



**SPORTS MOTIVATION AND ENGAGEMENT
AMONG BACHELOR OF PHYSICAL EDUCATION STUDENTS
OF THE UNIVERSITY OF MINDANAO, PHILIPPINES**

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Abstract:

This study addresses the significant relationship between sports motivation and engagement among Bachelor of Physical Education students of the University of Mindanao, Matina Davao City. Understanding the effect of sports motivation on students' sports engagement will play a crucial role in finding a solution for health problems due to people's inactive lifestyles. In education, health is wealth due to very tiring and exhausting work and tasks. Sports engagement is one way to stay physically fit and stay healthy. However, sports engagement is challenging for some people for different reasons, including a lack of motivation. Motivation in the sports context plays a vital role in determining the students' behavior in sports. However, motivation is dynamic and different for individuals; it is still considered a key determinant. At the same time, sports engagement or participation is defined as an intentional, proactive engagement in sports-related physical activities, especially during free time. One hundred ninety-one students were identified as respondents for data gathering through stratified random sampling. The sample distribution is classified according to all year levels. The statistical approaches used in this study were mean, standard deviation, and Pearson Product Correlation. This study's findings revealed a significant relationship between the sports motivation and sports engagement of the BPE students at the University of Mindanao. The results tell us that when institutions keep on increasing the motivation of students in sports through proper instructions, implementation of sports clubs, and building playable fields without cost to students, it will also increase the interest and engagement of students in sports, which can lead a majority of students to live a healthy lifestyle and enjoy their student life, positively affecting their mental health.

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1. Introduction

Sports engagement gives many health benefits to a person and increases well-being, but despite this well-documented advantage, people are still inactive in sports and physical activities (Sáez *et al.*, 2021). A physically inactive person is likelier to increase the risk of physical health problems and decrease life expectancy (Jurak *et al.*, 2020). According to the World Health Organization (WHO, 2019), 80% of school-going adolescents aged 11-17 from 146 countries in 2001-2016 did not achieve at least one-hour physical activity engagement recommendations, which is becoming a trend that needs urgent action and attention. In addition, findings from European Union (EU) countries showed that out of 10 people (above 15 years of age), there were six (6) who seldom or never play any sports or engage in exercise (Breda *et al.*, 2018). This study aims to understand the reasons behind the lack of sport engagement. By discovering the barriers or factors in sports engagement, we can comprehend the problem and propose strategic interventions to help increase sports engagement, especially among students.

Physical activity includes sports engagement that helps improve the physical fitness and health of an individual, and active children physically have stronger bones, low risk of cardiovascular diseases, low body fat, high levels of cardiorespiratory fitness, higher strength and endurance of muscles, and a lower risk of having chronic non-communicable diseases, which means they have a higher level of physical fitness and health compared to those who are in active (Tahira, 2022). In addition, sports participation is beneficial for not only adolescents' physical fitness but also their self-esteem. Thus, studies reported that sports participation improves feelings of physical competence and satisfaction with physical appearance and body image, which can lead to increased global self-esteem (Bang *et al.*, 2020). Furthermore, according to the findings of the study of Guddal *et al.* (2019), sports engagement has a significant impact on adolescents' mental health; adolescents who have higher engagement in sports were positively associated with higher self-esteem and life satisfaction and can also reduce the likelihood of distress in psychological well-being, this emphasized the importance of engagement in sport even in late teens.

It is important to remember that sports engagement benefits a person's life and health; thus, we must take action and promote and encourage everyone to increase engagement in sports (Collins, 2017). According to the study by Gumapac *et al.* (2019), a person's well-being can be improved through sports engagement through its favorable impact on their mental and social development, regardless of whether the effect is more pronounced during the advanced preparatory period. When an individual participates in sports during their spare time, they can acquire benefits such as mental, social, and physical health (Appelqvist-Schmidlechner *et al.*, 2021).

