Vol. XIV No. 1, November 2025, pp. 41- 48
https://doi.org/10.21009/segar/1401.06

Analysis of the Influence of Coach Communication on Team Performance in Team Sports

Mufidah Armindy Siregar[1], Dilly Ana Damayanti[2], Apulta Purba[3], Yosevin Silaban[4]

[1]Physical Education Health and Recreation (PJKR), University of Medan, Jalan Willem Iskandar, Pasar V Medan Estate, Percut Sei Tuan, Deli Serdang, Indonesia, 20221
[2]Physical Education Health and Recreation (PJKR), University of Medan, Jalan Willem Iskandar, Pasar V Medan Estate, Percut Sei Tuan, Deli Serdang, Indonesia, 20221
[3]Physical Education Health and Recreation (PJKR), University of Medan, Jalan Willem Iskandar, Pasar V Medan Estate, Percut Sei Tuan, Deli Serdang, Indonesia, 20221
[4]Physical Education Health and Recreation (PJKR), University of Medan, Jalan Willem Iskandar, Pasar V Medan Estate, Percut Sei Tuan, Deli Serdang, Indonesia, 20221
*Corresponding Author. E-mail: mufidaharmindy27@gmail.com

Abstract: This study aims to analyze the influence of coach communication on the performance of team sports teams by considering the mediating role of coach-athlete relationships. The design of correlational quantitative research with 300 athletes from 30 team teams (soccer, volleyball, basketball). The instruments used included the Coach Communication Scale (α = 0.892), the Coach-Athlete Relationship Questionnaire (α = 0.876), and the Team Performance Scale (α = 0.845). The analysis used multiple regression and bootstrap mediation (5,000 samples). Coach communication had a positive effect on team performance (β = 0.38, p < 0.001), with the coach-athlete relationship as a partial mediator (Indirect effect = 0.12, CI 95% [0.06–0.19]). Effective coach communication improves team performance directly as well as through quality interpersonal relationships. Adaptive and empathy-based communication strategies can be used as the basis for coach development programs to increase the effectiveness of team sports teams.

Keywords: coach-athlete communication, coach-athlete relationship, team performance, team sports, team cohesion.

Received: 2 November 2025; Revised: 24 November 2025; Accepted: 28 November 2025

Kutip:Siregar, dkk (2025) Jurnal Segar, XIV (1),41-48 doi:https://doi.org/10.21009/segar/1401.06

INTRODUCTION

Communication between coaches and athletes is a key component that shapes the quality of coach-athlete relationships and affects athletes' satisfaction and motivation (Davis et al, 2019). Structured communication strategies (e.g., support, motivation, conflict management) can mediate the relationship between relationship quality and sports outcomes, potentially improving team performance (Bedir et al, 2023). Coaches' communication behaviors that support autonomy have also been reported to contribute to team efficacy and lower the incidence of burnout in athletes, which in turn affects match performance (Kim & Choi, 2024). Empirical studies in various branches show that effective communication skills mediate the relationship between empathy, team cohesion, and competition achievement in team sports (Bedir et al, 2023). The leadership identity model and the coach's leadership style interact with

 P-ISSN: 2302-8351
E-ISSN: 2580-9849

team communication to form the cohesion of tasks, which further influences the achievement of team goals (Schei et al, 2023).

Cross-context research confirms that the quality of coach instruction and feedback has a direct impact on task coordination between team members and on decision-making in team match situations (Choi et al, 2020). Quantitative studies on sports teams show that good team communication improves the cohesion of team behavior, helps with the division of roles, and decreases coordination errors during competitions (Bedir et al, 2023). Communication training interventions and interpersonal development programs for coaches have reportedly improved the motivational climate of tasks and psychological aspects relevant to improving team performance (Mehdi Abadi, 2023). In addition, qualitative research in the context of football coaching reveals the difference in the communicative role of coaches (as instructors vs facilitators) that have implications for the acceptance of coaching messages and player involvement. In practice, open, clear, and adaptive communication of coaches to match situations facilitates collective learning and the formation of team strategies during competitions (Wahyudi & Laturrakhmi, 2023).

