

Effective Communication as a Mediator between Leadership and Team Unity in Football Teams

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Abstract

This study examines the relationship between leadership characteristics, communication skills, and team unity among football team captains. It also investigates the mediating effect of effective communication on the relationship between leadership and team unity. The study involved football players (n = 324) from 19 teams in the Turkish Football Federation (TFF) 2nd League. “Leadership for Sport Scale (LSS)”, “Team Cohesion Inventory” and “Effective Communication Scale in Team Sports” were used to collect the data. In the research, frequency, Cronbach Alpha reliability analysis, Anova, Pearson correlation and regression analysis methods such as frequency, Cronbach Alpha reliability analysis, correlated mediation effect method were used by Andrew F. Hayes using Process v4.2 software. Analysis results showed that athletes' perceptions of leadership, communication, and team unity varied based on certain demographic characteristics. Furthermore, a significant relationship was found between leadership in sports and both effective communication and team unity. Finally, effective communication was found to mediate the relationship between leadership and team unity. Effective communication plays a crucial role in connecting team captains' leadership characteristics with team unity. Additionally, the development of effective communication and team unity is directly related to the presence of an effective leader. In conclusion, communication skills significantly contribute to team captains' perceptions of leadership style and team unity.

Keywords: Leadership in Sport, Football, Team Captain, Team Cohesion, Communication, Mediation Effect.

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Futbol Takımlarında Liderlik ve Takım Birlikteliği Arasında Bir Aracı Olarak Etkili İletişim

Öz

Bu çalışma, futbol takım kaptanlarının liderlik özellikleri, iletişim becerileri ve takım uyumu arasındaki ilişkiyi incelemektedir. Ayrıca, liderlik ve takım uyumu arasındaki ilişkide etkili iletişimin aracılık etkisi de araştırılmaktadır. Çalışmaya Türkiye Futbol Federasyonu (TFF) 2. Lig'de yer alan 19 takımdan futbolcular (n = 324) katılmıştır. Araştırma verilerinin toplanmasında; “Sporda Liderlik Ölçeği” (Leadership for Sport Scale-LSS), “Takım Birlikteliği Envanteri” ve “Takım Sporlarında Etkili İletişim Ölçeği” kullanılmıştır. Araştırmada istatistik analizler olarak; frekans, Cronbach Alpha güvenirlik analizi, Anova, Pearson korelasyon ve regresyon analizi yöntemlerinden biri olan ilişkili aracılık etkisi yöntemi Andrew F. Hayes tarafından Process v4.2 adlı yazılımla kullanılmıştır. Analiz sonuçları, sporcuların liderlik, iletişim ve takım uyumu algılarının belirli demografik özelliklere göre değiştiğini göstermiştir. Ayrıca, sporda liderlik ile hem etkili iletişim hem de takım uyumu arasında anlamlı bir ilişki bulunmuştur. Son olarak, etkili iletişimin liderlik ve takım uyumu arasındaki ilişkiye aracılık ettiği bulunmuştur. Etkili iletişim, takım kaptanlarının liderlik özellikleri ile takım uyumu arasında bağlantı kurulmasında önemli bir rol oynamaktadır. Ayrıca, etkili iletişim ve takım uyumunun geliştirilmesi, etkili bir liderin varlığıyla doğrudan ilişkilidir. Sonuç olarak, iletişim becerileri takım kaptanlarının liderlik tarzı ve takım uyumu algılarına önemli ölçüde katkıda bulunmaktadır.

Anahtar kelimeler: Sporda Liderlik, Futbol, Takım Kaptanı, Takım Uyumu, İletişim, Aracılık Etkisi.

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Introduction

Leadership is a multifaceted and critical phenomenon that has played a central role in human social structures throughout history. Although commonly understood through daily experiences, leadership remains a complex and dynamic concept, particularly within organized settings such as sport. In sport contexts, leadership has traditionally been associated with formal roles such as coaches or managers; however, growing attention has been directed toward the role of athlete leadership, particularly that of team captains (Loughead et al., 2006).

