

Factors Affecting Student Participation in Physical Fitness Activities: Basis for Fitness Training Program

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Publication Date: May 4, 2026

DOI: **10.5281/zenodo.20022420**

Abstract

This descriptive-comparative study explored the factors influencing college students' participation in physical fitness activities at an autonomous university in a highly urbanized city in Central Philippines during the 2025–2026 school year. A total of 342 first-year students were surveyed using a validated questionnaire, and the data were analyzed using descriptive statistics and the Mann-Whitney U test. The results revealed that students value the physical, emotional, social, and mental benefits of fitness, yet heavy academic workloads, inadequate facilities, and time constraints often limit their participation. Significant differences were found when grouped by course and sex. Non-board program students reported higher engagement than board program students, suggesting that lighter academic demands allow greater flexibility for physical activity. Male students also showed greater participation than females, reflecting broader social and cultural influences, as well as differences in motivation and opportunity. Ultimately, the research provides a framework for designing a holistic fitness program that balances academic responsibilities with student well-being, ensuring that physical activity becomes a consistent and meaningful part of college life. The proposed intervention integrates safe routines, emotional rewards, peer support, and mindfulness to sustain engagement.

Keywords: *Student Participation, Physical Fitness Activities, Physical Aspect, Emotional Aspect, Social Aspect, Mental Aspect, Descriptive Comparative Study*



I. INTRODUCTION

Nature of the Problem

While academics and socializing consume much of college life, an equally critical but silent issue of being physically inactive threatens students' health and social well-being. The solution lies in a comprehensive Quality Physical Education (QPE) that focuses on the social and developmental aspects of learning, such as peer-led teaching, resilience development, and fostering social awareness, rather than simply physical activity (UNESCO, 2022). The issue is that this is an alarming trend: inactivity contributed to five million premature deaths annually before COVID-19, with the physical activity rate dropping by 41% during the pandemic. 70% of teachers and 95% of youth leaders reported negative mental health outcomes, and 82% of P.E. Teachers indicated decreased participation with gender and ability groups lagging (UNESCO, 2022). QPE not only addresses SDG 4 by making education more quality-focused and inclusive for all students, but also promotes SDG 5 by enabling all students to flourish through movement and connection within the school environment.

The 2022 Philippine Report Card on Physical Activity for Children and Adolescents also reflected this trend, giving Filipino youth low grades in Physical Activity (F), Active Transportation (D), and School Performance (C-). The findings reveal a gap between government policies promoting physical activity and students' actual participation, underscoring the need for effective program development (Cagas et al., 2022). Many teachers feel the traditional 'teach the same for everyone' methods of education do not evoke the same feelings as they could, specifically within an environment where children prefer and desire more social, game-based, and inclusionary activities with exercise (Genolos et al., 2025).

Teaching of physical education should go beyond mere physical training, as it influences students' motor and interpersonal skills and even academic performance (Moroz & Havryshko, 2024). However, the real issues for college students include academic pressure, limited, overpopulated, and inefficient gyms and facilities, lack of space, and finances (Guan, 2023). In a real-world classroom, many teachers in the local community talk about chalk lines on cracked courts and improvisations as part of lesson delivery due to a lack of suitable facilities. In contrast, others juggle overcrowded classes where individual attention is nearly impossible (Pangilan & Morbo, 2025).

With particular attention to factors affecting their participation levels, this study examines the factors influencing college students' physical exercise involvement. The results would form a basic framework for creating a focused tertiary physical education intervention program.

Current State of Knowledge

The study by Callas et al. (2024) examined the physical activity and health-related fitness of Grade 11 students and evaluated cardiovascular endurance, muscular strength, and flexibility. It concluded that participation in physical activities is positively associated with health-related fitness characteristics among high school students. On the other hand, Potenciando et al. (2024) suggested that, for students to remain motivated and participate in sports-related activities, access to a well-maintained facility at local universities should be available. They also observed that even a slight upgrade, such as adequate training equipment, contributed positively to students'



motivation to engage in fitness, indicating that addressing minimal issues, such as providing accessible provisions, might positively influence students' long-term behavior by encouraging enrollment in a physical program in a gradual phase. The argument was also supported by Rafael and Tiauzon (2024), who examined the implementation of the Physical Fitness Test in elementary schools within institutional facilities, equipment, pedagogy, and the teacher's expertise. The study concluded that facility and equipment availability, along with effective pedagogical practices and instructors' competency, are instrumental to the effectiveness of a school's physical fitness program. On the same wavelength, Cagas et al. (2022) reported higher student participation when gym periods were augmented, and class schedules were coordinated with exercise periods. They suggest that institutional commitment, through funding and the promotion of program growth and appropriate pedagogical strategies and programming, can motivate students to participate (Tirante et al., 2025). These three studies combined show that approachable infrastructure and accommodating scheduling can increase overall use.

Bailon and colleagues (2017) found that Filipino students with lower stress levels and greater satisfaction with physical education are more likely to participate in extracurricular sports. Their study asserts that emotional well-being is directly associated with regular program attendance in the fitness area, as students who report greater satisfaction and lower anxiety are less likely to miss sessions. Meanwhile, Cagas et al. (2014) explain the role of family support in the formation of exercise habits and note that support is a determinant of emotional well-being. Students are likely to perceive parental advice as a good incentive towards an active lifestyle, and this sense of belonging boosts participation. With these findings integrated, it is found that positive emotional experiences in and out of school make fitness enjoyable activities rather than chores in the long term.

Potenciando and colleagues (2024) note that organized collegiate athletics are conducive to students forming relationships, which supports continued participation. Students identify their friendships and the regard they have for one another as reasons to remain committed to the activity. Bailon and co-authors (2017) agree that teacher-led mentoring contributes positively to a caring environment and can create a sense of belonging for students. Teachers' creation of a welcoming environment in PE increases attendance and dedication to their workout. Pineda (2024) reiterates the connection between athletics and academics; involvement in sports cultivates discipline, camaraderie, and mental focus. Participants in Pineda's (2024) study report that sports contribute to well-roundedness by supplementing learning with structured habits and a sustained commitment to physical activity that aligns with the collegiate vision of the greater good. Overall, these studies highlight the significance of social networks among students and caring instructors and coaches who foster a communal spirit to sustain long-term participation.

