

The role of coach-athlete relationship on motivation and sports engagement

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Abstract

Background and Study Aim The relationship between coach and athlete may significantly influence an athlete's experience in sports. Elements such as closeness, commitment, and complementarity are key aspects of this relationship. The current study aimed to examine the association between motivation and athletes' engagement in sports, as mediated by the coach-athlete relationship.

Material and Methods A sample of 408 student-athletes from various universities in Iligan City participated in the study. They completed a set of questionnaires assessing motivation, the coach-athlete relationship, and athlete engagement. The participants were between 18 and 25 years old. The measures used in the study included the Coach-Athlete Relationship Questionnaire (CARTQ), the Sports Motivation Scale (SMS), and the Athletic Engagement Questionnaire (AEQ). Ethical approval was obtained from all participants.

Results The results showed that coach-athlete relationships were characterized by closeness, commitment, and complementarity. These relationships significantly mediated the link between intrinsic and extrinsic motivation and athlete engagement in sports. Strong connections between coaches and athletes enhance the positive effect of motivation on engagement. This occurs by fulfilling athletes' psychological needs for autonomy, competence, and relatedness. Conversely, amotivation was negatively associated with engagement through the dimensions of the coach-athlete relationship. Athletes with high levels of amotivation are more likely to disengage. This highlights the need for coaches to foster a supportive environment that reduces negative motivational states.

Conclusions The evidence supports the utilization of Self-Determination Theory (SDT) to better understand the importance of relationship factors in enhancing motivation. This approach leads to long-term engagement in sports. These results offer a more comprehensive view of the delicate dynamics of the coach-athlete relationship and its consequences for motivation and athletic engagement in sports.

Keywords: engagement, motivation, coach-athlete relationship, intrinsic, extrinsic

Introduction

Despite the growing interest in enhancing athletic performance, there remains a significant challenge in understanding the factors that sustain long-term motivation and engagement among athletes. The complexity of these psychological factors often leads to inconsistent outcomes in both research and practice. This highlights the need for further exploration of the elements that contribute to sustained athletic commitment. In this context, various research topics have shown that the motivation and engagement of athletes in sports have consistently been a subject of interest for researchers and professionals in the field of sports psychology [1, 2, 3]. While engagement has been construed in a variety of ways, it is generally

understood in the literature as persistent and positive cognitive and emotional experiences in sports, characterized by four interconnected dimensions: vigor, dedication, confidence, and enthusiasm [4, 5]. According to Lonsdale et al. [5], vigor refers to a feeling of being physically, mentally, and emotionally lively, defined by high levels of energy and resilience. Dedication, on the other hand, is a strong sensation of being deeply involved in one's sport, along with a sense of facing substantial challenges. Confidence is understood as having trust in one's ability to reach a high level of performance and accomplish desired goals. Enthusiasm embodies a strong sense of excitement and enjoyment. Exploring the factors that influence athlete engagement and understanding how it is formed presents a substantial opportunity to discover the hidden potential and strengths of student-athletes.

Athlete engagement is characterized by pleasant thoughts and feelings that lead to a sense of profound involvement in sports [4, 6, 7]. It includes feelings of excitement, encouragement, and satisfaction about the task [8, 9], as well as deep focus and concentration on sports activities [4, 10]. Research has indicated that athlete engagement is a condition of optimal performance, positively correlated with high levels of achievement in sports [7, 10]. It is also linked to persistence, such as higher flow [11], self-regulation in elite athletes [12], athletes' well-being [13], and lower burnout in student-athletes [14]. The profound impact of engagement in sports on student-athletes, along with the growing acknowledgment that it can be nurtured and improved, has led to increasing interest in understanding the mechanisms that contribute to its development in sports.

However, while several studies have explored the dynamics of improving sports engagement [2, 6, 7, 15], to the author's knowledge, very few have examined these dynamics from the perspective of Self-Determination Theory (SDT). Utilizing this theory [16, 17], this study contends that athletes' motivation tends to enhance coach-athlete relationships (i.e., closeness, commitment, complementarity) and, ultimately, increase athletes' engagement in sports.