Athlete leadership, which entered the scientific literature nearly five decades ago, has garnered increasing scholarly interest in recent years (Loughead et al., 2006). Among the various forms of athlete leadership, team captains hold a prominent position in influencing team functioning and performance. Captains are expected to serve as communicators, role models, and mediators between players and coaches (Loughead, 2017). They play a crucial role in establishing team norms, fostering morale, and enhancing interpersonal relationships (Santos et al., 2019; Cotterill & Fransen, 2016).

Leadership style, defined as the pattern of behavior used to influence and guide team members, significantly affects team dynamics. Effective leadership in sport is often characterized by the ability to build trust, motivate players, and respond to situational demands (Chelladurai, 1998). Two key aspects of team dynamics closely associated with captaincy are team unity and communication. Team unity, often linked to collective success, refers to the degree of unity and commitment among team members (Hardy et al., 2006; Bass & Riggio, 2006). Similarly, effective communication facilitates the coordination of efforts, the sharing of tactical information, and the overall integration of team strategies (Chelladurai, 1998; Lower-Hoppe et al., 2020; Kılıçkaya et al., 2020).

Despite the increasing recognition of captains' influence on both unity and communication, few studies have explicitly examined the mediating role of communication in the relationship between leadership and unity within sport teams. Therefore, this study proposes a research model to investigate the relationship between team captains' leadership characteristics, their communication skills, and overall team unity, with a specific focus on the mediating role of effective communication.

By addressing this gap, the study aims to contribute to the existing literature by providing empirical evidence on the interplay between athlete leadership, communication, and team unity, and by offering a conceptual model that can guide future research in sport leadership.

For this purpose, answers to the following research questions will be sought:

[RQ 1] Is there a significant difference in athletes' perceptions of team captains' leadership behaviors, effective communication skills and team unity according to their demographic characteristics (age, position in the team, education, athletic experience)?

[RQ 2] Is there a significant relationship between athletes' perceptions of team captains' leadership, effective communication and team unity?

[RQ 3] According to athletes' perceptions, is there a moderating mediating effect of communication on the relationship between leadership and team unity?

Material and Method

Participants

The participants of this study were a total of 324 active soccer players from 19 teams in the TFF 2nd League and were investigated using an online survey tool. The general characteristics of the participants were as follows: 30.2% were between the ages of 25-29, 33.3% were midfielders, 69.8% were high school graduates, and 29.9% had a football background of 1-3 years. Approval for this study was granted by the Ethics Committee of a university to which one of the authors is affiliated. In addition, during the current research, we have acted within the framework of the “Directive on Scientific Research and Publication Ethics of Higher Education Institutions”.

Table 1

Personal Information of Participants

Features		N	%
Age	15-19	66	20,4
	20-24	87	26,9
	25-29	98	30,2
	30 age and older	73	22,5
Position in the Team	Goalkeeper	42	13
	Defender	102	31,5
	Midfielder	108	33,3
	Striker	72	22,2
Education status	High School	226	69,8
	Associate's Degree	39	12
	Bachelor's Degree	54	16,7
	Master's Degree/PhD	5	1,5
How many years have you been playing soccer?	1-3 year	97	29,9
	4-7 year	80	24,7
	8-11 year	93	28,7
	12-15 year	29	9
	+15 year	25	7,7

Research Scales

The questionnaire consists of scales whose validity and reliability have been adequately tested in previous studies. Leadership for Sports Scale (LSS) was developed by Chelladurai and Saleh (1980) and adapted into Turkish by Unutmaz and Gençer (2012). The scale consists of a total of 40 items in five sub-dimensions: education and training, democratic behavior, autocratic behavior, social support and rewarding behavior. Participant responses were collected on a 5-point Likert-type scale.

In the analysis conducted to test the reliability of the scale, Cronbach's Alpha coefficient was calculated as 0.915, indicating that the scale has a high level of internal consistency.