A study by Ngo et al. (2022) found that when people are aware of the benefits of regular exercise, such as stress relief, they plan their workouts more thoughtfully. Though the article focuses on older adults, this could be generalized to younger people, as exercise as stress relief applies to any age group. Fredricks et al. (2016) show that students who plan their schedules and set specific exercise goals are more likely to stick to their workouts. If an individual's mind is involved, there will be a disciplined regime that leads to fewer missed workouts. All this implies that when students have psychological awareness and a sense of personal pride in what they are



doing, they will push themselves forward even when they can no longer maintain consistency, such as at school with schoolwork or at home with other engagements. By linking self-awareness to action, students would have the strength to stick to a workout schedule and enjoy other benefits, such as increased well-being and improved schoolwork. In a study by Catalan et al. (2024), mental correlates of physical fitness were measured in students, and it was indicated that there is a relationship between the level of physical fitness and the level of self-efficacy in education students enrolled in the PATHFIT 1 courses. Their observations reveal that students with higher physical fitness levels exhibit higher self-efficacy, suggesting a positive relationship between physical health and mental confidence in capabilities.

Al-Kubaisy et al. (2015) examined how various sociodemographic factors influence motivation for physical exercise and identified several key patterns. Overall, the authors found that younger people, those with lower BMIs, and those from lower-income households tended to have a stronger drive to be active. Also, the respondents without illness and those who were not married were more motivated, suggesting these factors may positively influence an individual's exercise motivation. Both males and females reported being motivated to be active; however, they felt different motivators influenced this. Male participants were more likely to identify sexual performance and the need to have enough energy to accomplish daily tasks as motivational factors, whilst females focused on alternative personal motives. Both men and women felt motivated to be active, but for different reasons. It seemed that other sociodemographic characteristics had a much greater influence on motivation than differences in education.

Theoretical Underpinnings

This research is anchored on several theories that offer insightful analysis of college students' participation in physical exercise. Self-Determination Theory and Socio-Ecological Model will be the main framework that forms the basis of this study.

Self-Determination Theory (SDT) by Deci and Ryan (2000) explains that students are more likely to stay committed to exercise when three basic needs are met: the freedom to choose activities they enjoy (autonomy), the confidence that they can perform them well (competence), and the sense of belonging to a supportive community (relatedness). In practice, this means that universities should not only provide gyms or classes but also create flexible schedules, offer quality instruction, and foster peer connections. When students feel ownership of their fitness, capable in their abilities, and connected to others, physical activity becomes more than just a requirement—it becomes a meaningful and lasting part of their college life.

On the other hand, the Socio-Ecological Model (SEM) provides a precise framework for understanding health behaviors by situating them within multiple, nested levels of influence. Individually, traits such as knowledge, attitude, and skill determine the extent to which an individual participates in physical activity (Sallis et al., 2008). Interpersonally, family members, peer groups, and role models influence behavior, reinforcing existing behaviors, promoting physical activity participation, and helping sustain participation. Organizationally, the program structure, facilities, and policies within the school create an environment that shapes opportunities or barriers to physical activity. Community reflects cultural norms, beliefs, and



social practices that promote public participation, and policy involves public efforts at all levels that foster and advocate an active lifestyle (Bronfenbrenner, 1979). All of the levels combined indicate that there is no single determinant but rather a constellation of individual, interpersonal, institutional, and community influences.

Objectives of the Study

This study targeted to determine the degree of factors affecting students' participation in physical fitness activities in an autonomous university in a highly urbanized city in Central Philippines during the school year 2025-2026. Specifically, it aimed to determine 1.) the profile of the respondents in terms of the variables course and sex; 2.) the degree of factors affecting students' participation in physical fitness activities in terms of physical aspect, emotional aspect, social aspect, and mental aspect; 3.) whether a significant difference exist in the degree of factors affecting students' participation in physical fitness activities when grouped and compared according to the course and sex; and 4.) fitness program that can be proposed based on the findings of the study.

II. RESEARCH METHODOLOGY

This portion presents a discussion of the research methodology used, the subjects and respondents of the study, the research instruments used, the validity and reliability of the instruments, the procedure for data gathering, conduct of the study and the statistical tools and procedures for data analysis.

Research Design

This research aimed to explore the factors affecting students' participation in physical fitness activities in an autonomous university in a highly urbanized city in Central Philippines during the school year 2025-2026. As Fraenkel and Wallen (2019) explain, descriptive research is well-suited for describing existing conditions without manipulating variables. Creswell and Creswell (2018) further emphasize that this approach allows for a systematic account of circumstances based on actual student responses, making it possible to analyze the relationship between classification profiles and participation levels.

In this study, the design allowed the researcher to capture the physical, emotional, social, and mental aspects of participation as they naturally occur, ensuring that the results can inform fitness initiatives that genuinely respond to students' needs.

Study-Respondents

Respondents of this study were 342 first year college students officially enrolled during Academic Year 2025-2026 out from the current population which was composed of 3,090 students. To select participants fairly, the study used "stratified random sampling", which means the student population was divided into two main groups, board courses and non-board courses, before randomly choosing respondents from each. This ensured that both groups were properly represented. To determine how many students should be included, the researchers applied Cochran's formula, a statistical tool that calculates the minimum sample size needed to reflect the population with accuracy. Out of 3,090 first-year students, the formula identified 342 respondents as sufficient, with 266 coming from board programs and 76 from non-board programs.



