suggests and future research should focus on the moderating effect of gender as such an effect appears likely given that gender influences empathy and prosocial behaviour and that there is a relationship between those two.

Introduction

Prosocial behaviour is an interesting and complex aspect of human nature which includes a wide range of acts, attitudes, and intentions focused on helping others while also contributing to society positively (Bierhoff, 2005). It entails acts of kindness, collaboration, empathy, and altruism, all of which play an important role in developing positive connections, building strong communities, and promoting individual and collective well-being. Prosocial behaviour ranges from simple acts of helping and sharing to more complex acts of volunteering and advocacy and reflects the desire of humans to connect, support, and uplift one another (Bierhoff, 2005).

These behaviours of being kind, empathetic, and altruistic towards one another and collaborating effectively in a team are especially important within the context of soccer (Kavussanu et al., 2009). Soccer is one of the most popular sports globally and understanding the characteristics that promote prosocial behaviour in soccer is critical for enhancing them and in turn, facilitating prosocial behaviour. Prosocial behaviour in soccer is characterized by actions such as helping teammates and encouraging them, returning the ball to the opponent, apologizing to an opponent, helping an opponent off the floor, or kicking the ball off the field to stop playing if the opponent is injured (Kavussanu et al., 2009). These behaviours entail the previously mentioned acts of kindness, collaboration, empathy, and altruism. Enhancing prosocial behaviour to its maximum is desirable as it has an impact on people's health (Kavussanu & Al-Yaaribi, 2021). Research showed that prosocial teammate behaviour could prevent burnout in sports as a form of psychological, emotional, and physical withdrawal from a previously enjoyable activity in response to chronic stress. According to research, engaging in prosocial behaviour can result in a variety of positive outcomes, including increased self-esteem, improved mental health (e.g., less prone to burnout), improved physical health (e.g., prevent physical withdrawal from a previously enjoyable activity in response to chronic stress) and higher resistance to stress (Kavussanu & Al-Yaaribi, 2021). Additionally, what is noticeable is that most of the observed prosocial behaviours during soccer matches were ones directed towards a teammate and that prosocial behaviours occurred more often towards a teammate than the opponent, like congratulating the teammate, with a mean of 6 prosocial acts per game, compared to 0.4 prosocial opponent behaviours (Kavussanu et al., 2009). So behaving prosocially towards a teammate occurs more often compared to behaving prosocially towards an opponent and enhancing prosocial behaviour has many beneficial health outcomes.

Morality

One factor that is shown to be linked to an enhancement in prosocial behaviour is morality. Morality entails distinguishing between right and wrong, making ethical decisions, and acting in ways consistent with societal norms and values. According to Bandura's social cognition theory, individuals form a moral identity and establish a set of personal norms and values that guide their behaviour as a result of this process (Bandura, 1991). If a person has high levels of morality, they are more likely to behave prosocially but also the other way round, if a person behaves prosocial, they tend to have high levels of morality. High levels of morality include being truthful, respectful, accountable, behaving prosocial and being empathetic and Bandura characterizes this as vital to the human functioning of any society (Bandura, 1991). In the context of soccer, this could mean not deceiving the opponent (e.g., not faking an injury) or prioritizing teamwork within the team by supporting teammates (Kavussanu et al., 2009). Bandura (1999) summarizes this as "People do good things as well as refrain from doing bad things" (p.194).

Empathy

Following this understanding, Bandura mentioned the proactive and inhibitive aspects of morality. Proactive morality is the ability to behave humanely, whereas inhibitive morality is the ability to refrain from behaving inhumanely. Behaving humanely includes our uniquely human qualities, such as empathy, compassion, and rationality (Kavussanu et al., 2009). Empathy is hereby the most important one when talking about prosocial behaviour. If a person is displaying high levels of morality, they are likely to also display high levels of empathy and prosocial behaviour. Empathy is the ability to understand and share the feelings, emotions, and perspectives of others, often leading to a sense of compassion and the desire to support or help them, it includes both cognitive (perspective-taking) and affective (empathic concern) components (Kavussanu & Ring, 2021). Perspective-taking refers to an individual's attempts to understand another by imagining their point of view, whereas empathic concern refers to feelings of sympathy and concern for those less fortunate than oneself. In sports, empathy has been found to be positively associated with prosocial behaviour as it is inhibiting aggression. If a person possesses high levels of empathy, they are more likely to emotionally connect with others and experience their joy or pain and because they are feeling the emotions of the other person, they are more likely to act prosocial (Kavussanu & Ring, 2021; Stanger et al., 2016). Additionally, multiple studies found that females consistently reported higher empathy than

males, in the general context as well as in the context of soccer. Further research demonstrated through mediation analysis that empathy (i.e., a combined measure of perspective-taking and empathic concern) significantly accounted for the effects of gender on physical aggression in adolescents (Kavussanu et al., 2009). It is possible that gender differences in antisocial behaviour in sports are in part due to differences in empathy between males and females. Although empathy has not been found to mediate the effects of gender on prosocial behaviour, such a role appears likely given that empathy has been linked to prosocial behaviour in non-sport contexts and females have been found to exhibit higher prosocial behaviour than males in a table-soccer task (Schulte-Rüther et al., 2008).

