Advances in Social Sciences and Management
February 2024, Vol-2, No-2, pp. 17-25.

# Variation in Perceived Motivational Climate in Sports Among Young Football Players: A Case Study During a Tournament Preparation

Nuno André Nunes, Tom Doncom, & Russell Discombe

1. Department of Sport and Health, Solent University, Southampton, United Kingdom

**Abstract:**
The athletes' perceptions of their coaches' behaviour significantly contribute to the perception of motivational climate. This study aims to analyse the consequences of different types of coaching orientation on young football players, considering the perceived motivational climate in sports. Twenty-two football players aged 13-14 years completed the Perceived Motivational Climate in Sport Questionnaire-2 prior to the first practice in preparation for a tournament, and before the last game. The coach promoted a mastery approach to the under-13 team (n=12), and a performance approach to the under-14 team (n=10). Kruskal-Wallis Test showed no statistical differences pre-intervention. Post-intervention showed differences for Cooperation ($p<0.05$, higher for under-13), and Inequality ($p<0.05$, higher for under-14). The factorial analysis revealed no statistically significant differences in the various categories at the two data collection time points. The results demonstrate that the motivational climate perceived by players is directly influenced by the coach's attitudes and behaviours, with different training strategies inculcating different perceptions among players. Player's perception of coaches providing positive and encouraging feedback after success or failure in performance, as well as not ignoring errors, supporting players, and providing ample guidance, was associated with a task-oriented climate. In contrast, players who perceive their coach to give less positive feedback but a high amount of punishment feedback, punish excessively, and provide little support, were associated with an ego-oriented climate.

*Keywords: Perceived Motivational Climate in Sports, Young Football Players, Achievement Motivation, Coaching Behaviours, Training environment.*

## INTRODUCTION

Participation in youth sports has been associated with a myriad of physical and psychosocial benefits (Howie et al., 2018). It is therefore crucial to understand what underlying factors motivate athletes to continue their participation. The primary focus of athletes during sports performance centres on demonstrating competence, with athletes' awareness of their competence depending on how they perceive the cause of their success (Nicholls, 1984). Training and competition serve as ideal contexts to foster sports commitment in young individuals, provided they experience positive motivation, a key factor in enhancing adherence to physical-sporting activities (Almagro, 2011). In the sports context, the coach's importance and influence on young athletes are well-established as crucial for sustained sports participation (Torregrosa et al., 2008; Wekesser et al., 2021).

According to Nicholls' Achievement Goal Theory (1984), there are two distinct perceived achievement goal orientations: task orientation and ego orientation, which determine how individuals define success in an achievement setting (Harwood, Spray, & Keegan, 2008). The

orientations of the athlete can be influenced by dispositional and situational factors of key social agents (Harwood & Thrower, 2020), for example, those the coach seeks to instil during training. Task-oriented and ego-oriented orientations represent two distinct ways individuals perceive their competence for success in their sports (Newton, Duda & Yin, 2000). Task-oriented athletes perceive their abilities in relation to personal standards, judging their performances based on what they have, mastered, learned, and improved (Duda et al., 1995). Athletes with high levels of task orientation believe substantial effort is required to improve or acquire specific skills through extensive training. Success is perceived as a result of expended effort and overcoming challenging tasks, leading to high intrinsic motivation. Task-oriented athletes tend to enjoy themselves more, believing personal effort leads to achievement, fostering higher intrinsic motivation, greater self-confidence, and interest in the sport (Seifriz, Duda & Chi, 1992; Lee et al., 2020). They are associated with greater joy, personal effort, collective satisfaction, positive relationships with coaches and parents, and a lower tendency for tension and performance anxiety (Smith et al., 2005).

Conversely, ego-oriented individuals believe their individual abilities are determined by comparing themselves to other athletes (Standage & Treasure, 2002). Success is perceived as a result of possessing superior abilities, diminishing intrinsic interests, disregarding effort for success, and focusing solely on achievement. Ego-oriented athletes tend to overemphasize results, associate the ability to perform sport skills with sports success, experience more negative reactions from coaches and parents, exhibit high performance anxiety, and derive less pleasure and satisfaction from team activities (Smith et al., 2005).

