

Assessing College Students Sports Commitment and Motivation at Different Sports Levels toward Innovative Sports Program

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Abstract: This study employs a descriptive-comparative approach to investigate the interplay between motivation and commitment to exercise among college students of various exercise levels. Two research tools were used: Motives for Physical Activities Measure-Revised (MPAM-R) by Chen Shanping (2013) and SPORT COMMITMENT QUESTIONNAIRE 2 (SCQ-2) by Scanlan et al. (2016). The study included 968 respondents: 128 high-level athletes, 397 sports majors, and 443 general college students. Key findings: 1. "Sport Enjoyment" (mean = 3.23) and "Valuable Opportunities" (mean = 3.21) were highest-ranked commitment indicators, highlighting intrinsic satisfaction and enriching experiences. 2. Men showed higher commitment across dimensions, and physical education majors and high-level athletes exhibited higher motivation. 3. Respondents were positively inclined towards motivation, with "Enjoyment" (mean = 3.422) as the leading motivator. 4. Males had higher competence motivation, and both genders shared motivation in fitness, enjoyment, social engagement, and appearance. 5. Differences in commitment existed between exercise levels, and a positive correlation between sport motivation and commitment was observed. In conclusion, this study provides valuable insights into the relationships between motivation and commitment to exercise among college students. It emphasizes the roles of positive experiences, professional category, and athleticism in influencing these factors.

Keywords: Sport commitment; Sport motivation; Innovative Sports Program

1 Introduction

Participation in sports has been shown to have a wide range of benefits for college students, including improved physical health, social skills, and mental well-being. However, the extent to which students are committed to sports and motivated to participate can vary depending on a variety of factors, including the level of competition and the individual's personal goals and interests. College sports programs have been a popular aspect of Chinese college life for many years. These programs offer students the opportunity to participate in sports at various levels of competition, ranging from intramural sports to varsity sports. Participation in sports has been shown to have numerous benefits for college students, including improved physical health, social skills, and mental well-being (Wechsler et al., 2016).

College students are at a unique stage of development, facing various academic and social pressures. As a result, their sports commitment and motivation may differ from those of other age groups. Furthermore, college sports programs offer a range of sports opportunities for students, including recreational, intramural, and intercollegiate sports. Each of these sports levels may have different demands and expectations, leading to different levels of sports commitment and motivation among students (Standage et al., 2018).

Several recent studies have investigated the relationship between age and sports commitment and motivation. For instance, a study by Wylleman et al. (2018) found that athletes aged 16-24 reported higher levels of sport commitment than athletes aged 25-34, 35-44, and over 45 years. Similarly, a study by Ntoumanis et al. (2019) found that younger athletes were more intrinsically motivated compared to their older counterparts.

Gender has also been shown to influence sports commitment and motivation. A study by Ntoumanis, Taylor, and Standage (2019) found that male college students reported higher levels of sports commitment and intrinsic motivation compared to female students. However, female students reported higher levels of extrinsic motivation.

Zhang (2023) conducted a descriptive and categorical analysis of sport motivation, ANOVA of exercise behavior and sport behavior of students with different motivation combinations on 2340 undergraduate students in a national survey. The results showed that: college students' motivation in sports was generally strong, and the type of motivation was "strong internal motivation and weak external motivation", and the gender difference was "high male and low female". Socioeconomic status has also been linked to sports participation and commitment. A study by Stodden et al. (2019) found that students from lower socioeconomic backgrounds were less likely to participate in sports, and those who did were less committed compared to students from higher socioeconomic backgrounds.

Socioeconomic status has also been linked to sports participation and commitment. A study by Stodden, Goodway, Langendorfer, Robertson, Rudisill, Garcia, and Garcia (2019) found that students from lower socioeconomic backgrounds were less likely to participate in sports, and those who did were less committed compared to students from higher socioeconomic backgrounds.

Overall, previous research has identified several factors that may influence college students' sports commitment and motivation, including gender, age, socioeconomic status, and past experiences with sports. However, research on sports commitment

and motivation among college students, particularly at different sports levels, is still limited. Therefore, considering the diversity of college students' participation in sports, this study applied sport commitment and motivation analysis to different levels of sports. This multilevel research design allows for better assessment of the effects of different sport levels on college students' motivation and commitment to sports, and the findings are essential for the development of effective interventions and strategies, as well as a better understanding of the factors that influence their sport participation and success.

