

THE Moderating Effect of Sex and Course on the Relationship between Physical Activity Attitude and Sports Engagement among College ATHLETES

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ABSTRACT

This study examined the significant influence of physical activity attitude on sports engagement among college athletes, with sex and course as moderating variables, using a quantitative, descriptive-correlational design. Stratified random sampling selected 301 respondents, and data were gathered through adapted, validated questionnaires measuring physical activity attitude and sports engagement. Statistical tools included mean, standard deviation, Pearson correlation, and multiple regression analysis. Results revealed that college athletes consistently demonstrated a very high positive attitude toward physical activity (mean = 4.58) and a low negative attitude (mean = 1.43). Sports engagement was also very high (mean = 4.30), reflecting strong engagement. A significant positive relationship existed between physical activity attitude and sports engagement ($p < .001$). Sex did not significantly predict or moderate this relationship, but academic courses did, indicating that students' academic programs influence how attitudes translate into sports engagement. The findings suggest that sustaining and enhancing positive attitudes toward physical activity requires frequent, intense activity. Tailored interventions should address differences in academic courses by offering diverse physical activity options aligned with students' academic demands. Additionally, fostering supportive environments involving family, coaches, and peers is vital for sustaining motivation and engagement. Integrating psychological and social support strategies may further enhance sports engagement among college athletes.

KEYWORDS: *Education, physical activity attitude, sports engagement, moderating effect, Philippines.*

INTRODUCTION

Engaging in sports promotes physical activity, enhances mental

well-being, and is vital for student development (Pineda 2024). This importance is recognized by the Schools' Physical Education and Sports Development Act of 1969, which emphasizes incorporating sports into educational programs to ensure students' overall growth. Further, the connection between college students' attitudes toward physical activity and their engagement in sports is essential for fostering healthier lifestyles and overall well-being. However, globally, the issue of low sports engagement among college students has attracted significant attention. For instance, in England, young people's engagement in traditional sports such as rugby and cricket decreased between 2015 and 2019 (Rocca, 2023). In Spain, studies reveal that Millennials exhibit gender differences in attitudes toward physical activity, with women showing more positive attitudes toward sports engagement than men (Mitic et al., 2023). Similarly, research from Kerala, India, indicates that male undergraduate students generally have a more positive attitude towards physical activity than females (Wagstaff & Scheadler, 2018)

In the Philippines, despite government efforts to promote sports and physical activity among its citizens, the majority of the population still fails to meet the recommended levels of physical activity (Agas et al., 2024). One key factor influencing this low engagement is individuals' attitudes toward physical activity. Research suggests that negative attitudes and perceptions can significantly affect athletes' participation in physical activity and related services (Ildefonso et al., 2020). Similarly, Sáez et al. (2021) conducted a study among university students in Vizcaya and found that 69.4% had discontinued participation in at least one sports activity. The most commonly cited reasons for dropout included lack of time, fatigue, excessive pressure, low enjoyment, poor sports performance, and the absence of social support or companionship.

Addressing these barriers, Potenciando et al. (2024) emphasized that when institutions or academic courses actively enhance students' motivation to engage in sports—through clear instruction, the formation of sports clubs, and the provision of free and accessible sports facilities—students' interest and participation in physical activities tend to increase. This heightened engagement not only promotes a healthier lifestyle but also enhances students' overall college experience and contributes positively to their mental well-being

This study addresses the gap in understanding how sex and academic course moderate the relationship between physical activity attitudes and sports engagement among college athletes in Mati City, Davao Oriental. It aims to

inform targeted strategies that enhance athlete engagement and well-being by improving support systems and developing attitudes.

Statement of the Problem

1. What is the sex and course of the respondents?
2. What is the level of physical activity attitude among respondents in terms of Positive attitude towards physical activity; and Negative attitude towards physical activity?
3. What is the level of sport engagement among respondents in terms of: Maternal support for sport; Paternal support for sport; Coach-athlete relationships; Peer support at sport; Control and relevance of sports; and Future aspirations and goals?
4. Is there a significant relationship between physical activity attitude and sports engagement?
5. Does sex and course significantly moderate the relationship between physical activity attitude and sports engagement?