Achievement orientations (i.e., task and ego) are believed to be determined through a complex relationship between the individual orientation and the wider motivational climate created by key social agents (Harwood & Thrower, 2020). One of the most influential social agents within sport is the coach. Gardner's (1998) studies provide valuable insights into the impact of coach behaviour on ahtletes perceived motivational climate. Gardner emphasized the crucial role of coaches in shaping the motivational environment within sports teams. According to Gardner's findings, coaches who exhibit supportive and empowering behaviours, such as providing positive feedback, acknowledging mistakes as opportunities for growth, and fostering a sense of teamwork, tend to create a task-oriented motivational climate. Similarly, Torregrosa et al. (2008) demonstrates that the coach-induced climate is highly correlated with youth football players' perceptions of their behaviour on the pitch, as motivational climate and coaches' communication style significantly determine players' enjoyment and commitment. Additionally, Almagro et al. (2011) highlight the importance of the motivational climate conveyed by the coach as a predictor of motivation and sports commitment in young athletes, establishing a direct relationship between task-oriented climate and sports commitment, basic psychological needs, and motivation.

The perceived motivational climate for task-oriented athletes is characterized by valuing hard work and skill improvement. Athletes are encouraged to evolve, work harder, help each other learn, and believe that each team member plays a crucial role in collective success (Newton, Duda & Yin, 2000; Smith et al., 2005). This climate is associated with positive outcomes: task-centred sports goals, increased effort, interest, competence, positive attitudes, cooperation, persistence, enjoyment, and intention to participate in sports. Task-oriented athletes experience effectiveness in their performances, freedom to make decisions, maintain good relationships with peers and coaches, enjoy the sport, and commit to regular and prolonged sports practice (Almagro et al., 2011; Garcia-Gonzalez, et al., 2019).

In contrast, the motivational climate perceived by ego-oriented athletes tends to be characterized by an environment where mistakes are punished, the coach recognizes only the best athletes, rivalry among teammates is encouraged, and competition among team members is promoted by the coach (Newton, Duda & Yin, 2000; Smith et al., 2005). This climate results from a lack of variety in tasks, an authoritarian coaching style limiting athletes' decision-making, public recognition based on social comparison, grouping by skill level, outcome-oriented evolution based on victory or defeat, and differentiated practice time allocation (Almagro et al., 2011). Studies related to Nicholls' Achievement Motivation Theory reveal numerous benefits for athletes perceiving a task orientation compared to those perceiving an ego orientation, such as improved subjective wellbeing (Martinez-Gonzalez et al., 2021), and reduced likelihood to induce dejection, anxiety, and anger (Ruiz et al., 2019). However, there is still a lack of investigation related to the academy level and when a team is manipulated under two different scenarios. Therefore, this study aims to analyse the variation in perceived motivational climate in sports among young football players (Under-15, U15) during an end-of-season tournament preparation, considering the type of coach orientation in different teams. It is expected players will adopt team-related behaviours when they are task-oriented, such as cooperation and effort. On the other hand, players facing ego-oriented coaching behaviours are expected to adopt individual-performance behaviours as punishment and inequality.

## METHODS AND MATERIALS

### Participants

Twenty-two male football players from an Under-15 team took part in this investigation. All participants experienced three weekly 90-minute training sessions, plus one game on weekends at a regional playing standard in a regular astroturf football pitch. Players are part of an amateur football club and have around 40 weeks of training per season. Data was collected during a 5-a-side football tournament, which was the final tournament of the season. Players were divided into two different teams: Team 1, all players Under-14 (N = 12); and Team 2, all players Under-15 (N = 10). Informed consent was gained from the coaches, parents, and players, as well as gatekeeper consent from the clubs, before the beginning of the study. All participants were notified that they could withdraw from the study at any time. The experimental protocol and investigation were approved by the local Institutional Research Ethics Committee and performed according to the Helsinki Declaration's ethical standards.

### Data Collection

To analyse the motivational climate, the Perceived Motivational Climate in Sport Questionnaire-2 (PMCSQ-2) was utilized, originally validated by Newton, Duda & Yin (2000). The questionnaire comprises a total of 33 items grouped into two dimensions: task orientation (17 items) and ego orientation (16 items), measured using a 5-point Likert scale, where 1 corresponds to completely disagree, and 5 corresponds to completely agree.

### Procedures

During the preparation for the tournament, a total of 12 training sessions were conducted. Out of all the players, only 4 members from each team attended all 12 sessions, with the minimum attendance recorded at 7 sessions. In terms of the average, Team 1 was present at 10.2 sessions (85% attendance), while Team 2 attended 10.1 sessions (84.2% attendance) (Table 1). Regarding the number of matches played during the tournament, the Team 1, who received task-oriented guidance, played 6 games, successfully advancing through the group stage, and finishing the tournament in 3$^{rd}$ place. On the other hand, the Team 2, who received ego-oriented guidance,

failed to progress to the next stage, playing a total of 3 matches and finishing in 6th position. Concerning attendance at the matches, all players were present in every game throughout the tournament.