The study has some limitations. First, the sample size is limited to four universities in China, which may not be representative of all college students in China. Second, the study will only focus on sport commitment and motivation at the college level and may not be applicable to other levels of education. Third, the results of the study will be limited to questionnaire reports collected from respondents, which may not accurately reflect their actual levels of sport commitment and motivation. Finally, this study will not consider other factors that may affect levels of sport commitment and motivation, such as socioeconomic status and family background.

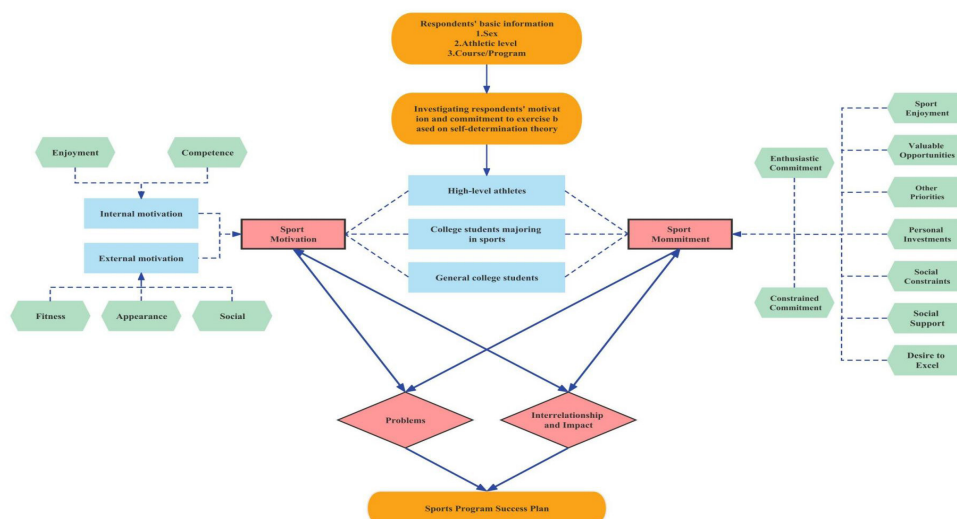
This study will be beneficial to college students, educators and sports clinic staff involved in sports programs at all levels as this study aims to provide insight into the factors that influence college students' commitment and motivation to sport at different sport levels. College students interested in engaging in sports and educators who wish to develop effective strategies to enhance college students' commitment and motivation in sports may benefit from the results of this study. In addition, this study may also be of interest to athletic organizations and policy makers concerned with the development and promotion of college athletics. By identifying key factors that influence sport commitment and motivation, this study could provide valuable information to help improve the quality of sport programs and increase participation rates. In conclusion, the beneficiaries of this study are college students, educators, sports organizations, and policy makers interested in promoting sports participation and enhancing sports commitment and motivation among college students of all sports levels.

1.1 Statement of the Problem

The purpose of this study is to assess the relationship between

exercise motivation and exercise commitment among college students of different exercise levels, to gain insight into the current situation of exercise motivation and exercise commitment among college students, to promote active exercise among college students, and present a plan for the success of the sports program.

1. What is the respondent's profile in terms of.
 - 1.1 Sex
 - 1.2 Athletic level
 - 1.3 Course/Program
2. What is the assessment of the respondents of their sport commitment in terms of:
 - 2.1 Enthusiastic Commitment
 - 2.2 Constrained Commitment
 - 2.3 Sport Enjoyment
 - 2.4 Valuable Opportunities
 - 2.5 Other Priorities
 - 2.6 Personal Investments
 - 2.7 Social Constraints
 - 2.8 Social Support
 - 2.9 Desire to Excel
3. Is there a significant difference in the assessment of the respondents of their sport commitment when they are grouped according to profile?
4. What is the assessment of the respondents of their sport motivation in terms of:
 - 4.1 Enjoyment motivation
 - 4.2 Competence motivation
 - 4.3 Fitness motivation
 - 4.4 Appearance motivation
 - 4.5 Social motivation
5. Is there a significant difference in the assessment of the respondents of their sport motivation when they are grouped according to profile?
6. Is there a significant relationship in sports commitment and motivation among college students at different sports levels?
7. Based on the results of the study, what innovations are proposed to promote the success of the sports program?



