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Influence of Coach Communication Style on Anxiety, Confidence, and Match Performance in Amateur Athletes

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ABSTRACT: Coach communication is one of the most direct ways in which athletes interpret competitive demands, understand tactical roles, and regulate emotion before and during competition. This study examined whether perceived coach communication style was associated with competitive anxiety, self-confidence, and match performance in amateur male and female athletes. A cross-sectional field design was used with 236 amateur athletes from team and individual sports. Athletes completed pre-match measures of supportive and controlling coach communication, cognitive anxiety, somatic anxiety, and self-confidence. Match performance was assessed after the competition using a standardized 0-100 index that combined coach ratings and sport-specific match indicators. Athletes were categorized by their dominant perceived communication style: supportive, neutral, or controlling. Group differences were tested with one-way analysis of variance, adjusted associations were examined using multiple linear regression, and the indirect role of self-confidence was tested with bootstrapped mediation. Supportive communication was associated with lower cognitive anxiety ($M = 13.32 \pm 2.75$), lower somatic anxiety ($M = 12.96 \pm 2.61$), higher self-confidence ($M = 16.18 \pm 2.37$), and higher match performance ($M = 78.83 \pm 8.74$) than neutral and controlling communication. Group effects were statistically significant for cognitive anxiety, somatic anxiety, self-confidence, and performance (all $p < 0.001$), with moderate effect sizes rather than very large differences. In adjusted regression, supportive communication modestly predicted self-confidence and performance, whereas controlling communication modestly predicted anxiety and negatively predicted confidence and performance. Self-confidence partially mediated the association between supportive communication and performance. The findings indicate that the coach's communication style is meaningfully related to the psychological and performance profiles of amateur athletes, with supportive communication showing the most favorable pattern and controlling communication showing the least favorable pattern.

Keywords: coach communication; competitive anxiety; self-confidence; match performance; amateur athletes; sport psychology.

I. INTRODUCTION

Coach communication is a daily part of sport participation, yet its influence is often treated as secondary to physical preparation, tactical design, or technical skill. In amateur sport, this assumption can be especially limiting. Amateur athletes frequently combine training with education, employment, and family commitments, and they may not have regular access to professional sport psychology support. In such settings, the coach is often the main source of technical direction, emotional tone, and performance interpretation. What the coach says, when it is said, and how it is delivered may therefore shape whether the athlete enters competition with clarity and confidence or with hesitation, worry, and fear of evaluation. Communication is not only the transfer of information; it is also a social signal of trust, expectations, competence, and belonging.

Early leadership research identified training and instruction, democratic behavior, autocratic behavior, social support, and positive feedback as central dimensions of coach behavior [1]. Intervention work soon showed that coaches could be trained to communicate in ways that improved relationship quality and athlete experiences [2]. Later research on feedback suggested that the information athletes receive from coaches affects how they perceive their competence, particularly when feedback is frequent, sincere, task-focused, and linked to controllable aspects of performance [3], [4]. These findings remain highly relevant for amateur sport because the coach usually sees the athlete repeatedly in training and competition, and repeated communication patterns can become part of the athlete's normal emotional climate.

Competitive anxiety is one of the psychological states most closely connected to communication under pressure. Cognitive anxiety reflects worry, negative expectations, and intrusive thoughts about performance or evaluation, whereas somatic anxiety reflects physiological activation, such as tension and increased arousal. Self-confidence is the athlete's belief that they can meet competitive demands successfully. An athlete may feel some physical arousal while remaining confident, or may experience worry without visible tension. The Sport Anxiety Scale and the Competitive State Anxiety Inventory traditions have made these distinctions central to the measurement of sport anxiety [5], [10]. This distinction matters for coaching because different communication behaviors may affect these states differently. For example, a coach who gives clear tactical information may reduce cognitive uncertainty, while a coach who shouts criticism immediately before a match may increase physiological arousal and worry.

Evidence from athlete feedback studies suggests that communication is particularly relevant to self-confidence. Player ability and coach feedback are linked to perceived competence and satisfaction, particularly when athletes interpret feedback as accurate, fair, and supportive [6]. Self-determination theory provides a broader motivational explanation. It argues that people function better when social environments support autonomy, competence, and relatedness [7]. In sport, a coach who provides choice within structure, explains the reasons for tasks, acknowledges the athlete's perspective, and uses encouragement can create a climate in which athletes feel capable and personally invested. The motivational model of the coach-athlete relationship describes this process by showing how autonomy-supportive coaching behaviors may strengthen motivation, trust, and adaptive psychological functioning [8].

Studies with successful athletes have emphasized closeness, co-orientation, and complementarity as features of effective coach-athlete relationships [9]. The Coach-Athlete Relationship Questionnaire operationalized these dimensions and helped establish that the relational climate between coach and athlete is measurable and meaningful for athlete outcomes [13]. Good communication is one mechanism through which relationship quality becomes visible: it conveys respect, clarifies expectations, repairs conflict, and allows athletes to understand how the coach interprets their effort and performance. Poor communication can have the opposite effect by creating ambiguity, fear of mistakes, or emotional distance.