**Table 1: Frequency and Average training by all players.**

| Training sessions frequency | Team 1 (N=12) | Team 2 (N=10) |
|---|---|---|
| 12 = 100% | 4 = 33,3% | 4 = 40% |
| 11 = 91,7% | 2 = 16,7% | 1 = 10% |
| 10 = 83,3% | 2 = 16,7% | 2 = 20% |
| 9 = 75% | 1 = 8,3% | 0 = 0% |
| 8 = 66,7% | 2 = 16,7% | 1 = 10% |
| 7 = 58,3% | 1 = 8,3% | 2 = 20% |
| Average Frequency to Training sessions | 10,2 = 85% | 10,1 = 84,2% |

The administration of the questionnaires took place before the first tournament preparation training session and before the start of the last tournament match, aiming to assess the variation in motivational climate among young football players, considering the different coach orientations. To achieve this, throughout the tournament preparation training sessions and during the tournament matches, the coach exhibited distinct attitudes and behaviours for both teams (Table 2). Since the coach of the sample is also an investigator of this study, an impartial physical education teacher was requested to administer the questionnaires in an isolated environment to obtain reliable responses; if the coach had administered the questionnaires, players' responses could have been biased, reflecting what the coach would like to observe.

**Table 2: Training and game strategies implemented by the coach in the different teams.**

| **Team 1 – Task climate** | **Team 2 – Ego climate** |
|---|---|
| Serene and calm tone of voice | Offensive and aggressive tone of voice |
| Focus on the collective development and effort of the players | Focus on the result and victory at all costs |
| Giving opportunity to all players | Prioritise the best players |
| Congratulate the team in general | Congratulate individual players |
| Substitutions for everyone to play | Substitutions for mistakes made |
| Promote equality among athletes | Promote individual improvement in relation to others |
| Correct the mistake | Punish the mistake |
| The players who put in the most effort will play | The best players always play |
| Mix of players in the training organization | Separation of players in the training organization |

## Data Analysis

Before analysing data, the different items were categorized based on their orientation towards task or ego. For each category, the three items from the questionnaire with the highest correlation were chosen, following the approach of Newton, Duda, and Yin (2000). Accordingly, three categories were proposed for task orientation: Cooperation (items 11, 21, and 33); Team Importance (items 5, 19, and 32); and Effort/Improvement (items 14, 28, and 30). Two categories were proposed for ego orientation: Punishment (items 2, 15, and 18); and Inequality (items 13, 26, and 29). The category of rivalry among team members was excluded due to the consideration that the obtained results would not be conclusive, related to the reliability and validity of the obtained results given the small sample size. Rivalry among team members is a complex and multifaceted aspect of team dynamics that may require a sufficiently large sample size to yield

meaningful insights (Newton, Duda, and Yin, 2000). In this case, it was determined that the sample size was inadequate to capture the nuances and variability within this category effectively. Considering the sample size (<30 subjects), non-parametric tests were employed for the statistical analysis. To compare groups (Team 1 and Team 2) at the two data collection points (before the first tournament preparation training and before the last tournament match), a Kruskal-Wallis test was used to determine the presence or absence of statistically significant differences in the analysed categories (cooperation, team importance, effort/improvement, punishment, and inequality). Simultaneously, the Wilcoxon test was also used to conduct a factorial analysis, aiming to assess the presence or absence of statistically significant differences within the same category at the two data collection points, considering the different groups. All statistical tests were conducted using IBM SPSS Statistics 20 for Macintosh. A significance level of $p<0.05$, consistent with social sciences practices, was adopted.

## RESULTS

Regarding the first data collection, before the start of tournament preparation, no statistically significant differences were observed between the two groups concerning the five analyzed categories (Table 3). However, second-year Under-15 athletes exhibited slightly lower average values across all analyzed categories, including those related to ego orientation.