Mastery Motivational Climate

Furthermore, the mastery motivational climate, which focuses on personal development, skill development, and task mastery, has the potential to influence prosocial behaviour in soccer (Kavussanu et al., 2009). A mastery-oriented environment promotes teamwork and collective achievement by encouraging individuals to engage in prosocial behaviours that benefit the entire team rather than focusing simply on individual performance (Kavussanu et al., 2009; Kavussanu, 2019). It entails the way coaches communicate their goals to the players. A mastery-orientated climate emphasizes attributes such as effort, improvement, and personal progress, for example, a coach that lets an underperforming player play because they were always present at the training compared to a better player who was not at the training. In contrast to a performance-orientated climate which places greater emphasis on normative ability and surpassing others. Here, the coach would let the best player play. Research has indicated that the latter climate is associated with a higher incidence of antisocial behaviour, whereas the former climate demonstrates an inverse relationship with antisocial behaviour. Moreover, the mastery motivational climate exhibits a positive association with prosocial behaviour and heightened levels of moral functioning (Kavussanu et al., 2009; Kavussanu, 2019).

Gender

Lastly, a critical aspect to explore is the potential difference in prosocial behaviour between genders. In general, research suggests that female players are more likely to act prosocial and to help fellow players as their male counterparts (Van Lange et al., 2018). This could be explained by the fact that females tend to adhere to the fair play norms by respecting the rules of the game and that they tend to show a lower tolerance to engage in antisocial behaviours. Investigating gender differences in prosocial behaviour in soccer can reveal how

individuals across gender groups contribute to teamwork, cooperation, and justice in these circumstances (Van Lange et al., 2018).

Therefore, the purpose of this study is to investigate the association between gender and prosocial behaviour in soccer, considering the influence of morality, specifically empathy, and mastery motivational climate. This is crucial so that we can acquire a better understanding of the dynamics that influence prosocial behaviour in soccer by researching these elements, as well as shed light on the particular contributions of gender and morality to developing healthy social interactions in these circumstances. It is best to do this in a sport that is already represented worldwide in order to then apply the gained knowledge to other ball sports as well that might not be as well researched as soccer. The outcome of this study aims at finding concrete ways in which prosocial behaviour can be encouraged in the best possible way for each gender in order to make soccer even more enjoyable for each individual.

Hypothesis 1: There is a positive relationship between empathy and prosocial behaviour in soccer that is moderated by gender, where identifying as a woman strengthens this relationship.

Hypothesis 2: There is a relationship between the gender of a person and the level of empathy, where identifying as a woman leads to higher levels of empathy.

Hypothesis 3: There is a relationship between the gender of a person and prosocial behaviour, where identifying as a woman leads to more prosocial behaviour.

Hypothesis 4: There is a positive relationship between perceptions of mastery motivational climate and prosocial behaviour in soccer.

Methods

Design

This study aims to investigate prosocial behaviour in soccer with a special interest in the differences in gender and how the level of empathy and mastery motivational climate influence if soccer players behave prosocial or not. It aims to understand prosocial behaviour better to then find ways in which prosocial behaviour can be encouraged. The study is divided into a quantitative part in the form of a self-report questionnaire and a qualitative part in the form of an observation. For the quantitative part, the target group of the study are active soccer players from 16 to 40 years. The study aims to have an equal amount of male and female participants. They have to play actively in a soccer club in the 2022/2023 season and their English level had

to be sufficient, this was ensured via self-report. The dependent variable is prosocial behaviour, and the independent variables are empathy (low, moderate, or high levels of empathy) and mastery motivational climate. It is going to be checked if gender is influencing the level of empathy a person has as well as the level of prosocial behaviour. Additionally, it is going to be checked if gender is moderating the relationship between empathy and prosocial behaviour in soccer. Lastly, the relationship between perceptions of mastery motivational climate and prosocial behaviour in soccer is going to be analysed. For the qualitative part, the target group are male and female adult soccer teams in Germany, 5 of each. In the observation, the prosocial behaviours items from the Prosocial and Antisocial Behaviour in Sport Scale (PABSS) by Kavussanu & Boardley (2009) are used as a blueprint to then observe the frequencies of these behaviours and compare them to the answers to the scale.

Participants

For this study, the sample consisted of 40 participants that filled out a survey. Participants in the online survey were between 18 and 33 years old, with a mean age of 22.95 years and a standard deviation of $SD = 3.06$. 20 participants are female, and 20 participants are male. 28 participants were German, 8 were Dutch, and one participant each was Polish, South Korean, Spanish and from Italy. Their mean soccer experience was 9.16 years and a standard deviation of $SD = 6.41$, and the levels ranged from amateur soccer to semi-professional leagues. The participants were recruited through advertisements posted on social media platforms (e.g., WhatsApp, Instagram, Facebook) and through the use of snowball sampling, where participants forwarded the survey to their fellow teammates.

The sample of the observational part of the study was a convenience sample, as local German soccer games were watched and observed. The sample consisted of 10 observations of male and female soccer matches, for which 5 matches each were observed. All participants were German and at least 18 as adult teams were observed. An overview of the teams and their level can be found in Appendix A.