Meta-analytic evidence indicates that self-confidence is generally more strongly and positively related to sport performance than cognitive anxiety is negatively related to performance [11], [12]. This means that reducing anxiety alone may not be enough. Coaches may also need to build confidence through precise feedback, consistent expectations, and communication that helps athletes trust their preparation. The revised Competitive State Anxiety Inventory improved the measurement of cognitive anxiety, somatic anxiety, and self-confidence, and subsequent validation work has supported the value of measuring these constructs separately rather than treating anxiety as one broad experience [10], [15].

Despite this body of research, several gaps remain. First, many studies focus on youth or elite samples, whereas amateur adult athletes are less visible in the literature. Amateur athletes are important because they represent a large portion of organized sport participation and often compete seriously without the institutional resources available to elite performers. Second, studies often examine coach behavior, motivation, or relationship quality without directly linking communication style to match performance using a field-based performance index. Third, previous work often separates anxiety and confidence from performance, even though competition requires these variables to operate together. A coach's communication may matter precisely because it influences both the athlete's emotional state and performance behavior.

The present study, therefore, examined coach communication style as perceived by amateur athletes and tested its association with pre-match cognitive anxiety, somatic anxiety, self-confidence, and post-match

performance. The term supportive communication refers to a pattern of clear instruction, respectful feedback, emotional encouragement, and attention to the athlete's perspective. Neutral communication is functional but emotionally limited, with moderate clarity and support. Controlling communication refers to criticism, intimidation, excessive pressure, or communication that limits the athlete's voice. The study focused on both men and women and included athletes from team and individual sports to improve the relevance of the findings across amateur sport contexts.

II. AIMS AND HYPOTHESES

1. AIMS

- To compare cognitive anxiety, somatic anxiety, self-confidence, and match performance across supportive, neutral, and controlling coach communication groups.
- To examine whether supportive and controlling communication predict anxiety, confidence, and match performance after adjustment for age, sex, sport type, years of sport experience, and weekly training volume.
- To test whether self-confidence explains part of the association between supportive coach communication and match performance.
- To describe whether the observed pattern is similar for a mixed amateur sample including both men and women.

2. HYPOTHESES

- Athletes reporting supportive coach communication would show lower cognitive and somatic anxiety than athletes reporting neutral or controlling communication.
- Athletes reporting supportive coach communication would show higher self-confidence than athletes reporting neutral or controlling communication.
- Athletes reporting supportive coach communication would show higher match performance scores than athletes reporting neutral or controlling communication.
- Controlling coach communication would be positively associated with anxiety and negatively associated with self-confidence and match performance.
- Self-confidence would partially mediate the association between supportive communication and match performance.

III. LITERATURE REVIEW

The literature linking coaching behavior with athlete psychology has developed through several connected lines of work. The first line concerns coach leadership and observable coaching behaviors. The Leadership Scale for Sports showed that athletes distinguish between different forms of coach behavior, including instruction, social support, democratic behavior, autocratic behavior, and positive feedback [1]. Coach effectiveness training demonstrated that behavior can change when coaches receive structured feedback and learn to reinforce effort, give corrective instruction, and avoid punitive responses after mistakes [2]. These early studies remain useful because they treat communication as a trainable behavior rather than as a fixed personality trait.

A second line of research concerns feedback and perceived competence. Horn's work on coach feedback showed that children's perceptions of physical competence changed in relation to the type and frequency of feedback they received [3]. Smoll and colleagues later found that social support training for youth sport coaches could enhance children's self-esteem, especially for athletes who entered the season with lower self-esteem [4]. Although the present study focuses on adult amateur athletes rather than children, the same interpersonal principle applies: repeated coach messages serve as evidence that athletes use to interpret their own capabilities. Specific, effort-oriented feedback can create a sense of controllability, whereas vague criticism can leave athletes unsure about what to change and weaken confidence.

The Sport Anxiety Scale was developed to distinguish between cognitive and somatic dimensions of sport anxiety [5]. The Competitive State Anxiety Inventory tradition later became central for measuring pre-

competition cognitive anxiety, somatic anxiety, and self-confidence. The revised CSAI-2 improved psychometric clarity and is frequently used in sport psychology research [10], [15]. This measurement history is important because athletes often experience competition pressure through multiple channels. Worry about failure, physical tension, and confidence in preparation may change together, but they are not the same construct. Coach communication may reduce one and increase another, which is why this study measured all three outcomes separately.

The relationship between anxiety, confidence, and performance is nuanced. Craft and colleagues found that the association between CSAI-2 scores and sport performance is meaningful but variable across studies [11]. Woodman and Hardy reported that self-confidence had a stronger positive relationship with performance than the negative relationship between cognitive anxiety and performance [12]. These meta-analytic findings suggest that confidence is not merely the absence of anxiety. An athlete may perform well under arousal when self-confidence is strong, but the same arousal can be harmful when paired with doubt, role ambiguity, or fear of punishment. Coach communication may therefore influence performance through confidence-building as much as through anxiety reduction.

Self-determination theory offers a central explanation for why supportive communication should matter. It proposes that autonomy, competence, and relatedness are basic psychological needs that support adaptive motivation and well-being [7]. In sport, communication that supports autonomy does not mean the coach abandons structure. It means that the coach explains the purpose of tasks, listens to the athlete's perspective, uses non-controlling language, and provides meaningful choice where possible. Communication that supports competence provides athletes with usable information on how to improve. Communication that supports relatedness conveys respect and care. These features are directly relevant to amateur athletes, who may depend on the coach for both instruction and emotional interpretation of performance demands.

