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Relationship between goal orientation and mindfulness in football players across playing positions

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Abstract. This study investigated the relationship between goal orientation and mindfulness in football players, while also examining differences across playing positions. A cross-sectional design incorporating both correlational and comparative approaches was employed. The sample consisted of 180 licensed football players competing as goalkeepers (n = 32), defenders (n = 46), midfielders (n = 62), and strikers (n = 40). Data were collected using validated scales measuring task and ego orientation, as well as athlete mindfulness. Prior to the main analyses, normality assumptions were tested and satisfied. Differences across playing positions were examined using one-way ANOVA, while relationships between variables were analyzed using Pearson correlation coefficients. The results revealed no statistically significant differences across playing positions in overall goal orientation ($p = .990$, $\eta^2 = 0.00$), task orientation ($p = 0.348$, $\eta^2 = 0.02$), or mindfulness sub-dimensions, including awareness ($p = 0.292$, $\eta^2 = 0.02$), non-judging ($p = 0.413$, $\eta^2 = 0.02$), and refocusing ($p = 0.255$, $\eta^2 = 0.02$). Descriptive findings indicated that task orientation scores were consistently higher than ego orientation scores across all position groups. Similarly, among mindfulness dimensions, refocusing demonstrated the highest mean values across all positions. Correlation analysis revealed significant positive relationships between mindfulness and goal orientation across all playing positions ($p < 0.01$), with correlation coefficients ranging between $r = 0.551$ and $r = 0.818$. In conclusion, football players exhibited similar goal orientation and mindfulness profiles regardless of playing position, with effect sizes indicating negligible practical differences. The findings also indicate a consistent positive association between mindfulness and goal orientation, suggesting that these psychological constructs may operate in an interrelated manner within football performance contexts.

Introduction

Football is one of the most widely followed sports worldwide and imposes complex performance demands on players (Martín-García et al., 2018). Although physical capacity, tactical awareness, and motor skills are widely recognized as essential components of football performance, psychological and cognitive characteristics have increasingly been acknowledged as equally influential (Öztürk et al., 2025; Koç et al., 2025a). In competitive environments, players are required not only to cope with physical intensity but also to maintain attentional focus and psychological stability under constantly changing game conditions (Li et al., 2025). However, sustained competitive pressure may lead to increased stress, anxiety, and disruptions in attentional control. Within football, playing positions involve distinct tactical roles, responsibilities, and decision-making demands. These positional differences may influence how players define success, regulate performance, and evaluate achievement outcomes (Öğraş & Çetin, 2024). One of the most widely used frameworks for explaining such individual differences is Goal Orientation Theory, which focuses on how individuals conceptualize success and which criteria they prioritize during performance (Nicholls, 1989). This framework distinguishes between task orientation and ego orientation. Task-oriented athletes tend to evaluate success based on personal improvement and skill development, whereas ego-oriented athletes emphasize outperforming others and social comparison (Duda & Nicholls, 1992). These orientations are associated with differences in

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motivation, decision-making processes, and responses to competitive pressure (Çekiç, 2018; Anderman et al., 2002). In particular, maintaining performance under pressure is closely linked to attentional control and psychological regulation.

In this context, mindfulness has emerged as an important construct in sport psychology. Mindfulness refers to the ability to maintain attention on present-moment experiences while adopting a non-judgmental and accepting stance (Kabat-Zinn, 2003; Baer, 2003; Bishop et al., 2004; Kaufman et al., 2009; Pineau et al., 2014; Gardner et al., 2017). In sports characterized by rapid decision-making, such as football, mindfulness is considered to play a role in attentional regulation and performance consistency.

Despite the growing interest in both goal orientation and mindfulness, existing research examining the relationship between these constructs remains limited (McCarthy, 2011; Lee, 2020; Lewis et al., 2022). Moreover, studies addressing these variables within the context of playing positions in football are particularly scarce. Given that positional roles involve different cognitive and attentional demands, examining goal orientation and mindfulness together within a positional framework may provide a more comprehensive understanding of players' psychological profiles.

Therefore, the present study aims to examine the relationship between goal orientation and mindfulness in football players, while also investigating whether these variables differ across playing positions. Based on the theoretical framework and existing literature, it is hypothesized that (H1) goal orientation and mindfulness levels do not significantly differ according to playing positions, and (H2) there is a positive relationship between goal orientation and mindfulness among football players. By addressing these hypotheses, the study seeks to provide a clearer understanding of how motivational and attentional processes are structured within different positional roles in football.