Materials

To collect data an online questionnaire with several standardised and validated scales was created via Qualtrics. For this report, the prosocial behaviour in soccer was measured using the prosocial items of the Prosocial and Antisocial Behaviour in Sport Scale (PABSS) by Kavussanu & Boardley (2009). It normally consists of 20 items, where 4 measure prosocial teammate behaviour, 3 measure prosocial opponent behaviour, 5 measure antisocial teammate

behaviour and 8 measure antisocial opponent behaviour. As this study aims to understand prosocial behaviour, only the first 7 items were used. An example of an item is “Congratulated a teammate for good play” where the participants were asked to indicate how often they think they engaged in this behaviour in the current soccer season. They could rate on a 5-point Likert scale from “Never” to “Very Often” and the higher the score, the more prosocial behaviour was executed. The scale and subscales have been shown to have good-to-very-good levels of internal consistency with a Cronbach’s alpha of $\alpha = 0.86$ for antisocial opponent behaviour, $\alpha = 0.83$ for antisocial teammate behaviour, and $\alpha = 0.74$ for prosocial teammate and opponent behaviour. It has also been shown to have high levels of discriminant validity and concurrent validity (Kavussanu & Boardley, 2009).

To gain insight into what type of prosocial behaviour the participants have engaged in themselves and/or have experienced in their team during the current soccer season an open question was asked after the PABSS where they were asked to shortly illustrate an example of prosocial behaviour.

To measure the general level of empathy, the perspective-taking and empathic concern subscales of the Interpersonal Reactivity Index were used (Davis, 1980). The scale generally consists of 28 items which are divided into four subscales with 7 items each. The first subscale is perspective taking (e.g., “I sometimes try to understand my teammates/opponents better by imagining how things look from their perspective”). The second subscale is a scale measuring fantasy, and the last two subscales are the empathic concern scale (e.g., “I am often quite touched by things that I see happen”) and the personal distress scale. For this study, only the empathy and perspective-taking subscales were used with a total of 14 items. For them, the participants had to indicate on a 5-point Likert scale how well the statement describes them in general with 1 being “Does not describe me very well” and 5 being “Describes me very well”. A high score on the perspective-taking subscale as well as on the empathic concern subscale means that the participant inherits self-reported high skills in perspective-taking and high levels of empathy. The subscales have been shown to have good levels of validity and reliability with a Cronbach’s alpha of $\alpha > 0.90$ (De Corte et al., 2007).

To measure mastery motivational climate the Perceived Motivational Climate in Sport Questionnaire-2 (PMCSQ-2) by Seifriz, Duda, & Chi (1992) was used. The scale consists of 33 items for which the participants had to indicate on a 5-point Likert scale how they view the typical atmosphere on their team and how much they agree with each statement ranging from

“Strongly Agree” to “Strongly Disagree”. One example of an item is “The coach believes that all of us are crucial to the success of the team/squad”. The scale is checking for two motivational climates: Task-Involving and Ego-Involving climates. In a task-oriented environment, competence is associated with effort, self-improvement, the encouragement of cooperation, and the significance of the role played in sports. The ego-involving atmosphere, on the other hand, concentrates on the outcome and encourages comparison and rivalry with others because the criterion of success is performing as well as or better than others or accomplishing the same as others but with less effort (Pérez-Romero, 2022). A high score on one of the subscales and a low score on the other one indicates a perception of this specific climate within one’s team. The scale has been shown to have adequate levels of convergent and discriminant validity and composite reliability with a Cronbach’s alpha of $\alpha > 0.90$ (Pérez-Romero, 2022).

Lastly, for the qualitative part of the study, the observation, materials were the 7 prosocial items of the PABSS and an informed consent sheet that was signed by the trainers of the clubs before the game on an iPad (Appendix D). The informed consent stated the purpose and procedure of the study, stated that no personal data was recorded, contact details and their rights to decline their participation at any time.

Procedure

The participants were able to access the Qualtrics questionnaire via an anonymised link provided by the research team. This link was distributed through social media platforms and the SONA participant system (Appendix E). Once accessing this link, the participants were presented with an informed consent section, giving information regarding participation, and gathering consent regarding participation. Next, the PABSS was displayed to the participants, measuring their perceived prosocial behaviour in the current soccer season, and after filling it in they were asked an open question where they should shortly illustrate an example of prosocial behaviour they have engaged in or experienced during the current soccer season. After that, the remaining two questionnaires were displayed, the PMCSQ-2 measuring their perceived motivational climate in their team, and the perspective-taking and empathic concern subscales of the Interpersonal Reactivity Index, measuring perspective-taking and empathy.

After the participants answered these scales, they were asked demographic questions about their age, nationality, gender, active years of playing soccer and the highest level of soccer that they played. This was done after the questionnaire, to ensure the participants’ full attention to the questionnaires. Lastly, all participants were provided with a debriefing sheet, repeating

the intent and purpose of the study as well as stating the contact details again. Additionally, this sheet provided a field where the participant could leave their mail address in case they are interested and want to obtain the results of the study.

For the observation, 5 male soccer matches, and 5 female soccer matches were observed of lower level soccer games in Germany. The written consent was gotten from the trainers of the teams beforehand and no personal data was collected only the frequencies of the behaviour according to the 7 items of the PABSS throughout the game (Appendix D).

