



Motivation, self-efficacy, and coach support in sport commitment among adolescent athletes

Khalil Junan Difa^{1abcde}, Febriani Fajar Ekawati^{2ef}, Sugiyanto^{3ef}.

¹Master's Program in Sport Science, Faculty of Sports, Universitas Sebelas Maret, Surakarta, Indonesia.

²Department of Sports Coaching Education, Faculty of Sports, Universitas Sebelas Maret, Surakarta, Indonesia.

³Department of Physical Education and Health, Faculty of Sports, Universitas Sebelas Maret, Surakarta, Indonesia.

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Abstract

Sport commitment is important for sustaining adolescents' participation in organized sport, yet evidence concerning its psychological and interpersonal correlates remains limited in specialized sports-school settings. This study examined the relationships among sport motivation, exercise self-efficacy, perceived coach support, and sport commitment among adolescent student-athletes. A cross-sectional correlational design was conducted at SMP Khusus Olahraga Surakarta, Indonesia. All 189 registered student-athletes were invited through total population sampling; after 20 incomplete questionnaires were excluded, the final analytical sample comprised 169 participants. Sport motivation, exercise self-efficacy, perceived coach support, and sport commitment were assessed using the Sport Motivation Scale-II, Exercise Self-Efficacy Scale, Athletes' Received Support Questionnaire, and Sport Commitment Questionnaire-2, respectively. Data were analyzed using Partial Least Squares Structural Equation Modeling with SmartPLS version 3. Sport motivation ($\beta = .321$), exercise self-efficacy ($\beta = .239$), and perceived coach support ($\beta = .172$) were positively associated with sport commitment. The relationships between sport motivation and perceived coach support ($\beta = .171$) and between exercise self-efficacy and perceived coach support ($\beta = .123$) were not statistically significant. A significant indirect association was found between sport motivation and sport commitment through perceived coach support ($\beta = .029$, 95% CI [.006, .058]); however, this finding does not establish causal mediation. Overall, the findings indicate that psychological resources and perceived interpersonal support are associated with sport commitment and provide context-specific evidence for understanding commitment among adolescent student-athletes in specialized sports schools.

Keywords: Sport motivation, exercise self-efficacy, perceived coach support, sport commitment.

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Correspondence author: Khalil Junan Difa, Universitas Sebelas Maret, Surakarta, Indonesia.

Email: khalil_0907@student.uns.ac.id



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INTRODUCTION

Sport commitment reflects athletes' determination and intention to remain involved in organized sport. During adolescence, commitment becomes particularly important as athletes face increasing training demands, competitive pressure, academic responsibilities, and decisions about continued participation. Youth sport involvement has been associated with psychological and interpersonal factors, including enjoyment, perceived competence, motivation, and social support from coaches, parents, and peers (Battaglia et al., 2024; Li et al., 2024; Zhang et al., 2019). Understanding these factors is therefore important for explaining differences in adolescents' sustained involvement in structured sport programs.

This issue is particularly relevant in specialized sports schools, where adolescents must manage academic and athletic responsibilities simultaneously. SMP Khusus Olahraga Surakarta combines formal education with approximately ten structured training sessions across at least six days each week. Internal attendance records covering the school's 189 registered athletes over one month indicated that approximately 10% repeatedly missed scheduled training without documented medical or official reasons. Although these internal data describe the study context and do not establish reasons for non-attendance, they suggest that psychological and interpersonal factors may contribute to differences in athletes' continued engagement alongside educational, environmental, and training-related conditions (Teixeira et al., 2012).

Sport motivation is one psychological factor associated with sustained participation. Self-Determination Theory distinguishes qualitatively different reasons for engaging in an activity, ranging from more self-endorsed forms of motivation to those driven primarily by pressure or external demands (Ryan & Deci, 2017; Standage, 2023). Athletes with more autonomous reasons for participation may be more willing to invest effort and persist because they perceive sport as enjoyable, valuable, or personally meaningful. Previous

research has linked motivational regulation with sport commitment, training consistency, and sustained participation (Braga-Pereira et al., 2025; Mohebi et al., 2024; Ntoumanis & Moller, 2025; Rippon et al., 2024; Singh & Bal, 2024). Because the present model examines sport motivation as an overall construct, the proposed relationship concerns overall sport motivation rather than a specific motivational regulation.

Exercise self-efficacy represents another psychological resource associated with continued sport involvement. Social Cognitive Theory conceptualizes self-efficacy as a belief in one's capability to organize and perform actions required to achieve particular behavioral outcomes. In the context of the present study, exercise self-efficacy concerns confidence in maintaining exercise-related behavior rather than confidence in sport-specific skills or competitive performance. Athletes with stronger exercise self-efficacy may be more willing to maintain training and remain engaged when participation becomes demanding. Previous evidence has similarly associated self-efficacy and related exercise beliefs with physical activity, training behavior, persistence, and continued sport participation (Borgolte & Pinquart, 2024; Li et al., 2024). Exercise self-efficacy was therefore expected to be positively associated with sport commitment.

Perceived coach support represents an important interpersonal component of athletes' sport environments. In this study, it refers to the emotional, esteem, informational, and tangible support athletes perceive from their coaches. Such support may help athletes manage training demands, maintain confidence, and sustain involvement in sport. Previous research has associated supportive coach–athlete interactions and coaching environments with athletes' motivation, confidence, commitment, and continued participation (Fikri Mohd Kassim et al., 2024; Mohebi et al., 2024; Sevil-Serrano et al., 2021; Zhang et al., 2019). Perceived coach support was therefore expected to be positively associated with sport commitment.