In addition, different studies have accumulated evidence proving the positive relationship between sports participation and a person's perceived physical and mental health, commonly known as HROoL (Health-related Quality of Life), but even with all these benefits, some barriers make people disengage in sports programs (Pedersen, 2021). Barriers such as the person's age (Emmonds, 2023) and income level are evident in European Union countries (Statistics on Sport Participation, 2022). Barriers are present; thus, there is a need to find strategies to reduce or remove barriers to help people participate in sports and help increase people's confidence in sports engagement while increasing their motivation to achieve happiness and joy in sports participation without thinking about the barriers (Yu & Song, 2022).

Moreover, motivation is an underlying energy source that directs all areas of our behavior, thoughts, emotions, and interpersonal interactions. It is essential for guaranteeing continuity and compliance (Batista *et al.*, 2021). It is essential to understand the role of motivation in sports participation as it is a critical indicator of current and potential future sports commitment and engagement (Medicine *et al.*, 2019). A theory that aids in explaining sports engagement processes is the Flow Theory developed by psychologist Mihaly Csikszentmihalyi (1970). It explains that flow is a state of total immersion or absorption in an activity, where nothing else appears to be important other than the task, and the experience is so enjoyable that people will continue to do it even at a significant cost or simply for the joy of it, which defines a person's determination in engagement in sports (Steimer, 2021). In the context of vigor, flow occurs when a person fully engages in an activity that matches their skill level and presents a clear set of goals and immediate feedback while enjoying the activity (Miller, 2019).

In support, the Self-Determination Theory (SDT) by Ryan and Deci (2020) encourages sports engagement by addressing three essential psychological needs: autonomy, competence, and relatedness (De Francisco *et al.*, 2020). Sports vigor is intricately linked to independence, in which individuals experience increased energy and passion as a result of their freedom to choose and manage their sporting activities; individuals' dedication is strengthened by competence as they seek mastery and success while matching their interests with their own beliefs; and absorption, which is characterized by intense attention and participation, is more likely when there is a sense of relatedness, establishing ties within the sports community (Ackerman, 2018).

Another theory is the Cognitive Evaluation Theory (CET) (Ryan & Deci, 2018); just like the SDT, in CET, there is autonomy support that can contribute to the vigor of an individual in sports by giving them a sense of control, and choice of their activities such as choosing routines and making their own goals to become independent and autonomy support helps athletes feel in control of their sports experiences, from decision-making to execution, by letting them feel accountable for their performance, which promotes absorption (Balaguer *et al.*, 2018). Moreover, in CET, dedication can be fostered through intrinsic motivation, for an individual to engage and become passionate in performing a task because they know it is for their own sake and satisfaction (Riley, 2016). These theories support the idea that when the psychological demands are met, the individual

will be motivated to engage in a sport, which can positively affect sports engagement (Bicalho & Costa, 2018).

Additionally, flow and self-determination influence motivation and engagement; people are more driven to act when they feel their actions will affect the outcome (Cherry, 2022). Thus, motivation affects sports participation and influences the link between self-efficacy and sports participation (Yu *et al.*, 2022). Higher self-efficacy and strong motivation drive more active sports engagement (Yu *et al.*, 2022). Furthermore, the mental process that supports and guides an athlete's action is called motivation (training, approach to competition, managing adversity, and performance) (Human, 2022). Studies show that sports motivation, such as attaining benefits and achieving personal goals, significantly affects sports engagement. Thus, the more motivated a person in sports is, the higher the levels of sports engagement are (Yu & Song, 2022).