In order to measure intra-team communication, two factors and 15 items of the scale developed by Sullivan and Feltz (2003) were used. These factors are defined as “acceptance and positive conflict” and “discrimination and negative conflict”. The scale was adapted into Turkish by Alkan (2009). Participant responses were collected on a 7-point Likert-type scale. In the analysis conducted to determine the reliability of the scale, Cronbach's Alpha coefficient was calculated as 0.85, indicating that the scale has sufficient internal consistency.

In order to measure team unity, the "Team Cohesion Inventory" developed by Carron, Widmeyer and Brawley (1985) was used, which consists of 4 statements (group attraction-social, group attraction-task, group cohesion-social and group cohesion-task). The scale was adapted into Turkish by Unutmaz et al. (2011). The research data were scored on a 9-point Likert-type scale. In the analysis conducted to test the reliability of the scale, Cronbach's Alpha value was found to be 0.82.

Data Analysis

During the analysis of the data obtained from the scales applied in the study, the significance level was set as $p \leq .05$ and the analysis was carried out using the SPSS 26.0 package program. With the programme used, the data were tested with different analysis techniques appropriate to the problems. For the relationships between demographic characteristics and the variables of leadership in sport, team unity and effective communication, normality test was applied first. Cronbach's alpha (α) coefficients were calculated to measure the reliability of the scale questions used in the research. Since the research data showed normal distribution, one-way analysis of variance (ANOVA) test was applied for multiple comparisons. Pearson correlation analysis was used to investigate the level of relationship between athlete leadership, team unity and effective communication. In addition, the correlated mediation effect method, which is a type of regression analysis method, was used with the software named Process v4.2 by Andrew F. Hayes. There are various models developed by Hayes (2018) for this method. Among these models, Hayes Process Model 4 was run at 95% confidence interval. Covariates variables were also added to the model. Age, position, education and professional football background were added as covariates. The use of covariates (correlated variables) in the mediation effect analysis provides more accurate and reliable results in the analysis. Adding covariates makes the model less biased and reduces the confounding effect.

Findings

Mean Scores of Leaderships, Effective Communication and Team Unity Perceived by Athletes in Team Captains

In this study, it was seen that athletes evaluated team captains' education and training ($M = 52,70$, $SD = 8,43$) style as the most dominant behavior, followed by Democratic behavior ($M = 36,86$, $SD = 5,72$), Social Support ($M = 32,11$, $SD = 5,02$) Rewarding behavior ($M = 20,21$, $SD = 3,57$) and Autocratic behavior ($M = 13,35$, $SD = 5,04$). The athletes rated the team captains' level of effective communication ($M = 74.16$, $SD = 12.46$) and ensuring team integrity ($M = 111.51$, $SD = 24.58$) with a high mean.

ANOVA Analysis Results for Leadership in Sports, Effective Communication, Team Unity according to demographic characteristics of athletes (Age, Position Played, Education, Football experience)

According to the age variable of the athletes, in the dimensions of education and training ($F(6,421) = 4,35$, $p=.002$), democratic behavior, ($F(3,907) = 4,25$, $p=.000$), rewarding behavior ($F(3,244) = 4,25$, $p=.002$), leadership in sport total score ($F(2,805) = 4,03$, $p=.04$), and team unity ($F(8,227) = 6,85$, $p=.000$). As a result of the analysis of the mean scores, it was found that the perceptions of each leadership style of the athletes in the 15-19 age range were higher than the athletes in the higher age group. At the same time, autocratic behavior ($F(3,240) = 2.34$, $p=.02$) perceptions of the athletes between the ages of 15-19 were lower than the athletes between the ages of 25-29. There was no difference in athletes' perceptions of effective communication ($F(1,564)$, $p>0.05$) according to their ages. According to the position played by the athletes, there was a difference only in democratic behavior ($F(3,344) = 3,93$, $p=.01$). It was determined that the difference was in favor of the football players playing in the midfield position. There was no difference between the athletes' perceptions of leadership in sports ($p>0.05$), effective communication and team unity ($p>0.05$) and the position variable. According to the education level of the athletes, there was no difference between their perceptions of leadership in sport ($F(3,964) = 4,08$, $p=.00$), effective communication ($F(3,913) = 3,93$, $p=.01$), team unity ($F(3,344) = 3,93$, $p=.01$) and perceptions of education and training ($F(2,670) = 7,078$, $p=.04$), democratic behavior ($F(5,977) = 4,42$, $p=.00$) and social support ($F(6,065) = 4,24$, $p=.00$) from the dimensions of leadership in sport ($p<0.05$). It was seen that the difference occurred in favor of football players with bachelor's degree only in the perceptions of team unity ($F(7,555) = 6,41$, $p=.00$) and this difference occurred in favor of football players with high school graduation. There was a difference in the perceptions of democratic leadership ($F(3,608) = 4,27$, $p=.00$) according to the years of playing football. It was seen that the difference occurred in favor of football players who played football for more than 15 years. There was no difference between leadership in sports