The proposed model further considers whether sport motivation and exercise self-efficacy are associated with athletes' perceptions of coach support. More motivated athletes may participate more actively and interact more frequently with their coaches, providing greater opportunities to receive or recognize support. Similarly, athletes with stronger exercise self-efficacy may engage more confidently in training interactions, including seeking feedback and communicating with coaches. Self-Determination Theory and Social Cognitive Theory provide complementary conceptual perspectives for these hypothesized relationships. Self-Determination Theory informs the role of motivation in sustained participation, whereas Social Cognitive Theory positions self-efficacy as a belief that may shape how individuals engage with and respond to their social environment. Thus, exercise self-efficacy may be associated with more active coach–athlete interactions and greater opportunities to perceive or receive coach support. These relationships are treated as theoretically informed hypotheses rather than causal pathways, and a cross-sectional design cannot establish their temporal ordering.

Despite growing evidence concerning these factors, the literature remains fragmented. Previous studies have examined motivation, self-efficacy, coaching behavior, and sport commitment separately or within partial models, while coach support has frequently been positioned as an antecedent of athletes' motivation and commitment (Braga-Pereira et al., 2025; Li et al., 2024; Mohebi et al., 2024; Sevil-Serrano et al., 2021; Zhang et al., 2019). Consequently, less is known about how sport motivation, exercise self-efficacy, perceived coach support, and sport commitment are related when examined simultaneously, particularly among adolescent athletes in specialized sports schools. Evidence concerning the statistical indirect role of perceived coach support also remains limited. This context is important because adolescent student-athletes simultaneously encounter developmental, academic, training, and competitive demands that may differ from those experienced by adult athletes, university athletes, or recreational participants.

This study contributes by examining sport motivation, exercise self-efficacy, perceived coach support, and sport commitment simultaneously within a structural model in a specialized sports-school context. Self-Determination Theory and Social Cognitive Theory provide complementary foundations for understanding the distinct psychological constructs examined rather than constituting an integrated theoretical model. Accordingly, sport motivation, exercise self-efficacy, and perceived coach support were hypothesized to be positively associated with sport commitment. At the same time, sport motivation and exercise self-efficacy were also hypothesized to be positively associated with perceived coach support. The study further examined the specific indirect associations of sport motivation and exercise self-efficacy with sport commitment through perceived coach support. These indirect relationships were tested as statistical associations and were not intended to establish causal mediation.

Accordingly, this study aimed to examine the hypothesized structural relationships among sport motivation, exercise self-efficacy, perceived coach support, and sport commitment among adolescent athletes at SMP Khusus Olahraga Surakarta. The study hypothesized that sport motivation, exercise self-efficacy, and perceived coach support were positively associated with sport commitment. Sport motivation and exercise self-efficacy were also hypothesized to be positively associated with perceived coach support. Finally, the study examined the specific indirect associations of sport motivation and exercise self-efficacy with sport commitment through perceived coach support. These indirect relationships were tested as statistical associations within the proposed model and were not intended to establish causal mediation.

METHOD

Research Design and Setting

This study employed a quantitative cross-sectional correlational design to examine the hypothesized relationships among sport motivation, exercise self-

efficacy, perceived coach support, and sport commitment among adolescent student-athletes. Partial Least Squares Structural Equation Modeling (PLS-SEM) was used to estimate the specified relationships simultaneously. Data were collected from 20 to 30 April 2026 at SMP Khusus Olahraga Surakarta, Indonesia, during the regular school and training period.

Population, Sampling, and Participants

The target population comprised all 189 student-athletes registered at SMP Khusus Olahraga Surakarta during the 2025/2026 academic year. The recruitment strategy used total population sampling (census), and all eligible student-athletes were invited to participate. Eligibility required active student-athlete status, participation in the school's regular training program, voluntary participation, parental or guardian consent, and sufficient questionnaire data for analysis. The original protocol did not specify a minimum duration or attendance threshold for regular participation. Athletes who were injured during data collection were not included, and questionnaires containing more than 10% missing responses were excluded. All 189 registered student-athletes were invited to participate. Twenty questionnaires were excluded because they contained more than 10% missing responses, resulting in a final analytical sample of 169 participants (89.4%) with no remaining missing data.

Participants represented 13 sports: football ($n = 20$), basketball ($n = 12$), volleyball ($n = 18$), tennis ($n = 8$), badminton ($n = 12$), pétanque ($n = 12$), pencak silat ($n = 20$), taekwondo ($n = 14$), athletics ($n = 18$), swimming ($n = 16$), archery ($n = 4$), cycling ($n = 3$), and tarung derajat ($n = 8$). Each athlete evaluated the head coach responsible for their sport, resulting in 13 coach-based clusters. We conducted the PLS-SEM analysis at the individual-athlete level, and we did not adjust standard errors or statistical inferences for clustering. ICCs and sensitivity analyses for clustering were not performed. Information on age, sex, grade level, duration of sport participation, training experience, and competition level was unavailable and was not included in the analysis. Census sampling

was used solely as a recruitment strategy and was not considered evidence of analytical sample adequacy. The maximum number of predictors for a single endogenous construct was three. A formal a priori power analysis was not conducted; therefore, undocumented effect-size, α , power, or required-sample parameters were not reconstructed retrospectively.