**Table 3: Results from first data collection prior to the intervention comparing the results of the PMCSQ-2 between Team 1 (Task climate) and Team 2 (Ego climate).**

| | Team 1 (N=12) | | Team 2 (N=10) | | |
|---|---|---|---|---|---|
| | Mean | dp | Mean | dp | *p* |
| Cooperation | 4,3056 | 0,44947 | 3,9000 | 0,67036 | 0,269 |
| Importance in the Team | 4,3333 | 0,45965 | 4,1333 | 0,81725 | 0,460 |
| Effort/Improvement | 4,0556 | 0,78924 | 3,9000 | 0,68584 | 0,503 |
| Punishment | 2,7500 | 0,57075 | 2,2667 | 0,51640 | 0,065 |
| Inequality | 2,5000 | 0,78496 | 2,1333 | 1,04468 | 0,425 |

Concerning the second data collection, after the implementation of different strategies in each of the teams, statistically significant differences were observed in some of the analyzed categories (Table 4). Consequently, no statistically significant differences were recorded among the different groups in the categories Importance to the Team, Effort/Improvement, and Punishment. However, statistically significant differences were noted in the categories Cooperation and Inequality. In this data collection, Team 1 players exhibited higher average values for Cooperation, Importance to the Team, and Effort/Improvement, whereas Team 2 showed higher average values for Punishment and Inequality.

**Table 4: Results from second data collection post intervention comparing the results of the PMCSQ-2 between Team 1 (Task climate) and Team 2 (Ego climate).**

| | Team 1 (N=12) | | Team 2 (N=10) | | |
|---|---|---|---|---|---|
| | Mean | dp | Mean | dp | *p* |
| Cooperation | 4,0833 | 0,62158 | 3,5333 | 0,44997 | 0,026 |
| Importance in the Team | 4,3056 | 0,68841 | 3,8000 | 0,78881 | 0,132 |
| Effort/Improvement | 3,9722 | 0,85821 | 3,5333 | 0,84911 | 0,333 |
| Punishment | 2,5278 | 0,84636 | 2,7667 | 0,72094 | 0,442 |
| Inequality | 2,0833 | 0,74026 | 2,9000 | 0,90335 | 0,042 |

Regarding the factorial analysis, the data indicates that no statistically significant differences were observed across the categories at the two data collection time points. This means that the players' perceptions of Cooperation, Importance in the Team, Effort/Improvement, Punishment, and Inequality remained relatively stable over time, with no significant changes detected between the two assessment periods (Table 5).

**Table 5: Factorial analysis**

| | *p* |
|---|---|
| Cooperation | 0,069 |
| Importance in the Team | 0,374 |
| Effort/Improvement | 0,512 |
| Punishment | 0,807 |
| Inequality | 0,970 |

## DISCUSSION

This study aimed to analyse the variation in perceived motivational climate in sports among U15 football players during an end-of-season 5-a-side tournament preparation, considering the type of coach orientation for different teams. The results showed some significant differences in perceived motivational climate between the two teams. Team 1 players perceived a predominantly task-oriented climate, emphasizing skill improvement, effort, and cooperation. In contrast, Team 2 players perceived a more ego-oriented climate, focusing on competition, results, and individual recognition. Statistical analysis revealed a positive correlation between athletes perceived motivational climate and their coach's orientation, supporting previous research (Torregrosa et al., 2008).

The results obtained in the first data collection revealed no statistically significant differences in the results from the PMCSQ-2 between Team 1 and Team 2 U15 football players, as hypothesised. This outcome can be attributed to the fact that all these players were part of the U15 team during the season and the coach exhibited consistent attitudes and behaviours towards all players throughout the competitive year. In contrast, significant statistical differences between the two teams emerged in the results of the second data collection (post intervention), reflecting distinct strategies employed in tournament preparation. Consequently, players' perceptions of the coach's behaviour and attitudes significantly contributed to their climate perception, aligning with the findings of Smith et al. (2005) and Torregrosa et al. (2008). Therefore, the climate induced by the coach is closely linked to players' perceptions of their performance, with the coach's role being pivotal in the commitment and enjoyment of young footballers.

The results for team 1 players in the second data collection, where behaviours and attitudes oriented towards the task were instilled, showed higher scores in categories such as Cooperation, Team Importance, and Effort/Improvement, categories associated with task orientation. From the first to the second data collection moment, the same values for ego-oriented categories decreased on average. These results are similar to past research (i.e., Seifriz, Duda & Chi, 1992; Smith et al., 2005; & Torregrosa et al., 2008), and indicating that a task-oriented motivational climate is linked to a coach providing ample guidance, positive and encouraging feedback after performance success or failure, supporting players, and not overlooking mistakes. The findings also synergise the conclusions of Ruiz et al. (2019), where coaches facilitating empowering climates with a task orientation will in turn reduce likelihood for social comparison, and decrease levels of anxiety, dejection, and anger. Players experiencing this climate tend to believe that

personal effort leads to achievement. Notably, players instilled in a task-oriented climate achieved a better ranking in the tournament (3rd place). Despite this, there is no data to determine if the motivational climate impacted the outcome of the tournament.