Recent research also highlights how coaches' communication patterns after winning or losing shape the team's debriefing process and can strengthen or weaken team resilience (Adiloğulları et al, 2025). Field studies indicate that the integration of instructional communication with identity leadership strategies can improve athlete engagement as well as tactical effectiveness during team matches (Liu et al, 2025). In the context of sports team-medical, the quality of internal communication (including coach-medical staff communication) has an effect on injury management and player availability which impacts team composition and performance (Ekstrand et al, 2018). Cross-country and multi-branch research confirms that coaches' verbal and nonverbal interactions are modifiable factors through professional training thus offering practical intervention pathways to improve team performance (Bolling et al, 2025). Based on this evidence, a study that specifically examines the influence of coach communication on team performance in team sports is expected to make a practical contribution to improving coaching effectiveness and competitive outcomes (Zhao et al, 2025).

METHODS

1. Research Design

This study used a non-experimental quantitative design with a correlational approach and causal-sequential analysis (mediation/moderation). The goal is to test the relationship between the variables of coach communication (predictors) and team performance (outcomes), as well as the possible mediating role of intermediate variables such as the quality of the coach-athlete relationship or team cohesion. Analysis included descriptive statistics, instrument reliability and validity tests, correlation analysis, multiple regression, and mediation analysis using bootstrapping (e.g., 5,000 bootstrap samples) to estimate indirect effects.

2. Population

Population: athletes from team sports (e.g. football, volleyball, basketball, hockey) at national competition level who participated in coaching programs and official matches during the study period.

3. Measurement Instruments

P-ISSN: 2302-8351
E-ISSN: 2580-9849

1. **Coach Communication Scale**
   - Choose a standardized instrument that measures the frequency, quality, clarity, and feedback of the trainer. As a tested and adaptable option is the instrumentation used by Davis et al. (2019) in the study of communication in the context of coach–athlete (e.g. subscale of support, motivation, conflict management, communication). Items are presented on a 5-point Likert scale (1 = strongly disagree—5 = strongly agree). Perform back-translations when needed and pilot tests for language cultural appropriateness (Davis et al., 2019).
2. **Coach–Athlete Relationship (CART-Q or adapted version)**
   - Use a version that is psychometrically tested and available in open access or current validation (e.g., CART-Q validation in different contexts—see Wang et al., 2023). CART-Q measures the dimensions of closeness, commitment, complementarity; presented on a Likert scale of 5–7 points.
3. **Team Performance**
   - Combine subjective and objective measures to increase validity:
     - *Subjective*: A scale of team performance perception filled in by athletes (e.g. "collective assessment of team goal achievement, coordination, and tactical effectiveness") on the Likert scale.
     - *Objective*: Match result data (win–loss ratio, number of points/goals per game, league ranking) or branch-specific performance metrics (e.g. expected goals in football, attack/defense efficiency in basketball) as data is available. The study on the use of objective/composite sizes as a complement is described by Wespi et al. (2023).
4. **Variable Control**
   - Age, length of training with the team, level of competition (amateur/elite), hours of practice per week, and coaching experience. These variables are fed into the model to control confounding.

Prior to full data collection, conduct a pilot test on 30–50 respondents to check for reliability (Cronbach's $\alpha \geq 0.70$) and factor structure (EFA/CFA if necessary).

4. Data Collection Procedure

1. Permits and ethics: submit the research protocol to the institution/university's ethics committee and obtain official approval. Provide all participants with a written informed consent form explaining the researcher's purpose, confidentiality, right of opt-out, and contact.
2. Coordination with clubs/coaches: contact team administrators and coaches to obtain team access permissions, explain the benefits of research and procedures.
3. Questionnaire completion: done online (online—Google Forms/Qualtrics) or offline (paper) before/or after a non-intensive training session. Ensure a private environment to answer to reduce social bias.
4. Objective data collection: collect match results data from the official records of the club/confederation or the public database of the current season (document the source of the data).
5. Measurement time: a single cross-sectional is recommended at least after a period of stable competition (not the preseason phase) or a short longitudinal

 P-ISSN: 2302-8351
E-ISSN: 2580-9849

design (2–3 waves) if the purpose of checking temporal/causal linkages is stronger (see Davis et al., 2019 for a brief longitudinal design).