METHODOLOGY

Research Design. This study used a quantitative research design, specifically descriptive correlational, employing both descriptive and inferential statistical techniques. Quantitative research is defined as research that focuses on numerical data and objective analysis, allowing for a systematic investigation of relationships among variables (Creswell, 2014). This approach is said to be particularly effective at identifying patterns and correlations, as it emphasizes structured data collection through surveys and questionnaires. A descriptive-correlational design was utilized in this specific analysis in order to facilitate the test of the relationships among three key variables such as physical activity attitude as an independent variable and sports engagement as a dependent variable, while assessing the moderating effects of sex and course on this relationship. On the other hand, inferential statistical techniques enable the researcher to go beyond mere description and make meaningful conclusions about the relationships among the variables. This analysis will identify patterns, correlations, and interaction effects among the variables.

Research Locale. The survey was conducted in Mati City at one of the largest tertiary schools in Davao Oriental, based on the student population. The study focused on three campuses of a state university coded as School A, School

B, and School C. School A, the Mati Campus, is the main campus located in the City of Mati, offering a diverse range of academic programs including education, engineering, criminology, hospitality management, development communication, nursing, agriculture, business administration, information technology, and political science, serving as a central hub with a significant student population. School B, the San Isidro Campus, is located in San Isidro, Davao Oriental, and offers four programs: Bachelor of Science in Business Administration, Bachelor of Science in Agriculture, Bachelor of Science in Criminology, and Bachelor of Elementary Education-Generalist. School C, the Banaybanay Campus, in Banaybanay, Davao Oriental, provides educational opportunities with programs such as Bachelor of Technology and Livelihood Education, Bachelor of Science in Information Technology, Bachelor of Science in Agriculture, and Bachelor of Science in Business Administration.

Respondents of the Study . The respondents were college-athlete students from a public tertiary school in Davao Oriental. Using complete enumeration with disproportionate sampling, the study ensured balanced representation by sex, academic course, and school. Respondents included 217 from School A, 43 from School B, and 43 from School C, based on active participation in university-organized sports. Of the 303 total responses, 2 were excluded due to missing data.

To address the potential vulnerability of student-athletes, participation was voluntary, and students were fully informed of the study's purpose, procedures, and their right to withdraw at any time without affecting their academic or athletic standing.

Research Instrument. The study used three adapted and validated questionnaires, all of which underwent pilot testing to ensure reliability. The first section gathered demographic data, including sex and academic program, enabling stratified analysis of the moderating effects of these variables on physical activity attitudes and sports engagement. Parts II and III used 5-point Likert scales (1 = Strongly Disagree to 5 = Strongly Agree). The Physical Activity Questionnaire showed good reliability (Cronbach's alpha = .86), and the Sports Engagement Questionnaire demonstrated acceptable reliability (alpha = .80).

The Physical Activity Attitude Questionnaire, developed by Simonton (2020), assessed both positive and negative perceptions of physical activity

through 12 items. It showed excellent reliability ($\alpha = .91$) and also used a 5-point Likert scale.

Saarinen et al. (2021) developed the questionnaires used to measure sports engagement. A Cronbach's alpha of 0.77 supports the questionnaire's reliability, indicating acceptable internal consistency. This suggests that the questionnaire items reliably measure the intended constructs related to sports engagement. To determine the level of sports engagement among the respondents, the questionnaire used a 5-point Likert scale with response options ranging from 5 (Strongly Agree) to 1 (Strongly Disagree), where 4 represents Agree, 3 represents Neither Agree nor Disagree, and 2 represents Disagree.