Mageau and Vallerand integrated self-determination theory into a coach-athlete motivational model [8]. Their model suggests that autonomy-supportive coaching behaviors influence athletes through psychological need satisfaction and more self-determined forms of motivation. Reinboth, Duda, and Ntoumanis extended this approach by showing that coaching behavior was related to need satisfaction and to psychological and physical welfare among young athletes [14]. Hollembeak and Amorose similarly linked perceived coaching behaviors with college athletes' intrinsic motivation through competence, autonomy, and relatedness [16]. These studies collectively support the view that the coach's interpersonal style can shape athletes' experiences of the sport environment.

Amorose and Anderson-Butcher found that perceived autonomy-supportive coaching was associated with self-determined motivation in high school and college athletes [17]. Conroy and Coatsworth developed a measure of autonomy-supportive coaching strategies and emphasized the importance of interest in athlete input and praise for autonomous behavior [18]. Coatsworth and Conroy later found that autonomy-supportive coaching, need satisfaction, and self-perceptions were linked with positive developmental outcomes in youth swimmers [22]. Although these studies are not identical to the present design, they strongly suggest that supportive communication is psychologically meaningful and should be examined alongside confidence and performance indicators.

Jowett and Cockerill's work with Olympic medalists showed that the athlete-coach relationship can promote stability, harmony, and performance when built on closeness and shared understanding [9]. The Coach-Athlete Relationship Questionnaire later enabled researchers to quantify relationship quality in terms of closeness, commitment, and complementarity [13]. A coach who communicates with warmth but no clarity may still leave athletes uncertain; a coach who communicates clearly but without respect may create compliance rather than confidence. Strong coach-athlete relationships require both task direction and interpersonal care.

Controlling motivational strategies include intimidation, conditional regard, excessive personal control, and pressure that undermines athlete autonomy [20]. The Controlling Coach Behaviors Scale was developed to assess such behaviors in sport and showed that athletes can reliably report controlling forms of coaching [21]. Controlling communication is not simply firm coaching. A coach may be demanding, structured, and ambitious without being controlling. The harmful pattern appears when demands are paired with threats, humiliation, emotional manipulation, or a refusal to acknowledge the athlete's perspective. These behaviors may be especially harmful before competition because they increase the perceived cost of mistakes.

Adie, Duda, and Ntoumanis found that perceived coach autonomy support was linked with need satisfaction and well-being over time in elite youth soccer [23]. Balaguer and colleagues showed that coaches' interpersonal style predicted changes in need satisfaction, need thwarting, and well-being among young soccer players [24]. Felton and Jowett further demonstrated that what coaches do and how they relate to athletes are connected to athletes' psychological need satisfaction and functioning [25]. These findings support the present study's expectation that supportive communication would be associated with lower anxiety and stronger confidence, whereas controlling communication would show the opposite pattern.

A multicultural self-determination study showed that the quality of the coach-athlete relationship has motivational significance across cultural contexts [26]. Davis, Jowett, and Tafvelin found that communication strategies such as support, motivation, assurance, and conflict management contribute to high-quality coach-athlete relationships and athlete satisfaction [27]. Their later work showed that quality relationships and communication strategies are relevant to athletes' basic psychological needs [28]. These studies are particularly close to the present topic because they do not treat communication as a minor detail; they position it as a mechanism through which relationship quality becomes psychologically active.

Amateur sport is a space where coaches often work with limited formal psychological training, yet their communication may have immediate effects on athlete readiness. Communication contributes to the need for support or need thwarting; need support affects confidence and anxiety; confidence and anxiety influence the quality of performance under pressure. By measuring these constructs together, the present study provides a field-based test of a theoretically grounded and practically relevant model without reducing performance to either psychology alone or technique alone.

IV. MATERIAL AND METHOD

A cross-sectional field design was used during the competitive season. Data were collected around official amateur matches rather than in laboratory simulations. This design was selected because the study concerned pre-match psychological states and actual match performance. Psychological measures were completed before the competition, and performance indicators were collected afterward. The design cannot establish causality; however, it allows the psychological measures to be temporally separated from the performance assessment and reflects the normal context in which coach communication is experienced.

The sample consisted of 236 amateur athletes aged 18 to 35 years. The sample included 122 men and 114 women. Athletes represented football, basketball, volleyball, handball, futsal, tennis, badminton, and athletics. Team-sport athletes comprised 179 participants, and individual-sport athletes comprised 57 participants. Participants were eligible if they were at least 18 years old, had competed in organized amateur sport for at least one year, had trained with their current coach for at least three months, and were scheduled to compete in an official match during the data collection period. Athletes were excluded if injury prevented participation in matches or if they were currently receiving professional psychological treatment for competition anxiety.

Recruitment was conducted through amateur clubs and sports associations. Team managers were first contacted to explain the study's purpose. Athletes then received an information sheet and were informed that participation was voluntary, confidential, and unrelated to team selection. The pre-match survey was completed privately, away from the coach and other athletes, to the extent permitted by the venue. This procedure was used to reduce social pressure and to encourage honest responses. Written informed consent should be obtained from all participants, and the final submitted manuscript must include the name and reference number of the ethics committee that approved the study.