Materials and Methods

Participants

The present study was designed using a cross-sectional model incorporating both correlational and comparative approaches. The correlational component aimed to examine the relationships between goal orientation and mindfulness, while the comparative component focused on identifying potential differences across playing positions.

The sample of the study comprised 180 licensed football players representing various on-field positions. All participants were actively engaged in football during the 2025–2026 competitive season and were competing in youth and amateur leagues affiliated with official football organizations. Participants were regularly training and competing at their respective levels during the data collection period and were recruited on a voluntary basis. A convenience sampling method was employed in the selection of participants, as accessibility and willingness to participate were taken into consideration. All individuals provided informed consent prior to their inclusion in the study.

Prior to data collection, an a priori power analysis was conducted using G*Power 3.1 software to determine the minimum required sample size. Based on a medium effect size (f = 0.25), an alpha level of 0.05, and a statistical power of 0.80 for one-way ANOVA with four groups, the required minimum sample size was calculated as 180 participants. Therefore, the sample size of the present study was considered sufficient to detect statistically meaningful differences.

Procedures

Before the data collection process, all participants were fully informed about the objectives and procedures of the study. They were explicitly notified that the obtained data would be used exclusively for scientific purposes, would remain confidential, and would not be disclosed to any third parties. In addition, participants were informed that the obtained information would be analyzed only within the framework of statistical procedures and that personal identification details would not be included at any stage of the research process. Participants who chose not to take part in the study following this briefing were not included in the research sample.

A researcher-designed personal information form was used to collect participants' demographic and sport-related characteristics. The form contained items addressing variables such as gender, age, educational level, length of sporting experience, and playing position.

Goal orientation was measured through the Task and Ego Orientation in Sport Questionnaire originally developed by Duda and Nicholls (1992). This instrument comprises 13 items, of which seven

assess task orientation and six evaluate ego orientation, with responses rated on a five-point Likert scale. The Turkish version of the scale, adapted for use with athletes, was validated by Toros (2004).

Athletes' mindfulness levels were evaluated using the Athlete Mindfulness Scale, whose Turkish validity and reliability were established by Tingaz (2020). The instrument is composed of three sub-dimensions, namely awareness, non-judging, and refocusing. It contains 15 items rated on a six-point Likert scale, yielding total scores between 40 and 65. Items 6, 7, 8, 9, and 10 are scored in reverse. Reported correlation coefficients between the overall scale score and its sub-dimensions were 0.84 for awareness, 0.72 for non-judging, and 0.83 for refocusing. In the present study, the internal consistency coefficient (Cronbach's alpha) for the overall scale was found to be 0.87, while the alpha values for the sub-dimensions were 0.82 for awareness, 0.76 for non-judging, and .84 for refocusing. These values indicate acceptable to high internal consistency.Data Analysis

Statistical analyses were carried out using the SPSS 22.0 software program. The distribution characteristics of the data were examined through skewness and kurtosis coefficients. In line with the guidelines proposed by Tabachnick, Fidell, and Ullman (2007), values falling within the range of −1.5 to +1.5 were regarded as indicative of normal distribution. According to these criteria, the dataset was determined to satisfy the normality assumption.

Comparisons between two independent groups were conducted using independent-samples t-tests, whereas differences among multiple groups were examined through one-way analysis of variance (ANOVA). When significant differences were observed, post hoc procedures were applied, with the Bonferroni correction selected in consideration of unequal group sizes. Associations between variables were assessed via Pearson correlation analysis. Descriptive statistics were reported in terms of means and standard deviations, and statistical significance was determined at the $p < .05$ level (Koç et al., 2025; Adıgüzel et al., 2025).

Result

Table 1. Participants' demographic characteristics

	n	Frequency (%)
Ages 13-14	60	33.3
Ages 15-16	60	33.3
Ages 17-18	60	33.3
Total	180	100.0
Goalkeeper	32	17.8
Defender	46	25.6
Midfielder	62	34.4
Striker	40	22.2
Total	180	100.0

As shown in Table 1, a total of 180 football players participated in the study. When the age distribution of the participants was examined, it was observed that 60 players (33.3%) were in the 13–14 age group, 60 players (33.3%) were in the 15–16 age group, and 60 players (33.3%) were in the 17–18 age group. These findings indicate that the age groups were equally distributed within the sample. Regarding playing positions, 32 participants (17.8%) were goalkeepers, 46 (25.6%) were defenders, 62 (34.4%) were midfielders, and 40 (22.2%) were strikers. The highest level of participation was observed among midfield players, whereas the lowest participation rate was found in the goalkeeper position.