Data Analysis

All analyses were conducted using R-Studio. First, the dataset was cleaned and participants that did not fully answer the questionnaire were excluded, this reduced the number of participants from 55 to 40. The sample was checked for flatliners; however, no instances of such anomalies were detected in the examined data set. Next up, the data was checked for the four assumptions of linear models: linearity, independence, equal variance, and normality and the means of each variable were computed. After that, three variables with the mean scores for each scale were added, to be able to perform the analyses. Additionally, a basic analysis of demographic criteria such as nationality, age and soccer experience was conducted to get familiar with the sample. These descriptive statistics provide an overview of the sample characteristics and the distribution of variables in the study. Further analysis using simple linear regression modelling and moderation analysis will help explore the relationships between these variables and their predictive power in the subsequent sections. Because the sample size is rather small, the function *bootstrapping* was used to perform linear regression analysis for all 4 hypotheses and for the moderation analysis for the first hypothesis.

For the open question, the answers were grouped into codes on the basis of common themes, and these codes were then compared to the results of the PABSS (Appendix B, C). The observations were recorded as frequencies according to the 7 items of the PABSS and then they were compared to the frequencies of the PABSS self-questionnaire, and it was checked whether observation and self-report match or contradict.

Results

Descriptive Statistics of the Quantitative Study

For the level of prosocial behaviour, the mean score was 3.57 out of 5 [$SD = 0.54$; $Min = 2.29$; $Max = 4.86$] indicating that participants scored relatively high in prosocial behaviour.

For the subscales “empathetic concern” and “perspective-taking” of the Interpersonal Reactivity Index measuring empathy the mean score was 2.11 out of 5 [$SD = 0.28$; $Min = 1.64$; $Max = 2.79$] suggesting that, on average, participants scored moderately on these empathy subscales with relatively low variability in the scores around the mean. Lastly, for the perceived motivational climate the mean score was 3.31 out of 5 [$SD = 0.29$; $Min = 2.55$; $Max = 3.79$] indicating that, on average, participants perceived the motivational climate relatively positively.

Table 1

Descriptive Statistics and Correlations for the Quantitative Study

Variable	n	M	SD	(1)	(2)	(3)	(4)
(1) Avg_score PABSS	40	3.57	0.54	-			
(2) Avg_score PMCSQ	40	3.31	0.29	-.07	-		
(3) Avg_scoreIRI	40	2.11	0.28	.04	.27	-	
(4) Gender ^a	40	1.5	0.51	-.07	-.09	-.2	-

^a 1 = male and 2 = female.

Statistical Analysis

The analysis examined what encourages prosocial behaviour in soccer with a special focus on the influence of empathy and mastery motivational climate on prosocial behaviour while also accounting for differences in gender. This was done in order to then find concrete ways in which prosocial behaviour can be encouraged way for each gender. As the four assumptions Normality, Linearity, Homoscedasticity, and Independence were not met, the function *bootstrapping* was used to fix this. For the first hypothesis, a moderation analysis was performed and for the other three hypotheses linear regression analysis was performed.

Moderation Analysis

Hypothesis 1: There is a positive relationship between empathy and prosocial behaviour in soccer and gender moderates this relationship, where identifying as a woman strengthens this relationship.

We predicted that there is a positive relationship between empathy and prosocial behaviour in soccer that is moderated by gender. This was tested by doing a moderation analysis where prosocial behaviour in soccer was the dependent variable and the level of empathy was the independent variable and gender was the moderator. The analysis indicates a significant effect of empathy on prosocial behaviour ($B = 0.08$, $SE = 0.26$, $95\% CI [2.3, 4.48]$). This effect is positive, so if the level of empathy increases, the level of prosocial behaviour also increases. Additionally, we did not find a moderation effect of gender on the relationship between empathy and prosocial behaviour ($B = 0.37$, $SE = 0.64$, $95\% CI [-1.27, 8.09]$).

Linear Regression Analysis

Hypothesis 2: There is a relationship between the gender of a person and the level of empathy, where identifying as a woman leads to higher levels of empathy.

We predicted that there is a relationship between the gender of a person and the level of empathy, where identifying as a woman leads to higher levels of empathy. This was tested by doing a linear regression analysis where the level of empathy was the dependent variable and gender was the independent variable. The analysis indicates a significant effect of gender on empathy ($B = -0.37$, $SE = 0.31$, $95\% CI [0.91, 3.49]$). This effect is negative, so identifying as a man leads to less empathy than identifying as a woman.

Hypothesis 3: There is a relationship between the gender of a person and prosocial behaviour, where identifying as a woman leads to more prosocial behaviour.

We predicted that there is a relationship between the gender of a person and the level of prosocial behaviour, where identifying as a woman leads to more prosocial behaviour. This was tested by doing a linear regression analysis where the level of prosocial behaviour was the dependent variable and gender was the independent variable. The analysis indicates a significant effect of gender on prosocial behaviour ($B = -0.06$, $SE = 0.16$, $95\% CI [0.51, 2.85]$). This effect is negative, so identifying as a man leads to less prosocial behaviour than identifying as a woman.

Hypothesis 4: There is a positive relationship between perceptions of mastery motivational climate and prosocial behaviour in soccer.

We predicted that there is a relationship between perceptions of mastery motivational climate and prosocial behaviour in soccer. This was tested by doing a linear regression analysis where prosocial behaviour was the dependent variable and mastery motivational climate was

the independent variable. The analysis indicates a significant effect of mastery motivational climate on prosocial behaviour ($B = 0.08$, $SE = 0.25$, $95\% CI [2.24, 4.42]$). This effect is positive, so if the perceptions of mastery motivational climate increase, the level of prosocial behaviour also increases.