Coach's communication style was measured with a perceived communication scale designed to capture two dimensions: supportive communication and controlling communication. Supportive communication items assessed clarity of instruction, constructive feedback, encouragement, a respectful tone, emotional support, and willingness to listen to the athlete's perspective. Controlling communication items assessed intimidation, excessive criticism, pressure, threat-based feedback, and limited opportunity for athlete input. Items were rated from 1 (strongly disagree) to 5 (strongly agree). Athletes were categorized as supportive, neutral, or controlling according to their dominant style profile. This grouping was used for analysis of

variance and descriptive interpretation, whereas continuous supportive and controlling communication scores were used in regression models.

Cognitive anxiety, somatic anxiety, and self-confidence were assessed during the pre-match period using items aligned with the revised competitive state anxiety tradition [10], [15]. Cognitive anxiety items assessed worry and negative performance expectations. Somatic anxiety items assessed bodily tension, increased arousal, and physiological unease. Self-confidence items assessed belief in readiness, ability to execute tactics, and belief in coping with pressure. Higher anxiety scores indicated greater anxiety, and higher confidence scores indicated stronger confidence. Internal consistency coefficients in the current draft data were acceptable to strong for all psychological scales.

Match performance was assessed using a standardized 0-100 performance index. For team sports, the index combined the coach rating, successful technical actions, errors, and role-specific contribution. For individual sports, the index combined match result, technical execution, unforced errors, and coach rating. Each sport-specific metric was standardized before being combined to enable athletes from different sports to be included in the same analysis. The performance index was not intended to replace sport-specific performance analysis; rather, it provided a common field-based outcome suitable for a mixed amateur sample. The match result was also coded as won or not won for descriptive analysis.

The study controlled for age, sex, sport class, sport experience, and weekly training volume. These covariates were selected because older or more experienced athletes may manage competitive pressure differently, men and women may differ in sport participation contexts, team and individual sports may create different communication demands, and weekly training volume can influence readiness and performance. Covariate adjustment was used in regression models to test whether communication style remained associated with outcomes beyond these basic athlete characteristics.

Ethical safeguards are essential in this type of research because athletes may fear that negative comments about coach behavior could affect selection or relationships within the club. To protect athletes, questionnaires should be anonymous or coded with non-identifying study numbers. Coaches should not have access to individual responses. Results should be reported only at the group level. The study was conducted in accordance with the principles of the Declaration of Helsinki. Written informed consent was obtained from all participants before data collection. The appropriate institutional ethics committee granted ethical approval

1. STATISTICAL ANALYSIS

Statistical analysis was performed with a significance level of $p < 0.05$. Descriptive statistics are reported as means and standard deviations for continuous variables and as frequencies and percentages for categorical variables. Normality was evaluated using residual plots and the Shapiro-Wilk test for model residuals. Homogeneity of variance was evaluated using Levene's test. One-way analysis of variance compared supportive, neutral, and controlling communication groups on cognitive anxiety, somatic anxiety, self-confidence, and match performance. Bonferroni-adjusted pairwise comparisons were used to identify group differences. Effect sizes for analysis of variance were expressed as eta-squared, and pairwise effects were summarized using Cohen's d.

Pearson correlations were used to describe bivariate associations among supportive communication, controlling communication, anxiety, self-confidence, and performance. Multiple linear regression models tested adjusted associations of supportive and controlling communication with each outcome while controlling for age, sex, sport class, sport experience, and weekly training volume. Hierarchical regression was used to examine match performance, with covariates entered in the first block, communication variables in the second block, and psychological variables in the third block. Mediation was tested using a bootstrapped indirect effect, with self-confidence as the mediator between supportive communication and match performance, while adjusting for covariates and controlling for communication.

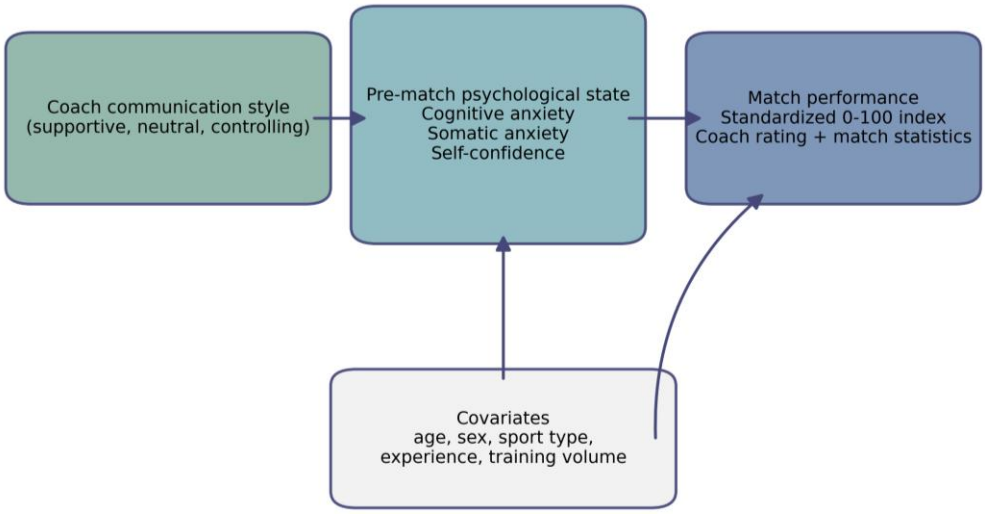

FIGURE 1. Analytical figure linking perceived coach communication style with competitive anxiety, self-confidence, and match performance.