This study's independent variable is sports motivation, which has six (6) indicators. First is amotivation, a situation where people see no relation between their actions and the desired goal (Rodrigues *et al.*, 2021). Second, external regulation – the least self-determined one among all extrinsic and intrinsic motivation types, focuses on tangible results unrelated to the task or activity and is concerned with rewards, punishments, or constraints (Kirkağaç *et al.*, 2017). Third is introjected regulation – a behavior under a sense of responsibility instead of an innate drive for satisfaction (Uzun & Aydemir, 2020). Fourth is identified regulation – a behavior with a conscious value that makes it acceptable when it is essential to the person (Zamarripa *et al.*, 2018). Fifth is integrated regulation, the most self-determined type that occurs when conduct aligns with personal aims and ambitions and the sport becomes compatible with the values and the self (Tóth-Király *et al.*, 2020). Lastly, intrinsic motivation is naturally inclined to be curiosity and interest, seeking challenges and exercising and enhancing their abilities and knowledge, even without operationally separable benefits (Di Domenico *et al.*, 2017).

On the other hand, the dependent variable is sports engagement, which, according to Pacquing (2023), engagement is a constructive and favorable psychological condition marked and distinguished by three (3) indicators. First, vigor – is emblematic of a heightened level of mental fortitude when engaging in an activity, and athletes consistently strive for optimal performance even when faced with adversity (Alkorashy & Alanazi, 2023). Second is dedication– fully immersed in one's task and feeling a profound sense of importance, excitement, motivation, pride, and challenge (Topa & Aranda-Carmena, 2022). Finally, absorption – an athlete's complete concentration on the task at hand, during which time appears to pass quickly, and even disengagement from the activity proves challenging (Mazzetti *et al.*, 2021). Based on the indicators mentioned previously, engagement is not only for a person's mental and physical health but can also increase well-being or life satisfaction (Xiao *et al.*, 2020).

In addition, sports motivation and engagement have been studied in many different nations. However, there needs to be more research in the Philippines about the relationship between motivation and engagement in sports, much less here at the University of Mindanao. Based on our readings, we have seen just a few research articles

that discuss the variables in quantitative design with the respondents who are much more likely to engage in sports because of their chosen course, the Bachelor of Physical Education. In addition, most of the studies were done before the pandemic, while our research was done after the COVID-19 pandemic, which also factors that lower students' motivation and decreased sports engagement (Leyton Román, 2021). A new set of data and findings about the motivations and engagement of people after the pandemic can be obtained through this study.

The global decrease in sports participation, caused by sedentary lifestyles and digital interruptions, seriously threatens public health. According to the Centers for Disease Control and Prevention (2022), an inactive lifestyle contributes to increased obesity, cardiovascular illness, and mental health problems, undermining the sense of community that sports can provide. This research study aims to understand the complex factors that influence sports motivation, seeking to develop targeted treatments that encourage people of all ages to adopt an active way of life. Implementing sports events, tournaments, and leisure activities is a practical way to motivate people to actively participate in physical activity and sports (Sierra-Díaz, 2019).

The global significance of our study is the ability to counter the rising health problem associated with sedentary living, promoting a beneficial impact on global public health by lowering the global incidence of lifestyle-related diseases. This is supported by the World Health Organization (2023), which states that an active lifestyle lessens the risk of health problems. According to Reed (2021), improved sports engagement offers improved physical health and enhances mental well-being, social cohesiveness, and worldwide economic productivity. Teachers handling physical education can use the study's findings to discuss the necessary topics to improve students' sports motivation and increase sports engagement (Pilasombat & Chongcharoan, 2022). Moreover, it promotes a sustainable and active future in which sports are not simply an option but a key component of successful societies, improving the lives of individuals and communities worldwide through targeted interventions and policy suggestions.

Inactivity and sedentary lives are becoming growing issues in today's society. Many people are not motivated to maintain an active lifestyle, which leads to various health problems and a reduction in overall well-being (Park *et al.*, 2020). Our study on sports motivation and engagement helps build a more welcoming, diverse, and equitable society where everyone may engage in and benefit from sports. The researcher's goal is to encourage people to include physical activity in their everyday routines by developing activities that people find pleasurable and exciting. This may involve team sports, dancing, walking, or any other sort of exercise that corresponds to individual preferences, according to Boonekamp *et al.* (2020). An article published by the Department of Local Government, Sports, and Cultural Industry in 2019 stated that community participation and enhanced relationships fostered by sports and physical activities can build a sense of camaraderie and boost social confidence.

