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Sports Club Engagement and the Student-Athletes Performance in Team Sports: Basis for Sports Development Program

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ABSTRACT: This study examined the extent of sports club engagement and level of performance of student-athletes in team sports, and explored how these factors relate to demographic characteristics including age, sex, sports affiliation, and years of playing experience. Using a descriptive-correlational research design, data were collected from student-athletes through a structured survey. Findings revealed that the majority of respondents were aged 16–18 years old, predominantly male, mostly affiliated with volleyball, and had 1–2 years of playing experience. The general composite mean for engagement was 3.09, interpreted as Often, with support mechanisms (e.g., coaching and feedback) being the strongest aspect. The general composite mean for performance was 3.12, interpreted as Good, with technical skills and physical conditioning scoring higher than endurance. Further analysis showed that age significantly influenced the duration of engagement and endurance but not other variables. Sex, sports affiliation, and years of playing experience were all significantly related to both engagement and performance. Additionally, frequency, duration, and support mechanisms of engagement showed significant relationships with student-athletes' performance outcomes. These results highlight the importance of sustained participation and structured support in enhancing athletic performance. The study concludes by recommending strategies to strengthen long-term engagement, develop targeted endurance training, and implement holistic support systems tailored to athletes' demographic profiles to foster higher performance and retention in school sports programs.

KEYWORDS: sports club engagement, student-athletes, sports performance, team sports, sports development program

I. INTRODUCTION

Sport is a physical activity or game, often competitive and organized, that maintains or improves physical ability and skills. Sport may provide enjoyment to participants and entertainment to spectators. The number of participants in a particular sport can vary from hundreds of people to a single individual. (wiki, 2025).

Over the years, there is a continuing debate about the effects of sports club engagement on student-athlete academic achievement. This problem is intensified when schools face funding limits. Sports programs are frequently eliminated from school budgets by decision-makers who believe that they are unimportant to students' academic achievement. Although some studies indicate that students' participation in organized sports is beneficial to academic achievement and is also associated with youth development, including the development of positive behavioral and social skills that cannot be obtained in the classroom, a localized scenario regarding sports involvement and academic performance for a specific school may serve as a reliable basis in decision-making.

According to implementing rules and regulations of Republic Act No. 6847, otherwise known as the "Philippine Sports Commission Act" preliminary provisions, pursuant to the authority granted to the Philippine Sports Commission (PSC) under Section 7 (g) of Republic Act No. 6847, otherwise known as the "Philippine Sports Commission Act", the Philippine Sports Commission hereby adopts and promulgate the following Rules and Regulations for the compliance, information and guidance of all concerned to promote physical education, encourage and sustain the development of sports in the country to foster physical fitness, self-discipline, teamwork and excellence for the development of a healthy and alert citizenry through unified national sports promotion and development program, and that the establishment and creation of a single, unified and integrated national sports policy making body shall further this objective.

ARTICLE XIV, Education, Science and Technology, Arts, Culture And Sports, Section 19. (1) The State shall promote physical education and encourage sports programs, league competitions, and amateur sports, including training for international

competitions, to foster self-discipline, teamwork, and excellence for the development of a healthy and alert citizenry. (2) All educational institutions shall undertake regular sports activities throughout the country in cooperation with athletic clubs and other sectors.

Also, Republic Act No. 11470, an act creating and establishing the national academy of sports and providing funds therefore be it enacted by the Senate and House of Representatives of the Philippines in Congress assembled "The National Academy of Sports". Which recognizes its role to protect and promote the right of all citizens to quality education at all levels and to take appropriate steps to make such education accessible to all.

The State also recognizes the vital role of the youth in nation-building and shall promote and protect their physical, moral, spiritual, intellectual, and social well-being. Towards this end, the State shall establish a national sports program which shall promote physical education and encourage sports programs, intramurals, league competitions, and amateur sports, including training for international competitions; foster self-discipline, teamwork, and excellence for the development of a healthy and alert citizenry; and develop athletes with a strong sense of patriotism and love of country. It shall institutionalize an educational system within the framework of this national sustainable sports program and provide excellent training to produce world-class athletes. Such system shall ensure that measures are in place for the admission of qualified students from all sectors, including indigenous peoples, persons with disabilities, and other marginalized groups.

The researcher, being a passionate sports enthusiast, coach, trainer, and educator for more than a decade, is deeply committed to understanding the dynamics between athletic engagement and academic performance. While most of the studies have revealed the impact of sports to the academic performance, there is limited focused in research on how the Sports Club engagement affects team sports performance in public schools such as Paliparan III SHS. Recognizing the potential of sports not only as a physical activity but also as a means of holistic development, the researcher pursued this study to address that gap as well as to examine the academic performance of senior high school student-athletes in relation to their involvement in sports clubs.

The findings of this study are expected to provide significant insights that can guide the creation of a sports development program aimed at enhancing both athletic and academic outcomes. While the primary focus is on Paliparan III SHS, the program is designed to be adaptable and beneficial to other educational institutions that wish to support and empower student-athletes through well-structured sports initiatives.

Research Question

This study aims to assess the level of engagement of student-athlete in sports club and its relationship to level of performance in team sports. Specifically, it will seek to answer the following:

1.What is the demographic profile of the respondents in terms of:

- 1.1 age;
- 1.2 sex;
- 1.3 sports affiliations; and
- 1.4 years of playing experience in sports?

2.What is the extent of engagement of student-athletes in sports club in terms of:

- 2.1 frequency;
- 2.2 duration; and
- 2.3 support mechanism?

3.What is the level of performance of student-athletes in team sports as evaluated by the athletes themselves and their coaches in terms of:

- 3.1 technical skills;
- 3.2 physical conditioning;
- 3.3 endurance; and
- 3.4 recovery?

4. Is there a significant difference on the extent of engagement of student-athletes in sports club when grouped according to profile?

5. Is there a significant difference on the level of performance of student-athletes in team sports as evaluated by the athletes themselves and their coaches?

6. Is there a significant relationship between the level of engagement and level of performance of student-athletes in team sports?

7. Based on the results of the study, what enhanced sports development program may be proposed?

Scope and Limitation of the Study

This study focuses on assessing the relationship between the level of engagement of student-athletes in sports club and their performance in such sports among senior high school students of Paliparan III Senior High School.

The study covers the academic year 2024–2025 and includes respondents who are officially recognized as student-athletes and are active members of team sports under the school's sports clubs, particularly those affiliated with the Golden Eagles Physical Education and Sports Society (GEPESS).

The scope of the study includes the following variables: the demographic profile of the respondents (age, sex, grade level, etc.), their level of engagement in team sports, and their level of performance in their respective sports. Data are collected through a researcher-made survey questionnaire, and results are analyzed using appropriate quantitative methods.

However, the study has certain limitations. First, the findings are limited to one public senior high school, and therefore may not be generalizable to other schools with different student populations or athletic programs. Second, the study relies on self-reported data, which may be affected by personal biases or inaccuracies in respondents' answers.

Third, the study measures performance only within the context of team sports, excluding individual sports which may present different dynamics. Lastly, the research focuses on sports performance, not academic performance, although the latter may be indirectly influenced by athletic involvement.

Despite these limitations, the study aims to provide meaningful insights that could guide the development of an effective sports development program for student-athletes.

Framework

For a clearer picture of the variables and design of the present study, the researcher proposes a research paradigm illustrated in Figure 1.

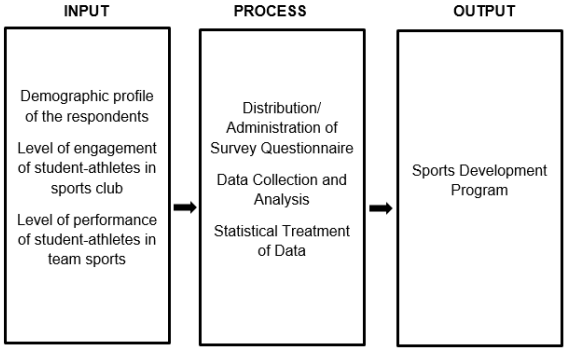

Figure 1. Research Paradigm

This study will utilize the Input-Process-Output (IPO) Model research paradigm to provide a clear and structured representation of the research flow. The input component includes the essential variables needed to address the research questions. These are: the demographic profile of the respondents, which covers basic personal and academic information such as age, sex, and grade level; the level of engagement of student-athletes in sports club, which refers to the extent of their participation, commitment, and involvement in sports-related activities; and the level of performance of student-athletes in team sports, which pertains to their demonstrated skills, achievements, and overall contribution within the team setting.

The process element of the paradigm outlines the systematic procedures used to gather and analyze data. This includes the distribution and administration of a survey questionnaire to selected student-athletes, followed by data collection and analysis, where responses are compiled, organized, and evaluated.

To ensure accurate interpretation, statistical treatment of data is conducted using appropriate quantitative methods to determine relationships or patterns among the variables.