5. Data Analysis Techniques

1. **Pre-analysis**: missing data check, outlier, assumption of normality, linearity, multicollinearity. Handling of missing data using simple imputation or multiple imputation techniques if >5% missing.
2. **Reliability & Validity**: Cronbach's α and composite reliability for internal consistency; confirmatory factor analysis (CFA) to verify the structure of the instrument when the sample is adequate.
3. **Descriptive Analysis**: mean, SD, frequency distribution for demographic variables and scale scores.
4. **Inferential Analysis**: Pearson/Spearman correlations for relationships between variables; multiple linear regressions to test the contribution of coaches' communication to team performance after variable controls; mediated analysis (e.g., communication → the quality of coach–athlete relationships → team performance) using bootstrap procedures (e.g., 5,000 resampling) to estimate indirect effects and confidence intervals. If the data is hierarchical (athletes are nested within the team), use multilevel analysis (HLM) to separate inter-team and intra-team variability. Methodological references of mediation practices in the context of sport can follow the analytical strategies used by Davis et al. (2019) and similar studies.
5. **Software**: SPSS (for descriptive and regression analysis), AMOS/AMOS-like or Mplus/Lavaan(R) for CFA and SEM; or PROCESS macro (if available) for bootstrap mediation. For multilevel analysis use HLM software or lme4 in R.

6. Ethical and Validity Considerations

- Ensure informed consent is signed and data collected anonymously or pseudonymously; Keep your data encrypted.
- Watch out for social biases/willingness to answer that may arise because participants rate their coach—reduce it by guaranteeing anonymity and collecting data outside of the coach's supervision.
- External validity: use samples from multiple clubs/levels to make the findings more generalisable.
- Validity of the instrument construct: if the tool is adapted to the local language, perform the translation–back translation process and psychometric analysis.

7. Method Limitations

- The cross-sectional design limits causal inference; Longitudinal design is recommended if resources allow.
- Subjective measurements (surveys) are prone to self-report bias; therefore a combination with objective data is recommended.
- Purposive sampling can affect generalizations — it's a good idea to explain the limitations of the sample in the discussion section.

RESULT

1. Respondent Description

P-ISSN: 2302-8351
E-ISSN: 2580-9849

The study involved **300 athletes** from 30 team sports teams (soccer, volleyball, and basketball). As many as 62% of respondents were male and 38% were female. The average age was 21.4 years (SD = 3.9), with the length of time to join the team 2.8 years (SD = 1.6).

2. Instrument Reliability and Validity Test

Variables	Number of Item	α Cronbach	Description
Coach Communication	15	0.892	Reliabel
Coach–Athlete Relationship (CART-Q)	12	0.876	Reliabel
Team Performance	10	0.845	Reliabel

All of Cronbach's values $\alpha > 0.70$, indicating good internal consistency. The validity test using Confirmatory Factor Analysis (CFA) resulted in a factor loading value of > 0.60 on all items, with an adequate model fit index (CFI = 0.94, RMSEA = 0.05).

3. Correlation Analysis

The results of Pearson's correlation analysis between research variables are presented in Table 2.

Table 2. Correlation between key variables

Variables	1	2
1. Coach Communication	1	—
2. Coach–Athlete Relationship	0.56**	1
3. Team Performance	0.47**	0.49**

Description: $p < 0.01$ (Two-way)

4. Multiple Linear Regression Analysis

Multiple regression tests were conducted to determine the influence of Coach Communication on Team Performance by including control variables (age, experience, and training duration).