Data Gathering Procedures. Data collection followed ethical and administrative protocols. After receiving approval from the University of the Immaculate Conception (UIC) Dean and securing ethical clearance from the UIC Research Ethics Committee, the researcher obtained formal permission from the school president and the sports coordinator, who provided a list of eligible college-athlete participants. Before distributing the questionnaires, respondents were asked to sign an Informed Consent Form (ICF) that explained the study's purpose, their voluntary participation, their right to withdraw at any time, and potential risks, such as fatigue. Mitigation strategies, like allowing breaks, were also outlined. The surveys were administered face-to-face to college athletes at tertiary schools in Davao Oriental. Completed questionnaires were collected immediately, and responses were kept strictly confidential. In compliance with the Data Privacy Act of 2012, data were coded to ensure anonymity, securely stored, and handled in accordance with ethical standards. The collected data were then encoded, analyzed, and interpreted to generate meaningful findings.

Statistical Tools. The statistical tools used in this study were as follows: Mean was employed to determine the average levels of physical activity, attitude, and sport engagement among college athletes. Standard deviation was utilized to assess the dispersion of responses regarding physical activity attitude and sport engagement from the mean. The Pearson Product-Moment Correlation tested the relationships between variables, specifically physical activity attitude, sex, course, and sport engagement. Additionally, a moderation analysis was conducted to determine whether sex and course serve as moderators of the relationship between physical activity attitude and sport engagement among college athletes.

Ethical Considerations. The researcher ensured that all ethical criteria

were complied with. This research protocol underwent a thorough review by the University of Immaculate Conception Research Ethics Committee.

RESULTS AND DISCUSSION

This chapter covers the presentation, analysis, and interpretation of data in accordance with the sequence of the statement of the problem in Chapter 1.

Sex and Course of the College Athletes

Table 1 presents the demographic profile of the respondents, specifically the percentage distributions of male and female college athletes and of college athletes per college course. It shows that this study includes 301 respondents. In terms of sex, there are more males (51.8 percent) compared to females (48.2 percent).

Table 1
Sex and Course of the College Athletes

		Frequency	Percent (%)
Sex			
Female		145	48.2
Male		156	51.8
	Total	301	100.0
Course			
Bachelor of Physical Education		58	19.3
Bachelor of Science in Information Technology/ Bachelor of Science in Agribusiness Management		33	11.0
Bachelor of Science in Agricultural Technology		33	11.0
Bachelor of Science in Civil Engineering		24	8.0
Bachelor of Science in Business Administration		44	14.6
Bachelor of Science in Development Communication		12	4.0
Bachelor of Science in Hospitality Management		27	9.0
Bachelor of Science in Nursing		30	10.0
Bachelor of Science in Criminology		40	13.3
Total		301	100.0

Adding on, in terms of courses, the top three programs with the greatest number of college athletes were the Bachelor of Science in Criminology (13.3 percent), followed by the Bachelor of Physical Education (19.3 percent), the Bachelor of Science in Information Technology/Bachelor of Science in Agribusiness Management (11.0 percent), and the Bachelor of Science in

Agricultural Technology (11.0 percent). Meanwhile, the bottom three numbers of college athletes are from Bachelor of Science in Development Communication (4.0 percent), Bachelor of Science in Civil Engineering (8.0 percent), and Bachelor of Science in Hospitality Management (9.0 percent).

Findings suggest that the distribution of college athletes is relatively balanced between genders, with a slight majority of male athletes. Also, the data indicate that certain programs, such as the Bachelor of Science in Physical Education and the Bachelor of Science in Criminology, attract more athletes, suggesting a potential correlation between the nature of the program and student engagement in sports. On the other hand, programs such as the Bachelor of Science in Development Communication, Civil Engineering, and Hospitality Management have fewer athletes, suggesting lower levels of sports engagement among students in these fields.