Descriptive Statistics of Qualitative Research

Open Question

The open question was “We would like to gain insight into what type of prosocial behaviour you have engaged in and/or have experienced in your team during the current soccer season. We are asking you to shortly illustrate an example of prosocial behaviour below.”

After coding the answers to the open question, six codes were identified.

1. *Pass the ball out because of injury. / Act to pause the game because of an injury*

The frequency of this code was 4 and an example of an answer is “An opponent was fouled, and my teammates passed the ball out”.

2. *Helping an opponent or teammate in various ways when help is needed.*

The frequency of this code was 9 and an example of an answer is “Helping a teammate that was struggling on an emotional level by talking to her and calming her down”.

3. *Speaking respectfully with each other.*

The frequency of this code was 8 and an example of an answer is “Somebody on our team insulted someone from the other team and we stood with the opponent and apologized for this behaviour”.

4. *Congratulating, motivating, and supporting each other.*

The frequency of this code was 6 and an example of an answer is “In my team, me and my teammates praise other teammates for good play during a game or training very often”.

5. *Prosocial behaviour on and off the field to keep a nice climate within the team.*

The frequency of this code was 4 and an example of an answer is “Integrate new team members into the group”.

6. *Constructive Feedback.*

The frequency of this code was 2 and an example of an answer is “I regularly take care of younger players on and during the match and try to give them support. Be it either through advice, encouragement, but also through constructive criticism. My personal focus is always to give assistance to my fellow players and beyond that, to convey a positive

feeling. Soccer is to a large extent a matter of the head and therefore also highly dependent on the mental state”.

When comparing these codes of the open question to the items of the PABSS a lot of similarities can be seen. Code 1 derived from the open question associates with item 6 of the PABSS, as they are both about stopping the game because someone was injured. Code 2 associates with items 5 and 7, as they are about helping. Code 4 associates with items 1 to 3, as they are about encouraging and supporting each other. Lastly, code 6 is associated with item 4 as they are about constructive feedback (Appendix C). Codes 3 and 5 have no direct association with any of the items of the PABSS. Code 3 is very specific as it is about speaking respectfully with each other and can even be further divided into speaking respectfully with a teammate, an opponent or the referee or the visitors. Code 5 is primarily about prosocial behaviour outside of the field which is not included in the PABSS at all. So, the open question is giving, even more, possible prosocial behaviours. It is additionally putting the emphasis on generally speaking respectfully with each other and also includes behaviour outside of the field, with prosocial behaviour like being the listener of the team or integrating new players into the team which is not included in the PABSS.

The code that had the most answers was code 2 with 9 answers. This code can be further divided into subcodes, either helping an opponent or helping a teammate. What is noticeable here is that helping an opponent was mentioned 3 times whereas helping a teammate was only mentioned 2 times (the other 4 answers mentioned both options or none specifically). In the PABSS it was the other way around and helping an opponent was the least frequent action. However, helping an injured teammate is not included in the PABSS. In total, 33 people answered the open question, 17 male and 13 female participants and 3 times N/A. For every code, the male-female ratio was equal, or the males reported more answers for each code. Only for the prosocial behaviour outside of the field, women reported a higher frequency with 1:3. The exact male-female ratio for each code can be found in Appendix B.

Observation

After the observation, the mean frequencies for each item were calculated. It can be seen that prosocial teammate behaviour (PT) (around 4 times per game) occurred more often than prosocial opponent behaviour (PO) (around 1 time per game). This is in line with the results of the PABSS for PT where the mean was 3.87 but not in line with the OT of the PABSS where the mean was 3.1. Additionally, females displayed more PO and males displayed more PT.

What was notable was that the males were generally more vocal on the field compared to the females as they were talking more on the field compared to their female counterparts (Appendix F).

Discussion

The present study aimed to explore the factors that encourage prosocial behaviour in soccer, with a specific focus on the difference between gender and the influence of morality, especially empathy and mastery motivational climate. Through linear regression analyses, support was found that there is a positive relationship between empathy and prosocial behaviour in soccer, that women have higher levels of empathy, that women behave in a prosocial manner more often, and that there is a positive relationship between perceptions of mastery motivational climate and prosocial behaviour in soccer. However, no support was found for a moderating role of gender in the relationship between empathy and prosocial behaviour in soccer.

Implications

This is in line with what the literature suggests. This study found that there is a positive relationship between empathy and prosocial behaviour in soccer and research supports these findings that high levels of empathy lead to more prosocial behaviour in soccer because people are more likely to understand the point of view of others and view themselves in their shoes and therefore behave more nicely towards others (Kavussanu & Ring, 2021). Furthermore, this study also found evidence that women generally have higher levels of empathy compared to their male counterparts. In research, gender also accounted for the differences in empathy in the general context as well as in the context of soccer (Kavussanu et al., 2009). Next, we found that women behave prosocial more often and research suggests that this is because females tend to adhere to the fair play norms more by respecting the rules of the game and that they tend to show a lower tolerance to engage in antisocial behaviours (Van Lange et al., 2018). However, we did not find a moderation effect of gender on the relationship between empathy and prosocial behaviour in soccer. Research found that empathy accounted for the effects of gender on aggression, but they did not find a moderating role of gender in the relationship between empathy and antisocial behaviour. This study focussed on prosocial behaviour only, but it also did not find a moderating effect of gender on the relationship between empathy and prosocial behaviour (Kavussanu et al., 2009; Schulte-Rüther et al., 2008). Lastly, we found a positive relationship between perceptions of mastery motivational climate and prosocial behaviour in soccer. A mastery-oriented climate is shown to put an emphasis on teamwork and collective

achievement and facilitate prosocial behaviour (Kavussanu, 2019). Kavussanu et al. (2009) found that most of the observed prosocial behaviours during soccer matches were ones directed towards a teammate and that prosocial behaviours occurred more often towards a teammate than the opponent. This is also in line with what our study found. In the observation, it could be seen that prosocial teammate behaviours occurred more often than prosocial opponent behaviours.