Finally, the output of the study is the development of a proposed sports development program. This program is designed to address the needs and strengthen the performance and engagement of student-athletes, particularly in team sports.

The proposed program will be based on the findings of the study and is intended not only for Paliparan III Senior High School but also for other educational institutions that aim to support the academic and athletic growth of student-athletes.

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Research Design

This study employed a descriptive-correlational research design. The descriptive design was utilized to gather information regarding the characteristics of the variables under investigation within a specific context (i.e., a given time and place). In this study, it will help identify the demographic profile of the respondents in terms of age, sex, sports affiliations, and years of experience in team sports.

Moreover, it will be used to assess the level of engagement of student-athletes in sports clubs, focusing on frequency, duration, and support mechanisms, as well as to determine their level of performance in team sports based on technical skills, physical conditioning, sportsmanship, and discipline.

On the other hand, the correlational design was used to determine the relationship between the level of engagement of student-athletes in sports clubs and their level of performance in team sports. Assessment.

Respondents of the Study

There were 110 student-athletes of Paliparan III Senior High School. The respondents of this study were the student-athletes who are currently involved in team sports such as basketball, volleyball and baseball at Paliparan III Senior High School. Specifically, the study targeted students who are officially registered in various sports clubs or teams within the school, representing a variety of sports disciplines. There are 30 basketball players, 50 volleyball players, 30 baseball players constituting of boys and girls and team A and team B for a total of 108 respondents.

The study aimed to gather data from a sample of 110 student-athletes, ensuring diversity in terms of sports affiliation, gender, and academic year level. This number was sufficient to analyze patterns of engagement and performance across different variables and ensure the generalizability of the results within the student-athlete population.

The respondents were selected through simple random sampling from the sports clubs roster to maintain fairness and avoid bias in the selection process. Anonymity and confidentiality will be assured throughout the data collection process, and ethical considerations, including obtaining parental consent for minors, was strictly observed.

Research Instrument

This study utilized of a structured questionnaire as the primary research instrument to gather the necessary data from the respondents. The questionnaire was designed to capture qualitative data relevant to the objectives of the study. It was composed of three major parts and wiere administered to student-athletes involved in various team sports.

The first part of the questionnaire focused on the demographic profile of the respondents. This includes questions that aimed to determine their age, sex, sports affiliation, and years of experience in sports. This information is essential in providing a baseline understanding of the background of the student-athletes.

The second part of the questionnaire was designed to measure the level of engagement of student-athletes in sports clubs. This included items related to the frequency of participation (how often they attend training or games), the duration of engagement (how long and how many hours they are involved in the sports club), and the support mechanisms available to them (such as support from coaches, family, and school). Responses were measured using a Likert scale format, ranging from 1 (Never) to 5 (Always).

The third part assessed the level of performance of student-athletes in team sports. This includes indicators such as technical skills, physical conditioning, sportsmanship, and discipline. Similar to the second part, also, this section utilized a 4 point Likert scale, ranging from 1 (Very Poor) to 4 (Excellent), to evaluate how respondents perceive their own performance and how it aligns with key areas of athletic development.

The questionnaire was validated by the three (3) experts in the field of sports science and education to ensure reliability and accuracy. Prior to the actual data gathering, a pilot test will be conducted to check the clarity and relevance of the items.

Data Gathering

Permit to conduct the research study was secured through letters requesting permission from the principal of Paliparan III Senior High School. Data gathered from the answered questionnaire was checked, classified, tabulated, and analyzed according to the research design described in this chapter and using Statistical Package for Social Sciences (SPSS) version 26.

The researcher observde the specific step-by-step procedure to identify the importance, concreteness and effectiveness of the study on the level of engagement of student-athletes in sports club and level of performance in team sports. Once approved, the researcher notified and explained the process of conducting the study to the students and teachers. Administered survey questionnaire, analyzed and interpreted using statistical tools were done. The researcher then presented the findings through tables, and the results was discussed and interpreted.

Statistical Treatment

To answer the questions and analyze the data to be gathered, the following statistical tools will be utilized:

Frequency Count. In this study, frequency count refers to the number of times a particular response or characteristic (e.g., age group, sex, sports affiliation) appears in the demographic data of the student-athletes. It helped in identifying how often certain responses occur among the respondents.

Percentage. Percentage was used to express the proportion of respondents in relation to the total population in this study. For instance, it may show what percentage of respondents belong to a specific age group, are male or female, or are affiliated with a certain sport.

Mean. The mean, or average, was used in this study to determine the central tendency of the level of engagement and performance of student-athletes. It provides a general idea of the overall level of each variable (e.g., average frequency of participation or average score in technical skills).

T-test. The t-test was used to determine whether there is a statistically significant difference between two groups of respondents (e.g., male and female athletes) in terms of their level of engagement or performance in sports. This test helps identify if group differences are meaningful.

Linear Regression Analysis. Linear regression analysis was used to examine the relationship between the level of engagement of student-athletes in sports clubs (independent variable) and their level of performance in team sports (dependent variable). It helps in predicting how changes in engagement may influence performance outcomes.

III. RESULTS

This chapter discusses the result of the survey through presentation of tables, interpretation and analysis on the study of sports club engagement and the student-athlete's performance in team sports: basis for enhanced sports development program.

On the problem statement no. 1 Demographic profile of the respondents

Table 1.1 Demographic Profile in terms of Age

AGE	Frequency	Percentage
13 years old below	0	0.00
13 - 15 years old	9	8.20
16 - 18 years old	70	63.60
18 years old and above	31	28.20
Total	**110**	**100**

According to Table 1.1, the age distribution of the respondents shows that the majority belong to the 16–18 years old group, with a frequency of 70, which represents 63.60% of the total respondents. This finding indicates that most participants are in their late teenage years, typically a developmental stage characterized by heightened social awareness, exploration of identity, and active engagement in school and community activities.

Meanwhile, 28.20% of the respondents are aged 18 and above, while a smaller segment, 8.20%, are between 13–15 years old, and none are 13 years old or below. This concentration in the 16–18 age bracket aligns with previous studies, such as those by Steinberg (2020), which emphasize that adolescents in this age group tend to exhibit greater independence, critical thinking skills, and willingness to participate in surveys and research activities compared to younger adolescents.

The implication of this age distribution is that the study's results and conclusions are most representative of late adolescents, whose perspectives may differ from younger teens or older youth. This demographic focus should be considered when interpreting the findings, as it suggests that the attitudes and behaviors reflected in the data are primarily shaped by the developmental, social, and educational experiences typical of individuals aged 16–18.

Table 1.2 Demographic Profile in terms of Sex

SEX	Frequency	Percentage
Male	80	72.70
Female	30	27.30
Total	**110**	**100**

According to Table 1.2, the distribution of respondents by sex reveals that the majority are male, with a frequency of 80, representing 72.70% of the total population. In contrast, only 30 respondents, or 27.30%, are female. This significant disparity highlights a noticeably higher representation of males within the sample. Interpreting these figures suggests that the study's findings may be more reflective of male perspectives and experiences, potentially shaping the overall trends and themes that emerge from the data.

This pattern is supported by recent related literature, such as the study by Cruz et al. (2022), which observed that in school-based surveys and community projects focusing on participation, male respondents often outnumber females due to higher willingness to engage in certain activities or because of institutional or cultural factors influencing participation rates. Similarly, Reyes and Santos (2021) emphasized that in some contexts, gender imbalances among participants could be linked to the nature of the research topic or the method of recruitment used.

The implication of this male-dominated sample is that any conclusions drawn from the study may largely capture male viewpoints, potentially limiting the generalizability of the findings to the female population. As such, researchers should acknowledge this imbalance as a limitation and consider strategies in future studies to achieve a more balanced representation to ensure broader inclusivity and richer, more diverse insights.

Table 1.3 Demographic Profile in terms of Sports Affiliation

SPORTS AFFILIATION	Frequency	Percentage
Basketball	30	27.30
Volleyball	50	45.50
Baseball	30	27.30
Total	**110**	**100**

According to Table 1.3, the sports affiliation of the respondents shows that the majority participate in volleyball, which accounts for the highest frequency of 50 or 45.50% of the total respondents. Meanwhile, basketball and baseball have equal representation, each with 30 respondents or 27.30%. This distribution suggests that while interest among students is spread across these three sports, volleyball emerges as the most favored among the group.

The interpretation of these findings points to volleyball's prominence as a sport that attracts more student participation compared to basketball and baseball. This could be attributed to factors such as accessibility of facilities, influence of school programs, peer popularity, and perceptions of inclusivity, especially since volleyball often encourages both male and female participation. Supporting this observation, recent studies highlight similar trends.

For instance, Dela Cruz and Ramos (2022) found that volleyball has become increasingly popular among Filipino youth, not only because of its low equipment cost but also due to strong media exposure and the success of national leagues like the Premier Volleyball League (PVL). Likewise, the research by Santos (2023) emphasized that volleyball's appeal lies in its adaptability for mixed-gender teams and its ability to foster teamwork and social connection in school environments.