Measures

Sport Motivation

Sport motivation was assessed using the 18-item Sport Motivation Scale-II (SMS-II; Pelletier et al., 2013), which comprises six motivational regulations: intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, and amotivation. In the PLS-SEM model, these six dimensions were represented as indicators of an overall sport motivation construct. Accordingly, the construct was interpreted as overall sport motivation rather than autonomous motivation, controlled motivation, or any individual motivational regulation. This operationalization was considered when interpreting the structural relationships and comparing the findings with studies using different SMS-II specifications.

Exercise Self-Efficacy

Exercise self-efficacy was assessed using the 10-item Exercise Self-Efficacy Scale (ESES; McAuley, 1993), which measures confidence in maintaining exercise-related behavior. The instrument was selected because its item content corresponds to maintaining regular exercise participation within the structured training routines of the participating student-athletes. The 10 items were aggregated into a total score and entered into the PLS-SEM model as a single indicator. Accordingly, the construct was interpreted specifically as exercise adherence self-efficacy rather than sport-specific skill, competitive, or performance self-efficacy. Because the study documentation did not include validation evidence in a directly comparable population of Indonesian

competitive adolescent student-athletes, relationships involving the ESES were interpreted within this restricted conceptual scope. Using a single aggregated indicator also limits evaluation of item-level measurement properties and the representation of measurement error within the PLS measurement model.

Perceived Coach Support

Perceived coach support was assessed using the 22-item Athletes' Received Support Questionnaire (ARSQ; [Freeman et al., 2014](#)), which covers four dimensions of received support: emotional, esteem, informational, and tangible support. Participants evaluated the head coach responsible for their respective sport. In the PLS-SEM model, the four ARSQ dimensions were represented as indicators of perceived coach support. Thus, the construct refers specifically to support perceived as received from the athlete's head coach rather than general social support or coaching style.

Sport Commitment

Sport commitment was assessed using the Sport Commitment Questionnaire-2 (SCQ-2; [Scanlan et al., 2016](#)). The original SCQ-2 comprises commitment dimensions and their theoretically proposed antecedents, which are conceptually distinct. In the analytical model, sport commitment was represented using 12 indicators. Accordingly, the analysis was restricted to the commitment indicators represented in the analytical dataset rather than treating all 58 SCQ-2 items as a single undifferentiated sport commitment construct. Interpretation of the construct was therefore restricted to the sport commitment indicators represented in the final analytical model.

Instrument Translation and Measurement Evaluation

All instruments were administered in Indonesian following forward–backward translation before data collection. Further adaptation procedures could not be verified from the available study documentation. Psychometric

evidence from the original development or validation studies was therefore treated as background evidence rather than as evidence of validity for the present Indonesian sample. The evaluation of outer loadings, average variance extracted (AVE), reliability, and discriminant validity in the present sample was regarded as a preliminary assessment of measurement properties rather than comprehensive evidence of cross-cultural validation.

Data Collection and Ethical Considerations

The research team administered the questionnaires at SMP Khusus Olahraga Surakarta, with approximately 60 minutes allocated for completion. Participants used anonymous codes and were informed that participation was voluntary, their responses would remain confidential, and participation would not affect their academic or athlete status. The coaches being evaluated were present at the data-collection location. Because the study documentation did not establish whether coaches could directly observe individual responses or specify the physical distance maintained during questionnaire completion, coach presence was recognized as a potential source of social-desirability bias or response inhibition.

Common method bias procedurally through anonymous coding, confidentiality assurances, voluntary participation, and standardized questionnaire administration. A dedicated statistical diagnostic of common method variance was not performed. Ethical approval was granted by the Faculty of Sports, Universitas Sebelas Maret (Approval No. 869/UN27.11/PK.03.08/2026), and permission was obtained from SMP Khusus Olahraga Surakarta. Participants provided assent, and consent was obtained from their parents or guardians.

PLS-SEM Analysis

Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS version 3. The measurement model was evaluated using outer loadings, average variance extracted (AVE), Cronbach's

alpha, composite reliability, and the heterotrait–monotrait ratio (HTMT). Outer loadings $\geq .708$, AVE $\geq .50$, and reliability coefficients $\geq .70$ were used as evaluation criteria. Discriminant validity was evaluated using an HTMT threshold of .85 and 95% bootstrap confidence intervals. Actual HTMT values and their confidence intervals were interpreted from the verified final model rather than inferred from the threshold criteria alone.

The structural model was evaluated using inner variance inflation factors (VIF), R^2 , f^2 , and standardized path coefficients. Effect sizes were interpreted as small ($f^2 \geq .02$), medium ($f^2 \geq .15$), and large ($f^2 \geq .35$). Statistical significance was assessed using bootstrapping with 5,000 resamples, two-tailed testing, $p < .05$, and 95% confidence intervals. Structural relationships were evaluated using standardized path coefficients and their bootstrap inference, while specific indirect effects were considered statistically supported when their 95% bootstrap confidence intervals did not include zero. Because the study was cross-sectional, indirect effects were interpreted as statistical indirect associations rather than evidence of causal mediation. Q^2 , blindfolding, and PLSpredict were not reported because verified analytical information for these procedures was unavailable and was not reconstructed retrospectively.

RESULTS

A total of 189 student-athletes participated in the survey. No athletes were absent because of illness or participation in an official sports competition, and none declined to participate. Twenty questionnaires were excluded because they contained more than 10% missing responses. Consequently, the final analysis included 169 athletes, yielding an analytical response rate of 89.4%.

