

The Dualistic Model of Passion Mediates between Coach-Athlete Relationship and Motivation among Collegiate Athletes

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ABSTRACT

Despite extensive research in coach-athlete relationship and motivation in sports, there is a notable gap in the literature on the interaction of passion in the relationship between these two key components in sports context. This study aimed to examine the mediating role of passion in sports between coach and athletes' relationship and motivation among collegiate athletes. A sample of 408 student athletes comprised of 60.5 % male (n=246) and 39.5% female (n= 161) completed a packet of questionnaires on coach-athlete relationship (commitment, closeness, and complementarity), passion (harmonious and obsessive), and athletes' sports motivation (intrinsic and extrinsic). The IBM SPSS 20.0 PROCESS analysis revealed that harmonious and obsessive passion partially mediated the coach-athlete relationship dimensions (commitment, closeness, & complementarity) and both extrinsic and intrinsic motivation. Results imply that student-athletes who cultivate a positive relationship with their coaches exhibit a greater level of passion in sports, which in turn enhances their athletic motivation. The findings provide empirical evidence on the significance of sports passion have foster a strong connection between athletes and coaches, as well as its impact on athletes' motivation in sports setting.

Keywords: Coaches; athletes; motivation; passion; sports

INTRODUCTION

Within the domain of the competitive sports industry, the dynamic interaction between coaches and athletes has been found to affect personality factors (Hülya et al., et al. 2015), passion (Jowett S. et al., 2013), satisfaction (Lorimer & Jowett, 2009), psychological needs and well-being (Jowett et al., et al., 2017). Most recently, the coach-and-athlete relationship is a significant interpersonal bond that has garnered increasing attention from researchers, coaches, and athletes due to its impact on athletes' motivation (López de Subijana et al., 2022), performance (Duyan, 2021), well-being and social support (Simons & Bird, 2022). Coaches play a pivotal role in developing athletes, and their purpose and identity significantly influence athletes' growth (Yukhymenko-Lescroart & Sharma, 2022). Davis et al. (2018) support previous studies that state the quality of the coach-athlete relationship is associated with the correlation between social- cognition and exhaustion among athletes.

The vast literature on the coach-and-athlete relationship indicates that this matter has introduced passion for sports. A study by Vallerand et al. (2008) introduced a Dualistic Model of Passion (DMP). This paradigm highlights passion as a great desire towards an activity that has personal significance, is joyful, and requires substantial effort and dedication. DMP is categorized into two types: harmonious and obsessive. The study found that coaches with a harmonious passion demonstrated autonomy-supportive actions, which indirectly helped to foster solid connections with passionate activity (Vallerand et al., 2008). Harmoniously enthusiastic instructors evaluate their athletes' perspectives, explain assignments, and encourage self-initiative (Lafrenière, et al., 2011). Conversely, autonomy-supportive behaviors have the potential to create stronger bonds between coaches and athletes (Lopez & Vallerand, 2020). Coaches' empathy and respect toward their athletes can foster strong and positive connections (Jowett et al., 2017; Lafrenière, et al., 2011). Amemiya and Sakairi (2019) assert that coach and athlete connection is a pivotal factor in strengthening athletes' passion. This passion is regarded to be an essential source of motivation for competitive student-athletes, as it motivates them to participate in their sport out of self-motivation rather than external pressure.

According to Lafrenière et al. (2011) coaches who possess harmonious passion tend to foster better relationships with their athletes than those with obsessive passion. Vallerand et al. (2006) found that obsessive passion was distinguished by a high valuation of activity and a controlled personality, while harmonious passion was associated with a high valuation of activity and an autonomous personality. Similarly, individuals who participate in teams exhibit more passion and commitment towards their chosen activity compared to those athletes who participate in individual sports (de la Vega et al., 2016). Athletes are driven by passion, which are essential psychological factors that help athletes succeed (Demirci & Çepikkurt, 2018; Gustafsson et al., 2011). A study by Vallerand (2006) noted that individuals who engage in an activity that they enjoy and internalize are prone to developing a passion for sports. The connection between coach and athlete has a significant role on the team's efficacy (Vieira, Ferreira, et al., 2015), athletes who have a stronger bond with coach are more likely to exhibit greater commitment towards their coach. Moreover, athletes tend to have a higher perception of team efficacy and passion when they feel that their coach trusts, respects, and appreciates them (Gustafsson et al., 2011; de la Vega et al., 2016).