Encouragement of an active lifestyle results in a comprehensive increase in persons' well-being, including physical health, mental toughness, and strengthened

social ties (Herbert C., 2022). Our research will have a positive impact on people's lives. It will help establish a happier and healthier society by motivating people to participate in sports as part of an active lifestyle. In a classroom environment, this will resolve the poor sports engagement of students in the community and enhance their skills and performance through more sports participation (Lau *et al.*, 2023).

Lastly, although all school subjects should encourage healthy lifestyles among students, Physical Education (PE) is the most crucial subject for cultivating well-being habits related to a healthy lifestyle during sports practice and other physical tasks (Sierra-Díaz *et al.*, 2019). For students' long-term health and to counteract sedentary behavior, engaging them in physical activities such as sports is crucial (Diehl *et al.*, 2018). This descriptive-correlational study aims to assess BPE students' sports motivation level in terms of amotivation, external regulation, introjected regulation, identified regulation, integrated regulation, and intrinsic motivation. To determine the level of sports engagement of the BPE students in terms of vigor, dedication, and absorption. Furthermore, it describes the significant relationship between sports motivation and sports engagement of BPE students in enhancing their skills and performance.

The hypotheses of this study are:

H₀: There is no significant relationship between sports motivation and sports engagement of BPE students;

H₁: Sports motivation positively affects the BPE students' sports engagement.

2. Method

2.1 Research Respondents

The chosen respondents of this study were the Bachelor of Physical Education (BPE) students from the College of Teacher Education (CTE) of the University of Mindanao, Matina campus, Davao City, Philippines. The inclusion criteria are as follows: the respondents must be 18 years and above, first-year to fourth-year, and enrolled in the academic year 2023–2024. The exclusions are BPE students who were cross-enrollees from other schools and BPE students enrolled for only one (1) semester. Responses were given voluntarily, and they were free to decline or cancel their responses to the study. The college currently has 376 BPE students enrolled, and by utilizing Raosoft, the sample size of 191 BPE students was determined. To complete the required respondents, there were 72 first-year students, 46 from the second year, 37 from the third year, and 36 from the fourth year. Stratified random sampling was used; this technique groups the respondents based on their shared characteristics to differentiate its effects on each group (Elfil & Negida, 2017) and to gain accurate and specific data based on groups (Lynn, 2019). With this sampling technique, every member of the population has an equal chance of responding.

2.2 Research Instruments

An adapted questionnaire was used for the independent variable (IV) and dependent variable (DV) and was modified to suit the study context. The IV, with six (6) indicators, was adapted from the sports motivation scale-6 (SMS-6) developed by Mallet, Kawabata, Newcombe, Otero-Forero, and Jackson (2007). The scale has 24 items, with four (4) items in each indicator. The DV with three (3) indicators was from the sports engagement scale (SES) developed by Guillen and Martinez-Alvarado (2014). The scale has 12 items, with four (4) items for vigor, three (3) items for dedication, and five (5) items for absorption. A five-point Likert scale was used with responses from (1) "very low" to (5) "very high" on the range, which helped the researchers determine the level of sports motivation of BPE students and identify their level of sports engagement. Very high (4.20 – 5.00) shows that the students are very highly motivated and are constantly engaged in sports; High (3.40 – 4.19) portrays that the students are highly motivated and often engaged in sports; Moderate (2.60 – 3.39), it can be interpreted as the students are moderately motivated and are sometimes engaged in sports; Low (1.80 – 2.59), it portrays that the students are slightly motivated and are occasionally engaged in sports; Very low (1.00 – 1.79), it shows that the students are not motivated and are not engaged in sports.