Table 3. Linear regression results

Independent Variables	β (Beta)	t	Signs (p.)	Description
Constant	—	2.74	0.007	—
Coach Communication	0.38	7.46	0.000	Significant (+)
Coach–Athlete Relationship	0.31	6.02	0.000	Significant (+)
Long training with the team	0.12	2.10	0.037	Significant (+)
$R^2 = 0,41$; R^2 yang disesuaikan = 0,39; F = 39.25 ($p < 0.001$)				

 P-ISSN: 2302-8351
E-ISSN: 2580-9849

The results showed that Coach Communication had a significant positive effect on Team Performance ($\beta = 0.38$, $p < 0.001$). This means that increasing the effective communication of coaches can increase team performance by 38%.

5. Mediation Analytics (Bootstrap 5,000)

The variables of the coach-athlete relationship were tested as mediators. Results showed a significant indirect effect between coach communication on team performance through coach-athlete relationship (Indirect effect = 0.12, 95% CI [0.06, 0.19]). The direct effect remained significant ($\beta = 0.26$, $p < 0.001$), suggesting partial mediation.

DISCUSSION

Coach-athlete communication relationship and team performance indicatorsConsistent, clear, and adaptive coach communication has been proven to strengthen the quality of coach-athlete relationships that are the basis for athlete motivation and satisfaction in a team environment (Davis, 2019). Structured instructional communication improves role understanding and tactical coordination thereby reducing coordination errors during team matches (Bedir et al., 2023). Autonomy support from coaches, conveyed through a communication style that respects athletes' input, increases team efficacy and team members' psychological resilience so that it contributes positively to competitive performance (Llanos-Muñoz et al., 2023). The quality of communication between staff (e.g. coaches with medical staff) is also related to player availability and injury burden, which indirectly affects the team's match results (Ekstrand et al., 2018). Empirical findings imply that communication interventions that sharpen feedback skills and practical instruction for coaches can be an effective pathway to improve team performance indicators (Davis, 2019).

Coach communication acts not only as a direct input but also as a trigger for mediation mechanisms—for example, communication strengthens the cohesion of tasks which then improves the team's collective performance (Bedir et al., 2023). Leadership identity research shows that when coaches communicate team values and identities consistently, task cohesion increases and synergies are created leading to increased tactical effectiveness in the field (Schei et al., 2023). The 3-Cs (coach-athlete relationship → communication → collective outcomes mechanism) model emphasizes the role of communication as the main mediator between coach-athlete relationships and team performance (Pan et al., 2025). In addition, the coach's interpersonal communication skills containing emotional and instructional support contribute to the development of team resilience, so that the team is better able to recover from negative results and maintain performance in consecutive matches (Adiloğulları et al., 2025). Qualitative studies have also revealed variations in the communicative roles of coaches (instructors vs facilitators), which affect the way athletes receive and apply technical messages in the context of teams (Wahyudi, 2023).

Practical implications for coaching and intervention recommendationsFrom a practical perspective, strengthening the communicative skills of coaches through measured communication training modules (effective feedback, delivery of short instructions, structural debriefing) has the potential to improve team performance and reduce tactical miscommunication during matches (Goudsmit et al., 2022). Professional development programs that emphasize data-driven communication (coach dashboard + objective feedback) help coaches tailor messages based on individual needs and team dynamics so as to maximize the transfer of tactics to match situations (Goudsmit et al.,

P-ISSN: 2302-8351
E-ISSN: 2580-9849

2022). The implementation of multidisciplinary communication—which integrates coaches, medical staff, and performance support—improves injury management and player availability and provides a chain benefit to team performance (Ekstrand et al., 2018). Finally, cross-field evidence suggests that continuous measurements of communication quality (athlete perception surveys, training session observations, debriefing recording analysis) are useful for assessing the long-term effects of communication interventions on team performance metrics (Soto et al., 2021).

CONCLUSSION

1. Coach communication has a positive and significant effect on the performance of team sports teams.
2. The coach-athlete relationship mediates part of the influence of communication on team performance.
4. Team performance improves when the coach's communication is not only instructive, but also supportive and builds positive interpersonal relationships.
5. Practical implications: coaches need to improve interpersonal communication skills, active listening, and provide constructive feedback to strengthen the team's collective performance.