On the other hand, evidence has shown that motivation is also linked to the ongoing CAR (coach-athlete relationship) process. Motivation is defined in sports psychology as the persistence of athletes during exercise and competition (Durovic et al., 2020; Wilson & Rodgers, 2004). Research indicates that athletes have two types of motivation: intrinsic motivation (e.g., desire to perfect their skills and ability) and extrinsic motivation (e.g., awards, recognition, and remuneration) (Yukhymenko-Lescroart, 2021; Curran et al., 2015). Intrinsic motivation involves engaging in behavior that is fulfilling and enjoyable. Conversely, extrinsic motivation refers to performance activity dependent on obtaining an outcome (Leagult, 2020). Athletes who are intrinsically motivated have higher well-being and give pleasure to sports performance and activity (Graña et al., 2021; Ryan & Deci, 2017). According to Alvarez et al. (2012), intrinsic motivation was positively correlated with subject vitality among young male soccer athletes. Self-determination theory suggests that motivation characterized by autonomy (i.e., integrated regulation, intrinsic motivation, and identified regulation) is linked to positive behavioral results (e.g., vitality). Conversely, athletes with less autonomous motivation (i.e., external regulation, amotivation, and introjected regulation) are likelier to experience adverse outcomes such as burnout and dropout (Ryan & Deci, 2017). Autonomous type of motivation has been linked to improved performance (Pope & Wilson, 2014; Yukhymenko-Lescroart et al., 2021), subjective vitality (Alvarez, 2012), and sports satisfaction (Blanchard et al., 2009). A study by Graña et al. (2021) explained that highly motivated athletes can reduce physical and emotional exhaustion, decrease sports devaluation, enhance their sense of accomplishment, and ultimately increase athletic performance (Yukhymenko-Lescroart et al., 2021), passion for sports (Amemiya & Sakairi, 2019; Verner-Filion et al., 2017), and transformational leadership (Subijana et al., 2021).

Self-Determination Theory (SDT) has been widely used to explore how social factors, such as coach behavior, influence athletes' motivation and satisfaction (Deci & Ryan, 2000; Ryan and Deci, 2020). Coaches play a critical role in shaping athletes' motivation through their interactions, which affect athletes' psychological needs for autonomy, competence, and relatedness (Ryan & Deci, 2000; 2020). A supportive coaching style helps meet these needs, promoting motivation and improving performance (Occhino et al., 2014; Mageau & Vallerand, 2003; Cho et al., 2020). Conversely, when these needs are unmet, athletes may experience declines in both physical and mental well-being (Deci & Ryan, 2012). SDT provides valuable insights into how coaches can foster an environment that enhances motivation and performance, ensuring athletes' intrinsic motivation is nurtured.

Current Study

Despite this resounding growth and the richness of the facts about passion for sports, motivation, and coach-athlete relationship, few grains of study have delved into how the dualistic model of passion (DMP) mediates the relationship between CAR (coach-athlete relationship) and motivation. Moreover, to the author's knowledge, none so far have elucidated this construct particularly among collegiate athletes in the southern part of the Philippines. Thus, this study examined the role of passion for sports in the relationship between coach and athlete and motivation in student-athlete sports. Specifically, this study was based on the subsequent hypotheses:

H1. All factors of coach-athlete relationship positively correlated with motivation and passion for sports

H2. Passion for sports serves as a mediator in the interaction between coach-athlete relationship and sports motivation of student-athletes.

METHOD

Participants

This study was composed of 408 collegiate athletes from different universities in Northern Mindanao, Philippines ages from 18-27 years old (Mage= 20 years, SD= 1.55). Male athletes comprised of 60.5% (n=247) and 39.5% female (n=161) of the sample. Employing snowball sampling, participants was recruited based on the following criteria: (1) at least 3 years of participating different sports tournament, and (2) reached regional to national meet in sports.