To get the validity and reliability of the instruments, the researchers underwent the following process. The researchers modified the adapted questionnaires and then incorporated suggestions from their adviser. It was submitted to the panels to check the validity, and comments and suggestions were incorporated before it underwent pilot testing. The instrument for the independent and dependent variables got a Cronbach alpha of .936 and .976, respectively, with excellent external consistency.

2.3 Research Design and Procedure

The design used descriptive-correlational quantitative research to give statistical descriptions of the possible relationship between motivation and engagement of BPE students in sports and determine the direction and magnitude of such relationship, if any. The descriptive-correlation method was deemed appropriate in our study because its goal is to depict the state of the situation and the relationship of variables as it existed at the time of the study to explore the causes of a particular phenomenon without manipulating the variables (Walters, 2020).

To obtain approval to conduct the study, the researchers submitted a letter to the college's dean. Upon approval, the hard copy questionnaire was administered and distributed in a classroom environment. After gathering the data for three (3) weeks, it was tallied, tabulated, and analyzed using the mean, standard deviation, and Pearson Product Correlation as statistical tools. The researchers ensured and protected the confidentiality of the data collected by adhering to Republic Act 10173, also known as the Data Privacy Act of 2012.

3. Results and Discussion

3.1 Level of Sports Motivation of BPE Students

Table 1 presents the Level of Sports Motivation data among Bachelor of Physical Education students. *Amotivation, external regulation, introjected regulation, identified regulation, integrated regulation, and intrinsic regulation* were used to quantify the level of sports motivation. Each criterion's weighted mean was calculated; the level of sports motivation's overall weighted mean is 3.85 (SD=0.488), indicating a descriptive level of "high," meaning students are highly motivated in sports.

The study results revealed that *identified regulation* has the highest mean score of 4.20 (SD= 0.562) with a descriptive level of very high. It revealed that the students are very highly motivated. At the same time, *amotivation* stands out with the lowest mean score of 3.12 (SD=0.853) with a descriptive level of moderate and can be interpreted as the students being moderately motivated.

Table 1: Level of Sports Motivation, n=191

Indicators	\bar{x}	SD
Amotivation	3.12	0.853
External Regulation	3.74	0.778
Introjected Regulation	3.91	0.637
Identified Regulation	4.20	0.562
Integrated Regulation	4.03	0.692
Intrinsic Motivation	4.11	0.602
Overall	3.85	0.488

The BPE students' results indicated a high descriptive level because they are highly motivated in sports. The findings provided by the participants are attributed to the impact of various motivational factors: *amotivation, external regulation, introjected regulation, identified regulation, integrated regulation, and intrinsic motivation* in engaging with sports. Students acquire a positive attitude towards physical activity, acknowledge its various health advantages, and value the social, academic, and personal growth opportunities associated with sports participation. The high level of motivation exhibited by students pursuing a Bachelor of Physical Education degree is an engine for their enthusiastic participation in sports activities, positively impacting their holistic health and wellness (Batista *et al.*, 2021). The results of this study align with the findings of other authors (Yu & Song, 2022), who have proven that sports motivation, such as attaining benefits (external regulation) and achieving personal goals (integrated regulation), significantly affects sports engagement.

Furthermore, motivation is a significant factor in influencing individuals' engagement and sports experience, leading to health enhancement (Collins, 2017). This is identical to what Guddal *et al.* (2019) found, which determined that playing sports offers various benefits, including social and psychological.

3.2 Level of Sports Engagement of BPE Students

The level of Sports Engagement among Bachelor of Physical Education Students of the University of Mindanao is revealed in Table 2.

Sports Engagement was measured based on the following indicators: *Vigor*, *Dedication*, and *Absorption*. Sports engagement has a weighted mean score of 4.03 (SD=0.693), and its description is high. This shows that the students are often engaged in sports.