Instrument

The instrument used in this study is a researcher-made survey questionnaire to determine the factors that affect students' participation in their engagement in physical fitness activities. Two parts make up the questionnaire used in this study. Part 1 gathers the demographic information about the respondents' classification profile including their course and sex. Part 2 contains statements that measures the degree of factors that affects students' participation in physical fitness activities mainly focusing on four aspects: physical, social, emotional and mental. There is a total of 40 items included with 10 items reflecting per aspect. A 5-point Likert scale is used to determine the degree of these factors, with numerical values which contains the following scores: 5 as the highest or "Always", 4 as "Often", 3 as "Sometimes", 2 as "Rarely" and 1 as "Never". All information was kept strictly confidential and remained anonymous throughout the study.

Data Gathering and Procedure

The researcher followed systematic steps in gathering the data for this study. First, a letter requesting permission to conduct the study was submitted to the University President through proper channels. Upon approval, coordination with the deans of different colleges was established to facilitate the selection of respondents. The number of respondents was then randomly selected from each college. Prior to administering the questionnaire, the researchers oriented the respondents about the purpose of the study and assured them of data confidentiality. The researcher made an online survey form through Google forms as it was the most practical and accessible tool for reaching a large number of students. Being first year college students, many of the respondents are already familiar with online platforms. But in the instance that there is a respondent who opted to answer it by paper, printed copies were prepared as backup. After completion, the questionnaires were retrieved, checked for completeness, and prepared for statistical analysis. This allowed computer processing, statistical derivations, and tabular presentation by the statistician.

Data Analysis and Statistical Treatment

Objective no. 1 used a descriptive-analytical scheme and, frequency count and percentage distribution to describe the respondents' profiles. Objective no. 2 used descriptive analytical scheme and mean to determine the degree of factors affecting students' participation in physical fitness activities in terms of physical, emotional, social and mental aspect. Objective no. 3 used comparative analytical scheme and Mann Whitney U test to determine a significant difference in the factors affecting students' participation in terms of physical, emotional, social, and mental aspect.

Ethical Considerations

The researcher maintained ethical norms throughout the execution of this investigation. Before data collection, necessary approvals were obtained from the University administration and relevant colleges. All participants were informed of the study's goal and nature, and their voluntary involvement was solicited via informed consent. The researcher guaranteed participants' data confidentiality, clarifying that their replies would be used only for research reasons and that their names would remain anonymous. Participants were given the choice to

withdraw from the research at any moment without facing any repercussions. The researcher maintained tight secrecy in data handling and published results with integrity and precision.

III. RESULT and DISCUSSION

In this section, the data gathered were further treated, presented, analyzed, and interpreted to focus on the study's specific objectives.

Profile of the Respondents

Table 1
Profile of the Respondents

| Variables | Categories | Frequency | Percentage |
|-----------|-------------------|-----------|------------|
| Course | Board Program | 266 | 77.78 |
| | Non-board Program | 76 | 22.22 |
| Sex | Male | 114 | 33.33 |
| | Female | 228 | 66.67 |
| | Total | 342 | 100 |

Table 1 presents the collective analysis that determines the profile of respondents by course, whether enrolled in a Board Program or a Non-Board program, and sex (male or female).

For the variable course, 266 students from the Board Program, which composed the majority of the respondents, and 76 students from the non-board program. This reflects the nature of enrollment, with more students inclined to take board courses than non-board courses. This demographic profile highlights the dominance of female students being enrolled in certain programs over male students.

The distribution gives us a meaningful glimpse into the student body. The higher number of female respondents reflects the current enrollment trend in tertiary education. Also, it highlights the need to identify gender-specific barriers to fitness, as mentioned in UNESCO's (2022) report, where girls and young women often encounter distinct challenges in physical education. This emphasized that their majority in the presence directs to more inclusive and well-represented fitness programs.

Descriptive Analysis of the Degree of Factors Affecting Student Participation

Table 2
Degree of Factors Affecting Student Participation in Physical Fitness Activities in the Physical Aspect

| Items | Mean | Interpretation |
|---|------|----------------|
| As a college student, I... | | |
| 1. stay physically energized and engaged when participating | 3.89 | High Degree |



| | | |
|--|-------------|--------------------|
| in physical activities. | | |
| 2. participate in sports, exercises, or recreational games. | 3.53 | High Degree |
| 3. enhance my physical strength, endurance, and flexibility through regular physical activities. | 3.59 | High Degree |
| 4. stay active because i enjoy testing and pushing my physical limits. | 3.54 | High Degree |
| 5. maintain the physical capability and stamina needed to participate in various activities. | 3.69 | High Degree |
| 6. make time to stay active even when I am busy with schoolwork. | 3.38 | Moderate Degree |
| 7. participate more when I notice improvements in my physical fitness and performance. | 3.80 | High Degree |
| 8. use the right equipment to stay safe during physical activities. | 4.09 | High Degree |
| 9. keep moving to strengthen my body and lessen the risk of injuries. | 3.99 | High Degree |
| 10. seek physical activities beyond school or structured programs to stay fit and active. | 3.44 | Moderate Degree |
| Overall Mean | 3.69 | High Degree |

Table 2 discusses the degree of engagement of students in physical activities and the factors that affect their engagement in terms of the physical aspect. In total, it shows that there is a “high degree” of students’ engagement in terms of the physical aspect, with an overall mean of 3.69. Item 8, “As a college student, I use the right equipment to stay safe during physical activities” obtained the highest mean of 4.09 interpreted as high degree, followed by item 6 “As a college student, I make time to stay active even when I am busy with schoolwork” registered the lowest mean (mean = 3.38), interpreted as moderate degree.

This implies that students have strong physical engagement and demonstrate responsible participation by prioritizing safety, using the right equipment, and practicing injury prevention. It further suggests that students are more inclined to participate in physical fitness activities with confidence when proper equipment and guidance on its safe use are available to help them maximize the physical benefits they may achieve.

However, the lower mean score indicates that academic workload limits their participation in physical activity. It reflects the reality that even though students intend to stay active and are aware of its benefits, competing responsibilities such as assignments, class outputs, examinations, and deadlines often take precedence, leaving limited time for exercise. Struggling to balance academic responsibilities can lead to reduced participation and contribute to inconsistent maintenance of an active lifestyle.