Table 1. Outer Loading and AVE of All Indicators

Variable	Indicator	Outer Loading	AVE	Remark
Motivation (SMS-II, X_1)			0.575	Valid
	SMS-II 1	0.803		✓
	SMS-II 2	0.786		✓
	SMS-II 3	0.799		✓
	SMS-II 4	0.711		✓

	SMS-II 5	0.706	✓
	SMS-II 6	0.738	✓
Self-Efficacy (ESES, X_2)		1.000	Valid
	ESES	1.000	✓
Coach Support (ARSQ, Z)		0.718	Valid
	ARSQ 1	0.837	✓
	ARSQ 2	0.864	✓
	ARSQ 3	0.886	✓
	ARSQ 4	0.799	✓
Sport Commitment (SCQ-2, Y)		0.548	Valid
	SCQ-2 1	0.800	✓
	SCQ-2 2	0.701	✓
	SCQ-2 3	0.689	✓
	SCQ-2 4	0.716	✓
	SCQ-2 5	0.710	✓
	SCQ-2 6	0.697	✓
	SCQ-2 7	0.749	✓
	SCQ-2 8	0.676	✓
	SCQ-2 9	0.707	✓
	SCQ-2 10	0.790	✓
	SCQ-2 11	0.826	✓
	SCQ-2 12	0.800	✓

Convergent validity was established for motivation, coach support, and sport commitment, with AVE values exceeding the .50 threshold. Self-efficacy was represented by a single indicator derived from the aggregate score of the 10 ESES items. Therefore, its outer loading and AVE values of 1.000 resulted from the single-indicator specification and were not interpreted as evidence of perfect measurement quality. Because the 10 ESES items were aggregated before inclusion in the PLS-SEM model, the item-level measurement properties of self-efficacy could not be evaluated within the measurement model.

Table 2. Heterotrait–Monotrait Ratio of Correlations

Construct	1	2	3	4
Motivation (X_1)	0.758			
Self-Efficacy (X_2)	0.425	1.000		
Sport Commitment (Y)	0.461	0.409	0.847	
Coach Support (Z)	0.223	0.196	0.290	0.740

Note. Discriminant validity was evaluated using the heterotrait–monotrait ratio of correlations (HTMT). Values below .85 were considered evidence of adequate discriminant validity. The diagonal cells are not applicable because HTMT is evaluated only between different constructs.

The square root of AVE on the matrix diagonal motivation [AVE = 0.758], self-efficacy (AVE = 1.000), sport commitment (AVE = 0.847), and coach support (AVE = 0.740)- all exceed the highest inter-construct correlation (0.461), confirming adequate discriminant validity. Each construct thus demonstrates sufficient measurement uniqueness without significant overlap

with other constructs. Internal consistency reliability was subsequently assessed using Cronbach's Alpha (α) and Composite Reliability (CR), as presented in Table 3.

Table 3. Construct Reliability Results

Variable	Cronbach's Alpha (α)	rho_A	Composite Reliability	Remark
Motivation (X_1)	0.785	0.785	0.724	Reliable
Self-Efficacy (X_2)	1.000	1.000	1.000	Reliable
Sport Commitment (Y)	0.808	0.909	0.862	Reliable
Coach Support (Z)	0.813	0.850	0.878	Reliable

Note. Values for Cronbach's alpha, rho_A, composite reliability (rho_c), and average variance extracted were copied from the same "Construct Reliability and Validity" output. Self-efficacy was modeled as a single-indicator construct; therefore, its internal consistency coefficients were not evaluated. The AVE value of 1.000 resulted from the single-indicator specification and was not interpreted as evidence of perfect measurement quality.

Motivation, sport commitment, and coach support demonstrated acceptable internal consistency based on Cronbach's alpha, rho_A, and composite reliability. Internal consistency was not evaluated for self-efficacy at the PLS construct level because a single aggregated indicator represented it. Among the multi-indicator constructs, Cronbach's alpha ranged from .785 to .813, while composite reliability ranged from .724 to .878. The CR of motivation (0.724), although proximate to the minimum threshold, remains acceptable given its AVE value (0.575) and all outer loading values meeting the required criteria. The fulfillment of all validity and reliability criteria confirms that the measurement model has adequate quality to proceed to structural model evaluation.