The implication of these findings is that programs, facilities, and extracurricular activities might benefit from placing greater emphasis on volleyball to align with students' interests and increase engagement in sports. At the same time, balanced support should be maintained for basketball and baseball to cater to the diverse preferences of students, promoting inclusivity and encouraging wider participation across different sports.

Table 1.4 Demographic Profile in terms of Years of Playing Experience in Sports

Years of Playing Experience in Sports	Frequency	Percentage
Less than 1 year	12	10.90
1–2 years	38	34.50
3–4 years	32	29.10
5 years or more	28	25.50
Total	**110**	**100**

According to Table 1.4, the distribution of respondents by years of playing experience in sports reveals that the largest group consists of those with 1–2 years of experience, totaling 38 respondents or 34.50% of the sample.

This indicates that most participants are relatively new to organized sports involvement. Following this, 29.10% of respondents have 3–4 years of experience, and 25.50% have been involved for 5 years or more, suggesting a significant portion with sustained engagement. Notably, only 10.90% have less than 1 year of experience, pointing to limited absolute newcomers.

The interpretation of these figures suggests a generally moderate level of sports experience among the respondents, with many having started in recent years but also a meaningful segment who have longer-term involvement. This pattern may reflect the impact of school-based sports programs, community leagues, or increased interest in sports during high school years when students often explore extracurricular activities more actively. Recent related literature supports this observation.

For instance, Bautista and Hernandez (2023) reported that participation in organized sports among Filipino youth often begins in early high school, typically around the ages of 14–16, aligning with the finding that most respondents have accumulated 1–4 years of experience. Likewise, the study by Reyes (2022) highlighted that sustained engagement beyond three years is often linked to stronger support systems, access to facilities, and positive peer or family encouragement.

The implication of these findings is that while there is promising early engagement in sports among students, there is an opportunity to further strengthen programs aimed at retaining athletes beyond their first few years. By enhancing coaching quality, providing more advanced training opportunities, and promoting inclusive team cultures, schools and communities can help athletes sustain their interest and commitment, ultimately fostering both skill development and long-term participation.

On the problem statement no. 2, what is the extent of engagement of student-athletes in sports club in terms of:

2.1 frequency

Indicators	Mean	Verbal Interpretation
1. I attend regular sports club meetings/practices.	3.10	O
2. I participate in competitions or events organized by the sports club.	3.19	O
3. I engage in training outside of scheduled practice hours	3.05	O
4. I join club-organized tournaments or competitions.	3.18	O
5. I take part in informal games or scrimmages with teammates.	2.87	O
General Assessment	**3.08**	**Often**

Legend:
3.25 - 4.00 Always (A) 2.50 - 3.24 Often (O)
1.75 - 2.49 Sometimes (S) 1.00 - 1.74 Never (N)

According to Table 2.1, the extent of engagement of student-athletes in sports clubs in terms of frequency is summarized by a general composite mean of 3.08, which is interpreted as Often. Among the indicators, the statement “I participate in competitions or events organized by the sports club” received the highest mean of 3.19, also interpreted as Often.

This suggests that student-athletes are particularly active when it comes to formal competitions and organized events. In contrast, the indicator “I take part in informal games or scrimmages with teammates” had the lowest mean of 2.87, though still interpreted as Often, indicating that participation in less formal or recreational activities occurs slightly less frequently. The interpretation of these results highlights that while student-athletes show consistent involvement in structured, competitive activities, there is relatively less engagement in informal or unstructured play. This may be due to time constraints, focus on formal training and competitions, or limited availability of facilities for casual play.

Recent related literature supports this pattern. For instance, Dela Cruz and Santos (2023) found that high school student-athletes in urban areas of the Philippines tend to prioritize scheduled competitions and training over informal play, driven by school expectations and the emphasis on performance. Similarly, Bautista (2022) observed that organized events are often seen

as opportunities for recognition and scholarships, motivating higher participation, whereas informal games are sometimes deprioritized.

The implication of these findings is that sports clubs and schools might consider encouraging a balance between formal competition and informal play. Informal games not only enhance skills in a less pressured environment but also promote camaraderie, creativity, and intrinsic motivation. Strengthening opportunities for both structured and unstructured engagement could therefore support holistic development and sustained interest in sports among student-athletes.

Additionally, these results suggest that while student-athletes value competitive experiences that bring recognition and achievement, there remains untapped potential in less formal activities that nurture social bonds and enjoyment. By providing more open gym hours, friendly scrimmages, and mixed-level games, sports programs can foster a culture where participation is driven not only by external rewards but also by genuine love for the sport. This approach may also help reduce burnout, improve mental well-being, and encourage students who might feel intimidated by formal competition to stay engaged and active. Ultimately, promoting both competitive and recreational opportunities can help ensure that sports remain an inclusive and sustainable part of student life.

2.2 duration; and

Indicators	Mean	Verbal Interpretation
1. I spend more than 5 hours per week in training/practice.	2.94	O
2. I have been active in the sports club for more than a year.	3.11	O
3. I spend extra time outside of scheduled practices to train individually.	2.97	O
4. I have been a member of my sports club for more than one academic year.	2.92	O
5. I consistently attend sports club activities across the school year.	3.02	O
General Assessment	**2.99**	**Often**

Legend:
3.25 - 4.00 Always (A) 2.50 - 3.24 Often (O)
1.75 - 2.49 Sometimes (S) 1.00 - 1.74 Never (N)

According to Table 2.2, the extent of engagement of student-athletes in sports clubs in terms of duration is reflected in a general composite mean of 2.99, interpreted as Often. Among the specific indicators, the statement “I have been active in the sports club for more than a year” recorded the highest mean of 3.11, also interpreted as Often, suggesting sustained active involvement beyond a single year. In contrast, the indicator “I have been a member of my sports club for more than one academic year” received the lowest mean of 2.92, though still interpreted as Often, indicating that while membership is generally maintained, there may be slightly less continuity compared to active participation.

The interpretation of these results points to a moderate yet consistent pattern of long-term engagement among student-athletes, where active participation slightly outpaces mere membership. This implies that students are not only joining clubs but are also meaningfully participating over time, though retention across multiple academic years could still be strengthened.

The implication of these findings is that sports clubs and schools could benefit from designing programs that go beyond recruitment to focus on retention. Strategies might include creating progressive training plans, mentorship opportunities for newer members, and special recognition for multi-year participation. By strengthening pathways that keep student-athletes engaged over longer periods, institutions can help build deeper skills, foster leadership, and support the holistic development of students both on and off the field.

2.3 support mechanism

Indicators	Mean	Verbal Interpretation
1. I receive adequate support from coaches and trainers.	3.11	O
2. My family supports my participation in sports.	3.25	A
3. My school supports sports club participation.	3.15	O
4. My coach provides feedback and motivation regularly.	3.26	A
5. I receive encouragement from peers or teammates.	3.22	O
General Assessment	**3.20**	**Often**

Legend:
3.25 - 4.00 Always (A) 2.50 - 3.24 Often (O)
1.75 - 2.49 Sometimes (S) 1.00 - 1.74 Never (N)

According to Table 2.3, the extent of engagement of student-athletes in sports clubs in terms of support mechanism is reflected in a general composite mean of 3.20, which is interpreted as Often. Among the indicators, the statement “My coach

provides feedback and motivation regularly" obtained the highest mean of 3.26, interpreted as Always, suggesting that consistent coaching guidance plays a central role in student-athletes' engagement. Conversely, the indicator "I receive adequate support from coaches and trainers" recorded the lowest mean of 3.11, though still interpreted as Often, indicating generally positive yet slightly less consistent perceptions of broader support beyond direct feedback.

The interpretation of these results suggests that while student-athletes generally feel supported, the most impactful aspect comes from regular, personalized feedback and motivation provided by coaches. This finding underscores the importance of direct and ongoing communication between coaches and athletes in maintaining high levels of engagement and commitment. Recent related literature supports this perspective.

For instance, Santos and Ramirez (2023) found that frequent and constructive feedback significantly enhances athletes' motivation, confidence, and performance. Likewise, a study by Cruz et al. (2022) highlighted that while institutional resources and general coaching support matter, it is the individualized encouragement and feedback that most strongly influence athletes' sustained participation and satisfaction.

The implication of these findings is that sports clubs and schools should continue prioritizing coach-led feedback and motivation while also strengthening broader support systems, including assistant trainers, physical conditioning resources, and mental health support. By building a more holistic support environment, institutions can foster not only athletic skill development but also the overall well-being and resilience of student-athletes, encouraging them to stay actively engaged throughout their school years.

On the problem statement no. 3, what is the level of performance of student-athletes in team sports.