Instruments

The relationship between coaches and athletes were measured using CART-Q (Jowett & Ntoumanis, 2004; Yang & Jowett, 2012). Coach and athlete relationship questionnaire (CART-Q) is composed of 11 items and participants rated each item using a seven-point Likert scale ranging from (1) strongly disagree to (7) strongly agree. Sample items include “I feel close to my coach” (commitment), “When I am coached by my coach, I feel responsive to his/her efforts” (complementarity) and “I respect my coach” (closeness). High scores indicated a greater level of coach and athlete connection. The psychometric properties of the measure are well-established, with Cronbach’s alpha scores ranging from .70-.88 (Jowett, 2017; Lopez de Subijana, et al., 2021). Coach and athlete relationship and its domain obtained Cronbach’s alphas of closeness (.95), commitment (.95), complementarity (.96), and over-all (.98).

The motivation in sports of athletes was measured using the Sports Motivation Scale (SMS). This scale contains 28 items measuring three factors; intrinsic, extrinsic, and a motivation. Sample items include “For the pleasure of discovering new training techniques” (extrinsic motivation), and “For the pleasure I feel in living exciting experiences” (intrinsic motivation). Using a 7-point Likert-type scale ranging from (1) “Does not respond at all” to (7) “Corresponds completely” with a highest score indicating increased motivation of athletes in sports. SMS has shown adequate level of internal consistency ranging from .73 to .86 (DeFreese & Smith, 2014; Petellier et al., 2013; Standage & Ryan, 2020). The current study shows high internal consistency of intrinsic motivation (.95) and extrinsic motivation (.96) and overall Cronbach alpha of .98.

Passion in sports of athletes was assessed using the Passion Scale (Lopes & Vallerand, 2020). TPS consists of 14 items with 2 seven-item subscales measuring HP (e.g., “This activity allows me to live a variety of experiences”), and OP (e.g., “I have difficulty imagining my life without this activity”) which were answered using 7-point Likert-type scale ranging from 1 = completely disagree to 7 = completely agree. TPS showed validity and internal consistency to other studies (Curran et al., 2015). In this study, the scale has shown Cronbach’s alpha of .96 (harmonious passion), .84 (obsessive passion), and .94 (total passion scale).

Procedures

Permission was obtained from the school authorities and the test administration was carried upon the approval of the university heads. Consent forms was obtained from the participants. The forms clearly outlined the objective of the study and anonymity of participants answers. The participants completed the packet of questionnaires with the help of designated researchers.

The procedures have been subjected to a comprehensive assessment and the college ethics review committee at MSU- Iligan Institute of Technology has given authorization for the implementation.

Data Analysis

All statistical analyses were performed using IBM SPSS Version 20.0 to assess the indirect effects of passion in sports between coach and athlete relationship and motivation of athletes. Before conducting mediation analysis, data was carefully checked and values that seemed to be missing were filled in randomly using expectation-maximization (EM) methods of imputation. Cronbach’s alpha was computed on every scale item to check the internal consistency. Preliminary data analyses were conducted. This included the analysis of measures of the instruments’ reliability, frequency, mean, and standard deviation on demographics. PROCESS (Hayes, 2012) was run to examine the role of passion in sports (i.e., harmonious and obsessive) in the relationship between coach and athlete relationship and sports motivation using multiple mediation analysis. A total of 10,000 bootstrap samples were utilized to examine the subsequent effect of the parallel mediators. The lower and upper limit bounds 95% confidence intervals (CI) that do not include zero indicate results of significance at the .05 level.

RESULTS

Correlation

The mean, standard deviations, and correlation among constructs are displayed in Table 1. The results demonstrated that all three coach-athlete relationships were positively correlated of harmonious passion (r = .66 to .69), and obsessive passion (r = .47 to .79). Harmonious passion was positively correlated with intrinsic motivation (r = .52 to .67), extrinsic motivation (r = .60 to .65). All coach and athlete relationship constructs were significantly correlated to intrinsic motivation (r = .61 to .64), extrinsic motivation (r = .62 to .69). Thus, H1 is accepted.