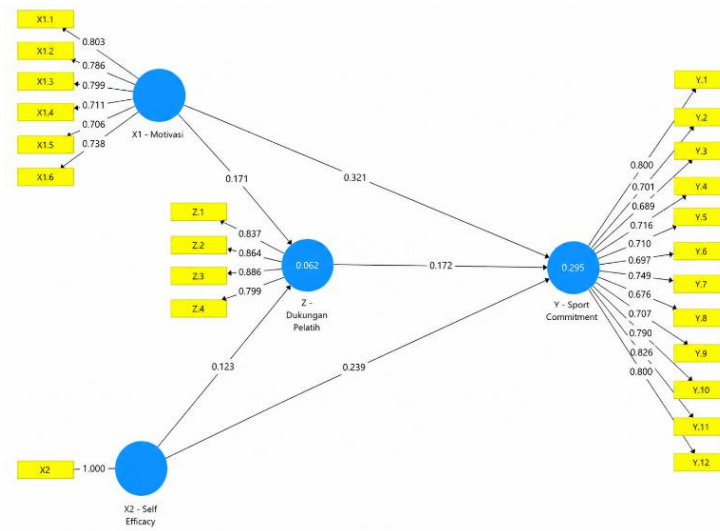


Figure 1. Measurement Model prior to the Bootstrapping process

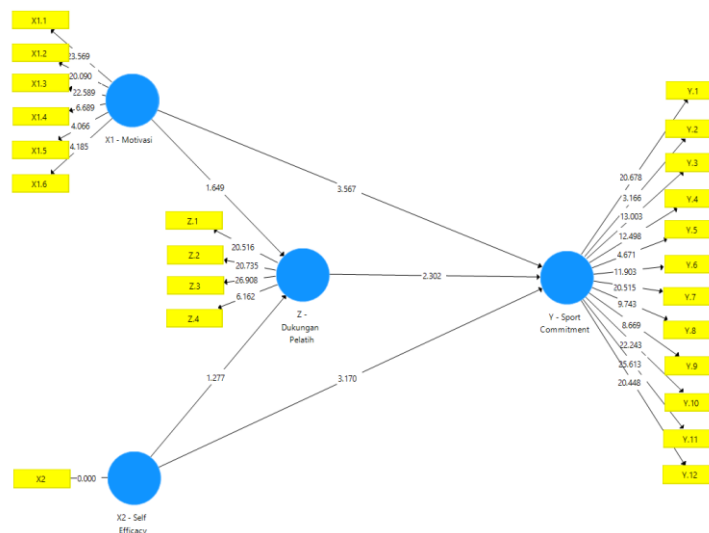


Figure 2. Measurement model following the bootstrapping process

Structural model evaluation began with the coefficient of determination (R^2) to assess the explanatory power of exogenous variables over endogenous variables. Results are presented in Table 4.

Table 4. Coefficient of Determination (R^2)

Endogenous Variable	R^2 (R-Square)	Adjusted R^2	Category
Sport Commitment (Y)	0.295	0.282	Moderate
Coach Support (Z)	0.062	0.051	Weak

Motivation, self-efficacy, and coach support explained 29.5% of the variance in sport commitment ($R^2 = .295$). Meanwhile, motivation and self-efficacy explained 6.2% of the variance in coach support ($R^2 = .062$).

Table 5. Testing Results – Direct and Mediation Effects (Bootstrapping, 5,000 Subsamples)

Hypothesis/Path	β	T	p	Sig.	Decision
1. Motivation → Sport Commitment	0.32	3.227	0.001	✓	Accepted
2. Self-Efficacy → Sport Commitment	0.24	3.102	0.002	✓	Accepted
3. Motivation → Coach Support	0.17	3.210	0.001	✓	Accepted
4. Self-Efficacy → Coach Support	0.12	1.288	0.198	×	Rejected
5. Coach Support → Sport Commitment	0.17	2.355	0.019	✓	Accepted
— Mediation Test (Indirect Effect) —					
6. Motivation → Coach Support → Sport Commitment	0.29	3.115	0.002	✓	Accepted
7. Self-Efficacy → Coach Support → Sport Commitment	0.02	1.004	0.316	×	Rejected

The structural model results showed that motivation was positively associated with sport commitment ($\beta = .321$, $t = 3.567$), supporting the corresponding hypothesis. Self-efficacy was also positively associated with sport commitment ($\beta = .239$, $t = 3.170$), supporting the hypothesis. Coach support was positively associated with sport commitment ($\beta = .172$, $t = 2.302$), supporting the corresponding hypothesis.

The relationship between motivation and coach support was positive but not statistically supported ($\beta = .171$, $t = 1.649$). Similarly, the relationship between self-efficacy and coach support was not supported ($\beta = .123$, $t = 1.277$). Among the predictors of sport commitment included in the model, motivation showed the largest standardized path coefficient, followed by self-efficacy and coach support.

DISCUSSION

This study examined the relationships among sport motivation, exercise self-efficacy, perceived coach support, and sport commitment among adolescent student-athletes in a specialized sports-school setting. Sport

motivation, exercise self-efficacy, and perceived coach support were positively associated with sport commitment, and together they explained 29.5% of its variance. Sport motivation showed the largest standardized path coefficient ($\beta = .321$), followed by exercise self-efficacy ($\beta = .239$) and perceived coach support ($\beta = .172$). These coefficients, however, should not be interpreted as statistically different in strength because they were not formally compared using confidence intervals or other appropriate tests. The effect-size analysis indicated medium effects for sport motivation and perceived coach support and a large effect for exercise self-efficacy. Thus, the findings suggest that both psychological resources and perceived interpersonal support are relevant to sport commitment within this specialized sports-school context.

The positive association between sport motivation and sport commitment is consistent with previous evidence linking motivation with persistence, effort, and continued involvement in sport (Pelletier et al., 2013; Scanlan et al., 2016; Schiff & Supriady, 2023). Self-Determination Theory provides a relevant framework for understanding how motivational regulation relates to sustained behavioral engagement (Ryan & Deci, 2017). Recent evidence has similarly shown that motivational experiences are associated with sport commitment among young athletes (Mohebi et al., 2024). Nevertheless, the present model represented the SMS-II dimensions as an overall sport motivation construct. The findings should therefore be interpreted as an association between overall sport motivation and sport commitment rather than as evidence concerning autonomous motivation, controlled motivation, or any individual motivational regulation. This distinction is important when comparing the present findings with studies that have analyzed specific SMS-II dimensions separately.