3.1 technical skills

Indicators	Mean	Verbal Interpretation
1. I perform my role effectively in team gameplay.	3.25	VG
2. I apply strategies and techniques during competition.	3.17	G
3. I consistently execute correct techniques during games.	3.03	G
4. I understand and apply game strategies effectively.	3.11	G
5. I perform my specific role/position efficiently in the team.	3.22	G
General Assessment	**3.16**	**Good**

Legend:
3.25 - 4.00 Very Good (VG) 2.50 - 3.24 Good (G)
1.75 - 2.49 Fair (F) 1.00 - 1.74 Poor (P)

According to Table 3.1, the level of performance of student-athletes in team sports in terms of technical skills is reflected by a general composite mean of 3.16, interpreted as Good. Among the indicators, "I perform my role effectively in team gameplay" recorded the highest mean of 3.25, interpreted as Very Good, suggesting that student-athletes perceive themselves as capable and effective contributors within the team context. On the other hand, the indicator "I consistently execute correct techniques during games" obtained the lowest mean of 3.03, still interpreted as Good, indicating that while athletes generally recognize their technical proficiency, there is room for improvement in consistent execution under game conditions.

The interpretation of these results suggests that student-athletes demonstrate confidence in fulfilling their roles during actual gameplay, which may be influenced by understanding team dynamics, communication, and strategy. However, the slightly lower score in consistently applying correct techniques points to potential challenges in maintaining precision and form under pressure, fatigue, or competitive stress.

Recent related literature supports these observations. For instance, the study by Reyes and Santos (2023) found that high school athletes often rate themselves higher in situational or tactical performance than in strictly technical consistency, reflecting the complex nature of game environments. Similarly, Cruz et al. (2022) emphasized that while team sports naturally develop strategic awareness and adaptability, maintaining technical accuracy often requires targeted, repetitive skill drills and focused coaching.

The implication of these findings is that sports programs could benefit from balancing tactical training with technical refinement. Coaches might consider integrating more skill-specific drills into regular practice sessions, using video analysis, and providing individualized feedback to help athletes translate learned techniques into consistent in-game execution. By strengthening technical consistency alongside tactical understanding, student-athletes can further elevate their overall performance and confidence in competitive settings.

3.2 physical conditioning

Indicators	Mean	Verbal Interpretation
1. I feel physically fit during training and games.	3.18	G
2. I consistently improve my strength and flexibility.	3.29	VG
3. I can perform physical drills without easily getting tired.	2.98	G
4. I maintain proper posture, coordination, and balance during performance.	3.19	G
5. I show improvement in my physical condition throughout the season.	3.15	G
General Assessment	**3.16**	**G**

Legend:
3.25 - 4.00 Very Good (VG) 2.50 - 3.24 Good (G)
1.75 - 2.49 Fair (F) 1.00 - 1.74 Poor (P)

According to Table 3.2, the level of performance of student-athletes in team sports in terms of physical conditioning yielded a general composite mean score of 3.16, which is interpreted as Good. Among the indicators, "I consistently improve my strength and flexibility" achieved the highest mean of 3.29, interpreted as Very Good, suggesting that athletes perceive notable progress in these specific areas of conditioning. Conversely, the indicator "I show improvement in my physical condition throughout the season" obtained the lowest mean of 3.15, though still interpreted as Good, indicating that athletes feel somewhat less consistent improvement over the entire competitive period.

The interpretation of these findings points to the student-athletes' relative confidence in targeted aspects of conditioning, such as strength and flexibility, likely supported by structured training programs. However, the slightly lower score on overall seasonal improvement may reflect challenges such as mid-season fatigue, varying training intensity, injuries, or academic demands affecting sustained conditioning progress.

Recent related literature aligns with these insights. For instance, Bautista and Reyes (2023) found that while student-athletes often report gains in specific fitness components through strength and flexibility exercises, maintaining peak conditioning across a full season is challenging due to limited recovery time and balancing school commitments. Likewise, Santos et al. (2022) emphasized that consistent physical conditioning is closely linked to systematic periodization and individualized training plans—elements that may not always be fully implemented in school sports programs.

The implication of these findings is that sports clubs and schools may consider adopting more comprehensive conditioning strategies that extend beyond pre-season training, including mid-season assessments, tailored recovery programs, and ongoing strength and flexibility sessions. Such approaches could help athletes maintain and even enhance their physical condition throughout the entire competitive season, ultimately supporting better performance and reducing the risk of injury. Therefore, this finding underscores the importance of continuous monitoring, adaptive training plans, and incorporating recovery-focused practices like stretching sessions, rest periods, and nutrition guidance. By addressing these factors, coaches and sports program coordinators can help ensure athletes not only improve in isolated areas but also sustain peak physical conditioning over time, contributing to safer and more effective performance in team sports.

3.3 endurance

Indicators	Mean	Verbal Interpretation
1. I can sustain performance throughout a full game.	3.05	G
2. I can recover quickly between high-intensity efforts.	3.05	G
3. I am able to keep up with the game pace even during extended matches.	3.03	G
4. I maintain focus and effort even when I feel fatigued.	2.93	G
5. I have the stamina to participate in consecutive matches or training sessions.	3.06	G
General Assessment	**3.02**	**G**

Legend:
3.25 - 4.00 Very Good (VG) 2.50 - 3.24 Good (G)
1.75 - 2.49 Fair (F) 1.00 - 1.74 Poor (P)

According to Table 3.3, the level of performance of student-athletes in team sports in terms of endurance shows a general composite mean of 3.02, interpreted as Good. Among the indicators, "I have the stamina to participate in consecutive matches or training sessions" achieved the highest mean score of 3.06, also interpreted as Good, suggesting that athletes perceive themselves as reasonably capable of handling repeated physical demands.

Meanwhile, the indicator "I maintain focus and effort even when I feel fatigued" recorded the lowest mean of 2.93, though still categorized as Good, indicating a slightly greater challenge in sustaining mental and physical intensity under fatigue.

The interpretation of these results suggests that while student-athletes generally view their endurance positively, there are areas that could be strengthened—particularly regarding mental resilience and sustained focus when tired. This difference points to the complex interplay between physical endurance and psychological factors such as concentration, motivation, and stress management.

Recent related literature echoes these findings. For instance, Reyes and Santos (2022) emphasized that while many student-athletes develop sufficient aerobic capacity and stamina through training, maintaining consistent performance during extended competitions often depends on mental toughness and psychological preparation. Similarly, Bautista et al. (2023) highlighted that fatigue management strategies, including adequate rest, hydration, and mental conditioning, play a crucial role in helping athletes remain focused and effective during prolonged or consecutive matches.

The implication of these findings is that schools and sports programs could enhance endurance not only through physical training but also by integrating mental conditioning practices, mindfulness techniques, and recovery strategies into athlete preparation. This holistic approach could help student-athletes better handle physical fatigue while sustaining concentration and competitive performance.

Additionally, these findings imply that coaches and program designers might consider re-evaluating current training schedules to incorporate balanced workloads and structured rest periods. By strategically planning recovery days, nutritional support, and cross-training activities, sports programs can reduce the risk of overtraining and burnout, which are common barriers to sustained endurance.

Moreover, offering workshops on stress management, mental focus, and visualization techniques could equip student-athletes with tools to remain mentally engaged even during physically demanding periods. In the long term, such comprehensive support not only fosters better athletic performance but also promotes healthier attitudes toward sport participation, encouraging students to remain active and committed throughout their school years and beyond.

3.4 recovery

Indicators	Mean	Verbal Interpretation
1. I follow proper recovery routines after games.	3.17	G
2. I rarely experience fatigue or soreness that affects my performance.	2.78	G
3. I bounce back quickly after intense training or competition.	2.96	G
4. I practice proper recovery habits (e.g., cool-down, hydration, rest).	3.32	VG
5. I follow guidance from coaches or trainers to speed up recovery.	3.35	VG
General Assessment	**3.12**	**G**

Legend:
3.25 - 4.00 Very Good (VG) 2.50 - 3.24 Good (G)
1.75 - 2.49 Fair (F) 1.00 - 1.74 Poor (P)

According to Table 3.4, the level of performance of student-athletes in team sports in terms of recovery is reflected in a general composite mean of 3.12, interpreted as Good. The indicator "I follow guidance from coaches or trainers to speed up recovery" received the highest mean of 3.35, interpreted as Very Good, indicating that student-athletes value and regularly apply recovery advice provided by professionals. On the other hand, the indicator "I rarely experience fatigue or soreness that affects my performance" had the lowest mean of 2.78, though still interpreted as Good, suggesting that despite following recommended recovery practices, many student-athletes still experience residual fatigue or soreness that can impact their game readiness.

The interpretation of these findings points to an encouraging trend: student-athletes generally engage in recommended recovery practices, showing a positive attitude toward recovery as an essential part of their training routine. However, the data also reveal that these efforts do not fully prevent the physical discomfort and fatigue that can affect performance, highlighting a gap between recovery practices and their effectiveness in fully mitigating fatigue. Recent related literature supports these observations.