1.2 Research Paradigm

This study follows the positivist paradigm, which is based on the principles of the scientific method, uses quantitative research methods, reduces the interference of subjective factors through large sample sizes and control variables, and uses statistical analysis to test hypotheses and inferences in order to make the conclusions more objective and reliable. Specifically, based on self-determination theory, this study will examine the differences in college students' commitment and motivation to participate in sports at different sport levels based on respondents' profile (Sex, Athletic level, Course/Program) and the key factors that influence college students' sport commitment and motivation at different sport levels, in order to propose effective interventions and ultimately develop a successful sport program plan.

2 Methodology

2.1 Research Design

This study will utilize descriptive-comparative correlational research design approach. It utilizes the gathering of data concerning the current state of things investigations through distribution of questionnaire. It also involved the treatment of data in order to test hypothesis and to answer questions concerning the current status of the subject of the study. The purpose of this study is to obtain data from a questionnaire survey, analyze the interrelationships between the variables of motivation and commitment to exercise for college students of different exercise levels, and provide suggestions and strategies to enhance motivation and commitment to exercise for college students.

2.2 Research Locale

The subjects of this study will be students from four universities, Guangzhou Institute of Physical Education, Wuhan Institute of Physical Education, Hunan Information Institute, and Hunan Institute of Science and Technology. College students are expected to participate in the study randomly selected from three populations: high-level athletes, sports majors, and general college students, among whom, 128 were high-level athletes, 397 were sports majors, and 443 were general college students. All test subjects are in good health, free of disease and won't receive any training related to this study, and are willing to participate in this study by signing the informed consent form.

2.3 Population and Sampling

In this study, stratified random sampling (SRS) was used. First, the sample will be divided into high-level athletes group, sports professional college students group and general college students group according to the level of sports. The sample size was 968 randomly selected people from different groups.

2.4 Data Gathering Instrument

The researcher will use two research tools in this study:

Sport motivation measurement tool using the optimized version of Motives for Physical Activities Measure-Revised (MPAM-R) developed by Chen Shanping (2013). Sport commitment measurement tool using the SPORT COMMITMENT QUESTIONNAIRE 2 (SCQ-2) developed by Scanlan, T.K., Chow, G.M., et al. (2016).

The optimized version of Motives for Physical Activities Measure-Revised (MPAM-R) of five subscales: pleasure motivation, health motivation, ability motivation, appearance motivation, and social motivation, with three questions per subscale. With 15 questions and 4 points. Likert scale, ranging from "Strongly Disagree" to "Strongly Agree". When the extraction condition was set to an eigenvalue greater than 1, 5 factors were obtained. The 15 questions of the optimized version scale were distributed in groups of 3 on the 5 level 1 factors, and the factor loadings of all questions were higher than the 0.5 criterion. The distribution and composition of the 5 level 1 factors were consistent with the full scale of exercise motivation (30 questions), and the naming of the subscales was adopted from the original scale. From the results of the exploratory factor analysis, the theoretical structure of the optimized version exercise motivation scale remained unchanged, and the optimized version exercise motivation scale was still able to comprehensively measure the test content and theoretical structure reflected by the full exercise motivation scale.

Scanlan, T.K., Chow, G.M., et al. (2016) discusses the importance of sport commitment and the limitations of existing measures of sport commitment. The SCQ-2 includes 13 subscales, consisting of two types of psychological commitment and 11 sources of sport commitment, including enthusiastic commitment, constrained commitment, sport enjoyment, valuable opportunities, other priorities, personal investments, social constraints, social support, and desire to excel. The authors also presents the results of several studies that were conducted to validate the SCQ-2 and establish its reliability and validity. The authors conclude that the SCQ-2 is a reliable and valid tool for measuring sport commitment and can be used in both research and applied settings to better understand and promote sport participation.