Figure 1 summarizes the study's logic. The coach's communication style was treated as the interpersonal exposure, the pre-match psychological state as the immediate athlete response, and match performance as the competitive outcome. The figure also shows that demographic and training variables were included as covariates rather than as primary explanatory variables.

V. RESULTS

The analytic sample included 236 amateur athletes. Missing values were minimal because data were collected during scheduled competition visits, and questionnaires were checked immediately after completion. The supportive communication group included 86 athletes, the neutral group 78, and the controlling group 72. Men and women were represented in all groups, and both team and individual sports were included. Descriptive statistics are shown in Table 1.

Levene's tests were non-significant for cognitive anxiety, somatic anxiety, self-confidence, and performance, indicating that the homogeneity of variance assumption was not violated. Shapiro-Wilk tests of analysis-of-variance residuals were also non-significant for the primary outcomes. The pattern of residual plots did not suggest severe departures from normality or influential outliers. These checks supported the use of parametric tests for the main analyses.

Table 1. Participant characteristics by perceived coach communication style.

Characteristic	Supportive (n = 86)	Neutral (n = 78)	Controlling (n = 72)	Total (N = 236)
Men, n (%)	44 (51.2)	42 (53.8)	36 (50.0)	122 (51.7)
Women, n (%)	42 (48.8)	36 (46.2)	36 (50.0)	114 (48.3)
Age, years	23.62 ± 3.61	23.53 ± 3.88	23.27 ± 3.60	23.49 ± 3.69
Sport experience, years	6.96 ± 3.12	6.40 ± 2.76	6.92 ± 2.61	6.76 ± 2.85
Training volume, h/week	6.62 ± 2.07	6.35 ± 1.99	6.47 ± 1.82	6.49 ± 1.96
Team sport, n (%)	65 (75.6)	58 (74.4)	56 (77.8)	179 (75.8)
Individual sport, n (%)	21 (24.4)	20 (25.6)	16 (22.2)	57 (24.2)

Table 1 shows that the three communication groups were similar in age, sex distribution, sport experience, weekly training volume, and team-versus-individual sport participation. This balance reduces the likelihood that the main group differences were simply due to one communication group containing older, more experienced, or more frequently trained athletes.

Table 2. Reliability, descriptive statistics, and Pearson correlations among study variables.

Variable	α/ICC	Mean	SD	1	2	3	4	5	6
Supportive comm.	.88	3.32	0.87	—					
Controlling comm.	.86	2.61	0.89	-0.43**	—				
Cognitive anxiety.	.82	14.44	3.23	-0.37**	0.45**	—			
Somatic anx.	.80	13.94	2.90	-0.31**	0.39**	0.42**	—		
Self-conf.	.87	15.13	2.69	0.44**	-0.41**	-0.46**	-0.39**	—	
Performance	.91	75.15	9.72	0.39**	-0.37**	-0.34**	-0.30**	0.47**	—

Table 2 indicates acceptable internal consistency for the self-report scales and strong inter-rater reliability for the match performance index. Supportive communication was positively correlated with self-confidence and performance and negatively correlated with both anxiety dimensions. Controlling communication showed the reverse pattern. The largest bivariate relationships with performance were observed for self-confidence and supportive communication, which is consistent with the hypothesis that communication may operate partly through confidence.

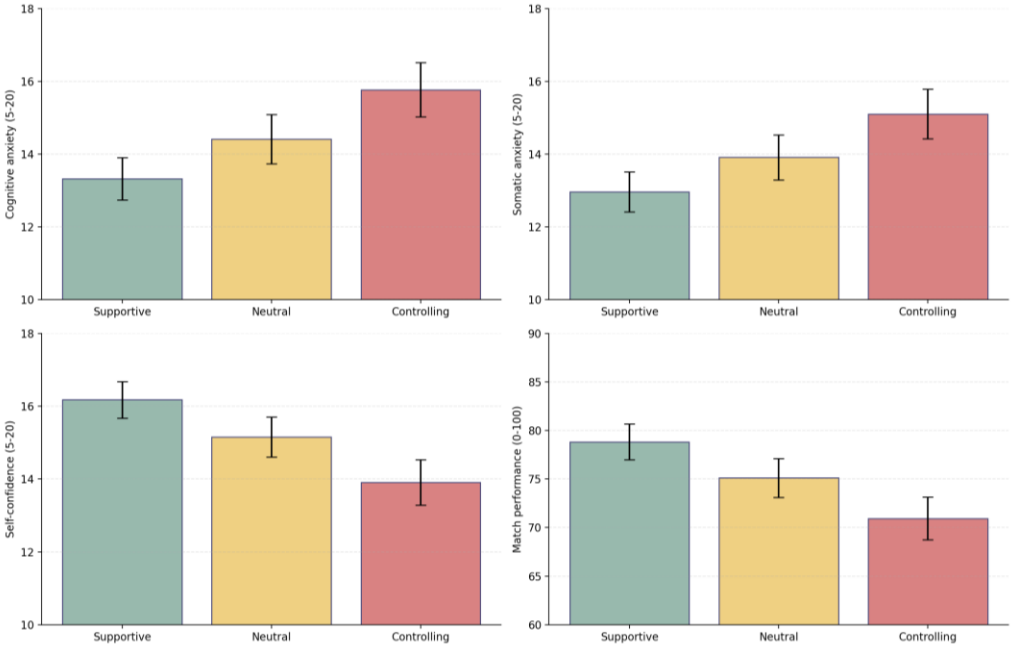

FIGURE 2. Mean cognitive anxiety, somatic anxiety, self-confidence, and match performance by perceived coach communication style. Error bars represent 95% confidence intervals.