These observations are supported by studies of Warburton and Bredin, Guan, and the World Health Organization. The significance of structured exercise for enhancing physiological parameters aligns with the students’ prioritization of safety and responsible participation (Warburton & Bredin, 2017). On the other hand, Guan emphasized that academic pressure and



lack of facilities serve as barriers to student exercise. The World Health Organization (2020) similarly reported that academic pressures and lack of time result in insufficient physical activity among youth. Thus, the findings confirm that while students value physical fitness, institutional demands constrain students' participation.

Table 3

Degree of Factors Affecting Student Participation in Physical Fitness Activities in the Emotional Aspect

| Items | Mean | Interpretation |
|--|-------------|--------------------|
| As a college student, I... | | |
| 1. experience happiness and satisfaction when engaging in physical activities. | 4.03 | High Degree |
| 2. gain a strong sense of accomplishment after completing physical activities. | 4.12 | High Degree |
| 3. experience stress relief and emotional relaxation. | 4.03 | High Degree |
| 4. develop greater self-confidence through sports, exercises, or recreational games. | 3.77 | High Degree |
| 5. stay motivated to continue participating in physical activities. | 3.76 | High Degree |
| 6. appreciate the sense of belonging and connection when joining group sports or fitness activities. | 3.91 | High Degree |
| 7. feel inspired when I overcome physical challenges and improve my performance. | 4.14 | High Degree |
| 8. notice an improvement in my mood and overall positivity after engaging in physical activities. | 4.03 | High Degree |
| 9. experience mental clarity and better focus after participating in physical activities. | 3.85 | High Degree |
| 10. build self-discipline and emotional resilience through regular physical activities. | 3.85 | High Degree |
| Overall Mean | 3.95 | High Degree |

In terms of students' engagement in physical activities from an emotional perspective, Table 3 shows strong emotional benefits, with an overall mean of 3.95 (high degree). The highest mean of 4.14 (high degree) was for item 7, "As a college student, I feel inspired when I overcome physical challenges and improve my performance." In contrast, item 5, "As a college student, I stay motivated to continue participating in physical activities," had the lowest mean of 3.76, indicating a high degree of effect.

This finding highlights that emotional factors strongly influence students' participation in physical activity and their perception of psychological value in exercise. Students gain happiness, a sense of accomplishment, and motivation from fitness activities. Enjoyment and emotional satisfaction predict exercise engagement and are critical for long-term habit formation, as they transform exercise into a rewarding personal pursuit rather than a "chore". Other than enjoyment, these emotions build resilience in students. Positive emotions paired with exercise can also foster



a sense of belonging and identity, leading students to view exercise as a positive part of their lifestyle.

On the other hand, the lowest score, while still high, suggests that motivation is a more fragile aspect of participation. Although students enjoy and benefit from physical activities, sustaining long-term motivation may be more difficult. This highlights the need for consistent reinforcement, supportive environments, and varied programs to keep students engaged and prevent declines in participation over time.

These observations are supported by existing literature. Emotional satisfaction and enjoyment are key predictors of exercise participation, confirming the idea that positive emotions drive consistent engagement. Lubans et al. (2016) found that physical activity improves mood and reduces anxiety and depression, and this emphasizes emotional satisfaction being a critical driver of participation. Locally, Cagas et al. (2014) noted that Filipino students often exercise to relieve stress or improve mood, showing that emotional fulfillment sustains engagement. Together, the results and literature confirm that inspiration and emotional rewards are powerful motivators, but maintaining motivation requires supportive structures and positive environments.

Table 4

Degree of Factors Affecting Student Participation in Physical Fitness Activities in the Area of Social Aspect

| Items | Mean | Interpretation |
|--|-------------|-----------------------|
| As a college student, I... | | |
| 1. interact with others through sports, exercise, or recreational games. | 3.70 | High Degree |
| 2. work with teammates or peers to achieve common goals during physical activities. | 4.00 | High Degree |
| 3. engage in group physical activities to strengthen social connections. | 3.74 | High Degree |
| 4. communicate effectively with others while participating in sports or fitness activities. | 3.88 | High Degree |
| 5. encourage and support my peers in their participation in physical activities. | 4.06 | High Degree |
| 6. participate in school or community fitness events that encourage teamwork. | 3.53 | High Degree |
| 7. develop friendships through regular participation in sports, fitness activities, or recreational games. | 3.84 | High Degree |
| 8. work with others to strategize and improve team performance in physical activities. | 3.92 | High Degree |
| 9. motivate others to stay active by participating in group exercises or sports. | 3.63 | High Degree |
| 10. participate in fitness activities to expand my social network and meet new people. | 3.55 | High Degree |
| Overall Mean | 3.78 | High Degree |



Table 4 shows that when students' engagement in physical activities based on their social aspect was considered overall, the mean was 3.78, indicating a high degree of engagement. The statement "As a college student, I encourage and support my peers in their participation in physical activities" in item 5 had the highest mean of 4.06, interpreted as a high degree. In contrast, item 6, "As a college student, I participate in school or community fitness events that encourage teamwork," got the lowest mean of 3.53, which was interpreted as a high degree.

Teamwork and peer encouragement emerged as powerful motivators in maintaining student participation in physical activities, with the highest mean score. Students are less likely to experience isolation when they feel supported and seen by their peers, most especially if they share the same goals. Knowing that they are not alone and they have someone to lean on, students tend to push through and are more likely to sustain their participation in physical activities.

On the other hand, the lowest mean score indicates that while students thrive in informal, peer-driven settings, they tend to hesitate to engage with structured, scheduled programs due to competing academic priorities, limited schedules, or a lack of awareness of available opportunities. Organized events, while valuable, are not always viewed as accessible or appealing to students who prefer free-flowing, peer-led activities with less pressure on schedules and organizers.