($F(1,489)$, $p=.20$), effective communication ($F(1,520)$, $p=.19$), and team unity ($F(2,033)$, $p=.09$), and the years of playing football ($p>0.05$).

Correlation Analysis results between athletes' perceptions of Leadership, Effective Communication and Team Unity towards team captains

The skewness, kurtosis and Cronbach alpha coefficients of the variables obtained from normality and reliability test analyses are presented in Table 2. The data were normally distributed as the skewness and kurtosis were within the recommended ranges of $-.264$ to $(-.479)$ for leadership in sport, $-.026$ to $(-.475)$ for effective communication and $.045$ to (-1.001) for team unity, respectively (Tabachnick and Fidell, 2013). Cronbach's alpha (α) values were 0.92 for the Leadership in Sport Scale, 0.83 for the Effective Communication Scale and 0.88 for the Team Cohesion Scale. As a result of the correlation analysis, it was found that there was a positive relationship between leadership in sport and effective communication ($r=.372$), between leadership in sport and team unity ($r=.180$), and between effective communication and team unity ($r=.169$) ($N=324$, $p<.001$) (see Table 2.)

Table 2

Descriptive Statistics, Pearson Correlations of Scores, and Cronbach's α .

Variable	1	2	3
Leadership (1)	-		
Effective Communication (2)	,372**	-	
Team Unity (3)	,180**	,169**	-
M	155,23	74,16	111,51
SD	20,82	12,46	24,58
Skewness	-,264	-,026	.045
Kurtosis	-,479	-,475	-1,001
Cronbach's	0.92	0.83	0.88

** $p<0.01$, M = Mean; SD = Standard Deviation.

Analysis of the Moderating Mediating Effect of Communication on the Relationship between Leadership and Team Unity

Table 3

Regression Analysis Results

Variables	Model 1			Model 2			Model 3		
	B	se	p	B	se	p	B	se	p
Fixed (constant)	34,6286	5,6216	0,000	102,8021	11,3108	0,0000	92,3279	11,8493	0,0000
Leadership scale in sport	0,2266	0,0313	0,000	0,2191	0,063	0,0006	0,1506	0,0673	0,0259
Age	1,0063	0,7891	0,2032	-4,3987	1,5878	0,0059	-4,7031	1,5762	0,0031
Position in the Team	-0,113	0,6683	0,8659	-0,3284	1,3447	0,8073	-0,2942	1,3316	0,8253
Education status	0,4148	0,813	0,6103	-6,1309	1,6358	0,0002	-6,2564	1,6204	0,0001
Professional football background	0,4402	0,661	0,5059	0,8781	1,3299	0,5096	0,7449	1,3178	0,5723
Effective communication							0,3025	0,1117	0,0072
F	11,5979			8,6323			8,5584		
p	<0.001			0,0000			0,0000		
R-sq	0,1542			0,1195			0,1394		

The results of the regression analysis between the variables are presented in Table 3. In line with the research hypothesis, three different sub-models were developed. Model 1 examines the effect of sports leadership on communication. The findings indicate that sports leadership has a positive and significant effect on effective communication ($B = 0.2266$, $p < 0.001$). The explanatory power of sports leadership on effective communication in this model ($R\text{-sq} = 0.1542$) is 15.42%.