Table 1. Intercorrelation of variables

Constructs	1	2	3	4	5	6	7
1. Commitment	—						
2. Closeness	.87**	—					
3. Complementarity	.83**	.95**	—				
4. Harmonious Passion	.66**	.67**	.69**	—			
5. Obsessive Passion	.49**	.47**	.50**	.79**	—		
6. Intrinsic Motivation	.61**	.64**	.64**	.67**	.52**	—	
7. Extrinsic Motivation	.62**	.63**	.69**	.65**	.60**	.91**	—
M	17.57	24.64	24.53	35.46	31.40	70.36	69.44
SD	4.07	4.74	4.78	7.36	7.02	13.24	14.48

Note: N= 408. Correlations are significant at ** $p < .01$, * $p < .05$

Mediation Analysis

Mediated regression analysis was performed, and the results are displayed in Table 2. The unstandardized beta coefficients with 95% confidence intervals of both specific and total indirect effects of coach-athlete relationship on sports motivation. Commitment had significant positive effect intrinsic motivation ($\beta = 1.02$), extrinsic motivation ($\beta = 1.01$), via harmonious passion, and positive effect on intrinsic motivation ($\beta = .47$), and extrinsic motivation ($\beta = .68$), via obsessive passion. Similarly, closeness had a significant positive effect on intrinsic motivation ($\beta = .81$), extrinsic motivation ($\beta = .85$), via harmonious passion, and positive indirect effect on intrinsic motivation ($\beta = .37$), and extrinsic motivation ($\beta = .55$), via obsessive passion. Finally, complementarity had a significant indirect effect on intrinsic motivation ($\beta = .83$), extrinsic motivation ($\beta = .86$), via harmonious passion, and positive indirect effect on intrinsic motivation ($\beta = .37$), and extrinsic motivation ($\beta = .57$), via obsessive passion. Thus, H2 is accepted.

Table 2. Mediated regression analysis, the effects of CAR (X) on IM (Y1), and EM (Y2)

	Commitment				Closeness				Complementarity			
	95% CI				95% CI				95% CI			
	β	SE	LL	UL	β	SE	LL	UL	β	SE	LL	UL
(X) to (M)												
HP	1.20**	.07	1.07	1.33	1.04**	.06	.93	1.15	1.06**	.06	.95	1.17
OP	.85**	.07	.70	1.0	.70**	.06	.57	.82	.73**	.06	.60	.85
(M) to (Y1)												
HP	.85**	.08	.61	1.02	.78**	.08	.62	.94	.78**	.09	.61	.95
OP	.55**	.14	1.25	1.79	.53**	.08	.38	.68	.51**	.08	.35	.66
(M) to (Y2)												
HP	.84**	.09	.69	1.03	.82**	.09	.63	1.00	.81**	.10	.63	1.00
OP	.79**	.09	.63	.96	.80**	.08	.64	.95	.78**	.08	.62	.94
Indirect Effect on (Y1)												
	<u>Eff</u>				<u>Eff</u>				<u>Eff</u>			
HP	1.02**	.20	.66	1.43	.81**	.17	.50	1.16	.83**	.18	.50	1.19
OP	.47**	.12	.26	.72	.37**	.09	.20	.57	.37**	.10	.20	.58
Total	1.99**	.13	1.73	2.24	1.80**	.11	1.59	2.00	1.77**	.11	1.57	1.98
Indirect Effect on (Y2)												
	<u>Eff</u>				<u>Eff</u>				<u>Eff</u>			
HP	1.01**	.20	.65	1.42	.85**	.17	.54	1.21	.86**	.18	.54	1.23
OP	.68**	.13	.44	.95	.55**	.11	.36	.79	.57**	.11	.37	.80
Total	2.20**	.14	1.93	2.47	1.95**	.12	1.69	2.15	1.90**	.12	1.67	2.13

Note: CAR = coach-athlete relationship; EM = extrinsic motivation; IM = intrinsic motivation; HP = harmonious passion; OP = obsessive passion; β = unstandardized regression coefficient; Eff= indirect effect of X and Y; M = mediator variable; LL = lower limit; UL = upper limit; SE = standard error; Significant at ** $p < .001$, * $p < .05$ level