Table 2. Mean scores of task and ego orientation sub-dimensions according to playing positions

		n	M	SD	f	p	n^2
Goal Orientation	**Goalkeeper**	32	25.38	5.26	0.038	0.990	0.00
	Defender	46	25.30	4.18			
	Midfielder	62	25.10	3.36			
	Striker	40	25.20	4.59			
Task Orientation	**Goalkeeper**	32	18.09	4.76	1.107	0.348	0.02
	Defender	46	17.78	4.01			
	Midfielder	62	19.11	3.54			
	Striker	40	18.53	3.78			

As shown in Table 2, task and ego orientation sub-dimension scores were compared across playing positions. The analysis revealed that overall goal orientation scores did not differ significantly

according to position (p>0.05). Likewise, task orientation scores did not differ significantly across the various playing position groups (p>0.05).

Table 3. Mean scores of mindfulness sub-dimensions according to playing positions

		n	M	SD	f	p	n²
Awareness	**Goalkeeper**	32	17.00	3.85	1.253	0.292	0.02
	Defender	46	16.85	3.37			
	Midfielder	62	17.74	3.12			
	Striker	40	16.48	3.62			
Non-Judging	**Goalkeeper**	32	14.47	5.66	0.959	0.413	0.02
	Defender	46	13.22	4.35			
	Midfielder	62	13.84	4.90			
	Striker	40	12.68	4.63			
Refocusing	**Goalkeeper**	32	25.06	3.68	1.366	0.255	0.02
	Defender	46	25.39	3.02			
	Midfielder	62	24.15	3.61			
	Striker	40	24.83	2.74			

Table 4. Level of relationship between goal orientation and mindfulness sub-dimensions

	n	Awareness	Task Orientation	Goal Orientation
Goalkeeper	**32**	**r**	0.818**	0.759**
		p	0.000	0.000
Defender	**46**	**r**	0.710**	0.690**
		p	0.000	0.000
Midfielder	**62**	**r**	0.592**	0.551**
		p	0.000	0.000
Striker	**40**	**r**	0.756**	0.631**
		p	0.000	0.000

As presented in Table 3, mindfulness sub-dimension scores were compared according to players' playing positions. The findings revealed that awareness sub-dimension scores did not show statistically meaningful variation across different playing positions (p>0.05). Similarly, non-judging scores did not vary significantly across position groups (p>0.05). Likewise, no meaningful differences were identified across playing positions with respect to refocusing scores (p>0.05).

As shown in Table 4, the relationships between goal orientation and mindfulness sub-dimensions were examined according to playing positions. The results indicated that the association between mindfulness and task orientation was stronger among goalkeepers and strikers, whereas relatively lower correlation values were observed among defenders and midfielders. Nevertheless, this relationship was found to be statistically significant across all position groups (p<0,01).

Similarly, when the relationship between mindfulness and ego orientation was examined, the highest correlation coefficients were observed in the goalkeeper group, followed by strikers and defenders, while lower values were identified among midfield players. However, the relationships between mindfulness and ego orientation were statistically significant in all position groups (p<0,01).

Discussion and Conclusion

The present study investigated whether football players' task and ego orientation levels differed according to playing positions. The findings demonstrated that no statistically significant differences emerged among positions in relation to either task or ego orientation. Nevertheless, task orientation scores were consistently higher than ego orientation scores across all positional groups. This pattern is largely consistent with previous research. McCarthy (2011), in a study conducted with

collegiate athletes, reported that task-oriented motivation tends to be more dominant than ego-oriented motivation and is associated with greater self-regulation, sustained motivation, and performance stability. Similarly, Duda & Nicholls (1992) emphasized that task-oriented athletes are more likely to develop long-term, intrinsically driven motivational patterns. In addition, Arı & Korkmaz (2025) reported that athletes with higher task orientation levels tend to exhibit greater cognitive flexibility and lower burnout symptoms.

Beyond these similarities, the absence of positional differences may be interpreted in relation to the shared performance environment of football. Although playing positions differ in tactical roles, players are exposed to similar training structures, coaching strategies, and competitive expectations. This shared context may contribute to the development of relatively homogeneous motivational profiles across positions. In particular, the emphasis on collective performance, team cohesion, and standardized training routines may reduce the likelihood of position-specific differentiation in goal orientation. Furthermore, the age range and developmental stage of the participants may have contributed to the observed uniformity, as younger athletes tend to be influenced more strongly by common environmental and coaching factors than by specialized positional demands.