The SDT suggests that the quality of an individual's motivation impacts their psychological outcomes [17]. This theory posits that individuals possess three basic psychological needs: the need for autonomy, the need for competence, and the need for relatedness. When these needs are met, individuals tend to be intrinsically motivated, leading them to stay engaged and persistent in their sports activities. In a sports context, athletes who feel in control of their training and performance (autonomy), who can handle challenging situations (competence), and who feel close to their coaches and teammates (relatedness) are more likely to be engaged in their sport. The fulfillment of these basic psychological needs has been positively associated with employee engagement [10, 17, 18], well-being [4, 19], and motivational climate [2], and is therefore believed to be a probable motivational factor for athletes' engagement. According to Ryan and Deci [20], the level of satisfaction of these needs determines the level of positive psychological outcomes, such as engagement. Conversely, frustration or obstruction of these needs determines the level of negative psychological consequences, such as burnout. Furthermore, there is a positive association between a desire for enjoyment and an increased likelihood of engagement in sports. SDT asserts that the coach's motivational climate impacts athletes' levels of intrinsic motivation and engagement in sports [20, 21].

Self-determination theory postulates that the motivational environment created by coaches is

connected to athletes' motivation by fulfilling their basic psychological needs [22, 23]. The type of motivation individuals experience is believed to influence athletes' affective states. A study by Curran et al. [24] claims that the motivational climate plays an important role in the overall quality of engagement in sports, particularly regarding factors such as enthusiasm, vigor, dedication, and confidence. Consequently, athletes' psychological health, well-being, and engagement are more positively affected when their motivation for sport is self-determined [19]. Self-determination theory (SDT) posits that social conditions in an environment impact both the motivational regulations that influence behavior and the psychological experiences, such as athletes' burnout and engagement [6, 1]. Ultimately, athletes' style of motivation is thought to be important to their emotional states and their level of engagement in sports [7, 25, 26]. Various analyses have been conducted on the relationship between the environment provided by coaches and the basic psychological needs of athletes on competitive teams [27, 28]. The findings revealed beneficial connections between coaches who promote autonomy and athletes' perception of their basic psychological needs. Hence, the extent to which athletes feel their needs are met—through their perceptions of autonomy, competence, and relatedness—is influenced by the sports environment established by coaches or significant individuals around the athletes [23, 29]. Thus, self-determination theory aims to understand the motivations behind sports participation and their impact on engagement [30, 31].

The CAR 3C's model, proposed by Jowett and Ntoumanis [32], is the first and most widely used model for understanding coach-athlete relationships [33]. The authors suggest that the attributes within this model are believed to derive from emotion, cognition, and behavior [34, 35, 36]. These characteristics include closeness, which represents the emotional connection between athletes and coaches, encompassing confidence, likability, and trust. Commitment refers to the intention of both athletes and coaches to sustain their relationship and maximize its benefits. Complementarity describes the interaction between athletes and coaches, highlighting how a friendly and responsive attitude from an athlete can lead to a similar response from a coach [32, 37]. Heightened perceptions of these constructs indicate a more positive perception of the coach-athlete relationship.

The 3C's model and its associated measures have been used for two decades to investigate factors related to the coach-athlete relationship [32, 38]. Research has shown that the coach-athlete relationship is associated with various factors such as motivation and needs satisfaction [25, 38],

physical self-concept [39], support and conflict [40, 41], collective efficacy [35], communication [42], and satisfaction and well-being [43, 44, 45]. However, the impact of the coach-athlete relationship on athlete engagement has not been thoroughly investigated. According to Self-Determination Theory (SDT) [22, 23], it is reasonable to argue that a strong and positive relationship between athlete and coach can greatly enhance athlete engagement by fulfilling their basic psychological needs for autonomy, competence, and relatedness. Athletes require a sense of psychological autonomy and choice while participating in sports. They also need to feel competent in handling the environment and achieving desired outcomes. Additionally, athletes seek a sense of warmth, connection, and bonding with their coach and teammates, known as the need for relatedness [20, 23]. Thus, a coach who creates an environment that addresses these basic psychological needs not only enhances the interest of the athlete but also contributes positively to their development [41]. By employing autonomy-supportive coaching interventions, providing constructive feedback, and fostering the athletes' sense of relatedness, a coach can enhance the athlete's psychological needs and ultimately cultivate a thriving, motivated, and resilient athlete [33, 46]. A strong and positive relationship, anchored in SDT, can lead to long-term athlete engagement and the fulfillment of their needs.

Although research has identified several factors that affect athletes' engagement, there is a lack of clarity and theoretical understanding regarding the specific mechanisms that contribute to the development and enhancement of athlete engagement. This study utilizes Self-Determination Theory (SDT) to demonstrate that fulfilling basic psychological needs is crucial for athletes to enhance their engagement in sports. Additionally, this study asserts that coach-athlete relationships mediate the relationship between sports motivation and engagement.