Exercise self-efficacy was also positively associated with sport commitment. This finding is consistent with Social Cognitive Theory, in which self-efficacy represents an individual's belief in their capability to perform and maintain behavior, as well as with previous evidence linking efficacy beliefs to behavioral persistence in achievement and sport contexts (Chen & Sukying,

2024; Kusumadewi et al., 2021; Nenot'ek et al., 2025). Research on physically demanding tasks and sport performance further suggests that efficacy beliefs are relevant to persistence and behavioral outcomes (Beattie et al., 2016; Moritz et al., 2000). However, the ESES used in this study assesses confidence in maintaining exercise-related behavior. The present finding therefore concerns exercise adherence self-efficacy and should not be extended to competitive performance, sport-specific skills, resilience, or broader athletic capabilities.

Perceived coach support was positively associated with sport commitment, highlighting the relevance of interpersonal resources within athletes' social environments. Previous studies have associated supportive coach–athlete interactions and coaching environments with athletes' motivation, psychological experiences, continued engagement, and sport commitment (Fajri et al., 2022; Mohebi et al., 2024; Sevil-Serrano et al., 2021; Taylor & Lonsdale, 2023). Prospective evidence has also identified support from coaches and teammates as relevant to adolescents' continued participation in organized sport (Marques et al., 2016). The present finding extends this evidence to perceived emotional, esteem, informational, and tangible support received from coaches. However, these dimensions of perceived support should not be equated with autonomy-supportive coaching, general social support, or broader coaching styles because these constructs differ from the ARSQ-based operationalization used in this study.

In contrast to their positive associations with sport commitment, the hypothesized relationships of sport motivation and exercise self-efficacy with perceived coach support were not statistically supported. The model explained only 6.2% of the variance in perceived coach support, suggesting that the proposed psychological predictors accounted for little variation in athletes' perceptions of support. Coach-, team-, and organizational-level factors not included in the model may contribute to these perceptions. The hypothesized direction may also warrant reconsideration because previous research has

more commonly positioned coaching behavior or coach support as an antecedent of athletes' motivation and commitment (Permana et al., 2022; Salsabila et al., 2025). Alternative models in which perceived coach support precedes athletes' psychological characteristics therefore warrant investigation. The present cross-sectional data cannot establish temporal ordering or determine which direction better represents these relationships.

The specific indirect association between sport motivation and sport commitment through perceived coach support was statistically significant ($\beta = .029$, 95% CI [.006, .058]). Because the confidence interval did not include zero, the result supports a statistical indirect association through perceived coach support. In contrast, the specific indirect association between exercise self-efficacy and sport commitment through perceived coach support was not statistically supported. These different patterns suggest that perceived coach support may be statistically involved in the relationship between sport motivation and commitment. In contrast, the corresponding indirect pathway for exercise self-efficacy was unsupported in the present model. Importantly, neither pattern establishes causal mediation because the cross-sectional design does not establish temporal precedence. Longitudinal data with temporally separated measurements are required to determine whether changes in psychological characteristics precede changes in perceived coach support and subsequent sport commitment.

The study contributes context-specific evidence by showing that psychological resources and perceived interpersonal support display distinct relationships with sport commitment in a specialized sports-school setting. While all three predictors were associated with sport commitment, the relationships involving perceived coach support were more complex than hypothesized. These findings support considering psychological and interpersonal factors together without implying a new causal mechanism or theoretical sequence. The findings indicate distinct patterns within the proposed structural model: all three predictors were positively associated with

sport commitment, whereas the hypothesized relationships from sport motivation and exercise self-efficacy to perceived coach support were not statistically supported. These results provide context-specific evidence for considering athletes' psychological resources alongside perceived interpersonal support without establishing a new causal mechanism or theoretical sequence. They also indicate that the relationships between psychological characteristics and coach support may be more complex than the proposed directional model suggests.

From a practical perspective, the findings support monitoring sport motivation, exercise self-efficacy, perceived coach support, and sport commitment as part of athlete development. Particular attention may be given to athletes' confidence in maintaining exercise participation, while coaches may provide consistent emotional, esteem, informational, and tangible support that corresponds to the construct assessed in this study (Parkinson et al., 2023; Versano & Cancio, 2024). From a practical perspective, the findings support monitoring sport motivation, exercise self-efficacy, perceived coach support, and sport commitment as part of athlete development. Particular attention may be given to athletes' confidence in maintaining exercise participation, while coaches may provide consistent emotional, esteem, informational, and tangible support (Parkinson et al., 2023; Versano & Cancio, 2024). However, because the observed relationships are correlational, interventions targeting these factors require evaluation through appropriately designed experimental or quasi-experimental studies before conclusions about their effects on sport commitment can be made.

Several limitations define the boundaries of these findings. First, the cross-sectional design prevents causal inference and does not establish the temporal ordering of the examined relationships. Second, recruitment from a single specialized sports school limits generalisability beyond comparable adolescent student-athlete populations. Third, athletes were nested within sports and coaches, but clustering was not statistically accounted for;

consequently, independence of observations cannot be fully assumed. Exercise self-efficacy was also represented by a single aggregated indicator, limiting the evaluation of measurement error and construct-level reliability. More broadly, operationalizing multidimensional constructs through global or dimension-level indicators may obscure variation across their underlying dimensions. Finally, reliance on athlete self-report and the presence of coaches during data collection may have introduced common method bias, social-desirability bias, or response inhibition.