3 Results And Discussion

This chapter presents the results of the gathered data with the analysis and interpretation according to the statement of the problem. The respondents were surveyed in terms of gender, type of specialty, and level of athletic skill, as well as respondents' ratings of athletic commitment, and ratings of athletic motivation. Whether there are differences in respondents' ratings of athletic commitment and athletic motivation after grouping them by characteristics. Whether there is a significant relationship between exercise commitment and exercise motivation among college students of different exercise levels. Determine conclusions based on the results of the analysis and propose a step toward innovative sports program.

Table 1: Profile of the Respondents

	Options	Frequency	Percentage
Sex	Female	498	51.446
	Male	470	48.554

Professional category	Ordinary college students	443	45.764
	Sports college students	397	41.012
	High-level athletes	128	13.223
Sports Level	No level	752	77.686
	Level 2	134	13.843
	Level 1 and above	82	8.471

Table 2: Analysis of Sports Commitment Variables

Indicators	Mean	SD	Qualitative Description	Interpretation	Rank
Enthusiastic Commitment	3.132	0.629	Agree	High Level	7
Constrained Commitment	2.944	0.625	Agree	High Level	11
Sport Enjoyment	3.232	0.588	Agree	High Level	1
Valuable Opportunities	3.218	0.61	Agree	High Level	2
Other Priorities	2.931	0.662	Agree	High Level	12
Personal Investments-Loss	3.045	0.659	Agree	High Level	9
Personal Investments-Quantity	3.155	0.645	Agree	High Level	4
Social Constraints	2.989	0.682	Agree	High Level	10
Social Support-Emotional	3.115	0.632	Agree	High Level	8
Social Support-Informational	3.143	0.635	Agree	High Level	5
Desire to Excel-Mastery Achievement	3.183	0.585	Agree	High Level	3
Desire to Excel-Social Achieve	3.133	0.606	Agree	High Level	6
Over-all Mean	3.101		Agree	High Level	

Legend: 3.50–4.00–Strongly Agree/Very High Level; 2.50–3.49–Agree/High Level; 1.50–2.49–Disagree/Low Level; 1.00–1.49–Strongly Disagree/Very Low Level.

In summation, the comprehensive analysis presented in Table 2, encompassing a diverse array of Sports Commitment indicators, culminates in illuminating the multifaceted nature of participants' commitment to sports engagement. Each indicator, characterized by distinct dimensions, affirms the intricate interplay of intrinsic motivations, social dynamics, personal investments, and achievement aspirations within the commitment construct(Luo lan., 2020).

Of noteworthy significance are the indicators of "Sport Enjoyment" and "Valuable Opportunities," both attaining higher ranks and exhibiting strong agreement. These underscore the pivotal roles of intrinsic gratification and the recognition of enriching experiences in fostering commitment(Kang, S., Lee, K., & Kwon, S., 2020). Concurrently, indicators such as "Desire to Excel-Mastery Achievement" and "Desire to Excel-Social Achievement" underline participants' pursuit of personal mastery and competitive recognition, contributing to their dedication(Leyton-Román, M et al., 2021).

The alignment of participants' investment with indicators such as "Personal Investments-Quantity" and "Personal Investments-

Loss" highlights the tangible efforts directed toward their sports involvement. Meanwhile, the nuanced interplay of social factors and limitations is discerned through "Social Constraints" and "Constrained Commitment."(Tara K. Scanlan et al., 2016).

The over-all mean rating of 3.101 underscores the overarching consensus of agreement among the indicators, portraying a holistic commitment profile shaped by a mosaic of influences. The synthesis of these indicators signifies the intricate nexus of motivational, social, and individualistic facets that collectively define participants' commitment.

The findings underscore the necessity of recognizing commitment as a multifaceted phenomenon, influenced by individual, social, and intrinsic factors(Tara K. Scanlan et al., 2016). This scholarly exploration underscores the need for tailored interventions that account for these diverse dimensions to optimize and nurture sports commitment. Future research endeavors could further delve into the interrelationships between these dimensions and their cumulative impact on the trajectory of sports commitment, enriching our comprehension of this intricate construct within the domain of athletic pursuits.