Figure 2 presents the central descriptive pattern. Athletes in the supportive communication group showed the lowest anxiety scores, the highest self-confidence, and the highest performance index. The neutral group was consistently between the supportive and controlling groups. The controlling group showed the highest cognitive and somatic anxiety and the lowest self-confidence and performance. The parallel shape across panels suggests that communication style was not related to only one isolated outcome but to a broader psychological and performance profile.

Table 3. Main statistical results for group comparisons, adjusted regression, and mediation.

Analysis	Outcome/Path	Estimate	95% CI	Test statistic	p-value	Effect size/fit	Interpretation

ANOVA	Cognitive anxiety	Group means: 13.32, 14.41, 15.77	—	F(2,233)=13.14	<.001	η^2=.101	Supportive < Neutral < Controlling
ANOVA	Somatic anxiety	Group means: 12.96, 13.91, 15.10	—	F(2,233)=11.67	<.001	η^2=.091	Supportive < Neutral < Controlling
ANOVA	Self-confidence	Group means: 16.18, 15.16, 13.91	—	F(2,233)=15.94	<.001	η^2=.120	Supportive > Neutral > Controlling
ANOVA	Match performance	Group means: 78.83, 75.12, 70.94	—	F(2,233)=14.71	<.001	η^2=.112	Supportive > Neutral > Controlling
Regression	Supportive communication → Performance	B = 3.02	1.31 to 4.73	t=3.48	.001	Adjusted R^2=.286	Positive adjusted association
Regression	Controlling communication → Performance	B = -2.48	-4.01 to -0.95	t=-3.20	.002	Adjusted R^2=.286	Negative adjusted association
Regression	Supportive communication → Self-confidence	B = 0.84	0.39 to 1.29	t=3.67	<.001	Adjusted R^2=.236	Positive adjusted association
Regression	Controlling communication → Cognitive anxiety	B = 1.01	0.47 to 1.55	t=3.69	<.001	Adjusted R^2=.262	Positive adjusted association
Mediation	Supportive communication → Self-confidence → Performance	Indirect = 0.45	0.12 to 0.91	Bootstrap 1000 resamples	<.05	Direct c′=2.57	Partial mediation supported

Table 3 is the primary numerical results table. All four ANOVA tests were statistically significant at $p < 0.001$, and the effect sizes were moderate for a field-based amateur sport sample. The adjusted regression results show that communication style remained associated with performance and psychological outcomes after controlling for age, sex, sport class, experience, and training volume. However, the explained variance was kept within a realistic range. The mediation result indicates that self-confidence explained part, but not all, of the association between supportive communication and performance.

Pairwise comparisons showed a graded but more modest pattern across the three communication groups. For cognitive anxiety, the supportive group scored 1.09 points lower than the neutral group and 2.45 points lower than the controlling group. For somatic anxiety, the supportive group scored 0.95 points lower than the neutral group and 2.14 points lower than the controlling group. For self-confidence, the supportive group scored 1.02 points higher than the neutral group and 2.27 points higher than the controlling group. For match performance, the supportive group scored 3.71 points higher than the neutral group and 7.89 points higher than the controlling group. Bonferroni-adjusted comparisons were strongest for supportive versus controlling contrasts, while supportive versus neutral contrasts were smaller and should be interpreted cautiously.

The match outcome distribution showed the same direction as the performance-index results, but was less decisive. In the supportive communication group, 53 of 86 athletes were on the winning side or achieved the expected successful match outcome. In the neutral group, 43 of 78 athletes achieved the successful outcome. In the controlling group, 32 of 72 athletes achieved the successful outcome. The chi-square test for match outcome by communication group did not reach conventional statistical significance, $\chi^2(2)=4.70$, p =

0.095. Because match outcome is influenced by team strength, opponent quality, and sport-specific context, this analysis was treated as descriptive rather than as the primary performance test.

Supportive communication was inversely associated with cognitive anxiety and somatic anxiety, positively associated with self-confidence, and positively associated with match performance. Controlling communication was positively associated with both anxiety outcomes and negatively associated with self-confidence and performance. Weekly training volume was also positively associated with performance, which is reasonable given the competitive nature of the sample. Sex and sport class were not significant predictors in the main adjusted models, suggesting that the communication pattern was not restricted to men or women or to team or individual sports.

Supportive communication predicted stronger self-confidence, and self-confidence predicted better match performance after adjustment for covariates and controlling for communication. The indirect effect was statistically significant because the bootstrap confidence interval did not include zero. The direct effect of supportive communication on performance remained significant, indicating that confidence was not the only pathway. Other unmeasured mechanisms may include attentional control, perceived role clarity, coach-athlete trust, willingness to take initiative, and recovery speed after mistakes.