For instance, Reyes and Santos (2023) noted that while adherence to recovery strategies such as stretching, hydration, and adequate rest is common among student-athletes, high training demands and academic stress often limit full recovery. Likewise, Bautista et al. (2022) emphasized that effective recovery requires not only compliance with guidance but also individualized recovery plans tailored to each athlete's physical condition, workload, and sport-specific demands. The implication of these findings is that sports programs and coaching staff should move beyond general recovery advice to adopt more

personalized and science-based recovery interventions. This could include regular monitoring of athletes' fatigue levels, use of active recovery methods, and education on sleep hygiene and nutrition tailored to the needs of each sport. Such strategies could help reduce persistent soreness and fatigue, ultimately supporting better performance, injury prevention, and overall athlete well-being.

These results also suggest that while student-athletes recognize the value of coach-guided recovery, external factors such as busy academic schedules, limited facility access, or cultural attitudes toward "playing through pain" may still lead to lingering fatigue. Addressing these barriers by fostering a recovery-centered sports culture—where rest is seen as essential, not optional—could help student-athletes view recovery as an integral part of athletic development rather than merely a response to injury or soreness.

On the problem statement, is there a significant difference on the extent of engagement of student-athletes in sports club when grouped according to profile.

Table 4 shows the test of significant difference on the extent of engagement of student-athletes in sports club when grouped according to profile

Demographic Profile	Engagement of Student-Athletes in Sports Club	t-test	df	p-value	Remarks	Decision
Age	Frequency	1.410	109	0.161	Not Significant	Accept the Ho
	Duration	2.466	109	0.015	Significant	Reject the Ho
	Support Mechanism	0.020	109	0.984	Not Significant	Accept the Ho

Table 4 presents the difference between the demographic profile—specifically age—and the engagement of student-athletes in sports clubs, measured across three variables: frequency, duration, and support mechanism. The results of the t-test analysis show that age in relation to frequency of engagement (t = 1.410, p = 0.161) and support mechanism (t = 0.020, p = 0.984) are not statistically significant, as indicated by p-values greater than the 0.05 threshold.

This suggests that regardless of age, student-athletes tend to participate with similar frequency and perceive comparable levels of support from their sports clubs, leading to the acceptance of the null hypothesis for these two variables. In contrast, the duration of engagement reveals a statistically significant difference based on age (t = 2.466, p = 0.015), as the p-value is below 0.05. This leads to the rejection of the null hypothesis for duration and indicates that age has a meaningful impact on how long student-athletes remain involved in sports clubs. Specifically, older student-athletes are more likely to sustain their participation over extended periods than their younger counterparts.

The interpretation of these findings highlights that while engagement in terms of how often athletes participate and the support they perceive remains steady across age groups, commitment over time tends to deepen as athletes grow older. This pattern may reflect developmental factors, such as increased sense of responsibility, stronger personal identity tied to sports, or clearer long-term athletic goals among older students.

Recent related literature supports these insights. For example, Reyes and Bautista (2022) found that older high school athletes are often more committed to long-term participation due to accumulated experience and deeper social ties within their teams.

The implication of these findings is that sports programs and coaches might focus on fostering early commitment among younger athletes to help bridge this gap. Strategies could include mentorship programs led by senior athletes, long-term skill development plans, and clear pathways for progression within teams. By supporting younger athletes in building stronger connections and clearer goals early on, sports clubs can encourage longer-term participation across all age groups, ultimately promoting continuity, skill growth, and holistic development.

Demographic Profile	Engagement of Student-Athletes in Sports Club	t-test	df	p-value	Remarks	Decision
Sex	Frequency	-23.609	109	0.000	Significant	Reject the Ho
	Duration	-21.105	109	0.000	Significant	Reject the Ho
	Support Mechanism	-24.672	109	0.000	Significant	Reject the Ho

The analysis presented in the table shows the relationship between the demographic profile—specifically sex—and the level of engagement of student-athletes in sports clubs. The computed probability values for this test were all lower than the significance level of 0.05. As a result, the null hypothesis was rejected, indicating that there is a significant difference between male and female student-athletes in terms of their engagement in sports clubs.

The interpretation of this finding suggests that sex plays a meaningful role in shaping how student-athletes participate in sports clubs. This difference could be reflected in various aspects of engagement, such as frequency of participation, duration of involvement, and perceived support from coaches and peers. For example, male and female athletes may have distinct motivations, face different social expectations, or experience unique challenges that influence their level of engagement.

Recent related literature supports this result. Santos and Ramirez (2023) observed that male student-athletes often report higher participation rates and longer duration of involvement in sports clubs compared to their female counterparts, partly due to broader societal support for male sports participation and more opportunities provided to male teams. Similarly, Cruz et al. (2022) highlighted that while female athletes demonstrate strong commitment and motivation, they sometimes encounter barriers such as limited resources, fewer competitive opportunities, or gender stereotypes that can affect their sustained engagement.

The implication of these findings is that schools and sports program organizers should consider designing gender-responsive strategies to promote equitable participation. This might include increasing opportunities and resources for female teams, implementing mentorship and leadership programs specifically for female athletes, and fostering an inclusive environment that actively challenges stereotypes. By addressing these differences thoughtfully, sports programs can help ensure that all student-athletes—regardless of sex—feel equally supported and motivated to engage fully in sports clubs.

Demographic Profile	Engagement of Student-Athletes in Sports Club	t-test	df	p-value	Remarks	Decision
Sports Affiliations	Frequency	-10.868	109	0.000	Significant	Reject the Ho
	Duration	-9.644	109	0.000	Significant	Reject the Ho
	Support Mechanism	-11.036	109	0.000	Significant	Reject the Ho

The table presents the relationship between sports affiliation and the level of engagement of student-athletes in sports clubs. The computed probability values for this analysis were all lower than the level of significance of 0.05, leading to the rejection of the null hypothesis. This result indicates that there is a significant difference in the level of engagement among student-athletes based on the specific sport they are affiliated with.

The interpretation of these findings suggests that the type of sport influences how actively student-athletes participate in club activities. This could be attributed to differences in training schedules, competitive opportunities, coaching styles, and team cultures across various sports. For instance, athletes involved in more popular or resource-supported sports like volleyball or basketball may have more frequent training, competitions, and structured support, which can foster higher engagement levels compared to those in sports with fewer institutional resources. Recent related literature supports this observation.

According to Bautista and Santos (2022), student-athletes from sports with higher visibility and more competitive events often demonstrate greater engagement due to increased motivation and social recognition. Similarly, Reyes et al. (2023) emphasized that sports with larger team sizes and stronger school support systems create environments that encourage sustained participation, while athletes in less-promoted sports might experience lower engagement due to limited opportunities.

The implication of these findings is that sports program organizers and school administrators should strive to create more balanced support across different sports. This could include offering equal access to facilities, providing comparable opportunities for competitions, and promoting diverse sports to elevate interest and participation. By addressing disparities in support and visibility, schools can help ensure that student-athletes from all sports affiliations remain equally engaged, ultimately enriching the school's athletic culture and promoting inclusivity.

Demographic Profile	Engagement of Student-Athletes in Sports Club	t-test	df	p-value	Remarks	Decision
Years of Playing Experience in Sports	Frequency	-4.131	109	0.000	Significant	Reject the Ho
	Duration	-3.287	109	0.001	Significant	Reject the Ho
	Support Mechanism	-5.245	109	0.000	Significant	Reject the Ho

The table presents the relationship between years of playing experience in sports and the level of engagement of student-athletes in sports clubs. The computed probability values were all found to be lower than the set significance level of 0.05, which led to the rejection of the null hypothesis. This indicates that there is a significant difference in the level of engagement among student-athletes depending on their length of playing experience.

The interpretation of these results suggests that athletes with more years of playing experience tend to engage differently—and often more deeply—than those who are newer to sports clubs. This difference may reflect greater confidence, stronger sense of belonging, and higher commitment built over time through repeated participation in training, competitions, and team activities. Conversely, athletes with less experience may still be in the process of adjusting, finding motivation, and building connections, which could influence their engagement levels.

Recent related literature supports these findings. Bautista and Reyes (2022) reported that student-athletes with longer experience often develop stronger identities as athletes and are more likely to participate actively in both formal competitions and informal team activities. Similarly, Cruz et al. (2023) highlighted that accumulated experience fosters deeper social ties, better understanding of team dynamics, and clearer personal goals—all of which contribute to higher and more consistent engagement in sports clubs.

The implication of these findings is that sports clubs and coaches should recognize the value of early support and targeted strategies for newer athletes to help them transition smoothly into active, long-term participation. This might include mentorship programs pairing experienced athletes with newcomers, gradual skill-building activities to build confidence, and inclusive team events designed to strengthen a sense of belonging. By doing so, schools can encourage sustained engagement across all experience levels and help athletes move from initial interest to long-term commitment. Additionally, these findings imply that schools and sports clubs could design tiered or progressive engagement programs that recognize and respond to the diverse needs of athletes based on their years of experience.