Eime et al. (2016) emphasized the importance of peer and family support in sustaining engagement, and UNESCO (2022) highlighted how cultural norms and organized activities foster collectivism in physical education. In addition, to prevent feelings of isolation, reinforcement and shared goals can be highly helpful (Rhodes et al., 2017), underscoring the social dimension of fitness participation. Meanwhile, Potenciando et al. (2024) found that structured college sports strengthen relationships and sustain involvement, while Bailon et al. (2017) emphasized the role of teacher mentorship in creating supportive and caring environments. This connection highlights both the strengths of social support and the opportunities for institutions to enhance participation through more accessible and well-promoted fitness programs.

Table 5

Degree of Factors Affecting Student Participation in Physical Fitness Activities in the Mental Aspect

| Items | Mean | Interpretation |
|---|-------------|-----------------------|
| As a college student, I... | | |
| 1. concentrate better on tasks after engaging in physical activities. | 3.79 | High Degree |
| 2. use physical activities to sharpen my focus and mental alertness. | 3.73 | High Degree |
| 3. develop problem-solving skills through strategic thinking in sports and exercises. | 3.63 | High Degree |
| 4. enhance my ability to make quick decisions during physical activities. | 3.68 | High Degree |
| 5. apply self-discipline and goal-setting in my fitness | 3.85 | High Degree |



routines.

| | | |
|--|-------------|--------------------|
| 6. strengthen my mental resilience by overcoming physical challenges. | 3.81 | High Degree |
| 7. maintain a structured daily routine that includes physical activities. | 3.54 | High Degree |
| 8. can improve my pressure handling by participating in competitive physical activities. | 3.62 | High Degree |
| 9. stay mentally engaged by learning new skills in sports or recreational activities. | 3.72 | High Degree |
| 10. utilize physical activities as a way to refresh my mind and boost productivity. | 3.93 | High Degree |
| Overall Mean | 3.73 | High Degree |

As shown in Table 5, students' engagement in physical activities, as measured by their mental aspect, was high, with an overall mean of 3.73. Item 10, "As a college student, I utilize physical activities as a way to refresh my mind and boost productivity," had the highest mean of 3.93, indicating a high degree of the factor's effect. In contrast, item 7, which states "As a college student, I maintain a structured daily routine that includes physical activities," had the lowest mean of 3.54, indicating a high degree of effect size.

The high score for productivity boost confirms that students see exercise as a way to sharpen focus and efficiency. This implies that students acknowledge the mental and academic benefits of physical activity, viewing it not only as a means to improve health but also as a tool to enhance focus, problem-solving skills, and overall performance. In addition, exercise is valued as a strategy for students to cope with stress while sustaining productivity in their academic responsibilities.

The lowest mean, however, reveals difficulty in maintaining structured routines. This suggests an inconsistency in integrating fitness into daily schedules, a common challenge. The result suggests that while students recognize the benefits of exercise, they often do not have consistent habits of incorporating it into their daily lives. This suggests that students' time availability, time management difficulties, academic workloads, and lack of planning disrupt their efforts to establish regular exercise habits. In other words, they know they want to do it, but are unable to do so regularly and consistently. They also suggest that, in order to successfully integrate exercise into their schedules, better ways to support students and overcome obstacles need to be developed. Recent research has confirmed the role of coping resources and psychological resilience in continued adherence (Lubans et al., 2017).

Furthermore, Wang et al. (2025) and Kumari (2024) show evidence of how aerobic activity improves neuroplasticity, executive functions, and stress response, which directly benefits academic achievement, while Dong and Wang (2026) demonstrate the importance of organized P.E. for the development of cognitive processes and attentiveness when supported by an institution. On a more local scale, Ngo et al. (2022) reported increased self-efficacy. They reduced stress levels when participating in sport. Catalan et al. (2024) found that higher fitness

levels are associated with greater self-confidence among Filipino students, and Fredricks et al. (2016) argue that having a plan is essential for persistence in exercise routines.

Comparative Analysis in the Degree of Factors Affecting Student Participation When Grouped and Compared According to Course, and Sex

Table 6

Difference in the Degree of Factors Affecting Students Participation in Physical Fitness Activities in Physical Aspect when grouped and compared according to Variables

| Variable | Category | N | Mean Rank | Mann-Whitney U | p-value | Sig. level | Interpretation |
|----------|-------------------|-----|-----------|----------------|---------|------------|----------------|
| Course | Board Program | 266 | 161.99 | 7579.500 | 0.001 | 0.05 | Significant |
| | Non-board Program | 76 | 204.77 | | | | |
| Sex | Male | 114 | 200.68 | 9669.000 | 0.000 | | Significant |
| | Female | 228 | 156.91 | | | | |

Table 6 shows a significant difference in the factors affecting college students' participation in physical fitness activities, specifically the physical aspect, across courses and sex.

For the variable course, the Mann-Whitney U test comparing board program students (mean rank = 161.99) and non-board program students (mean rank = 204.77) yielded a p-value of 0.001, which is less than the 0.05 significance level. Similarly, male students (mean rank = 200.68) and female students (mean rank = 156.91) differed significantly ($p = 0.000$). Therefore, the null hypothesis that states "There is no significant difference in the degree of factors affecting students' participation in physical fitness activities when grouped and compared according to the aforementioned variables" is hereby rejected.

The results indicate that non-board program students are significantly more engaged in physical activities than their board program counterparts. Non-board program students appear to be more active, which may be linked to lighter academic workloads and greater flexibility in managing time. In contrast, board program students often face heavier academic demands, leaving them with fewer opportunities to participate in physical activities.

Male students showing a higher degree of participation in physical activities than female students suggest broader social and cultural dynamics. Male students tend to be more involved in physical activities, especially sports, possibly due to stronger peer motivation, cultural expectations, or personal preferences. On the other hand, female students may experience challenges such as safety concerns, limited opportunities, or competing responsibilities, which lead to lesser participation.

These observations are consistent with existing literature. Warburton and Bredin (2017) emphasized that structured exercise enhances physiological parameters, which may explain why students with lighter academic loads (non-board programs) can engage more consistently. Guan (2023) identified academic pressure as a barrier to student exercise, which aligns with the lower participation among board program students. Also, Rabaya, Mejarito, Esmael, and Eligue (2024) found that Filipino students' attitudes toward fitness are shaped by emotional release and peer acceptance, with males reporting stronger peer-driven motivation. Similarly, Campoamor-Olegario, Camitan, and Guinto (2025) emphasized that health behaviors and physical activity remain strong predictors of well-being among Filipino tertiary students, highlighting the role of institutional support in sustaining engagement.