Limitations

However, it is essential to recognise the study's limitations. The study was done in a specific environment and used a small sample of only 40 participants, which may restrict the findings' generalizability also to other soccer populations. It is too small to be representative of the whole population. One reason for the small sample that was provided through feedback was that the English level of a lot of participants was insufficient for participation in the study. Participants had to cancel their participation because they realized that their English level is not appropriate. This is also represented in the dataset where we had to exclude 15 people because they did not answer the full questionnaire.

Furthermore, the study relied on self-report measures, which are prone to bias and potential measurement mistakes. Especially in the context of soccer, it could be that participants answered in a socially desirable manner to fulfil social norms, or they could have memory bias as a lot of questions were about the current season which is a rather long timespan. Additionally, the persons in the sample were largely recruited by snowball sampling. Because snowball sampling relies on referral from existing participants it is likely that participants all came from the same or similar socioeconomic background and that the sample is not representative of the broader population. The reason for this is that people tend to have social networks of people similar to them in aspects like education level, occupation or in the case of this study, shared interests, namely soccer. This could lead to a limited representation of diverse backgrounds and introduce bias that affects the generalizability of the study. What is positive about the sample is that it has an equal amount of male and female participants. So, both groups are represented equally and meaningful comparisons about gender-specific differences could be made, which is important for this study. However, each gender group was still too small and non-binary or transgender people were not a part of the study and could also be a topic for future research in order to have a more diverse sample and in order to enhance the generalizability of the results to the whole population.

Future Research

Future research should focus on conducting this study on a larger scale. The sample for this study was not that representative so future research should focus on having a sample that is representative of the whole population. The sample should have at least 100 participants and an equal amount of male and female participants. They should aim to have a very diverse sample with various socioeconomic backgrounds and nationalities. What could also be interesting is conducting this study for people who are part of the LGBTQ+ community as there is a gap in research for this topic. Because this study relied mostly on self-reported measures, future research should look into the influence of additional variables in shaping prosocial behaviour in soccer, such as cultural elements or social standards. This study focussed on Western culture however, soccer is a prominent sport worldwide so looking into different cultures and exploring what constitutes prosocial behaviour there and how to enhance prosocial behaviour in those cultures is important. Additionally, it could be interesting to compare Western and non-western cultures with regard to what factors influence if they behave prosocially in soccer and if there are different ways of enhancing it. This study used the method of snowball sampling which resulted in a homogenous sample. Future research should focus on having a diverse sample of people from various socioeconomic backgrounds, ages, and genders, in order to increase the generalizability to the whole population. Lastly, future research should focus on the moderating role of gender in the relationship between empathy and prosocial behaviour in soccer. So far, no moderating effect has been found. However, such a role appears likely as gender affects empathy (women tend to have higher empathy) and prosocial behaviour (women behave prosocial more often) and a relationship between empathy and prosocial behaviour in soccer has been found, where higher levels of empathy lead to more social behaviour.

Conclusion

In conclusion, this study adds to the growing body of research on prosocial behaviour in football by emphasizing the significance of gender and morality, particularly empathy and mastery motivational climate. Coaches, players, and sports organisations can work together to establish an inclusive and friendly soccer atmosphere that encourages compassion, fairness, and collaboration while accounting for individual as well as gender differences. Such efforts not only improve the overall experience and enjoyment of the game but also promote personal

development and contribute to the positive development of individuals within the football community.

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Appendix

Appendix A – Overview of Teams and Their Soccer Level

Name of Team	Male or Female	Level of Soccer (according to the German system)
SG Thüle/Petersdorf	Female	1. Kreisklasse
SV Bösel	Female	1. Kreisklasse
SV B-W Galgenmoor	Female	1. Kreisklasse
SC Kampe/Kamperfehn	Female	1. Kreisklasse
SC Winkum	Female	1. Kreisklasse
SV Evenkamp	Female	1. Kreisklasse
FC Sedelsberg	Female	1. Kreisklasse
SV Petersdorf II	Male	2. Kreisklasse
SV Petersdorf I	Male	Bezirksliga
SC Kampe/Kamperfehn	Male	2. Kreisklasse
VFL Markhausen	Male	2. Kreisklasse
Amasyaspor Lohne	Male	Bezirksliga
TuS Frisia Goldenstedt	Male	Bezirksliga
SV Thüle I	Male	Bezirksliga
SV Althenoythe	Male	Bezirksliga

Appendix B – Codes for Open Question + Gender Ratio

Pass the ball out because of injury. / Act to pause the game because of an injury. (2x

male; 2x N/A)

- shooting back the ball after an injury. **male**
- An Opponent was fouled, and my teammates passed the Ball out **male**
- If there is a foul, I play the ball out of bounds and help the person concerned. It does not matter whether the player is from my own team or the opposing team. I try to be a role model in every game. **N/A**
- mentioned an opponent was injured to the referee so he could pause the game to make sure the player was okay **N/A**