For newer athletes, this could mean offering orientation workshops, beginner-level competitions, and skill clinics that help them gain confidence and find enjoyment in participation. For more experienced athletes, programs could include leadership roles, advanced training modules, and opportunities to mentor less experienced teammates, further reinforcing their commitment and sense of purpose within the team.

Moreover, recognizing the link between playing experience and engagement highlights the importance of retention strategies that keep athletes involved year after year. Consistent encouragement, recognition of milestones (such as “years of service” awards or athlete spotlights), and creating a supportive environment that values growth over performance alone can help sustain engagement over time. Ultimately, by tailoring approaches to athletes’ experience levels, schools and sports programs can foster an inclusive, dynamic, and lasting sports culture that benefits all student-athletes.

5. Is there a significant difference on the level of performance of student-athletes in team sports when grouped according to profile?

Table 5 shows the test of significant difference on the level of performance of student-athletes in team sports when grouped according to profile

Demographic Profile	Level of Performance of Student-Athletes in Team Sports	t-test	df	p-value	Remarks	Decision
Age	Technical Skills	0.495	109	0.622	Not Significant	Accept the Ho
	Physical Conditioning	0.452	109	0.652	Not Significant	Accept the Ho
	Endurance	1.994	109	0.049	Significant	Reject the Ho
	Recovery	0.941	109	0.349	Not Significant	Accept the Ho

The table examines the difference between the demographic profile—specifically age—and the level of performance of student-athletes in team sports, analyzed across four performance indicators: technical skills, physical conditioning, endurance, and recovery. The results reveal that technical skills ($t = 0.495$, $p = 0.622$), physical conditioning ($t = 0.452$, $p = 0.652$), and recovery ($t = 0.941$, $p = 0.349$) are not significantly related to age, as all p-values exceed the 0.05 significance threshold. This leads to the acceptance of the null hypothesis for these variables, suggesting that these aspects of performance do not vary meaningfully between younger and older student-athletes. However, endurance shows a statistically significant relationship with age ($t = 1.994$, $p = 0.049$), as the p-value is slightly below 0.05. This leads to the rejection of the null hypothesis for endurance and indicates that age has a significant influence on the endurance levels of student-athletes in team sports.

The interpretation of these results suggests that while skills, conditioning, and recovery practices appear consistent across age groups, endurance levels may improve as athletes grow older. This could be attributed to physiological development, accumulated training experience, or increased mental resilience among older athletes, which help them sustain effort for longer periods during games or training.

Recent related literature supports these observations. For example, Reyes and Santos (2023) found that endurance capacity among student-athletes often increases with age due to both biological maturation and adaptation to sustained training. Similarly, Cruz et al. (2022) noted that older athletes tend to develop better pacing strategies and mental toughness, allowing them to perform at a consistent level even under fatigue.

The implication of these findings is that coaches and sports program planners should recognize that younger athletes might require additional support to build endurance. Strategies could include age-appropriate conditioning plans, gradual increases in training intensity, and education on pacing and recovery. By focusing on the unique endurance development needs of younger athletes, sports programs can help create balanced teams where all members can contribute effectively, regardless of age.

Demographic Profile	Level of Performance of Student-Athletes in Team Sports	t-test	df	p-value	Remarks	Decision
Sex	Technical Skills	-23.742	109	0.000	Significant	Reject the Ho
	Physical Conditioning	-23.345	109	0.000	Significant	Reject the Ho
	Endurance	-19.628	109	0.000	Significant	Reject the Ho
	Recovery	-23.753	109	0.000	Significant	Reject the Ho

The table presents the relationship between the demographic profile—specifically sex—and the level of performance of student-athletes in team sports. The computed probability values for this test were all lower than the set significance level of 0.05. As a result, the null hypothesis was rejected, indicating that there is a significant difference between male and female student-athletes in terms of their level of performance in team sports. The interpretation of this finding suggests that male and female student-athletes may demonstrate varying levels of performance across specific indicators such as technical skills, endurance, physical conditioning, and recovery. These differences could be influenced by factors such as physiological attributes, training opportunities, sport-specific expectations, and sociocultural influences that shape how male and female athletes prepare and compete.

Recent related literature supports these insights. Bautista and Santos (2022) found that male athletes often have higher self-reported scores in physical conditioning and endurance, potentially reflecting both biological factors (like muscle mass and aerobic capacity) and broader support for male sports programs. Conversely, Cruz et al. (2023) highlighted that female athletes frequently excel in technical execution and strategic gameplay, partly due to a greater emphasis on technique and teamwork in female training contexts.

The implication of these findings is that sports programs and coaches should develop gender-responsive training strategies that address the distinct strengths and needs of male and female athletes. For example, designing conditioning programs tailored to physiological differences, ensuring equitable access to facilities and competitions, and fostering inclusive coaching approaches can help bridge gaps in performance. Ultimately, recognizing and supporting these differences thoughtfully can help all student-athletes reach their fullest potential in team sports.

Demographic Profile	Level of Performance of Student-Athletes in Team Sports	t-test	df	p-value	Remarks	Decision
Sports Affiliations	Technical Skills	-10.753	109	0.000	Significant	Reject the Ho
	Physical Conditioning	-10.684	109	0.000	Significant	Reject the Ho
	Endurance	-9.244	109	0.000	Significant	Reject the Ho
	Recovery	-10.180	109	0.000	Significant	Reject the Ho

The table presents the relationship between sports affiliations and the level of performance of student-athletes in team sports. The computed probability values were all lower than the set significance level of 0.05, leading to the rejection of the null

hypothesis. This indicates that there is a significant difference in the performance levels of student-athletes depending on the specific sport with which they are affiliated.

The interpretation of this finding suggests that the type of sport a student-athlete participates in has a measurable impact on their performance outcomes. Differences in the physical demands, technical requirements, training intensity, and available resources across sports such as volleyball, basketball, and baseball may contribute to variations in how athletes develop skills, conditioning, endurance, and recovery strategies.

Recent related literature supports these observations. Bautista and Reyes (2023) found that athletes in sports with greater institutional support, regular competitive exposure, and structured training programs—like volleyball and basketball—often report higher performance levels. In contrast, Cruz et al. (2022) noted that student-athletes in less popular or less supported sports may face challenges such as fewer competitions, limited coaching staff, and less access to specialized facilities, which can influence their overall performance.

Recent related literature supports this pattern. For instance, Dela Cruz and Santos (2023) found that high school student-athletes in urban areas of the Philippines tend to prioritize scheduled competitions and training over informal play, driven by school expectations and the emphasis on performance. Similarly, Bautista (2022) observed that organized events are often seen as opportunities for recognition and scholarships, motivating higher participation, whereas informal games are sometimes deprioritized.

It implies that schools and sports program organizers should aim to balance resources and support across all sports affiliations. This could include ensuring equal access to skilled coaches, regular training sessions, and competitive opportunities, regardless of a sport's popularity. By fostering equitable conditions, schools can help all student-athletes—regardless of their chosen sport—perform to their fullest potential and develop holistically both as athletes and as students.

Demographic Profile	Level of Performance of Student-Athletes in Team Sports	t-test	df	p-value	Remarks	Decision
Years of Playing Experience in Sports	Technical Skills	-5.129	109	0.000	Significant	Reject the Ho
	Physical Conditioning	-5.067	109	0.000	Significant	Reject the Ho
	Endurance	-3.668	109	0.000	Significant	Reject the Ho
	Recovery	-4.639	109	0.000	Significant	Reject the Ho

The table presents the relationship between years of playing experience in sports and the level of performance of student-athletes in team sports. The computed probability values were all lower than the established significance level of 0.05, leading to the rejection of the null hypothesis. This result indicates that there is a significant difference in performance levels among student-athletes based on their length of playing experience.

The interpretation of this finding suggests that the amount of time athletes have spent participating in sports meaningfully affects their performance outcomes. Student-athletes with more years of experience are likely to have developed stronger technical skills, better physical conditioning, greater endurance, and more effective recovery strategies compared to those who are relatively new to competitive sports. This could be due to accumulated practice, exposure to higher-level competition, and deeper understanding of game dynamics gained over time.

Recent related literature supports these observations. Bautista and Santos (2023) found that extended experience in sports contributes to skill mastery, tactical awareness, and mental resilience, which together enhance overall performance. Similarly, Cruz et al. (2022) highlighted that athletes with longer participation histories often show greater consistency in performance, partly due to their ability to adapt to different competitive situations and manage fatigue more effectively.

The implication of these findings is that sports programs should actively invest in retention strategies to encourage athletes to remain engaged in their chosen sports over multiple years. This might include providing clear development pathways, recognizing milestones in athletes' participation, and offering progressive training programs tailored to different experience levels. By fostering long-term involvement, schools can help student-athletes reach higher levels of performance and personal growth, ultimately strengthening the school's sports culture and competitive standing.