Future research should examine these relationships longitudinally across multiple specialized sports schools to establish temporal ordering and improve generalisability. Multilevel analyses are needed to account for athletes nested within sports, teams, and coaches, while multi-group analyses could determine whether the structural relationships differ between individual and team sports. Dyadic athlete–coach data and objective behavioral indicators, such as training attendance and continued participation, could complement self-report measures. Future models may also incorporate theoretically justified demographic and sport-related control variables when such information is available and examine alternative structural specifications in which perceived coach support precedes athletes' motivation, exercise self-efficacy, and commitment. Experimental or quasi-experimental studies are subsequently needed to determine whether interventions targeting these factors produce changes in sport commitment.

CONCLUSION

Sport motivation, exercise self-efficacy, and perceived coach support were positively associated with sport commitment among adolescent student-athletes in a specialized sports-school setting. The findings provide context-specific evidence that psychological resources and perceived interpersonal support are relevant to athletes' commitment to continued sport participation. The observed indirect association between sport motivation and sport

commitment through perceived coach support represents a statistical relationship rather than evidence of causal mediation. Given the cross-sectional, single-site design and the clustering of athletes within sports and coaches, interpret the findings in light of the characteristics of the population studied. Longitudinal, multi-site, and multilevel research is needed to examine whether these relationships remain consistent across settings and over time.

REFERENCES

- Battaglia, A., Kerr, G., & Tamminen, K. (2024). The Dropout From Youth Sport Crisis: Not as Simple as It Appears. *Kinesiology Review*, 13(3), 345–356. <https://doi.org/10.1123/kr.2023-0024>
- Beattie, S., Woodman, T., Fakehy, M., & Dempsey, C. (2016). The role of performance feedback on the self-efficacy-performance relationship. *Sport, Exercise, and Performance Psychology*, 5(1), 1–13. <https://doi.org/10.1037/spy0000051>
- Borgolte, K., & Pinquart, M. (2024). The relationship between exercise-related expectancies and exercise behavior in adolescent athletes. *Health Psychology and Behavioral Medicine*, 12(1), 2356777. <https://doi.org/10.1080/21642850.2024.2356777>
- Braga-Pereira, R., Furtado, G. E., Campos, F., Sampaio, A. R., & Teques, P. (2025). Impact of fitness coach behavior on exercise motivation, commitment, and enjoyment: A longitudinal study. *PLOS ONE*, 19(12), 1–20. <https://doi.org/10.1371/journal.pone.0310931>
- Chen, Z., & Sukying, A. (2024). Relationship between Intrinsic Motivation, Self-Efficacy, Self-Regulated Learning, and English Achievement among Chinese High School Students. *Journal of English Language and Linguistics*, 5(3), 261–276. <https://doi.org/10.62819/jel.2024.578>
- Fajri, A. W., Setyawati, H., Rahayu, T., Wira, D., Kusuma, Y., Rafikoh, R., Rohmah, I., & Chen, C.-W. (2022). Self-efficacy, Self-Confidence, Achievement Motivation, and Their Relationship to Competitive Anxiety. *Journal of Physical Education and Sports*, 11(4), 426–434. <https://doi.org/10.15294/jpes.v11i4>
- Fikri Mohd Kassim, A., Maizatul Akma Jamal, N., Shahbudin Syed Omar, S., Kamal Kamaruddin, H., Akmal Anuar, N., & Syukri Che Zakaria, M. (2024). Coach-Athlete Relationship, Trust and Confidence Among Team Sport Athletes. *Malaysian Journal of Sport Science and Recreation*, 20(1). <https://doi.org/10.24191/mjssr.v20i1.1094>

- Freeman, P., Coffee, P., Moll, T., Rees, T., & Sammy, N. (2014). The ARSQ: The Athletes' Received Support Questionnaire. *Journal of Sport & Exercise Psychology*, 36(2), 189–202. <https://doi.org/10.1123/jsep.2013-0080>
- Kusumadewi, I. A., Ghozali, D. A., Hastami, Y., & Wiyono, N. (2021). Hubungan antara Tingkat Kecemasan dan Tingkat Efikasi Diri pada Atlet Renang. *JOSSAE: Journal of Sport Science and Education*, 6(1), 107. <https://doi.org/10.26740/jossae.v6n1.p107-114>
- Li, Y., Xu, J., Zhang, X., & Chen, G. (2024). The relationship between exercise commitment and college students' exercise adherence: The chained mediating role of exercise atmosphere and exercise self-efficacy. *Acta Psychologica*, 246, 104253. <https://doi.org/10.1016/j.actpsy.2024.104253>
- Marques, A., Ekelund, U., & Sardinha, L. B. (2016). Associations between organized sports participation and objectively measured physical activity, sedentary time and weight status in youth. *Journal of Science and Medicine in Sport*, 19(2), 154–157. <https://doi.org/10.1016/j.jsams.2015.02.007>
- McAuley, E. (1993). Self-efficacy and the maintenance of exercise participation in older adults. *Journal of Behavioral Medicine*, 16(1), 103–113. <https://doi.org/10.1007/BF00844757>
- Mohebi, M., Zarei, S., Zandi, H. G., & Bahrami, A. (2024). The Effect of Coaches' Interpersonal Style Profiles on Young Athletes' Motivation and Sport Commitment. *Japanese Psychological Research*, n/a(n/a). <https://doi.org/https://doi.org/10.1111/jpr.12548>
- Moritz, S. E., Feltz, D. L., Fahrbach, K. R., & Mack, D. E. (2000). The relation of self-efficacy measures to sport performance: a meta-analytic review. *Research Quarterly for Exercise and Sport*, 71(3), 280–294. <https://doi.org/10.1080/02701367.2000.10608908>
- Nenot'ek, F. P. Y., Kristiyanto, A., & Syaifullah, R. (2025). Effects of high-intensity interval training ratios on physical fitness in junior high students. *Jurnal SPORTIF: Jurnal Penelitian Pembelajaran*, 11(3), 494–513. https://doi.org/10.29407/js_unpgri.v11i3.26452
- Ntoumanis, N., & Moller, A. C. (2025). Self-determination theory informed research for promoting physical activity: Contributions, debates, and future directions. *Psychology of Sport and Exercise*, 80, 102879. <https://doi.org/10.1016/j.psychsport.2025.102879>
- Toumanis, N., & Moller, A. C. (2025). Self-determination theory informed research for promoting physical activity: Contributions, debates, and future directions. *Psychology of Sport and Exercise*, 80, 102879. <https://doi.org/10.1016/j.psychsport.2025.102879>