Materials and Methods

Participants

A total of 408 student-athletes from various universities in Northern Mindanao, Philippines, participated in the study. The participants ranged in age from 18 to 27 years ($M = 20$ years, $SD = 1.55$). The sample included 247 male athletes (60.5%) and 161 female athletes (39.5%). Using snowball sampling, participants were recruited based on the following criteria: (1) at least 3 years of participation in different tournaments and (2) participation in regional or national competitions in sports.

Research Design

The study employed an inferential approach, utilizing standardized questionnaires to gather data.

The coach-athlete relationship was assessed using the CART-Q [32, 47]. The CART-Q is composed of 11 items, and participants rated each item on a seven-point Likert scale, ranging from (1) strongly disagree to (7) strongly agree. High scores indicate a greater level of connection between coach and athlete. The psychometric properties of this measure are well-established, with Cronbach's alpha scores ranging from 0.70 to 0.88 [38, 35, 48]. The Cronbach's alpha for closeness, commitment, and complementarity are 0.95, 0.95, and 0.96, respectively. The overall internal consistency of the CART-Q is 0.98.

Sports motivation of athletes was measured using the Sports Motivation Scale (SMS) [49]. This scale contains 28 items measuring three factors: intrinsic motivation, extrinsic motivation, and amotivation. Participants responded using a 7-point Likert-type scale ranging from (1) "Does not correspond at all" to (7) "Corresponds completely," with higher scores indicating increased motivation in sports. The SMS has shown adequate levels of internal consistency, ranging from 0.73 to 0.86 [50, 51, 52]. In the current study, the SMS demonstrated high internal consistency for intrinsic motivation (0.95), extrinsic motivation (0.96), and amotivation (0.88). The overall Cronbach's alpha of the SMS is 0.98.

The Athletic Engagement Questionnaire (AEQ) [53] was developed to measure sports engagement. This scale comprises 16 items across four dimensions: confidence, dedication, vigor, and enthusiasm. Participants rated each item using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating a higher level of engagement in sports. This scale has demonstrated adequate validity and reliability across multiple investigations [54, 7, 55]. The internal consistency of the AEQ dimensions—confidence, dedication, vigor, and enthusiasm—are 0.95, 0.96, 0.97, and 0.98, respectively. The overall internal consistency of the AEQ is 0.98.

Permission was obtained from the school authorities, and the test administration was carried out following the approval of the university research ethics board. Consent forms were obtained from the participants, clearly outlining the study's objectives and ensuring the anonymity of participants' responses. The participants completed the packet of questionnaires with the assistance of designated researchers. The procedures were subjected to a comprehensive assessment, and the university's ethics review committee authorized the implementation.

Statistical Analysis

All statistical analyses were performed using IBM SPSS Version 20.0 to assess the indirect effects of the coach-athlete relationship on the relationship between motivation and sport engagement of athletes. Before conducting the mediation analysis,

the data were carefully checked, and any missing values were imputed randomly using expectation-maximization (EM) methods. Cronbach's alpha was computed for each scale item to assess internal consistency. Preliminary data analyses were conducted, including the assessment of instrument reliability, frequency, mean, and standard deviation for demographic variables. The PROCESS macro [56] was used to examine the role of the coach-athlete relationship between motivation and engagement of athletes using multiple mediation analysis. A total of 10,000 bootstrap samples were utilized to examine the effects of the parallel mediators. The 95% confidence intervals (CI) for the lower and upper limits that do not include zero indicate significant results at the .05 level.

Results

The results of the study are presented in Table 1 and Table 2. Table 1 shows the means, standard deviations, and correlations of the study variables. Significant positive correlations were found among intrinsic, extrinsic, and amotivation ($r = -.13$ to $.92$), confidence, dedication, vigor, and enthusiasm ($r = -.23$ to $.96$), and coach-athlete relationships characterized by closeness, commitment, and complementarity ($r = -.23$ to $.95$). It is also significant to note that there was a positive correlation between the dimensions of CAR and intrinsic and extrinsic motivation. Conversely, the results showed a significant negative correlation between amotivation and all dimensions of coach-athlete relationships and athlete engagement.