For particular results of indicators, the highest means are *dedication* with a mean value of 4.10 (SD=0.730) and a descriptive level of high; *absorption* with a mean value of 4.08 (SD=0.716) and a descriptive level of high; and *vigor* has the lowest mean score with a mean value of 3.91 (SD=0.765) and a descriptive level of high as well. All the indicators of the level of sports engagement have a descriptive level of high. This indicates that the students are often engaged in sports, exceptionally committed to their athletic endeavors, and are self-assured while exercising.

Table 2: Level of Sports Engagement, n=191

Indicators	\bar{x}	SD
Vigor	3.91	0.765
Dedication	4.10	0.730
Absorption	4.08	0.716
Overall	4.03	0.693

It was determined that the BPE students often engage in sports due to their high level of motivation. Sports engagement is thriving due to the strong emphasis placed by teachers on cooperative learning, recognizing its significance, valuing effort and improvement, and actively encouraging students to participate in sports. Physical education teachers are dedicated to enhancing the learning environment for students, which includes assigning them diverse responsibilities and promoting collaboration in various sports-related tasks (Pilasombat & Chongcharoan, 2022). These innovative approaches in sports involvement are distinct strategies that empower students by boosting their self-assurance while enhancing their drive to find happiness and fulfillment through active participation while disregarding any obstacles that may arise (Yu & Song, 2022).

Moreover, the findings are consistent with the information provided by Gumapac *et al.* (2019), which states that sports engagement offers numerous advantages and profoundly influences individuals' lives in various ways. It contributes to physical well-being and a healthy body, fosters self-assurance, and aids in maintaining good psychological health (Reed, 2021). Engaging in sports during free time can yield benefits encompassing mental, social, and physical health (Appelqvist-Schmidlechner *et al.*, 2021). Nevertheless, it is essential to assess the disparities in how teachers and students interact during sports participation, specifically in implementing organized consequences for errors, uneven acknowledgment, and fostering sports competition (Pilasombat & Chongcharoan, 2022).

3.3 Correlation Matrix of Sports Motivation and Sports Engagement

A numerical result is shown in this table to comprehensively determine the relationship between the BPE students' sports motivation and their level of engagement. The overall statistical relationship of the variables is revealed in this table. Specifically, it also shows the relationship of each indicator of the two variables. The overall mean value indicates a strong positive significant correlation between sports motivation and engagement with a coefficient of .808 ($p=.001$). *Integrated regulation* also revealed a very strong correlation to sports engagement with an overall coefficient value of .834 ($p=.001$); *intrinsic motivation* with an overall all coefficient of .775($p=.001$), and *introjected regulation* with .749 ($p=.001$) as its coefficient, both showed a strong positive correlation to sports engagement; it was also revealed that *external regulation* with a coefficient value of .580 ($p=.001$), and *identified regulation* with an overall coefficient of .544 ($p=.001$), both have a moderate positive correlation; however, *amotivation* has the lowest overall coefficient value of .102 ($p=.160$), which shows that it has no relationship with sports engagement. Additionally, all indicators of sports engagement displayed strong positive correlations to sports motivation, *absorption* with an overall coefficient of .779 ($p=.001$); *vigor* with .767 ($p=.001$) as its coefficient; *dedication* with a coefficient value of .723 ($p=.001$).

Table 3: Correlation Matrix of Sports Motivation and Sports Engagement

Sports Motivation	Sports Engagement			Overall
	Vigor	Dedication	Absorption	
Amotivation	0.076	0.060	0.134	0.102
External Regulation	0.579***	0.492***	0.551***	0.580***
Introjected Regulation	0.709***	0.654***	0.733***	0.749***
Identified Regulation	0.522***	0.545***	0.484***	0.544***
Integrated Regulation	0.781***	0.766***	0.802***	0.834***
Intrinsic Motivation	0.736***	0.710***	0.736***	0.775***
Overall	0.767***	0.723***	0.779***	0.808 ***