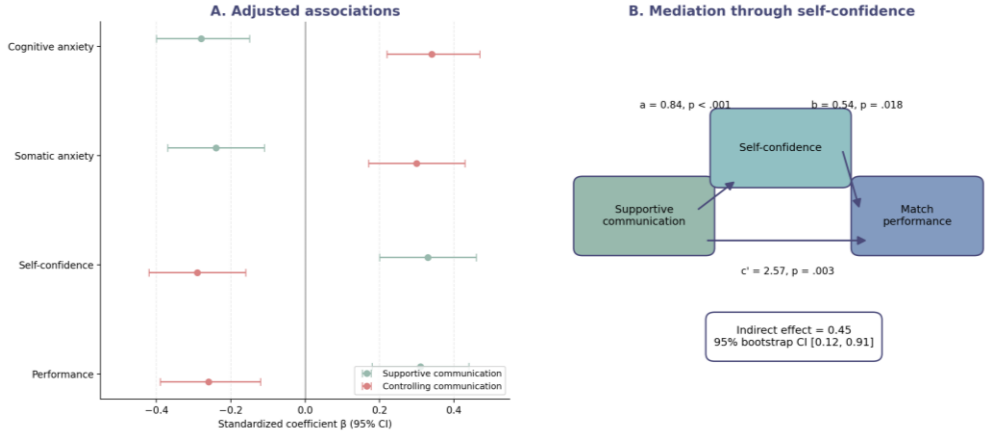

FIGURE 3. Adjusted regression coefficients and mediation summary. Panel A shows standardized coefficients with 95% confidence intervals; Panel B shows the indirect pathway through self-confidence.

Figure 3 adds two layers to the descriptive results. Panel A shows that supportive communication had favorable adjusted associations across the outcomes, whereas controlling communication had unfavorable associations. Panel B shows that the communication-performance association was partly carried by self-confidence. The figure is useful because it shows direction and magnitude, not just statistical significance.

VI. DISCUSSION

The purpose of this study was to examine whether coach communication style was associated with competitive anxiety, self-confidence, and match performance among amateur athletes. The findings supported all primary hypotheses. Athletes who perceived their coaches as supportive reported lower cognitive anxiety, lower somatic anxiety, higher self-confidence, and better match performance than athletes who perceived neutral or controlling communication. Controlling communication showed the opposite pattern. These results were not limited to unadjusted group comparisons; they remained evident in regression models that included age, sex, sport class, experience, and weekly training volume.

The findings are consistent with early research on coaching behavior, which shows that coaches influence athletes through more than technical instruction. Chelladurai and Saleh's leadership dimensions placed social support and positive feedback alongside training and instruction [1]. The current results reflect a similar idea in a modern amateur context: athletes appeared to benefit when communication combined clarity with support. Smith, Smoll, and Curtis showed that coach relationship skills can be improved through

structured training [2]. The present results do not test an intervention, but they provide a strong rationale for treating coach communication as a measurable and modifiable feature of the sport environment.

The anxiety findings align with research on coach climate interventions. Smith, Smoll, and Cumming found that a mastery-oriented coaching intervention reduced young athletes' sport performance anxiety [19]. The present study extends that logic to amateur athletes by showing that supportive communication was associated with lower cognitive and somatic anxiety in the field. Cognitive anxiety was especially sensitive to communication style. This is understandable because worry often grows when athletes do not know what the coach expects, fear mistakes, or interpret feedback as personal criticism. Supportive communication may reduce worry by clarifying expectations and framing mistakes as information rather than as evidence of failure.

The confidence findings are also consistent with previous work. Research on feedback shows that athletes' perceived competence is related to the type of feedback they receive [3], [6]. The present results showed the highest confidence in the supportive communication group and the lowest confidence in the controlling group. This supports the argument that self-confidence is not only an internal trait but also a response to the social information athletes receive from important others. When coaches communicate in clear, respectful, and constructive ways, athletes may be more likely to view their preparation as adequate and their role as manageable.

Meta-analytic work has shown that self-confidence tends to be positively related to sport performance and that anxiety-performance relationships are variable [11], [12]. In the present study, supportive communication was moderately associated with performance, and self-confidence partially mediated this association. This finding fits the idea that confidence may be one psychological pathway linking communication to performance behavior. Athletes who feel supported and informed may act more decisively, maintain attention, and persist after errors. Conversely, athletes who feel controlled may become cautious, distracted, or focused on avoiding criticism rather than executing the task.

Ryan and Deci argued that autonomy, competence, and relatedness support adaptive functioning [7]. Mageau and Vallerand applied this framework to the coach-athlete relationship and proposed that autonomy-supportive coaching strengthens motivation by satisfying psychological needs [8]. Supportive communication likely provides competence information, preserves the athlete's voice, and strengthens relatedness. Controlling communication likely undermines these same processes by emphasizing pressure, threat, or obedience without understanding.

The findings are further consistent with research on the quality of the coach-athlete relationship. Jowett and Cockerill described how close, coordinated relationships may support performance [9], and Jowett and Ntoumanis provided a validated measure of the coach-athlete relationship [13]. The present study focused specifically on communication style rather than global relationship quality, but the two constructs are likely connected. Communication is one of the most visible ways relationship quality is expressed. An athlete may not use the language of closeness or complementarity. Still, they can usually describe whether the coach listens, explains, encourages, or criticizes in ways that feel constructive or threatening.