Table 2 displays the direct, indirect, and total effects among the variables. The study conducted mediation analysis to investigate the indirect effect of the three mediating variables of CAR (i.e., closeness, commitment, and complementarity) on athlete engagement. The results demonstrated that closeness ($\beta = 0.139$, 95% CI [.108, .170]), commitment ($\beta = 0.146$, 95% CI [.114, .179]), and complementarity

($\beta = 0.139$, 95% CI [.107, .171]) had a significant role in mediating the link between motivation and engagement. Furthermore, there was a notable direct impact of motivation on engagement ($\beta = .017$, $p < .001$). Finally, the total effect model was statistically significant ($\beta = 0.017$, $p < .001$). Therefore, athletes who possess high levels of motivation are more likely to engage actively in sports due to the strong bond and positive interaction between coaches and athletes, characterized by these dimensions.

Discussion

The current study aimed to examine whether motivation influences athletes' engagement in sport through the coach-athlete relationship. The study presents several interesting results that warrant further discussion. The hypothesis proposed that the coach-athlete relationship would mediate the relationship between motivation and athlete engagement. First, the results show that intrinsic motivation is associated with an increase in engagement. This finding suggests that athletes who exhibit intrinsic motivation are more likely to have higher levels of energy, which, in turn, leads to increased effort, the ability to overcome difficulties, and the attainment of desired results. This process is characterized by a sense of purpose, pride, and challenge, ultimately fulfilling a state of personal satisfaction [7, 21, 57].

In Self-Determination Theory (SDT) [16, 58], intrinsic motivation plays a crucial role in increasing athletes' engagement and performance in sports. Research has highlighted that intrinsic motivation enhances athletes' happiness and satisfaction in their sport and boosts performance by fostering toughness, determination, and a deeper dedication to training and competition [59, 60]. This type of motivation is linked to the basic psychological needs of autonomy, competence, and relatedness, which are fundamental to SDT, indicating that athletes are more likely to achieve

Table 1. Descriptive statistics and bivariate correlations

	1	2	3	4	5	6	7	8	9	10
1. Intrinsic	--									
2. Extrinsic	0.92**	—								
3. Amotivation	-0.13*	-0.15*	—							
4. Confidence	0.56**	0.56**	-0.34**	—						
5. Dedication	0.55**	0.55**	-0.33***	0.93**	—					
6. Vigor	0.53**	0.50**	-0.26**	0.86**	0.88**	—				
7. Enthusiasm	0.54**	0.50**	-0.27**	0.86**	0.87**	0.96**	—			
8. Closeness	0.61**	0.62**	-0.35**	0.65**	0.65**	0.59**	0.59**	—		
9. Commitment	0.65**	0.63**	-0.24**	0.59**	0.59**	0.60**	0.61**	0.87**	—	
10. Complementarity	0.65**	0.63**	-0.23**	0.57**	0.56**	0.60**	0.59**	0.83**	0.95**	—
M	48.11	70.15	13.53	17.14	17.24	17.80	18.03	17.57	24.65	24.53
SD	9.61	14.83	7.90	3.70	3.83	3.61	3.58	4.07	4.74	4.78

Significant at level * $p < .01$, ** $p < .001$

Table 2. Results of direct, indirect, and total effects

Path	Direct Effect β (SE)	Indirect Effect β (SE)	Total Effect β (SE)
Intrinsic → Closeness → Sports Engagement	0.395 (0.132)**	0.187 (0.060)** BC 95% [.069, .304]	0.581 (0.141)***
Intrinsic → Commitment → Sports Engagement	0.406 (0.072)***	0.424 (0.053)*** BC 95% [.320, -.528]	0.581 (0.141)***
Intrinsic → Complementarity → Sports Engagement	0.342 (0.137)**	0.239 (0.058)*** BC 95% [.125, .353]	0.581 (0.141)***
Extrinsic → Closeness → Sports Engagement	0.231 (0.044)***	0.291 (0.033)*** BC 95% [.227, .355]	0.522 (0.039)***
Extrinsic → Commitment → Sports Engagement	0.248 (0.046)***	0.274 (0.033)*** BC 95% [.209, -.339]	0.522 (0.039)***
Extrinsic → Complementarity → Sports Engagement	0.265 (0.046)***	0.257 (0.033)*** BC 95% [.002, .130]	0.522 (0.039)***
Amotivation → Closeness → Sports Engagement	- 0.226 (0.069)***	- 0.200 (0.036)*** BC 95% [-.270, -.129]	- 0.425 (0.070)***
Amotivation → Commitment → Sports Engagement	- 0.306 (0.070)***	- 0.254 (0.053)*** BC 95% [-.357, -.150]	- 0.425 (0.070)***
Amotivation → Complementarity → Sports Engagement	- 0.333 (0.067)***	- 0.092 (0.027)*** BC 95% [-.145, .321]	- 0.425 (0.070)***
Motivation → Closeness → Sports Engagement	.095 (.021)***	0.139 (0.016)*** BC 95% [.108, .170]	0.234 (0.021)***
Motivation → Commitment → Sports Engagement	.088 (.023)***	.146 (.017)*** BC 95% [.114, .179]	0.234 (0.021)***
Motivation → Complementarity → Sports Engagement	.095 (.023)***	.139 (.017)*** BC 95% [.107, .171]	0.234 (0.021)***
Motivation → Coach-Athlete Relationship → Sports Engagement	0.005 (0.002)***	0.011 (0.001)*** BC 95% [.009 - .014]	0.017 (0.001)***