According to Model 2, the effect of overall sports leadership on team cohesion was analyzed, and a positive relationship was identified ($B = 0.2191$, $p = 0.0006$). The explanatory power of sports leadership on team unity ($R\text{-sq} = 0.1195$) is 11.95%.

In Model 3, the effects of both sports leadership ($B = 0.1506$, $p = 0.0259$) and effective communication ($B = 0.3025$, $p = 0.0072$) on team cohesion were examined, and the results were found to be positive and significant. The explanatory power of sports leadership and effective communication on team unity cohesion in this model ($R\text{-sq} = 0.1394$) is 13.94%.

Age, position, education and professional football history were added to the regression models as covariates, and it was observed that these variables, especially age and education, made significant contributions to the model. In Model 2, age ($B = -4.3987$, $p = 0.0059$) and education ($B = -6.1309$, $p = 0.0002$), and in Model 3, age ($B = -4.7031$, $p = 0.0031$) and education ($B = -6.2564$, $p = 0.0001$) show significant and negative effects. These results reveal that differences in age and education level have direct negative effects on team cohesion. On the other hand, the variables of position and professional soccer history did not have a significant effect in all three models (e.g. in Model 3, position: $p = 0.8253$; pro: $p = 0.5723$). The inclusion of covariates in the model allowed for a more accurate assessment of the effects of the main variables and increased the internal validity of the model.

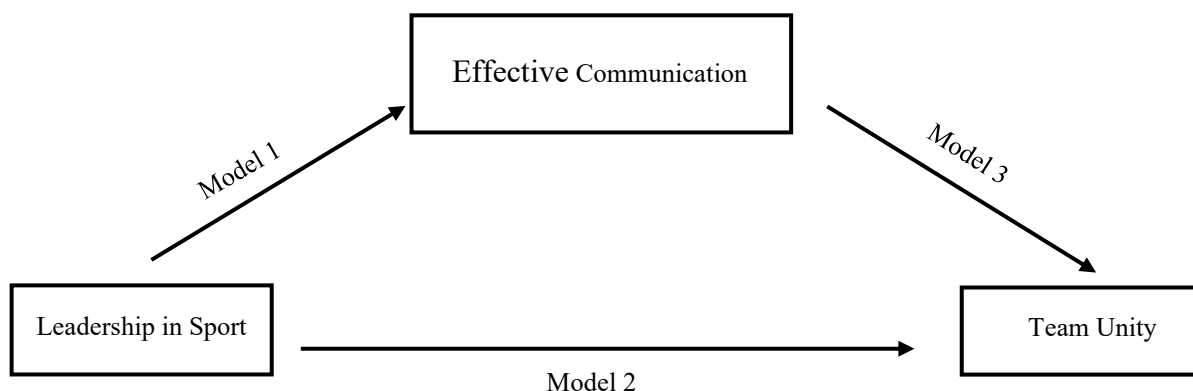


Figure 1. Model for Mediation Analysis

In order to perform mediation effect analysis, there must be a significant relationship between the variables in the model. As a result of the three models examined, it was determined that the

mediator effect analysis could be performed when the significance values were taken into consideration. Table 3 shows the results of the mediator effect.

Table 4

Mediation effect analysis results

			Unstand.	se	LLCI	ULCI
Total effect of leadership on team unity in sport			0.2191	0.0630	0.0952	0.3431
Direct effect of leadership on team unity in sport			0.1506	0.0673	0.0182	0.2830
Mediating effect of leadership in sport on team unity through effective communication						
Independent Variable	Mediator Variable	Dependent Variable	Unstand.	se	LLCI	ULCI
Leadership in Sport	Effective communication	Team unity	0.0685	0.0266	0.0205	0.1246

In Table 4, the results of the mediation effect analyses of the variables, between which a significant relationship was determined through direct regression analysis, are presented. Accordingly, effective communication was found to have a mediating role in the relationship between leadership in sport and team unity (γ :-0.0685, se :0.0266, 95%, CI 0.0205, 0.1246). In other words, communication has a mediating role in the relationship between leadership in sport and team unity.