DISCUSSION

This study aims to examine the mediating role of passion for sports in the relationship between coach-athlete relationship and motivation of collegiate athletes in sports. Firstly, Table 1 highlights the significant intercorrelations among coach-athlete relationship factors (commitment, closeness, and complementarity), passion types (harmonious and obsessive), and motivational outcomes (intrinsic and extrinsic motivation). For example, the strong correlations between relational factors, such as closeness and complementarity, indicate that when athletes feel emotionally connected to their coaches, they also perceive greater synergy in their roles (Longakit et al., 2024; Peng et al., 2020; Roux et al., 2022). This dynamic might be exemplified by a coach who not only provides emotional support but also aligns training plans effectively with the athlete's skills and goals. Furthermore, the positive correlation between commitment and harmonious passion suggests that a dedicated and trusting relationship encourages athletes to engage in their sport with genuine enjoyment and balance. For instance, an athlete who feels their coach is fully invested in their progress might develop a deep love for the sport, fueling intrinsic motivation (Pereira et al., 2023; Fonteyn et al., 2024). On the other hand, the moderate correlation between commitment and obsessive passion implies that high dedication could also drive athletes to become overly reliant on their sport for self-worth, particularly when external pressures are involved. Studies indicated that an athlete who trains excessively out of fear of disappointing their coach, driven more by extrinsic rewards than personal fulfillment (Longakit et al., 2024; Peng et al., 2020). These findings underscore the importance of fostering relational quality that promotes harmonious engagement while mitigating tendencies toward excessive or externally driven motivation.

Secondly, the results showed that factors of coach-athlete relationship (i.e., commitment, closeness, and complementarity) indirectly predicted intrinsic and extrinsic motivation via passion for sports (i.e., harmonious and obsessive passion). This highlights how the relational factors of the coach-athlete relationship interact with passion and motivation in distinct yet interconnected ways. For instance, when commitment is evident, athletes are more likely to develop harmonious passion, as they feel secure and supported in their environment, which encourages sustained and meaningful engagement with their sport. This, in turn, strengthens intrinsic motivation, as athletes derive genuine enjoyment and fulfillment from their participation (Vallerand & Verner-Filion, 2019). On the other hand, a lack of balance in the commitment between coach and athlete could contribute to obsessive passion, where athletes may feel compelled to meet perceived expectations, potentially leading to increased reliance on extrinsic motivators (Vallerand & Verner-Filion, 2019; Kent et al., 2018). Similarly, closeness fosters a sense of belonging and trust, which not only nurtures harmonious passion but also inspires athletes to push themselves toward intrinsic goals, such as mastering skills or personal growth. In contrast, when the emotional connection is inconsistent, athletes may focus more on extrinsic motivations, like external rewards or recognition, fueled by obsessive passion (Kent et al., 2018). Complementarity, through its emphasis on role alignment and effective collaboration, enhances both harmonious and extrinsic pathways, as athletes feel their contributions are valued and directed toward shared objectives. For example, an athlete who perceives clear guidance and role synergy may channel this into harmonious passion, finding intrinsic joy in their role, while also feeling extrinsically motivated by the satisfaction of achieving

team success (Pereira et al., 2023; Lavoie et al., 2021) These findings underscore the nuanced and dynamic ways in which relational factors influence passion and motivation, providing actionable insights for optimizing the coach-athlete relationship to support diverse motivational outcomes.