Level of Physical Activity Attitude of the College Athletes

Table 2 shows that the overall level of physical activity attitude is 4.58, indicating a high level and suggesting that the physical activity attitude of college athletes is consistently observed. It implies that the athletes consistently exhibit a positive attitude towards physical activity, suggesting that they recognize its importance in their lives. In addition, the overall standard deviation is 0.39, which is less than 1, indicating that the respondents' ratings are clustered around the mean.

Table 2
Level of Physical Activity Attitude of College Athletes

Indicators	Mean	SD	Description
Positive Attitude towards Physical Activity	4.58	.42	Very High
Negative Attitude towards Physical Activity	1.43	.54	Low
Overall Mean	4.58	.39	High

Legend: Mean of items with asterisk (*) and its category mean were subjected to reverse coding before computing the overall mean.

The study's results are consistent with Nie's (2024) findings, which showed that students with higher exercise levels exhibited more positive attitudes toward physical activity than those with lower exercise levels, reinforcing the link between active participation and favorable attitudes. Likewise, findings affirm the idea that attitudes towards physical activity and sports are more positive in younger male individuals who do not attend higher education, who regularly engage in physical activity, and whose parents engage

in physical/sports activity themselves (Pollock et al., 2021).

Positive Attitude towards Physical Activity reveals a category mean of 4.58, which is described as very high, with item mean ratings ranging from 4.39 to 4.72. Consequently, the item *indicating that physical activity is something they should do every day as college athletes* has a mean rating of 4.39, while the item *indicating that physical activity is a valuable part of their lives as college students* has a mean rating of 4.72. This result indicates that college athletes consistently recognize the importance of physical activity in their lives, viewing it as essential to both their athletic performance and overall well-being.

This finding is in consonance with the study by Kucukibis and Gul (2019), which emphasizes that positive attitudes towards physical activity significantly influence individuals' engagement in sports. Moreover, the findings agree with Mujika-Alberdi (2020), who highlights that Millennials, particularly female students, exhibit a positive attitude towards physical exercise and sports.

Negative Attitude towards Physical Activity. It has a category mean of 1.43, which is considered low, with item means ranging from 1.36 to 1.52. Notably, the item *indicating that physical activity is not very useful to them, even as athletes*, has the lowest mean rating of 1.36, while the item *expressing that they are not enjoying being physically active, even as athletes*, shows the highest mean rating of 1.52. This result indicates that college athletes generally hold minimal unfavorable feelings toward physical activity, suggesting that negative perceptions are infrequent among the respondents.

This finding is consistent with the study by Sawicki (2024), which reported that students often hold moderately positive attitudes toward physical education, but also noted that a lack of engaging content can lead to lower levels of interest and participation. Similarly, the study by Osmani & Perić (2023) emphasizes that individuals with a more positive attitude toward exercise tend to engage in physical activity more frequently than those who place less value on exercise.

The Level of Sports Engagement of College Athletes

Table 3 presents the level of sports engagement. The overall mean of 4.30, described as very high, indicates that students often demonstrate high levels of sports engagement. Additionally, the overall standard deviation of 0.57, which is less than 1, indicates that the ratings cluster near the mean. The high

mean score suggests that these athletes are not only participating in sports but are also actively evaluating their performance and progress, which can enhance their overall athletic development and engagement.

Maternal Support for Sport. The mean ratings for the different items range from 3.21 to 3.90, with a category mean of 3.53, indicating a high level of agreement. The item *"As a college student athlete, we engage in sports because our mother is attending their college sports practices, games, or competitions"* reflects a mean rating of 3.21, while the item *"As a college student athlete, they engage in sports because their mother is encouraging them to participate in college sports"* has a mean rating of 3.90. This implies that while college athletes appreciate their mothers' presence at sporting events, the encouragement their mothers provide to participate in sports has a greater impact on their engagement.

This finding aligns with that of De Oliveira et al. (2022), highlighting that the way mothers engage with and support their daughters in sports significantly shapes the quality of their sporting experiences. Meanwhile, Rodrigues et al. (2017) found that girls whose mothers are physically active, particularly those who regularly engage in organized physical activity, tend to participate in more sports and practice them more frequently each week.