Table 3: Differences in the Assessment of Sports Commitment when grouped by sex variables

Indicators	Sex	Mean	SD	Computed T-value	Sig	Decision on Ho	Interpretation
Valuable Opportunities	Male	3.344	0.629	6.397	0.000***	Rejected	Significant
	Female	3.098	0.565				
Sport Enjoyment	Male	3.366	0.605	7.064	0.000***	Rejected	Significant
	Female	3.106	0.543				
Desire to Excel-Social Achieve	Male	3.292	0.619	8.157	0.000***	Rejected	Significant
	Female	2.984	0.554				
Desire to Excel-Mastery Achieve	Male	3.322	0.608	7.35	0.000***	Rejected	Significant
	Female	3.053	0.531				
Social Support-Informational	Male	3.281	0.644	6.717	0.000***	Rejected	Significant
	Female	3.013	0.6				

Social Support-Emotional	Male	3.251	0.65	6.611	0.000***	Rejected	Significant
	Female	2.987	0.588				
Enthusiastic Commitment	Male	3.283	0.639	7.46	0.000***	Rejected	Significant
	Female	2.99	0.584				
Constrained Commitment	Male	3.085	0.673	7.016	0.000***	Rejected	Significant
	Female	2.81	0.543				
Social Constraints	Male	3.16	0.686	7.796	0.000***	Rejected	Significant
	Female	2.828	0.638				
Personal Investments-Quantity	Male	3.309	0.637	7.369	0.000***	Rejected	Significant
	Female	3.011	0.619				
Personal Investments-Loss	Male	3.235	0.652	9.072	0.000***	Rejected	Significant
	Female	2.866	0.615				
Other Priorities	Male	3.066	0.691	6.327	0.000***	Rejected	Significant
	Female	2.802	0.606				

Table 4:A POST HOC TEST OF Sports Commitment

Indicators	Sex(I)	Sex(J)	Mean(I)	Mean(J)	Difference(I-J)	Sig
Valuable Opportunities	Female	Male	3.098	3.344	-0.246	0.000***
Sport Enjoyment	Female	Male	3.106	3.366	-0.261	0.000***
Desire to Excel-Social Achieve	Female	Male	2.984	3.292	-0.308	0.000***
Desire to Excel-Mastery Achiev	Female	Male	3.053	3.322	-0.269	0.000***
Social Support-Informational	Female	Male	3.013	3.281	-0.268	0.000***
Social Support-Emotional	Female	Male	2.987	3.251	-0.263	0.000***
Enthusiastic Commitment	Female	Male	2.99	3.283	-0.293	0.000***
Constrained Commitment	Female	Male	2.81	3.085	-0.275	0.000***
Social Constraints	Female	Male	2.828	3.16	-0.332	0.000***
Personal Investments-Quantity	Female	Male	3.011	3.309	-0.297	0.000***
Personal Investments-Loss	Female	Male	2.866	3.235	-0.369	0.000***
Other Priorities	Female	Male	2.802	3.066	-0.264	0.000***

The table presents a comprehensive analysis of differences in the assessment of sports commitment based on the sex of participants. It includes various indicators of sports commitment, such as Valuable Opportunities, Sport Enjoyment, Desire to Excel (both Social Achieve and Mastery Achieve), Social Support (both Informational and Emotional), Enthusiastic Commitment, Constrained Commitment, Social Constraints, Personal Investments (both Quantity and Loss), and Other Priorities. The data is divided into two groups: Male and Female. The analysis showcases the frequency, mean, standard deviation, t-value, and p-value for each indicator within the two groups. Across all indicators, males consistently report higher mean scores compared to females, with

statistically significant differences indicated by extremely low p-values (all $p < 0.001$). These results suggest that males generally perceive higher levels of commitment in various dimensions of sports engagement compared to females, as evidenced by the significant differences in their mean scores and likewise the obtained result of the overall mean of female and male and this is substantiated from the obtained.

The results of this study are different from those of Pedro A. Sa ́nchez-Miguel et al. (2019), Tara K. Scanlan et al. (2016), and further testing studies are needed regarding the effect of gender on sport commitment.