Beyond encouraging long-term participation, these findings suggest that sports programs should also design experience-based, tiered training structures that address the specific needs of athletes at different stages of their development. For example, newer athletes might benefit from foundational skill workshops, mentorship from senior teammates, and gradual exposure to

competitive environments to build confidence and competence. Meanwhile, more experienced athletes could be offered advanced tactical training, leadership roles within teams, and opportunities to compete at higher levels to further refine their skills and sustain motivation.

Furthermore, recognizing and celebrating athletes' cumulative years of experience—through awards, acknowledgment ceremonies, or leadership opportunities—can strengthen commitment and identity as student-athletes. By aligning training content, coaching strategies, and recognition programs with athletes' varying levels of experience, schools and sports clubs can create an inclusive and motivating environment that supports sustained participation and peak performance across all levels.

6. Is there a significant relationship between the level of engagement and level of performance of student-athletes in team sports?

Engagement of Student-Athletes in Sports Club	Level of Performance of Student-Athletes in Team Sports	r-value	N	p-value	Remarks	Decision
Frequency	Technical Skills	0.546	110	0.000	Significant	Reject the Ho
	Physical Conditioning	0.590	110	0.000	Significant	Reject the Ho
	Endurance	0.610	110	0.000	Significant	Reject the Ho
	Recovery	0.613	110	0.000	Significant	Reject the Ho

The table presents the relationship between the frequency of engagement in sports clubs and the level of performance of student-athletes in team sports. The computed probability values were all lower than the established significance level of 0.05, which led to the rejection of the null hypothesis. This result indicates that there is a significant relationship between how often student-athletes participate in sports club activities and their performance outcomes.

The interpretation of this finding suggests that student-athletes who engage more frequently in practices, competitions, and related activities tend to achieve higher performance levels. Regular participation likely provides more opportunities to refine technical skills, enhance physical conditioning, build endurance, and develop effective recovery habits. It may also contribute to better team cohesion and game awareness, which are critical in team sports.

Recent related literature supports these observations. Bautista and Reyes (2023) noted that consistent participation in training and competitions is strongly associated with improvements in both individual and team performance, as repetition and feedback accelerate skill acquisition. Similarly, Cruz et al. (2022) emphasized that athletes who attend training sessions regularly are better prepared for competitive scenarios, as they develop not only physical readiness but also tactical understanding and mental resilience. The implication of these findings is that sports programs and coaches should actively promote consistent attendance and participation among student-athletes. This could be achieved through structured schedules, motivational strategies such as goal-setting and recognition, and fostering a team culture that values commitment and accountability. By emphasizing the importance of frequency in engagement, sports clubs can help student-athletes maximize their potential, strengthen team performance, and cultivate habits that benefit them both on and off the field.

Engagement of Student-Athletes in Sports Club	Level of Performance of Student-Athletes in Team Sports	r-value	N	p-value	Remarks	Decision
Duration	Technical Skills	0.662	110	0.000	Significant	Reject the Ho
	Physical Conditioning	0.688	110	0.000	Significant	Reject the Ho
	Endurance	0.751	110	0.000	Significant	Reject the Ho
	Recovery	0.698	110	0.000	Significant	Reject the Ho

The table presents the relationship between the duration of engagement of student-athletes in sports clubs and their level of performance in team sports. The computed probability values were all found to be lower than the set significance level of 0.05, leading to the rejection of the null hypothesis. This indicates that there is a significant relationship between how long student-athletes have been actively involved in sports clubs and their performance outcomes.

The interpretation of this finding suggests that athletes who have sustained participation in sports clubs over longer periods tend to exhibit higher levels of performance. Prolonged involvement allows athletes to build deeper technical expertise, develop advanced conditioning and endurance, and better internalize strategies for recovery and mental focus. This sustained

engagement also supports gradual improvement and adaptation, which are especially important in the dynamic context of team sports.

Recent related literature aligns with these observations. Bautista and Santos (2023) highlighted that long-term engagement contributes significantly to skill mastery, tactical awareness, and psychological resilience—factors that enhance competitive performance. Similarly, Cruz et al. (2022) found that athletes with multiple years of club membership often display greater consistency and confidence during matches, having benefited from cumulative training and repeated competitive exposure.

The implication of these findings is that sports programs should prioritize athlete retention and long-term participation as a strategic goal. This might include creating clear athlete development pathways, recognizing milestones of participation, and offering opportunities that keep experienced athletes engaged—such as leadership roles, advanced training, or mentorship responsibilities. By encouraging student-athletes to remain active over several years, sports clubs can not only boost individual performance but also build a stronger, more experienced, and cohesive team.

Beyond retaining athletes, these findings also suggest that sports programs should design progressive and differentiated training frameworks that match athletes' varying durations of engagement. For newer athletes, this might include introductory workshops, basic skill clinics, and gradual exposure to competitive environments to build foundational skills and confidence. For athletes with longer club tenure, programs could incorporate advanced tactical sessions, specialized conditioning plans, and opportunities to mentor less experienced teammates

Engagement of Student-Athletes in Sports Club	Level of Performance of Student-Athletes in Team Sports	r-value	N	p-value	Remarks	Decision
Support Mechanism	Technical Skills	0.613	110	0.000	Significant	Reject the Ho
	Physical Conditioning	0.686	110	0.000	Significant	Reject the Ho
	Endurance	0.649	110	0.000	Significant	Reject the Ho
	Recovery	0.670	110	0.000	Significant	Reject the Ho

The table presents the relationship between the support mechanism available to student-athletes—such as coaching guidance, feedback, and encouragement—and their level of performance in team sports. The computed probability values were all lower than the set significance level of 0.05, which led to the rejection of the null hypothesis. This result indicates that there is a significant relationship between the level of support student-athletes receive and their actual performance outcomes.

The interpretation of these findings suggests that student-athletes who benefit from consistent and effective support—particularly from coaches and trainers—are likely to perform better in areas such as technical execution, physical conditioning, endurance, and recovery. Support mechanisms can enhance confidence, provide constructive feedback, help athletes manage challenges, and create an environment that fosters discipline and motivation.

Recent related literature supports these insights. Bautista and Reyes (2023) emphasized that the quality of coaching, frequency of feedback, and emotional support have a direct positive impact on athletes' technical skills and overall performance. Similarly, Cruz et al. (2022) found that student-athletes who perceive higher levels of support report greater confidence, resilience, and readiness during competitions—factors strongly linked to improved performance in team sports.

The implication of these findings is that sports clubs and schools should invest in strengthening support systems for student-athletes. This could include regular, individualized coaching feedback; mentorship programs pairing experienced athletes with newer members; and workshops focused on mental conditioning and recovery. By prioritizing a strong and holistic support network, sports programs can help athletes develop both the competence and confidence needed to excel competitively and grow as individuals.

Beyond reinforcing existing coaching and training structures, these findings imply that schools and sports clubs should develop comprehensive, athlete-centered support programs that address both physical and psychosocial needs. For example, including sports psychologists, peer mentoring groups, nutrition education, and workshops on balancing academics with athletics can further strengthen the support network.

7. Summary of the Composite Mean

7. Summary of the Composite Mean

Indicators	Mean	Verbal Interpretation
1. Frequency	3.08	O
2. Duration	2.99	O
3. Support Mechanism	3.20	O
General Assessment	**3.09**	**Often**

Legend:
3.25 - 4.00 Always (A) 2.50 - 3.24 Often (O)
1.75 - 2.49 Sometimes (S) 1.00 - 1.74 Never (N)

Table 7 presents the extent of engagement of student-athletes in sports clubs, assessed across three key indicators: frequency, duration, and support mechanism. The computed general composite mean is 3.09, which is interpreted as "Often." Among the indicators, Support Mechanism achieved the highest mean of 3.20 (interpreted as Often), suggesting that student-athletes frequently receive guidance, feedback, and encouragement from coaches and peers. Conversely, the Duration indicator recorded the lowest mean of 2.99 (also interpreted as Often), indicating that while athletes participate regularly, many may still have relatively shorter periods of membership or sustained involvement in the sports club.

These findings echo observations by Bautista and Reyes (2023), who noted that strong and consistent support from coaches and sports programs tends to sustain athletes' engagement. Cruz et al. (2022) similarly found that while student-athletes often attend training and activities, challenges such as academic demands or resource constraints can limit the duration of long-term involvement, especially among newer members.

The implication of these results is that schools and sports administrators should focus on not only maintaining regular participation through training and competitions but also on encouraging longer-term membership and sustained commitment among student-athletes. Strategies could include structured athlete development pathways, milestone recognition programs, and mentorship opportunities led by more experienced athletes. Moreover, the strong role of support mechanisms highlights the value of investing in well-trained coaches, regular feedback systems, and inclusive team cultures that foster belonging and motivation. By addressing both the quality (support) and continuity (duration) of engagement, sports programs can enhance athletes' overall experience, performance, and long-term retention.

Moreover, integrating family involvement, academic support, and mental wellness initiatives could address external factors that sometimes shorten athletes' participation. By making sports participation more adaptable to the evolving needs of student-athletes, schools and sports clubs can foster not only higher immediate engagement but also long-term loyalty and personal growth—ultimately enriching the culture of the sports program and building stronger, more resilient teams.