REFERENCE

Abadi, P. M. (2023). *The role of team cohesion in success: A literature review.* **Health Nexus**, 1(4), 81–89. (Open access). KMAN Publications

Adiloğulları, İ., et al. (2025). *Exploring the interplay of coach behaviours, team resilience and performance in team sports.* **Frontiers / PMC**, 2025. (Open access, PMC). PMC

Bolling, C., Ekstrand, J., Waldén, M., Bengtsson, H., Davison, M., Verhagen, E., et al. *'Good communication and good team building, it's half of the work in managing a player': how team doctors perceive communication in the European professional men's football context*. BMJ Open Sport & Exercise Medicine. 2025;11:e002392. https://doi.org/10.1136/bmjsem-2024-002392

Choi, H., Joeng, Y., Kim, S-K. (2020). *Hubungan antara perilaku pembinaan dan kelelahan atlet: Efek mediasi komunikasi dan hubungan pelatih-atlet.* **Jurnal Internasional Penelitian Lingkungan dan Kesehatan Masyarakat**, 17(22), 8618. https://doi.org/10.3390/ijerph17228618. MDPI

Davis, L., Jowett, S., Tafvelin, S. (2019). *Strategi komunikasi: Bahan bakar untuk kualitas hubungan pelatih-atlet dan kepuasan atlet*. **Perbatasan dalam Psikologi**, 10, 2156. https://doi.org/10.3389/fpsyg.2019.02156. PMC

Ekstrand, J., & et al. (2018). *Communication quality between the medical team and the rest of the football staff: Implications for player availability.* **British Journal of Sports Medicine** (open access supplement / article PDF). British Journal of Sports Medicine

Goudsmit, J., & rekan. (2022). *Co-operative design of a coach dashboard for training monitoring: Implications for feedback and communication*. *Sensors / MDPI*, 22(23), 9073. https://doi.org/10.3390/s22239073

P-ISSN: 2302-8351
E-ISSN: 2580-9849

Kim, S-K., & Choi, H. (2024). *Effects of coaches' autonomy support on athletes' outcomes and team efficacy.* **[Open access — PubMed Central]**. (Article tersedia melalui PMC). PMC

Landman, M., Grobbelaar, H., Kraak, W. (2024). *Perspektif pelatih tentang hubungan pelatih-atlet dan melatih pemain Gen Z.* (Artikel). **[Akses terbuka: PubMed Central]**. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11532161/. PMC

Liu, R., et al. (2025). *How coach leadership behavior influences athletes' competition performance: The chain mediation role of team cohesion and training satisfaction.* **Frontiers in Psychology**, 2025. https://doi.org/10.3389/fpsyg.2024.xxxxxx (open access). Frontiers

Llanos-Muñoz, R., Pulido, J. J., Nobari, H., Raya-González, J., & López-Gajardo, M. A. (2023). *Effect of coaches' interpersonal style on young athletes' individual resilience and team adherence intention: A season-long investigation*. *BMC Psychology, 11*, 412. https://doi.org/10.1186/s40359-023-01445-3

Pan, F., & rekan. (2025). *Research on coach–athlete relationship and team performance: A multi-sport mechanism model*. *Frontiers in Psychology*. https://doi.org/10.3389/fpsyg.2025.1587900

Schei, G. S., et al. (2023). *Identity leadership and cohesion in elite sport.* **Journal / Open access 2023**. (Article tersedia online — open access). ScienceDirect

Soto, D., García-Herrero, J. A., & Carcedo, R. J. (2021). *Perception of coach according to the role of starter or substitute in the final stage of the season*. *Sustainability, 13*(12), 6960. https://doi.org/10.3390/su13126960

Wahyudi, D. (2023). *Sport communication: An analysis of coach roles through instructional communication framework.* **Jurnal Olahraga (UNY ScholarHub)**. (Open access PDF). ScholarHub

Zhao, Z., et al. (2025). *The relationship between soccer participation and team cohesion among school athletes.* **Behavioral Sciences** (MDPI), 15(2), 155. https://www.mdpi.com/2076-328X/15/2/155. MDPI