Helping an opponent or teammate in various ways when help is needed. (5x male; 4x female)

- Help a player female
- Helping an opponent that felt sick during the game male
- I have shown prosocial behaviour when a teammate of mine fell down and I went to her and asked if she was all right. I then helped her up and told her that if something was wrong, she can tell me anything. female
- To not choose competitiveness over helping each other out when needed (e.g., helping out anyone who needs help, whether it is about an opponent or a teammate) male
- helping a teammate that was struggling on an emotional level by talking to her and calming her down female
- Helping someone get up when they have fallen down male
- Als eine Gegenspielerin einen Krampf hatte, ist eine Mitspielerin direkt zu ihr und hat ihr Bein hochgehalten female
- Helping the opponent off the ground when accidentally fouling him male
- After a collision of two of my teammates with seconds of unconsciousness, everybody off and on the pitch reacted very helpfully. Male

Speaking respectfully with each other (4x male; 3x female, 1x N/A)

- being nice male
- speaking respectfully N/A
- I went to the referee at halftime after teammates got angry at him to say sorry male
- Adequate language use, not starting to yell even though you feel treated unfairly female
- do not talk negatively about a player who made a mistake female
- Somebody on our team insulted someone from the other team and we stood with the opponent and apologized for this behaviour. male
- shutting down disrespectful chants against the opposing team. male
- Whenever someone gets hurt because of me or if I hurt someone even slightly, I ask if everything is all right and I apologised female

Congratulating, motivating, and supporting each other (3x male; 3x female)

- In my team me and my teammates praise other teammates for good play during a game or training very often. female

- Motivate **female**
- I am a soccer player who cares a lot about his teammates. I try to encourage and motivate my teammates on and off the pitch. **male**
- When someone saw a risky opportunity and it did not work out, we all still support the dude for taking that risk, as it could have worked out great. No need to hate on the guy for trying something new. **male**
- applaud when a player leaves the pitch and has made a good game **male**
- Congratulating my teammates when they scored a goal **female**

Prosocial behaviour on and off the field to keep a nice climate within the team (1x male; 3x female)

- Integrate new team members into the group **male**
- Drinking beer together **female**
- Listener **Female**
- Asking to get taken down from the field so another person who really wanted to play can do that, voluntarily not playing because we were too many people and therefore had to decide who did not get to play **female**

Constructive Feedback (2x male; 0x female)

- I regularly take care of younger players on and during the match and try to give them support. Be it either through advice, encouragement, but also through constructive criticism. My personal focus is always to give assistance to my fellow players and beyond that, to convey a positive feeling. Soccer is to a large extent a matter of the head and therefore also highly dependent on the mental state. **male**
- Usually during football matches (either before or at half-time) I try to help some teammates that do not have as much experience playing football as I have by explaining some things they could improve in the field. This is especially for positioning aspects in the field. **male**

Appendix C – Associations of Items and Codes

Codes Open Question	Items PABSS
1. Pass the ball out because of injury. / Act to pause the game because of an injury.	6. Asked to stop play when an opponent was injured

2. Helping an opponent or teammate in various ways when help is needed.	5. Helped an injured opponent 7. Helped an opponent off the floor
3. Speaking respectfully with each other	-
4. Congratulating, motivating, and supporting each other	1. Encouraged a teammate 3. Gave positive feedback to a teammate
5. Prosocial behaviour on and off the field to keep a nice climate within the team	-
6. Constructive Feedback	4. Gave constructive feedback to a teammate

Appendix D – Informed Consent Observation and Survey

Informed Consent Sheet (Survey)

Purpose and Procedure

You are being invited to participate in a research study titled What Encourages Prosocial Behaviour in Soccer: The Difference Between Gender and the Influence of Morality. This study is done by me, Amelie Beeken from the Faculty of Behavioural, Management and Social Sciences at the University of Twente, as part of my Bachelor Thesis.

The purpose of this research study is to find out if your level of empathy, your perceived motivational climate of your team and your gender influence whether you behave prosocially in a soccer match to find ways prosocial behaviour could be enhanced. It will take you approximately 10 minutes to complete this survey. The data will be used for my Bachelor Thesis. To be able to participate in this study, you must be at least 16 years of age.

Risk, Anonymity and Confidentiality

We believe there are no major risks associated with this research study. All data will be anonymised and stored securely for two years. Your answers in this study will be treated confidentially; no personal data will be collected, and the researcher will not be able to trace back the data to a specific person, additionally, they will not be shared with other parties than the researcher and their supervisor.

Participant Rights and Consent

Your participation in this study is entirely voluntary. You are free to decline to participate, omit any question, or you can withdraw from the study at any time without the need to give a reason.

Clicking “I agree and consent to participating in this study” indicates that:

- you have been informed about the nature and method of this research in a manner that is clear to you,
- you have read this page thoroughly,
- you voluntarily agree to participate in this study,
- you are at least 16 years of age and not older than 40

Contact

For further information about this study and your rights as a research participant, you can contact the researcher via:

Amelie Beeken (a.beeken@student.utwente.nl)

And our research supervisor via:

Marleen Haandrikman (m.j.m.haandrikman@utwente.nl)

And the Ethics Committee via:

decaan-bms@utwente.nl

Informed Consent (Observation) – in German

Inhalt und Ablauf

Sie sind eingeladen, an einer Forschungsstudie mit dem Titel „Was fördert prosoziales Verhalten im Fußball? - Der Unterschied zwischen Geschlecht und der Einfluss von Moral“ teilzunehmen. Diese Studie wird von mir, Amelie Beeken von der Fakultät für Verhaltens-, Management- und Sozialwissenschaften der University of Twente, im Rahmen meiner Bachelorarbeit durchgeführt.