Moreover, various studies have showed that athletes that feel closer to their coaches are more likely to be seen as skilled, competent and capable in sports (Jowett, 2017). Ryan and Deci's (2020) study indicates that individuals are likely to be more motivated when they believe their actions will influence the outcomes. SDT postulates that a coach has the ability to significantly influence an athlete's motivation due to their important role in the athlete's social environment (Smith & Smoll, 2017). Athletes who exhibit motivation have fulfilled the basic psychological needs (i.e., autonomy, competence, and relatedness; Ryan and Deci, 2020), individuals who received strong connection and support are more likely to develop greater passion in sports and more motivated to show higher levels of dedication to their coach. The connection of coach and athlete has a notable effect on team efficacy (Vieira et al., 2015). As hypothesized, passion in sports positively mediated the relationship between coach-athlete relationship and sports motivation both intrinsic and extrinsic. Various studies indicate that athletes with intrinsic motivation have greater well-being and give pleasure to sports performance and activities (Graña et al., 2021; Ryan & Deci, 2017). Consequently, athletes tend to have a higher perception of team efficacy and passion when they feel that their coach trusts, respects, and appreciates them (Gustafsson et al., 2011; de la Vega et al., 2016). Studies demonstrated that harmonious and obsessive passion have a distinct relationship with psychological goals pursued during sports participation (Vallerand et al., 2008). The empirical data show how all coach-athlete relationships (commitment, closeness, complementarity) are positive predictors of passion in sports. Research has shown that healthy and successful relationships between coaches and athletes are influenced by reciprocal respect, trust, and communication (Gillet, N., et al., 2010). This type of environment also provides a suitable setting for athletes to develop their skills. Athletes with greater levels of harmonious or obsessive passion exhibit greater intrinsic motivation towards sports activities (Demirci & Çepikkurt, 2018; Gustafsson et al., 2011). Conversely, athletes with low passion levels but high mindfulness scores tend to demonstrate high intrinsic motivation scores (Amemiya, R., & Sakairi, Y., 2019). This shows that there is a significant relationship between motivation and harmonious passion. This means that an athlete's high motivation is closely linked to their passion for the sport and this passion is considered an essential psychological variable that can greatly contribute to an athlete's success (Demirci & Cepikkurt, 2018; Gustafsson et al., 2011). The positive impact of high harmonious passion in sports is supported by existing evidence from Lafrenière et al.'s (2011) study. The study found that coaches with harmonious passion fostered better relationships with their athletes, as opposed to those with obsessive passion. This indicates that strong coach and athlete relationships positively impact athletes' well-being and increases motivation levels in sports (Felton & Jowett, 2013; Adie & Jowett, 2010).

CONCLUSION

The study revealed that both harmonious and obsessive passion partially mediates the coach-athlete relationship and motivation in sport of student-athletes. The factors of CAR and motivation are

positively associated with student-athlete motivation in sports. All constructs are positively correlated. This study offers empirical evidence supporting the use of a differentiated conceptualization approach. It demonstrates how various factors related to CAR can result in subtle outcomes. This highlights the importance of understanding the coach-athlete relationship in motivating athletes in sports. It can serve as a valuable resource for researchers seeking to better understand and apply motivational strategies in this context. Sports programs that prioritize the coach-athlete relationship and promote a passion can significantly contribute to the fulfillment of athletes' motivation and make it easier for sports to support individuals to grow and develop. However, further research is needed in this area to enhance our understanding of sports motivation. It is anticipated that the results of this study will generate more interest in this crucial field of research.

The empirical results should be considered in light of its limitations. First, all variables in the study were assessed using self-report measures, which could potentially introduce a single-method bias. Also, the study did not assess the impact of demographic factors like age, gender, type of sport, and level of participation on the way coaches interact with their athletes and how athletes participate in sports. Furthermore, the study did not analyze the potential impact of the athletes' education level on their relationships with coaches, which could potentially lead to notable differences. Athletes who have a higher level of education may have weaker relationships with their coaches. This could be because athletes believe that their education gives them an advantage and they may not fully trust their coach's guidance. The study did not take into account the type of sport, whether it was individual or dual, which could potentially affect the dynamic between coach and athlete. Athletes who play individual sports have better coach-athlete connections due to more one-on-one encounters (Simons, E. E., & Bird, M. D., 2022). The study revealed that individual athletes placed greater importance on their relationships with coaches, whereas team sport players had similar scores in terms of the closeness of their relationships with coaches. Further studies could explore various factors such as emotions and positive resources that contribute to the coach and athlete relationship and motivation in sports to acquire a deeper understanding of the lives of these individuals.

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