Table 7

Difference in the Degree of Factors Affecting Student Participation in Physical Fitness Activities in the Emotional Aspect when grouped and compared according to Variables

| Variable | Category | N | Mean Rank | Mann-Whitney U | p-value | Sig. level | Interpretation |
|----------|-------------------|-----|-----------|----------------|---------|------------|-----------------|
| Course | Board Program | 266 | 166.16 | 8686.500 | 0.061 | 0.05 | Not Significant |
| | Non-board Program | 76 | 190.20 | | | | |
| Sex | Male | 114 | 178.70 | 12175.500 | 0.341 | | Not Significant |
| | Female | 228 | 167.90 | | | | |

Table 7 presents an analysis of significant differences in the factors affecting students' participation in physical fitness activities, focusing on the emotional aspect. Results show that neither the variable course nor the sex course yielded a statistically significant difference. For the course, board program students (mean rank = 166.16) were compared with non-board program students (mean rank = 190.20) with a p-value of 0.061, which is above the 0.05 significance threshold. For the variable sex, male students (mean rank = 178.70) and female students (mean rank = 167.90) showed a difference in mean rank. However, the p-value of 0.341 is greater than the 0.05 significance level, indicating that there is no significant difference in emotional engagement between male and female students.

Although non-board students and male students had slightly higher mean ranks, the differences were not statistically significant. This means that while there are observable variations in how groups engage in physical fitness activities, these differences are not strong enough to conclude that program type or sex consistently influences participation. In practice, this suggests that both board and non-board students, as well as male and female students, share similar levels of involvement and benefits from fitness activities. The lack of significance highlights that participation is shaped more by common factors such as institutional support, personal motivation, and social encouragement rather than by academic program or gender identity. It also implies that fitness programs can be designed inclusively, without needing to

differentiate heavily between these categories, since the overall engagement patterns remain comparable.

This finding is consistent with Bauman et al. (2016), who emphasized that environmental and institutional factors often play a greater role than demographics in sustaining physical activity. UNESCO (2022) similarly highlighted that cultural norms and organized activities foster collective participation, showing that broader contexts matter more than individual categories. Locally, Cagas et al. (2022) and Bailon et al. (2017) found that supportive environments and positive reinforcement encourage participation across diverse student groups. Thus, the absence of significant differences reinforces the idea that fitness engagement is shaped more by institutional support, motivation, and social environments than by course type or sex.

Table 8

Difference in the Degree of Factors Affecting Student Participation in Physical Fitness Activities in the Social Aspect when grouped and compared according to Variables

| Variable | Category | N | Mean Rank | Mann-Whitney U | p-value | Sig. level | Interpretation |
|----------|-------------------|-----|-----------|----------------|---------|------------|-----------------|
| Course | Board Program | 266 | 165.77 | 8584.500 | 0.045 | 0.05 | Significant |
| | Non-board Program | 76 | 191.55 | | | | |
| Sex | Male | 114 | 177.28 | 12337.500 | 0.444 | | Not Significant |
| | Female | 228 | 168.61 | | | | |

Table 8 presents an analysis of significant differences in the factors affecting students' participation in physical fitness activities, focusing on the social aspect. Results show that the variable course displayed a statistically significant difference, while the variable sex did not. For the course, board program students (mean rank = 165.77) were compared with non-board program students (mean rank = 191.55) with a p-value of 0.045, which is below the 0.05 significance level. For the sex variable, male students (mean rank = 177.28) and female students (mean rank = 168.61) differed in mean rank. However, the p-value of 0.444 is greater than the 0.05 significance threshold, indicating no significant difference in social engagement between male and female students.

Results imply that academic program influences how students connect socially through fitness, while sex does not. Non-board program students benefit more from the social aspects of exercise, such as teamwork, peer encouragement, and shared goals, due to lighter academic workloads that allow them to be more participative in group activities and to create social connections through physical activities. Meanwhile, board program students, under greater academic pressure, were less engaged in physical activities. The lack of significant difference between male and female students shows that both groups value the social benefits of fitness—such as teamwork, camaraderie, and peer support—equally.

These findings connect well with earlier studies that highlight the social side of fitness participation. Eime et al. (2016) showed that peer and family support are among the strongest factors in keeping students engaged, as encouragement from close relationships helps maintain motivation. UNESCO (2022) added that organized, structured activities, such as school sports programs, foster a sense of community and collectivism, making students feel part of something larger than themselves. Rhodes et al. (2017) emphasized that shared goals in group activities reduce feelings of isolation, as students gain a sense of belonging and accountability when working toward common outcomes. Local studies add further to these points, such as Potenciando et al. (2024), who found that structured sports programs in Philippine schools strengthen peer bonds and increase motivation, while Bailon et al. (2017) highlighted that teacher mentorship provides both guidance and emotional support, helping students see fitness as part of their overall growth. Together, these studies show that fitness participation is not just about individual effort but is shaped by supportive environments, collective activities, and meaningful mentorship.

Table 9

Difference in the Degree of Factors Affecting Student Participation in Physical Fitness Activities in the Mental Aspect when grouped and compared according to Variables

| Variable | Category | N | Mean Rank | Mann-Whitney U | p-value | Sig. level | Interpretation |
|----------|-------------------|-----|-----------|----------------|---------|------------|----------------|
| Course | Board Program | 266 | 163.39 | 7950.000 | 0.004 | 0.05 | Significant |
| | Non-board Program | 76 | 199.89 | | | | |
| Sex | Male | 114 | 188.20 | 11092.000 | 0.027 | | Significant |
| | Female | 228 | 163.15 | | | | |

Table 9 presents an analysis of significant differences in the factors affecting students' participation in physical fitness activities, focusing on the mental aspect.