Significant at level * $p < .05$, ** $p < .01$, *** $p < .001$

success based on their interests and preferences [20, 23]. Furthermore, fulfilling these basic needs can substantially influence athletes' overall motivation levels and determination to engage in intense training and tournaments. In line with this, an investigation showed that athletes who derive enjoyment and captivation from their actions are more inclined to attain enhanced learning and performance outcomes in various situations [59, 61]. Studies indicate that intrinsic motivation is strongly linked to positive emotional experiences, such as passion, happiness, and a feeling of being challenged [62]. These experiences can result in increased determination, effort, and a greater willingness to take on new challenges. Ultimately,

this can lead to improved performance and engagement in sports.

The second result shows that extrinsic motivation contributes to the increase in athletes' engagement. This suggests that when athletes participate in sports due to external incentives or pressure, it can still result in significant engagement in sports. The current results align with numerous studies indicating that athletes who receive external rewards (e.g., praise or material rewards) are more likely to engage in prolonged training sessions [63, 64], increase their willingness to engage in tasks [1], and experience increased motivation and commitment [2]. This supports Self-Determination Theory (SDT) [16, 58], which posits that while

intrinsic motivation is ideal for sustaining athlete interest and enjoyment, extrinsic motivation can help athletes stay engaged, especially when it aligns with their values and aspirations. For instance, athletes who consistently receive acknowledgment and recognition for their achievements may dedicate more effort to their training routines [65], motivating them to perform at their best [3], ultimately leading to enhanced performance and skills. Although extrinsic motivation enhances engagement in sports, it is important to maintain a balance with intrinsic motivation to avoid potential negative impacts, such as burnout and exhaustion [10, 23, 57]. Consequently, fostering an organizational environment that enhances both intrinsic and extrinsic motivational factors would be beneficial for athletes' well-being as well as their excellence in sports performance.

The third result shows that amotivation is negatively associated with athletes' engagement. These findings indicate that higher levels of amotivation observed in athletes can lead to their withdrawal from sports. This suggests that athletes may exhibit negative attitudes towards their sport, such as reduced effort in practice, lack of interest, and even complete dropout. A study conducted by Kouali et al. [66] suggests that amotivation may serve as a useful indicator for predicting a lack of perseverance in sports and physical activities. Self-Determination Theory (SDT) explains the link between amotivation and athlete engagement [20, 67]. This theory posits that the fulfillment of three basic psychological needs—competence, autonomy, and relatedness—determines individuals' motivation. When these needs are satisfied, athletes develop intrinsic motivation, which is strongly associated with high levels of motivation and performance [61]. Conversely, if these needs are unmet, athletes may experience amotivation, which can subsequently lead to poor performance. Various literature indicates that amotivation is linked to learned helplessness, low need satisfaction, and unfavorable contextual conditions, which may result in non-participation, low engagement, and low intentions to participate in sports and physical activity [66].

Finally, the results show that the roles of the coach-athlete relationship and its dimensions mediate the relationship between sports motivation and athlete engagement. Adhering to the tenets of Self-Determination Theory (SDT), the study examines how the closeness, commitment, and complementarity in the relationship between athletes and their coaches can significantly influence the level of motivation and engagement [22]. In the present study, closeness was found to mediate the relationship between motivation and athlete engagement. Within the context of SDT, the closeness between coaches and athletes fulfills the need for relatedness. This implies that athletes,

through caring and friendly interactions with their coach, cultivate a sense of worth and belonging.