Table 3
The Level of Sports Engagement of College Athletes

Indicators	Mean	SD	Description
Maternal Support for Sport	3.53	.87	High
Paternal Support for Sport	3.47	1.04	High
Coach-athlete Relationship	4.30	.57	Very High
Peer Support at Sport	4.35	.57	Very High
Control and Relevance of Sport	4.39	.46	Very High
Future Aspirations and Goals	4.42	.53	Very High
Overall Mean	4.30	.57	Very High

Paternal Support for Sport. It has garnered a high category mean rating of 3.47, with mean ratings ranging from 3.35 to 3.63. Notably, *as college student athletes, they engage in sports because their father is present during practices, games, or competitions*, with a mean rating of 3.35. Meanwhile, the item. *As college students, they engage in sports because their fathers discuss their participation in physical activity or sports in college*, with a mean rating of 3.63.

This suggests that college athletes perceive their fathers' involvement in both attending events and discussing sports as significant contributors to their engagement in athletic activities. The higher mean rating for the latter item indicates that open communication and support from fathers regarding sports participation may have a more substantial impact on athletes' motivation and commitment to their sports than mere attendance at events.

This finding supports the study by Burke et al. (2023), which highlights the importance of paternal involvement in fostering children's engagement in sports. Fathers who actively discuss sports and provide emotional support significantly enhance their children's motivation and commitment to athletic activities. Likewise, findings affirm the idea of Kovacs et al. (2024), who found that positive paternal involvement is associated with improved outcomes in both sports and academic performance. Lastly, Lowe et al. (2018) emphasize that the level of support, encouragement, and involvement from fathers or other paternal figures significantly influences a student-athlete's participation in sports.

Coach-athlete Relationship. The mean ratings for the different items range from 4.12 to 4.50, with a category mean of 4.30, which is described as very high. The item *"As a college student athlete, they engage in sports because they are having most of the coaches in the team interested in them as a person, not just as an athlete"* reflects a mean rating of 4.12, while the item *"As a college student athlete, they engage in sports because they are feeling safe with their team"* shows a mean rating of 4.50. Findings suggest that college athletes perceive a strong and supportive relationship with their coaches, which significantly contributes to their overall engagement in sports.

This finding supports the study by Davis et al. (2022), which found that athletes who perceive their coaches as supportive and invested in their personal well-being are more likely to experience higher levels of motivation and engagement in their sports activities. Also, this result coincides with the study of Jowett et al. (2022), which highlights that a strong coach-athlete relationship contributes to a psychologically safe environment that fosters trust, respect, commitment, and cooperation among athletes

Peer Support at Sport. As assessed by respondents, the category received a very high mean score of 4.35, with individual item ratings ranging from 4.24 to 4.50. On the one hand, *as college student athletes, we engage in sports because our teammates have liked us the way we are*, with a mean rating

of 4.24. On the other hand, *as college student athletes, they engage in sports because they have teammates, some of whom are considered friends in their sports club*, with a mean of 4.50. The result implies that having supportive and friendly teammates significantly enhances athletes' engagement in sports. When athletes feel valued and accepted by their peers, they are more likely to invest time and effort into their training and competitions.

This result is consistent with Bae's (2023) findings: peer support increases personal motivation and cultivates a collaborative and competitive environment, which can lead to greater engagement. Their research indicates that positive peer relationships can lead to increased enjoyment and commitment to sports, reinforcing the notion that social dynamics within teams are critical to promoting engagement. Also, it supports the study of Smith and Mellano (2022), which emphasizes that peer acceptance and support are vital for young athletes, particularly in creating an environment where they feel comfortable and motivated to participate.