Conversely, the results for team 2 U15 players in the second data collection, where behaviours and attitudes oriented towards ego were instilled, showed higher scores in categories such as Punishment and Inequality, categories associated with ego orientation. Values for task-oriented categories decreased from the first to the second data collection moment, with the opposite occurring in ego-oriented categories. These results align with studies by Seifriz, Duda & Chi (1992), Smith et al. (2005), and Torregrosa et al. (2008), indicating that an ego-oriented climate is associated with high levels of punishment feedback, significant punishment, limited support, and an overemphasis on individual result and performance. Athletes experiencing this climate tend to feel greater pressure and believe their performances are only positive when victorious in matches. In contrast to team 1 counterparts, team 2 U15 players achieved a lower ranking in the tournament (6th place). Hypothetically, the increased pressure and a focus on victory may have likely led to poorer sporting outcomes.

The factorial analysis conducted did not reveal statistically significant differences in the various categories at the two data collection moments. This absence of differences may be attributed to the small sample size, preventing more extensive data collection. It is anticipated that with a larger sample size, significant differences might have emerged in the diverse categories. The limited sample size also influenced the results obtained regarding group differences. Given the small number for team 2, the results in various categories were not as significant as expected, considering the strategies applied to the players. Consequently, there was always a group of players who competed more regularly, with only five players not regularly participating in the main team's activities. Thus, only these players had reasons for dissatisfaction compared to their peers. These differences in numbers are not as significant for team 1 since all these players rotated in the main team, maintaining an identical number of minutes played. Attendance at training did not prove to be a decisive factor in the obtained results, as the average difference between teams was 0.8% (equivalent to an average difference of 0.1 training sessions). Future studies should look to include a higher sample size to better analyse results to all categories of the PMCSQ-2.

The research results from the study add to the weight of research indicating that players perceived motivational climate is closely linked to the coach's attitudes and behaviours, both during training sessions and matches. Coaches who use a calm and serene tone of voice, focus on collective development and effort, provide opportunities to all players, praise the team, make substitutions to ensure everyone plays, promote equality among athletes, correct mistakes, play athletes who put in the most effort, and mix all players in training organization tend to instil a task-oriented climate. This results in increased cooperation, effort, and mutual assistance among team members. On the other hand, coaches using an aggressive and offensive tone of voice, emphasizing results and victory at all costs, prioritizing the best players, praising individual players, making substitutions based on mistakes, promoting individual improvement over others, punishing mistakes, consistently playing the best athletes, and segregating the top players in training organization tend to instil an ego-oriented climate. Players in such a climate perceive inequalities among teammates and experience pressure in executing technical gestures, fearing punishment.

## CONCLUSION

The deliberate orientation of the training climate by the coach is mirrored in the athletes' perceptions, highlighting the influential power coaches hold in shaping the sporting environment. Essentially, the coach's approach sets the tone for the entire training atmosphere, influencing athletes' attitudes, behaviours, and ultimately, their performance outcomes. This alignment between the coach's direction and the athletes' perception underscores the significant role of the coach as a key determinant of the training environment's quality. Coaches possess the ability to manipulate the context of practice, employing considerable influence over the overall experience and outcomes of their athletes. By consciously adopting positive coaching practices and fostering a task-oriented climate, coaches can create an environment conducive to individuals' growth, development, and success. Conversely, neglecting to prioritise a supportive and empowering training environment may result in negative consequences for athletes, hindering their progress and diminishing their enjoyment of the sport. Therefore, coaches must recognize their role as architects of the training climate and strive to cultivate an environment that nurtures athletes' potential and fosters their passion for sport.

Concluding, this study highlights the significance of coaches' behaviour in shaping athletes' perceptions of the motivational climate in sports. Task-oriented coaching practices were associated with positive outcomes, contributing to athletes' enjoyment, motivation, and commitment. Conversely, ego-oriented coaching practices were linked to detrimental effects on athletes' well-being and performance. Coaches, educators, and sports organizations should prioritize the development of task-oriented coaching strategies to enhance the overall sports experience for young athletes and promote long-term engagement in physical-sporting activities.

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