*** $p < .001$

The overall findings of the assessment of the correlation between sports motivation and sports engagement among BPE students at the University of Mindanao proved that there is indeed a significant relationship between the variables, disproving the null hypothesis of this study. The relationship between the variables is very strong, which means the independent variables can positively affect the dependent variable. In context, when the sports motivation of BPE students increases, their sports engagement will also increase to the same degree. This result supports and agrees with the Flow theory of Csikszentmihalyi (1970), which emphasizes the importance of motivation to achieve the state of flow, and the Self Determination theory of Ryan and Deci (2020), that motivation affects the person's behavior, such as engaging in sports. Thus, it is evident that when an individual has a high level of motivation, he/she will engage in sports more often than those who do not. The people who are not motivated will presumably avoid engaging in sports since most of them do not see the importance of sports engagement in their lives

and are also detached from sports because they think they are incapable of excelling in them (Yu *et al.*, 2022). The *amotivation* indicator has the lowest overall coefficient compared to other indicators of sports motivation since this is the opposite of motivation. Thus, it does not correlate to students' sports engagement; it will not help enhance the sports engagement of BPE students.

The research of Batista *et al.* (2021) is aligned with this study's findings that there is a significant relationship between sports motivation and engagement; it was also mentioned that motivation directly affects behavior. Thus, sports motivation helps increase sportive behavior or sports participation. Regardless of the type of motivation and gender, it can permanently affect the participation or engagement of an individual in sports. It is also important to note the importance of addressing and alleviating the motivation to avoid decreasing sports engagement among students (Ch, 2014).

4. Conclusion and Recommendation

To conclude, the level of sports motivation among BPE students is high, which portrays that the students are highly motivated in sports, and the level of sports engagement among BPE students is also high, which portrays that the students are often engaged in sports. However, when students do not see the importance of sports in their lives, they are most likely amotivated. In general, motivation affects a person's behavior; the students' motivation to engage in sports will depend on how much they think their participation will affect the situation's outcome (Cherry, 2022).

In addition, the data gathered in this study revealed a significant relationship between the variables of sports motivation and sports engagement of the BPE students at the University of Mindanao. The findings show a very strong positive correlation, implying that when a person is highly motivated, they are expected to engage more in sports compared to those who have low motivation or are not motivated. This study presents strong evidence to reject the null hypothesis, which assumes no significant relationship exists between sports motivation and sports engagement, while accepting the alternative hypothesis, which assumes that sports motivation positively affects BPE students' sports engagement. In connection with the flow theory of Csikszentmihalyi (1970), with the increase in motivation students, an increase in enthusiasm and mental fortitude will also occur or increase vigor, and they are more likely more dedicated to engaging in sports despite facing significant adversity just to experience the excitement and challenge. The high level of motivation affecting the vigor and dedication of students will help achieve the state of flow or absorption in the activity, which is all aligned with the flow theory.

The findings revealed that vigor has the lowest level among the indicators of sports engagement. In order to increase vigor, teachers should teach students the skills to participate in sports through training, setting goals, and giving feedback to help them enjoy sports. In addition, a competitive approach should be implemented in physical

education classes to motivate students further to engage in sports. This method uses the elements of competition, such as orderly rivalry and struggle for primacy, in a healthy way to improve the student's motivation to engage in sports and other physical activities (Ivanova & Korostelev, 2019). Furthermore, researchers can conduct longitudinal studies to track sports motivation and engagement to identify the factors that maintain continual engagement and understand how motivation changes while incorporating different indicators that impact students' involvement in sports (Saqr *et al.*, 2023). It is revealed that guidance is required to outline specific measures that can be taken to tackle the problem of inadequate participation and engagement in sports among BPE students effectively. The researchers will provide the school administration with the needed data to serve as a basis for their action plans.

Conflict of Interest Statement

The authors declare no conflicts of interest.

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