- Parkinson, J., Hannan, T., McDonald, N., Moriarty, S., Nguyen, T.-M., & Hamilton, K. (2023). Health action process approach: promoting physical activity and fruit and vegetable intake among Australian adults. *Health Promotion International*, 38(4). <https://doi.org/10.1093/heapro/daad095>
- Pelletier, L. G., Rocchi, M. A., Vallerand, R. J., Deci, E. L., & Ryan, R. M. (2013). Validation of the revised sport motivation scale (SMS-II). *Psychology of Sport and Exercise*, 14(3), 329–341. <https://doi.org/10.1016/j.psychsport.2012.12.002>
- Permana, A., Syamsul Taufik, M., Hidayat Suharto, T., Rahmat, A., Usmaedi, Arini, I., & Arini, I. (2022). Analisis Karakteristik Psikologi Kepribadian Atlet Bola Voli Kabupaten Cianjur Menuju PORDA Memasuki Tahun 2021. *Jurnal Segar*, 11(1). <https://doi.org/10.21009/segar/1101.06>
- Rippon, D., Shepherd, J., Wakefield, S., Lee, A., & Pollet, T. V. (2024). The role of self-efficacy and self-esteem in mediating positive associations between functional social support and psychological wellbeing in people with a mental health diagnosis. *Journal of Mental Health*, 33(6), 721–730. <https://doi.org/10.1080/09638237.2022.2069695>
- Ryan, R. M., & Deci, E. L. (2017). Self-determination theory: Basic psychological needs in motivation, development, and wellness. In *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. The Guilford Press. <https://doi.org/10.1521/978.14625/28806>
- Salsabila, A., Fitri, M., Williyanto, S., Apriady, H., & Ockta, Y. (2025). Examining personality traits and mental toughness: a comparative analysis among national and regional tarung derajat athletes. *Jurnal SPORTIF: Jurnal Penelitian Pembelajaran*, 10(4), 63–77. https://doi.org/https://doi.org/10.29407/js_unpgri.v10i4.23251
- Scanlan, T. K., Chow, G. M., Sousa, C., Scanlan, L. A., & Knifsend, C. A. (2016). The development of the Sport Commitment Questionnaire-2 (English version). *Psychology of Sport and Exercise*, 22, 233–246. <https://doi.org/10.1016/j.psychsport.2015.08.002>
- Schiff, N. T., & Supriady, A. (2023). Sports education model (SEM) on students' motivation and physical activity in classroom: A literature review. *Jurnal SPORTIF: Jurnal Penelitian Pembelajaran*, 9(1), 40–58. https://doi.org/10.29407/js_unpgri.v9i1.19067
- Sevil-Serrano, J., Abós, Á., Diloy-Peña, S., Egea, P. L., & García-González, L. (2021). The influence of the coach's autonomy support and controlling behaviors on motivation and sport commitment of youth soccer players. *International Journal of Environmental Research and Public Health*, 18(16). <https://doi.org/10.3390/ijerph18168699>

- Singh, S., & Bal, B. S. (2024). Motivational correlates of sports and physical activity. *Physical Education of Students*, 28(3), 168–174. <https://doi.org/10.15561/20755279.2024.0305>
- Standage, M. (2023). Self-Determination Theory Applied to Sport. *The Oxford Handbook of Self-Determination Theory*, March, 701–723. <https://doi.org/10.1093/oxfordhnb/9780197600047.013.35>
- Taylor, I. M., & Lonsdale, C. (2023). Motivational processes in physical education: A self-determination theory perspective. *Oxford University Press*. <https://doi.org/10.1093/oxfordhnb/9780197600047.013.36>
- Teixeira, P. J., Carraça, E. V., Markland, D., Silva, M. N., & Ryan, R. M. (2012). Exercise, physical activity, and self-determination theory: A systematic review. *International Journal of Behavioral Nutrition and Physical Activity*, 9. <https://doi.org/10.1186/1479-5868-9-78>
- Versano, J. J. L., & Cancio, B. L. (2024). Dance Imagery, Experience Motivation, and Psychological Mechanisms Among Dancesport Athletes. *European Journal of Physical Education and Sport Science*, 11(8), 134–164. <https://doi.org/10.46827/ejpe.v11i8.5743>
- Zhang, C.-Q., Zhang, R., Schwarzer, R., & Hagger, M. S. (2019). A meta-analysis of the health action process approach. *Health Psychology: Official Journal of the Division of Health Psychology, American Psychological Association*, 38(7), 623–637. <https://doi.org/10.1037/hea0000728>