With regard to mindfulness sub-dimensions, no significant differences were identified across playing positions. However, refocusing emerged as the most prominent component in all groups. This finding suggests that football players may place particular emphasis on attentional redirection skills when coping with competitive demands. Zhang et al. (2025) demonstrated that mindfulness-based interventions enhance athletes' ability to redirect attention and maintain focus under competitive conditions. Likewise, Baltzell and Akhtar (2014) highlighted that mindfulness practices contribute to improvements in awareness and refocusing capacities, thereby facilitating task engagement under stress. Qi (2025) also emphasized that the combined influence of awareness, non-judging, and refocusing plays a central role in performance regulation.

The lack of positional differences in mindfulness may be explained by the universal attentional demands of football. Regardless of position, players are required to process rapidly changing stimuli, maintain situational awareness, and regulate attention under pressure. These shared cognitive requirements may lead to the development of similar mindfulness profiles across positions. In this context, refocusing may represent a core attentional skill that is equally critical for all players, rather than a position-specific attribute.

The relationships between goal orientation and mindfulness were also examined in the present study. The results revealed strong positive associations between mindfulness and both task and ego orientations across all playing positions ($r = .551–.818$). These relatively high correlation coefficients suggest a robust linkage between motivational and attentional processes. One possible explanation is that athletes with higher levels of mindfulness may demonstrate greater attentional control and self-regulation, which in turn facilitates both mastery-focused (task) and performance-focused (ego) goal orientations. These findings suggest that mindfulness may not only enhance internal awareness but also support the monitoring of environmental demands and adaptive performance regulation (Baltzell & Akhtar, 2014; Röthlin et al., 2016).

However, the strength of these relationships may also be influenced by alternative factors. Given that both constructs were assessed through self-report measures self-report measures, common method variance may have contributed to the magnitude of the observed correlations. In addition, the conceptual overlap between attentional regulation and goal-directed behavior may partially account for the strong associations. Consistent with this interpretation, Kee et al. (2012) reported that athletes with higher mindfulness levels are better able to maintain concentration and regulate negative emotional reactions, even under performance pressure. This indicates that mindfulness may function as a regulatory mechanism that facilitates balanced responses to both internal and external stimuli.

When considered as a whole, the findings of this research indicate that task-oriented motivation tends to be associated with more enduring and stable motivational patterns, while mindfulness—particularly through refocusing—plays a critical role in attentional regulation. Arı & Korkmaz (2025) noted that task orientation contributes to reduced burnout risk, whereas Baltzell & Akhtar (2014) emphasized that mindfulness practices strengthen attentional control and support performance maintenance under stress. In this context, mindfulness may serve as an important psychological resource that enhances

cognitive flexibility and performance self-regulation in football players.

From a practical perspective, the predominance of task orientation across positions suggests that training environments may benefit from emphasizing mastery-based climates focused on personal improvement and learning processes. Furthermore, the prominent role of refocusing highlights the importance of systematically developing athletes' attention regulation skills. Coaches and practitioners may consider integrating mindfulness-based exercises, concentration drills, and structured mental training programs into regular practice routines to enhance players' ability to redirect attention during matches. In addition, the positive associations between mindfulness and goal orientation indicate that psychological interventions aimed at strengthening mindful awareness may also support motivational processes. Brief mindfulness-based practices incorporated into team routines may assist athletes in managing stress, maintaining focus under pressure, and sustaining performance throughout the season. Finally, individualized psychological support strategies that take into account players' motivational tendencies and attentional profiles may contribute to both performance optimization and long-term athlete well-being.

Overall, the results suggest that football players demonstrate comparable psychological profiles in terms of motivation and mindfulness, regardless of playing position. These findings underline the central role of attention control and self-regulation in sustainable athletic performance. However, several limitations should be considered when interpreting the findings. First, the cross-sectional design of the study limits the ability to draw causal inferences regarding the relationship between goal orientation and mindfulness. Second, the reliance on self-report measures may have introduced response bias and common method variance, potentially influencing the strength of the observed relationships. In addition, the use of a convenience sampling method and the specific age range of the participants may limit the generalizability of the findings to broader football populations.

Future research is encouraged to examine these associations across diverse performance levels, age groups, and sociocultural contexts. Moreover, longitudinal designs and controlled experimental approaches may provide a more comprehensive understanding of the causal mechanisms underlying the relationship between goal orientation and mindfulness.

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Conflict of Interest

The authors declare no conflict of interest related to this article.

Ethics Approval

The study protocol was approved by the Research Ethics Committee of the Faculty of Medicine, Cukurova University (Meeting No: 160, Date: November 14, 2025, Decision No: 127).

Author Contributions

Study Design: İB, CU
Data Collection: CU
Statistical Analysis: İB
Manuscript Preparation: İB, CU

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