Simons and Bird [34] highlight that when a player forms an emotional connection with a coach, participating in the activity for enjoyment or being motivated by rewards leads to a higher degree of engagement in sports. The formation of a compassionate and supportive relationship partially contributes to athletes feeling accepted, included, and secure, which further helps them to maintain their engagement. The concept of commitment, which acts as a mediator between motivation and athletes' engagement, is associated with the need for autonomy in Self-Determination Theory [20, 85]. For instance, athletes who perceive themselves as having autonomy regarding their training and goals are more likely to remain dedicated, regardless of their initial level of desire. Ryan and Deci [23] present similar findings, indicating that an athlete who is intrinsically motivated to compete or extrinsically motivated by the desire for recognition of their accomplishments will demonstrate higher levels of dedication if they are involved in setting personal goals and participating in the decision-making process of their training schedule. Thus, it can be inferred that fostering a robust, intimate, and highly esteemed relationship between athletes and coaches not only enhances motivation but also increases engagement in sports. Consequently, commitment serves as a bridge that links sports motivation to athletes' engagement, highlighting the importance of interpersonal relationships in sports [24, 37, 38].

Furthermore, complementarity relationships serve as a significant mediator between motivation and athletes' engagement in sports. Complementarity aligns directly with the Self-Determination Theory (SDT) proposition that competence plays a crucial role in coach-athlete relationships. Complementarity, which significantly influences athletes' perceived ability and skills, is one of the key psychological needs postulated in SDT. This is consistent with a study by Wang and Tong [46], which demonstrated that athletes with a positive attitude towards their skills derive greater enjoyment from their chosen sport. The perception of competence largely stems from the coordinated efforts between athletes and coaches. Additionally, there is evidence that the degree of interdependence in athletes' work positively contributes to their commitment, as it enhances productivity and allows athletes to observe the effectiveness of their efforts [18]. The satisfaction of the need for competence is further supported by the establishment of a collective climate where athletes can improve their performance [2]. Coaches have a crucial role in assisting athletes by offering critical feedback, helping to set realistic yet challenging goals, and ensuring that training aligns with the athletes'

abilities [25, 55]. Thus, both anticipated and actual relationships between athletes and coaches enhance motivation and sports participation through increased competence.

The current study's findings provide substantial support for Self-Determination Theory (SDT) and can help coaches create an environment favorable for promoting both intrinsic and extrinsic motivation, thereby enhancing sport engagement and performance. This approach not only boosts performance but also fosters athletes' physical and mental growth, as well as their continued engagement in sports. Thus, the current study has reinforced the role of the coach-athlete relationship in influencing sports motivation and increasing athletes' engagement in sports. Consequently, these research findings may be applicable across different cultures and countries.

While the current research provides new perspectives on how the nature of the relationship between a coach and an athlete influences motivation and athletes' engagement, it is important to recognize its limitations. First, the cross-sectional design limits the ability to establish causal relationships between motivation, the coach-athlete relationship, and engagement. Second, the study relied on self-report measures, which might have introduced certain biases, as participants may have overestimated or underestimated their levels of motivation and engagement. It may be beneficial to consider using social desirability scales as a means to address method bias in future analyses. Furthermore, in the present study, factors such as the type of sport, the highest level of sports participation, and the personality traits of athletes and coaches were not taken into consideration. Finally, future research should incorporate longitudinal designs to establish causal

links between motivation, aspects of the coach-athlete relationship, and engagement in sports. Additionally, including athletes from multiple geographical regions and sports disciplines in future studies could potentially improve the overall applicability of the findings. Future research could also explore specific patterns of coaching behaviors that influence athletes' motivation.

Conclusions

In light of the research conclusions, the following can be stated. The coach-athlete relationship has a positive indirect effect on the relationship between motivation and engagement in sports. The current study supports the idea that the integration of both intrinsic and extrinsic motivations can positively affect athletes' level of engagement in sports, particularly when these behaviors are reinforced by coach-athlete relationships characterized by closeness, commitment, and complementarity. Conversely, amotivation negatively affects athletes' level of engagement, indicating that coaches should foster an environment that promotes the basic psychological needs of athletes. These findings suggest that the level of engagement in sports can be improved by utilizing Self-Determination Theory (SDT) through specific coaching relationships. These results provide a more comprehensive view of the delicate dynamics of the coach-athlete relationship and their impact on motivation and athletic engagement in sports.

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