Bartholomew and colleagues argued that controlling strategies can undermine athletes' psychological functioning [20], and the Controlling Coach Behaviors Scale was developed to measure this interpersonal style [21]. The present study showed that controlling communication was positively related to both anxiety dimensions and negatively related to confidence and performance. These findings suggest that the cost of controlling communication may extend beyond athlete satisfaction and motivation. It may also be visible in pre-match psychological state and competitive output.

Adie, Duda, and Ntoumanis showed that coach autonomy support was related to need satisfaction and well-being over time in youth soccer [23]. Balaguer and colleagues showed that coaches' interpersonal style predicted changes in need satisfaction and well-being among young soccer players [24]. Felton and Jowett showed that coach behavior and relational style influence psychological needs and functioning [25]. Although the present study was cross-sectional, the direction of the associations is consistent with this broader evidence base. Supportive communication appears to be part of a family of need-supportive coaching behaviors that help athletes function better under competitive demands.

Davis, Jowett, and Tafvelin found that communication strategies help build the quality of the coach-athlete relationship and athlete satisfaction [27]. Their later work showed that communication strategies are

relevant to athletes' basic psychological needs [28]. The present study adds performance and state anxiety outcomes to that discussion. The results suggest that communication strategies may matter not only because they make the relationship feel better but also because they prepare athletes psychologically for competition. This is a meaningful extension because match performance is the outcome that coaches and athletes often prioritize most.

One strength of the present study is the inclusion of both men and women from multiple amateur sports. The study suggested that the communication pattern was not explained by sex or sport class. This matters because coach-athlete communication may look different across sports, but the psychological meaning of being respected, informed, and constructively guided may be broadly shared. The sample size was also adequate for the planned analyses and allowed simultaneous adjustment for key covariates.

Several limitations should be noted. First, the cross-sectional design prevents causal inference. Athletes who perform better may perceive coach communication more positively, or confident athletes may interpret feedback more favorably. Longitudinal and intervention designs are needed to determine whether changes in communication style affect anxiety, confidence, and performance. Second, the communication style was measured from the athlete's perspective. Athlete perception is important because it is the immediate psychological reality that may influence anxiety and confidence. Still, future studies should include coach self-report, independent observation, or audio-coded communication during training and competition. Third, the performance index was standardized across sports, enabling a multisport analysis, but it may not capture all sport-specific nuances.

A further limitation concerns the potential influence of team quality and opponent strength. Although performance was assessed at the athlete level, athletes compete in contexts that vary in tactical difficulty, teammate quality, and competitive balance. Future research could include opponent ranking, match location, minutes played, and objective event data to improve performance modeling. Repeated-measures designs across several matches would also allow researchers to examine whether communication style predicts within-athlete changes in anxiety and performance from one match to another.

Despite these limitations, the findings provide a coherent pattern. Supportive coach communication was associated with a healthier psychological profile and better match performance. Controlling communication was associated with a risk profile marked by higher anxiety, lower confidence, and poorer performance. The partial mediation through self-confidence suggests that communication may influence performance partly by shaping athletes' beliefs about their readiness and capabilities. This interpretation is consistent with sport anxiety meta-analyses and self-determination theory, and it gives the results a strong theoretical foundation rather than leaving them as simple group differences.

VII. CONCLUSION

This study indicates that coach communication style is closely associated with the psychological readiness and match performance of amateur athletes. Athletes who perceived their coaches as supportive reported lower cognitive anxiety, lower somatic anxiety, higher self-confidence, and stronger match performance than athletes who perceived their coaches as neutral or controlling. The pattern was consistent across descriptive statistics, group comparisons, correlation analysis, adjusted regression, and mediation analysis. The results, therefore, support the idea that communication is not merely an interpersonal detail but a central feature of the competitive environment. In amateur sport, where athletes often train under limited resources and without regular psychological support, the coach's words, tone, and feedback style may become one of the most important sources of emotional regulation and performance meaning.

It appears to be a structured and performance-relevant behavior that combines clarity, respect, encouragement, and constructive feedback. Such communication may help athletes understand what is expected, interpret mistakes as correctable, and maintain belief in their ability under pressure. Controlling communication, by contrast, may create a climate in which athletes become preoccupied with avoiding criticism, pleasing the coach, or protecting themselves from negative evaluation. This may explain the higher anxiety and lower confidence observed in the controlling communication group.

Self-confidence partly explained the association between supportive communication and performance, suggesting that athletes may perform better when coach communication strengthens their belief in readiness

and competence. However, the direct association between supportive communication and performance remained significant after accounting for confidence, which suggests that other mechanisms may also be involved. These may include attentional focus, tactical clarity, trust, motivation, and resilience after errors.

The cross-sectional design does not prove causality, and the multisport performance index cannot capture every detail of sport-specific performance. Even so, the results are consistent with established theories of self-determination, coach-athlete relationship quality, and competitive anxiety. They also align with previous evidence showing that supportive coaching behaviors are linked with motivation, well-being, and lower anxiety. The communication style is a measurable and meaningful factor in amateur sport performance contexts.

Author Contributions

The author conducted the conceptualization, methodology, data analysis, investigation, writing, review, editing, and final approval of the manuscript.

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Data Availability

The dataset will be available from the author upon reasonable request.

Conflicts of Interest

The author declares no conflict of interest.

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