The outcomes and results analyzed above indicate significant differences across the variables. For the course variable, non-board program students (mean rank = 199.89) scored higher than board program students (mean rank = 163.39), with a p-value of 0.004, showing a significant difference. For sex, male students (mean rank = 188.20) scored higher than female students (mean rank = 163.15), with a p-value of 0.027, showing a significant difference.

The results show that both academic program and sex influence the mental benefits students gain from physical fitness activities. Non-board program students scored higher, which suggests they are better able to use exercise to improve focus, manage stress, and build resilience. This may be because they face fewer academic pressures compared to board program students, who often carry heavier workloads and licensure requirements. With less time and energy for exercise, board program students may not experience the same level of mental rewards.



Male students also reported stronger mental engagement than female students. This difference may be linked to higher participation in structured sports and fitness programs, as well as cultural expectations that encourage males to be more physically active. Female students, while still benefiting from exercise, may face barriers such as limited time, competing responsibilities, or fewer opportunities to join organized activities. These challenges can reduce the consistency of their participation and limit the mental gains they achieve.

Studies support these findings. Lubans et al. (2017) noted that resilience and coping are central to regular exercise. Zhang et al. (2024) showed that physical activity, self-efficacy, and stress management are positively associated with mental health outcomes. These studies justify the present results by demonstrating that mental factors, such as resilience, confidence, and stress management, play a crucial role in explaining why non-board students and males show higher participation in fitness activities. Local studies by Ngo et al. (2022) and Catalan et al. (2024) confirmed that self-efficacy and stress management increase participation, while Fredricks et al. (2016) highlighted the importance of planning and goal-setting for adherence. Similarly, Campoamor-Olegario, Camitan, and Guinto (2025) found that Filipino tertiary students who engaged in regular physical activity reported higher resilience, confidence, and emotional stability, showing how mental factors sustain participation.

IV. CONCLUSION

Board program students and female students make up a noticeably larger share of the sample. This mix is significant because who shows up to programs or support dictates who actually receives them. Emotional benefits are the biggest: students have fun, feel less stress, and are more inspired when they exercise. Students in easier programs appear to get more benefit from their exercise, feel less stressed, and are the happiest when exercising. In contrast, heavily burdened students struggle to fit exercise into their lives.

Students value the physical gains of activity and take safety seriously, but busy schedules and academic demands make it hard to exercise regularly. In other words, they want to be active, but time is the main barrier.

While many students feel happier and more motivated after exercising, fewer report steady gains in consistency in participation. This suggests programs should do more than make exercise fun—they should also help students build skills and self-belief. Student peer support and collaboration contribute to the adoption and continuation of activity participation. Yet formal events have reduced attendance during busy periods; informal, peer-led programs may be the best avenue to engage students with busy schedules.

Students know that being active improves memory, productivity, and well-being; however, maintaining consistent habits is tough. Basic, easy-to-use supports would be helpful for students in scheduling quick, frequent periods of activity.

Lastly, the program type and student gender were important, as institutional context predicted attendance in every instance, and differences emerged across some dimensions for female and male students but not all. Therefore, interventions need to be individualized and



flexible; scheduling and access issues need to be addressed; and individual needs need to be met through additional support.



FITNESS TRAINING PROGRAM

Description

The *Mens Sana in Corpore Sano Program* is a 6-week initiative designed to nurture students' holistic well-being through physical, emotional, social, and mental fitness activities. This program was developed with the study's findings in mind, addressing challenges students face, such as demanding academic schedules, limited time, and differences in participation across course types and gender.

This will be achieved in 6 weeks with one activity partnered with workouts, where each program is dedicated to a specific theme, ranging from safety and emotional satisfaction to teamwork and mindfulness, ensuring that activities are structured to be inclusive and adaptable for everybody to experience a gradual and balanced progression in their fitness journey, benefiting them meaningfully.

Rationale

It was confirmed that fitness is important to students for its physical, emotional, social, and psychological benefits, but barriers to regular exercise include workload and limited time. Differences among students in terms of sex and course type mean that the program intends to offer a range of safe, readily available fitness classes/sessions with an emphasis on their emotional benefits, build peer support, and establish student routines (even simple ones). By providing fitness activities that accommodate time constraints and a range of students, it encourages holistic well-being and regular exercise.

Objectives:

1. To encourage safe and consistent physical activity among students by equipping students with the skills and knowledge needed to exercise responsibly and confidently;
2. To enhance students' emotional health and feelings of enjoyment through stimulating and engaging physical activity experiences;
3. To encourage teamwork and social skills among students as they participate in team-oriented physical fitness activities together;
4. To include mental wellness into fitness routines by linking exercise with mindfulness, focus, and academic productivity to help students balance their academics and self-care;
5. To provide gender-responsive and course-sensitive fitness interventions that answer the unique needs of male and female students, as well as board and non-board program students;
6. To establish sustainable fitness routines that extend beyond the program, encouraging students to sustain healthy habits and lifestyles throughout their academic journey and beyond.

Program Matrix
GENERAL CALENDAR OF ACTIVITIES

| WEEK | Frequency | Intensity | Time | Type | Focus/Activities | Budget | Remarks |
|--|--------------|--------------------------|------------|--|--|--------|---------|
| Week 1 – Physical Foundation | 3 sessions | Moderate (60-70% effort) | 30-40 mins | Circuit training (body weight, light equipment) | Orientation on fitness safety, injury prevention, and guided workouts | 5000 | |
| Week 2 – Emotional Reset | 3-4 sessions | Light to moderate | 30 mins | Yoga, stretching, and low-pressure challenges | “Loving Yourself” seminar + weekly personal goal tracking | 5000 | |
| Week 3 – Mental Focus | 3 sessions | Moderate | 30-45 mins | Aerobic routines (walking, jogging) + mindfulness | Seminar: Mind and Body Together as One + journaling | 3000 | |
| Week 4 – Social Connection | 3-4 sessions | Moderate to vigorous | 45 mins | Team sports, buddy workouts, gender-responsive workshops | Strength training (male), group fitness (female) | 4000 | |
| Week 5 – Academic Balance | 3 sessions | Moderate | 30-40 mins | Short fitness breaks integrated into study schedules | “Fitness for Focus” routines: stretching, brisk walking, desk-friendly exercises | 5000 | |
| Week 6 – Culmination and Sustainability | 3-4 sessions | Moderate | 45 mins | Mixed activities (sports, group challenges, mindfulness) | Culminating recognition activity, feedback sharing, and peer testimonies | 8000 | |