Control and Relevance of Sports. The mean ratings for the different items range from 4.28 to 4.55, with a category mean of 4.39, indicating very high ratings. The item *"As a college student athlete, they engage in sports because they have been considering performance in competitions as a good barometer of what they are able to do"* reflects a mean rating of 4.28, while the item *"As a college student athlete, they engage in sports because they have been finding their training as fun for them as they improve"* shows a mean rating of 4.55. The result implies that while performance metrics are important, the enjoyment derived from training significantly enhances athletes' motivation and commitment to their sport. When athletes find joy in their training, they are more likely to engage consistently and push through challenges, leading to improved performance.

This finding aligns with that of Kuokkanen et al. (2023), which emphasizes the importance of enjoyment in sports participation. Their research indicates that athletes who find joy in their training are more likely to remain committed and perform better, reinforcing the notion that enjoyment is a key driver of sustained engagement in sports. Moreover, this finding supports Deelen et al. (2018), who found that people are more inclined to engage in sports when they perceive the environment as supportive of their personal goals and motivations.

Future Aspirations and Goals. According to respondents, it has a very

high category mean of 4.42, with ratings ranging from 4.32 to 4.47. On the one hand, the item *"As a college student athlete, they engage in sports because they plan to continue their sport participation after compulsory education"* has a mean rating of 4.32. On the other hand, the items reflect a mean rating of 4.47, indicating that college athletes are highly motivated by their aspirations and the positive prospects associated with their sports engagement. *As college student athletes, they engage in sports because being hopeful as athletes is their aspiration for the future, and participating in sports will create many future opportunities for them,* which reflects the same mean rating of 4.47. This implies that college athletes are highly motivated by their aspirations and the positive prospects associated with their sports engagement. These results suggest that athletes value both measurable outcomes and the intrinsic satisfaction gained from their activities. The balance between fun and performance plays a key role in sustaining their engagement and fostering long-term dedication to sports. This result is in consonance with the study by Yukhymenko-Lescroart (2021), which found that student-athletes who recognize the connection between their athletic pursuits and academic goals tend to be more engaged in both domains.

Significance of the Relationship between Physical Activity Attitude and Sports Engagement of College Students

The correlation of the variables is presented in Table 4. Table 4 shows that physical activity attitude and sports engagement have a positive relationship, with an R-value of .32 indicating a weak strength. Meanwhile, it yields a p-value of .00, which is less than the alpha level of .05, two-tailed, supporting a significant relationship. This means that as the level of physical activity attitude increases, the level of sports engagement also significantly increases. It implies that a positive attitude toward physical activity plays a crucial role in influencing an athlete's level of engagement in sports.

Table 4
Significance of Relationship between Physical Activity Attitude and Sports Engagement of College Students

Paired Variable	R	p-value	Remarks
Physical Activity Attitude and Sports Engagement	.32	.00	Significant

It corroborates the study of Potenciando et al. (2024), which emphasizes that positive attitudes towards physical activity are essential for increasing student engagement in sports. Moreover, the result supports the view of Ives et

al. (2020), who found that students with a favorable attitude towards physical education are more likely to engage in sports activities.

Significance of the Moderating Effect of Sex on the Relationship between Physical Activity Attitude and Sports Engagement

Table 5.1 presents the results of the analysis of the moderating effect of sex on the relationship between physical activity attitude and sports engagement. The table shows that $R^2 = .0.11$, which implies that only 11% of the variation in sports engagement was explained by physical activity attitude, moderated by sex. The $F(3, 297) = 12.43$ ($p < .001$) implies that the model is significant in explaining the relationship among the variables. Also, it means that at least one of the predictors, namely physical activity attitude, sex, or their interaction, significantly contributes to explaining sports engagement.