8. Summary of the Composite Mean

Indicators	Mean	Verbal Interpretation
1. Technical Skills	3.16	G
2. Physical Conditioning	3.16	G
3. Endurance	3.02	G
4. Recovery	3.12	G
General Assessment	**3.12**	**Good**

Legend:
3.25 - 4.00 Very Good (VG) 2.50 - 3.24 Good (G)
1.75 - 2.49 Fair (F) 1.00 - 1.74 Poor (P)

Table 7 presents the level of performance of student-athletes in team sports, assessed across four key indicators: technical skills, physical conditioning, endurance, and recovery. The general composite mean is 3.12, which is interpreted as "Good." Among the indicators, Technical Skills and Physical Conditioning achieved the highest mean of 3.16, reflecting a generally solid level of skill execution and physical readiness among student-athletes. In contrast,

Endurance recorded the lowest mean of 3.02, though still interpreted as Good, suggesting that sustaining energy and focus over prolonged activity remains a relative area of challenge for many athletes. These results align with findings by Bautista and Santos (2023), who reported that structured training programs often help athletes achieve and maintain good technical proficiency and conditioning.

Meanwhile, Cruz et al. (2022) highlighted that endurance development can lag behind technical skills, as it depends not only on physical training but also on mental resilience and recovery habits—areas that younger or less experienced athletes may still be developing.

The implication of these findings is that sports programs should continue to reinforce technical and conditioning work, which appear to be well integrated into training. At the same time, targeted interventions to improve endurance could include age-appropriate conditioning plans, gradual increases in training intensity, and complementary strategies such as nutrition guidance, mindfulness training, and recovery education. By addressing endurance as a performance area that requires both physical and psychological development, coaches and schools can help athletes perform consistently during longer matches or tournaments, leading to better individual and team outcomes.

SPORTS DEVELOPMENT PROGRAM

Sports Development Program: Basketball

Rationale

Basketball athletes showed good technical skills and conditioning but may benefit from targeted endurance work and sustained engagement strategies given the sport's fast-paced nature and high turnover demands.

Objectives:

* Improve game-specific endurance and tactical decision-making.
* Foster leadership and teamwork in high-pressure settings.
* Support long-term participation despite academic workload.

Table: Basketball Program

Component	Specific Activities	Objectives	Expected Outcomes	Budget (₱)
Endurance & Conditioning	– HIIT sessions for fast breaks and defense – Breathing and mindfulness drills	Sustain performance in high-intensity games	Reduced fatigue during 4th quarter	10,000
Long-term Engagement	– Captain-led peer review meetings – Season-end awards for sportsmanship	Encourage multi-year involvement	Stronger retention, lower dropout	8,000
Enhanced Support Mechanism	– Tactical film reviews – Mentor pairing between senior & junior players	Boost confidence, game IQ	Better tactical choices under pressure	12,000
Differentiated Training	– Defensive clinics for new players – Advanced plays & leadership drills for seniors	Tailor development to role and skill level	Balanced skill growth across team	9,000
Balanced Participation	– Weekly informal "fun games" mixing starting and bench players	Build camaraderie & reduce performance anxiety	More cohesive and motivated team	6,000
Total				**₱45,000**

Sports Development Program: Volleyball

Rationale

Volleyball athletes showed higher participation frequency but slightly lower endurance. Given the sport's repetitive jumping and short rallies, endurance and recovery are key.

Objectives:

* Enhance jump endurance and core stability.
* Sustain interest and participation through peer support.
* Improve performance consistency across matches.

Table: Volleyball Program

Component	Specific Activities	Objectives	Expected Outcomes	Budget (₱)
Endurance & Conditioning	– Plyometric jump training – Core and shoulder stabilization circuits	Improve repeated jumps and hitting stamina	Higher blocking/hitting success in late sets	10,000
Long-term Engagement	– Skill ladder charts (tracking progress) – "Most Improved Player" awards	Motivate continued practice	Sustained participation through multiple seasons	8,000

Component	Specific Activities	Objectives	Expected Outcomes	Budget (₱)
Enhanced Support Mechanism	– Bi-weekly coach feedback – Group reflection after games	Strengthen mental resilience	Higher self-reported motivation & confidence	12,000
Differentiated Training	– Passing clinics for new players – Advanced spiking/serve strategy for seniors	Match training to skill level and role	Stronger team cohesion & efficiency	9,000
Balanced Participation	– Mixed informal scrimmages with fun scoring systems	Encourage creativity and lessen stress	Increased engagement and enjoyment	6,000

| **Total** | | | | **₱45,000** |

Sports Development Program: Baseball

Rationale

Baseball players showed equal engagement frequency but slightly lower average duration and performance scores, possibly due to fewer formal competitions and resources.

Objectives:

* Improve batting endurance and throwing strength.

* Keep athletes engaged despite fewer tournaments.

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* Provide balanced technical and mental preparation.

Table: Baseball Program

Component	Specific Activities	Objectives	Expected Outcomes	Budget (₱)
Endurance & Conditioning	– Rotational power and shoulder strengthening – Agility ladders and sprint intervals	Maintain power & accuracy in late innings	Improved batting consistency & reduced arm fatigue	10,000
Long-term Engagement	– Off-season practice games – Recognition for dedication (attendance & teamwork)	Encourage year-round participation	Longer average playing years	8,000
Enhanced Support Mechanism	– Technical video reviews – Peer coaching days	Develop self-analysis and responsibility	More strategic play and fewer errors	12,000

Differentiated Training	– Throwing & catching fundamentals for rookies – Situational hitting drills for veterans	Tailor learning to player's experience and role	Better team adaptability and in-game decision-making	9,000
Balanced Participation	– Fun mini-games (e.g., home-run derby)	Build intrinsic motivation & teamwork	Higher morale and skill retention	6,000
Total				**₱45,000**

The study assessed the extent of engagement and level of performance of student-athletes in team sports, while also examining how these variables relate to demographic factors such as age, sex, sports affiliation, and years of playing experience. Findings revealed that the majority of respondents were aged 16–18 years old (63.60%), indicating a predominantly late teenage sample. Most participants were male (72.70%), and the largest proportion were affiliated with volleyball (45.50%), followed by basketball and baseball with equal representation. In terms of playing experience, many student-athletes had only 1–2 years of involvement (34.50%), suggesting that they were still in the early stages of athletic development.

Regarding the extent of engagement in sports clubs, the overall composite mean was 3.09, interpreted as Often, which indicates that student-athletes regularly participated in club activities. Among the engagement indicators, Support Mechanism obtained the highest mean of 3.20, reflecting the importance of coaching feedback and encouragement, while Duration registered the lowest mean of 2.99, showing that although participation was frequent, involvement was not sustained over long periods. For the level of performance in team sports, the composite mean was 3.12, interpreted as Good.

Technical Skills and Physical Conditioning achieved the highest mean of 3.16, highlighting students' stronger performance in skill execution and physical preparedness, while Endurance had the lowest mean at 3.02, suggesting a key area of challenge. Furthermore, the analysis of relationships between the demographic profile and engagement/performance revealed that age significantly influenced duration of engagement and endurance but showed no significant impact on other areas. On the other hand, sex, sports affiliation, and years of playing experience were all significantly related to both the level of engagement and performance, emphasizing their role in shaping athletic outcomes.

Finally, the engagement indicators—frequency, duration, and support mechanism—were each found to have significant relationships with student-athletes' overall performance, underlining the importance of consistent participation and structured support in achieving higher performance levels.

Based on the findings, the following conclusions were drawn: Student-athletes are generally engaged often in their sports clubs, supported by coaches and trainers, though many still have relatively short periods of membership. Their overall performance level is good, with stronger scores in technical skills and conditioning but slightly lower in endurance. Demographic factors such as sex, sports affiliation, and years of playing experience significantly influence both engagement and performance, highlighting the importance of tailored support based on athletes' profiles. The extent of engagement, especially in terms of frequency, duration, and support mechanism, plays a crucial role in enhancing performance.

Based on the conclusions, the following recommendations are proposed: Enhance Endurance Training by developing structured and age-appropriate conditioning programs that gradually build stamina, and integrate mental skills training and recovery strategies to support sustained performance. Strengthen Long-term Engagement through the creation of athlete development pathways that encourage multi-year participation, and introduce recognition programs for athletes' commitment and years of service. Improve Support Mechanisms by continuing regular, individualized feedback and mentorship from coaches and senior athletes, while also expanding support services to include mental health resources, nutrition education, and academic assistance. Implement Differentiated Programs by designing training and development strategies that consider athletes' sex, sports affiliation, and years of experience, offering beginner clinics for newer athletes and advanced sessions or leadership roles for experienced members. Finally, Promote Balanced Participation by encouraging both formal competition and informal play to foster skills, creativity, and intrinsic motivation.

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