Ziel dieser Forschungsstudie ist es herauszufinden, ob Ihr Grad an Empathie, Ihr wahrgenommenes Motivationsklima innerhalb Ihrer Mannschaft und Ihr Geschlecht Einfluss darauf haben, ob Sie sich in einem Fußballspiel prosozial verhalten, um dann herauszufinden, wie prosoziales Verhalten verstärkt werden könnte. Hierzu beobachte ich das Fußballspiel und zähle die Häufigkeiten, bei denen bestimmte prosoziale Verhaltensweisen auftreten.

Beispiele könnten sein „einem Gegner vom Boden helfen“ oder „einem Teamkollegen gratulieren“.

Risiko, Anonymität und Vertraulichkeit

Wir glauben, dass mit dieser Forschungsstudie keine größeren Risiken verbunden sind. Es werden keine persönlichen Daten erhoben, weshalb eine komplette Anonymität vorliegt. Die erhobenen Daten werden sicher gespeichert und nicht mit anderen Parteien als dem Forscher und seinem Vorgesetzten geteilt.

Teilnehmerrechte und Zustimmung

Ihre Teilnahme an dieser Studie ist vollkommen freiwillig und ihre Zustimmung kann jederzeit widerrufen werden. Außerdem, steht es Ihnen frei, die Teilnahme abzulehnen.

Das Unterschreiben dieses Dokumentes bedeutet, dass:

- Sie über die Art und Methode dieser Forschung in einer für Sie verständlichen Weise informiert wurden,
- Sie diese Seite gründlich gelesen haben,
- Sie sich freiwillig bereit erklären, an dieser Studie teilzunehmen,
- Alle Teilnehmer mindestens 16 Jahre alt und nicht über 40 Jahre alt sind

Kontakt

Für weitere Informationen zu dieser Studie und Ihren Rechten als Forschungsteilnehmer können Sie mich kontaktieren über:

Amelie Beeken (a.beeken@student.utwente.nl)

Und meine Forschungsbetreuerin per:

Marleen Haandrikman (m.j.m.haandrikman@utwente.nl)

Und das Ethics Committee via:

decaan-bms@utwente.nl

_____ (Datum, Unterschrift)

_____ (Datum, Unterschrift)

Appendix E – Link to Online Questionnaire

https://utwentebbs.eu.qualtrics.com/jfe/form/SV_cCk0aUq2EeAh3WS

Appendix F – Frequencies According to PABSS of the Observation

Male Match 1 - SV Thüle I : SV Altenoythe

PABSS Item	Team 1	Team 2
1.	5	4
2.	3	4
3.	4	5
4.	2	1
5.	0	1
6.	1	1
7.	1	1

Male Match 2 - TuS Frisia Goldenstedt : SV Petersdorf I

PABSS Item	Team 1	Team 2
1.	3	1
2.	4	4
3.	3	3
4.	1	0
5.	1	2
6.	1	1
7.	2	1

Male Match 3 – SV Petersdorf I : Amasyaspor Lohne

PABSS Item	Team 1	Team 2
1.	2	5
2.	1	3
3.	6	3
4.	4	2
5.	0	0
6.	1	1

7.	1	2
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Male Match 4 – SV Petersdorf II : VFL Markhausen

PABSS Item	Team 1	Team 2
1.	3	5
2.	6	4
3.	2	1
4.	1	2
5.	0	0
6.	0	0
7.	0	0

Male Match 5 – SV Kampe/Kamperfehn : SV Petersdorf II

PABSS Item	Team 1	Team 2
1.	3	7
2.	4	3
3.	7	8
4.	0	1
5.	1	2
6.	1	1
7.	1	0

Female Match 1 – SV B-W Galgenmoor : SV Bösel

PABSS Item	Team 1	Team 2
1.	6	4
2.	7	5
3.	5	6
4.	3	4
5.	1	1
6.	1	1

7.	2	1
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Female Match 2 – SV Bösel : SC Kampe/Kamperfehn

PABSS Item	Team 1	Team 2
1.	3	2
2.	5	7
3.	4	3
4.	2	3
5.	0	0
6.	0	0
7.	0	0

Female Match 3 – SC Winkum : SG Thüle/Petersdorf

PABSS Item	Team 1	Team 2
1.	1	3
2.	4	6
3.	1	4
4.	0	1
5.	0	0
6.	2	2
7.	2	2

Female Match 4 – SG Thüle/Petersdorf : SV Evenkamp

PABSS Item	Team 1	Team 2
1.	3	5
2.	3	6
3.	2	4
4.	0	1
5.	1	2
6.	1	2

7.	0	2
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Female Match 5 – FC Sedelsberg : SG Thüle/Petersdorf

PABSS Item	Team 1	Team 2
1.	1	3
2.	3	4
3.	1	3
4.	0	1
5.	2	1
6.	1	1
7.	1	0