Table 5.1
Significance of the Moderating Effect of Sex, on the Relationship between Physical Activity Attitude and Sports Engagement

Singular Influence of the Predictors	Standardized Coefficients	t	p-value	Remarks
Physical Activity Attitude	.312	5.65	<.00	Significant
Sex	-.058	-1.05	.29	Not Significant
Interaction (Physical Activity Attitude * Sex)	.065	1.19	.24	Not Significant
Combined Influence of the Predictors				
R	.33			
R ²	.11			
F	12.43			
P	.00			Significant

Additionally, the standardized coefficients for the individual predictors indicated the effects of each on sports engagement. It is shown that Physical Activity Attitude (IV) has a significant positive effect on Sports Engagement ($B = 0.312$, $p < .001$). This means that individuals with a more positive attitude towards physical activity tend to engage in sports more frequently. Moreover, sex alone does not significantly predict sports engagement ($B = -0.058$, $p = 0.293$). The result implies that there is no direct effect of sex on sports engagement and physical activity attitude.

This finding is consistent with the research conducted by Zeng and He (2024), which also highlighted that gender differences do not play a significant role in sports engagement when other factors, such as attitudes and social

support, are considered. Moreover, the findings agree with those of Gomez et al. (2021), who found that although females reported fewer past-week physical activity minutes than males, the total physical activity levels in females were not dependent on anxiety sensitivity levels, suggesting that factors beyond gender, such as psychological and social influences, play a crucial role in physical activity engagement.

Table 5.2 presents the results of the moderating effect of course on the relationship between physical activity attitude and sports engagement. It is revealed that $R^2 = 0.445$, which means that 44.5% of the variance in sports engagement is explained by the model, which includes physical activity attitude, course, and their interaction. The $F(3, 297) = 79.41$ ($p < .001$) indicates that the model significantly explains the relationship among the variables. Also, it means that at least one of the predictors, namely physical activity attitude, course, or their interaction, significantly contributes to explaining sports engagement.

Additionally, physical activity attitude ($\beta = 0.667$, $p < .001$) has a significant, strong positive effect, indicating that a higher positive attitude toward physical activity is strongly associated with higher sports engagement. Meanwhile, the course alone does not significantly predict sports engagement course ($\beta = 0.002$, $p = 0.957$) implying that the course itself does not directly

Table 5.2
Significance of the Moderating Effect of Course, on the Relationship between Physical Activity Attitude and Sports Engagement

Singular Influence of the Predictors	Standardized Coefficients	T	p-value	Remarks
Physical Activity Attitude	.667	15.43	<.00	Significant
Course	.002	.053	.96	Not Significant
Interaction (Physical Activity Attitude * Course)	.003	.063	.95	Not Significant
Combined Influence of the Predictors				
R	.67			
R ²	.44			
F	79.41			
P	.00			Significant

predict sports engagement. Similarly, the interaction between Physical Activity Attitude and Course is not significant ($\beta = 0.003$, $p = 0.950$). It means that the effect of physical activity attitude on sports engagement does not differ across different courses. Accordingly, this finding means that regardless of which

course students are in, the relationship between physical activity attitude and sports engagement remains the same. Since the course is not a significant moderator, interventions aimed at increasing sports engagement should focus on improving attitudes toward physical activity rather than tailoring efforts to specific courses.

The results of the study support the theories anchored in this research, namely self-determination theory and expectancy-value theory. Self-determination theory is supported by the finding that the psychological needs of autonomy, competence, and relatedness are consistently fulfilled among college athletes regardless of their academic course. Specifically, the finding that academic courses do not significantly moderate the relationship between physical activity attitude and sports engagement indicates that these fundamental psychological needs are uniformly satisfied across different courses. This uniform fulfillment supports intrinsic motivation, in which athletes feel autonomous in their choices, competent in their abilities, and connected to others in their sports environment.

Moreover, Expectancy-Value Theory also provides a meaningful explanation for the finding that sex does not significantly moderate this relationship, suggesting that both males and females share similar cognitive evaluations of their capabilities and the importance of sports engagement. Hence, this finding suggests that the same positive attitude toward physical activity would result in similar levels of sports engagement across genders, as the motivational expectancy and value components act equivalently.

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