Discussion and Conclusion

This study examines the mediating role of effective communication in the relationship between team captains' leadership characteristics and team unity. It also explores athletes' perceptions of leadership communication and team unity based on their demographic characteristics.

The findings indicate that athletes identified the most dominant leadership behavior of team captains as educational and instructive. This was followed by democratic behavior, social support, rewarding behavior, and lastly, autocratic behavior, which had the lowest average score. Athletes evaluated captains' communication skills and their contribution to team unity positively.

The results suggest that sport leadership indirectly affects team unity, and effective communication mediates this relationship. This supports the study's proposed causal framework, emphasizing that communication skills are essential for team captains to demonstrate effective leadership and enhance team dynamics that foster unity.

Consistent with prior research, studies by Vincer and Loughhead (2010), Callow et al. (2009), Duguay et al. (2019), and Cevahircioglu et al. (2022) also highlight the positive association between leadership behaviors, effective communication, and team unity. Similarly, Smith et al. (2013), Bedir et al. (2023), Schei et al., (2023) and Hardy et al., (2008) reported that communication mediates the relationship between leadership and performance-related outcomes, aligning with the current study's findings.

Regarding age, the study found that athletes aged 15–19 reported higher perceptions of leadership behaviors compared to older participants. However, no significant age-related differences were found in perceptions of communication or team unity, in line with findings by Filiz and Aydın (2016).

In terms of playing positions, midfield players described their captains as more democratic, possibly due to their central role in facilitating communication across the team. Nevertheless, no significant differences in communication or team unity were observed across different positions, suggesting a shared commitment to team success regardless of role. This contrasts with Türksoy's (2013) findings, which reported positional differences in leadership preferences.

Significant differences were found in leadership perceptions based on education level. University graduates rated leadership, educational behaviors, democratic behaviors, social support, communication, and team unity more positively. This may indicate that higher education enhances self-confidence and leads to a more favorable evaluation of captains' leadership, although it may also be linked to lower perceptions of overall team cohesion. Previous studies (e.g., Bayrak & Nacar, 2015; Mutlu et al., 2019; Tepeköylü et al., 2021) have reported both supporting and conflicting results.

Finally, a positive correlation was found between players' years of experience and their perception of democratic leadership behaviors. More experienced athletes may have broader perspectives, making them more appreciative of democratic leadership. However, no significant differences were found in leadership, communication, or team unity scores based on years of experience—contrary to Ateş et al. (2018), who reported experience-based differences in communication.

The findings of this study suggest that the presence of an effective leader is critical for ensuring effective communication and promoting team unity. A key factor is the athletes' perceived view of team captains as leaders. This study offers an alternative perspective by specifically focusing on athletes' perceptions of leadership communication and team unity in the context of official team captains. This focus was chosen due to the unique responsibilities and expectations placed on team captains, such as facilitating communication with teammates and fostering team unity (Dupuis et al., 2006). The leadership qualities of team captains as official athlete leaders can significantly enhance their effectiveness within the team.

This research also emphasizes the need for further studies to explore the impact of team captains on team unity, potentially changing the way teams perceive their captains and underscoring the importance of their role. To address the gender gap, future studies could include female team captains. Additionally, including team captains in training sessions and seminars organized by Football Federations may contribute to the development of leadership behaviors, team unity, communication

skills, and performance-enhancing strategies. Future research on team captain leadership should also incorporate qualitative approaches to further enrich the understanding of this subject.

Ethical Approval Information

Ethics Review Board: Republic of Turkey, Çukurova University Faculty of Medicine, Non-Interventional Clinical Research Ethics Committee

Date of Ethics Approval Document: 21.05.2021

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Author Contribution Statement

Both authors contributed equally to all stages of the study.

Conflict of Interest Statement

The author(s) declare that there is no conflict of interest related to this research.

Note

This study was derived from the doctoral dissertation titled “*From the Perspective of Football Players: The Impact of Team Captains’ Leadership Behaviors and Effective Communication Skills on Team Cohesion.*”

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