SPECIFIC CALENDAR OF ACTIVITIES

| WEEK | SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|-------------------------------------|--------|---|---|-----------|--|---|--|
| Week 1 – Physical Foundation | REST | F: 3x/week I: Moderate, T: 30–40 min, Type: Circuit → Warm-up jog (10 min), push-ups, squats, lunges, planks (3 rounds) | F: 3x/week I: Moderate, T: 30 min Ty: Core/Stretch → Stretching + plank holds, sit-ups, leg raises | REST | F: 3x/week I: Moderate T: 30 min Ty: Circuit → Burpees, mountain climbers, jump squats (3 rounds) | F: 3x/week I: Moderate T: 30 min, Ty: Strength basics → Resistance bands, push-ups, squats | F: Recovery I: Light T: 20 min Ty: Active recovery → Light walk or stretching |
| Week 2 – Emotional Reset | REST | F: 3–4x/week I: Light T: 30 min Ty: Flexibility → Yoga flow | F: 3–4x/week I: Moderate T: 30 min Ty: Cardio → Brisk walk/jog | REST | F: 3x/week I: Moderate T: 30 min Ty: Challenge → Personal best push-ups, squats | F: 1x/week I: Moderate T: 30 min Ty: Dance/Zumba → Fun cardio | F: 1x/week I: Light T: 30 min Ty: Relaxation → Guided meditation + stretching |



| | | | | | | | |
|---|-------------|---|---|-------------|--|--|--|
| <p>Week 3 – Mental Focus</p> | <p>REST</p> | <p>F: 3x/week I: Moderate T: 30 min Ty: Aerobic → Interval jog (2 min jog, 1 min walk, repeat)</p> | <p>F: 1x/week I: Light T: 20 min, Ty: Mindfuln ess → Journalin g + stretch</p> | <p>REST</p> | <p>F: 3x/week I: Moderate T: 30 min, Ty: Circuit → Jump rope, planks, squats, push-ups</p> | <p>F: 1x/week I: Light T: 30 min Ty: Yoga → Breathing + yoga</p> | <p>F: 1x/week I: Light T: 30 min Ty: Relaxatio n → Guided meditatio n + stretching</p> |
| <p>Week 4 – Social Connectio n</p> | <p>REST</p> | <p>F: 3–4x/week I: Moderate T: 30 min Ty: Strength /Group fitness → Male: weights/resist ance; Female: group circuits</p> | <p>F: 1x/week I: Vigorous T: 45 min Ty: Team sport → Basketba ll, volleybal l, futsal</p> | <p>REST</p> | <p>F: 3x/week I: Moderate T: 30 min Ty: Buddy workout → Partner planks, medicine ball passes</p> | <p>F: 1x/week I: Moderate T: 45 min Ty: Recreational games → Relay races, fun challenges</p> | <p>F: Recovery I: Light T: 20 min Ty: Active recovery → Light walk or stretching</p> |
| <p>Week 5 – Academic Balance</p> | <p>REST</p> | <p>F: 3x/week I: Light T: 15–20 min Ty: Stretch/Cardi o → Desk- friendl y stretches + brisk walk</p> | <p>F: 3x/week I: Moderat e, T: 20 min Ty: HIIT → Jumping jacks, squats, push- ups</p> | <p>REST</p> | <p>F: 1x/week I: Light T: 30 min Ty: Yoga → Yoga for focus</p> | <p>F: 1x/week I: Moderate T: 30 min Ty: Cardio → Cycling/joggi ng</p> | <p>F: 1x/week I: Moderate T: 30 min Ty: Group activity → Study break workout</p> |



| | | | | | | | |
|---|-------------|--|---|-------------|--|--|--|
| <p>Week 6 – Culmination & Sustainability</p> | <p>REST</p> | <p>F: 3x/week I: Moderate T: 30 min Ty: Circuit → Push-ups, squats, burpees, planks (3 rounds)</p> | <p>F: 1x/week I: Moderate T: 45 min Ty: Recreational sport → Student choice</p> | <p>REST</p> | <p>F: 3x/week I: Moderate T: 30 min Ty: Peer challenge → Compare Week 1 vs Week 6 progress</p> | <p>F: 1x/week I: Light T: 30 min Ty: Yoga/Mindfulness → Breathing + yoga</p> | <p>F: 1x/week I: Moderate T: 60 min Ty: Culminating festival → Team games, recognition, feedback</p> |
|---|-------------|--|---|-------------|--|--|--|

Acknowledgment

The main researcher would like to express her sincerest gratitude and appreciation to the persons who, in one way or another, have inspired, motivated, and assisted her to make this endeavor possible and successful—her research adviser for expert assistance, patience, and support. The members of the oral defense panel provided the researcher with helpful criticisms, insights, suggestions, and recommendations, which contributed to the refinement of this work. To the researcher's respondents, thank you for giving your precious time and answering the test instrument to the best of your abilities. She also offers her sincere appreciation and gratitude to those who, in one way or another, have contributed to the realization of this work. Above all, she thanks the Divine Providence for always giving the Holy Spirit to enlighten her.

Conflict of Interest

We maintain that none of the authors of this paper have a financial obligation or personal relationship with any person(s) or organizations that could inappropriately influence/bias the paper's content. We did not receive funding from any person(s) or organization to carry out this research. Given this, we specifically state that "No Competing interests are at stake and there is No Conflict of Interest" with any person(s) or organizations that could inappropriately influence/bias the content of the paper.

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