Table 5:Differences in the Assessment of Sports Commitment when grouped by Professional category variables

Indicators	Professional category	Mean	SD	ComputedF-value	Sig	Decision on Ho	Interpretation
Desire to Excel-Social Achieve	Sports college students	3.325	0.497	67.083	0.000***	Rejected	Significant
	High-level athletes	3.336	0.611				
	Ordinary college students	2.903	0.613				
Desire to Excel-Mastery Achieve	Sports college students	3.36	0.489	60.15	0.000***	Rejected	Significant
	High-level athletes	3.367	0.613				
	Ordinary college students	2.971	0.586				

Social Support- Informational	Sports college students	3.343	0.513	61.855	0.000***	Rejected	Significant
	High-level athletes	3.331	0.668				
	Ordinary college students	2.91	0.648				
Social Support- Emotional	Sports college students	3.296	0.528	52.255	0.000***	Rejected	Significant
	High-level athletes	3.299	0.657				
	Ordinary college students	2.9	0.645				
Social Constraints	Sports college students	3.167	0.613	33.474	0.000***	Rejected	Significant
	High-level athletes	3.086	0.723				
	Ordinary college students	2.802	0.682				
Personal Investments- Quantity	Sports college students	3.394	0.495	99.875	0.000***	Rejected	Significant
	High-level athletes	3.422	0.612				
	Ordinary college students	2.865	0.653				
Other Priorities	Sports college students	2.99	0.679	2.774	0.063*	Accepted	Not Significant
	High-level athletes	2.872	0.774				
	Ordinary college students	2.894	0.606				
Personal Investments- Loss	Sports college students	3.25	0.554	60.721	0.000***	Rejected	Significant
	High-level athletes	3.241	0.646				
	Ordinary college students	2.805	0.671				
Valuable Opportunities	Sports college students	3.418	0.506	67.566	0.000***	Rejected	Significant
	High-level athletes	3.402	0.625				
	Ordinary college students	2.985	0.61				
Sport Enjoyment	Sports college students	3.422	0.501	56.23	0.000***	Rejected	Significant
	High-level athletes	3.356	0.624				
	Ordinary college students	3.027	0.585				
Constrained Commitment	Sports college students	3.066	0.617	18.4	0.000***	Rejected	Significant
	High-level athletes	3.008	0.678				
	Ordinary college students	2.815	0.591				
Enthusiastic Commitment	Sports college students	3.348	0.519	70.99	0.000***	Rejected	Significant
	High-level athletes	3.309	0.635				
	Ordinary college students	2.888	0.63				

Table 6:A POST HOC TEST

Indicators	Sex(I)	Sex(J)	Mean(I)	Mean(J)	Difference(I-J)	Sig
Valuable Opportunities	Sports college students	Ordinary college students	3.418	2.985	0.432	0.000***
	Sports college students	High-level athletes	3.418	3.402	0.015	0.794
	Ordinary college students	High-level athletes	2.985	3.402	-0.417	0.000***

Sport Enjoyment	Sports college students	Ordinary college students	3.422	3.027	0.395	0.000***
	Sports college students	High-level athletes	3.422	3.356	0.065	0.249
	Ordinary college students	High-level athletes	3.027	3.356	-0.33	0.000***
Desire to Excel-Social Achieve	Sports college students	Ordinary college students	3.325	2.903	0.422	0.000***
	Sports college students	High-level athletes	3.325	3.336	-0.01	0.856
	Ordinary college students	High-level athletes	2.903	3.336	-0.433	0.000***
Desire to Excel-Mastery Achiev	Sports college students	Ordinary college students	3.36	2.971	0.389	0.000***
	Sports college students	High-level athletes	3.36	3.367	-0.007	0.901
	Ordinary college students	High-level athletes	2.971	3.367	-0.396	0.000***
Social Support-Informational	Sports college students	Ordinary college students	3.343	2.91	0.432	0.000***
	Sports college students	High-level athletes	3.343	3.331	0.011	0.853
	Ordinary college students	High-level athletes	2.91	3.331	-0.421	0.000***
Social Support-Emotional	Sports college students	Ordinary college students	3.296	2.9	0.396	0.000***
	Sports college students	High-level athletes	3.296	3.299	-0.003	0.963
	Ordinary college students	High-level athletes	2.9	3.299	-0.399	0.000***
Enthusiastic Commitment	Sports college students	Ordinary college students	3.348	2.888	0.461	0.000***
	Sports college students	High-level athletes	3.348	3.309	0.039	0.509
	Ordinary college students	High-level athletes	2.888	3.309	-0.421	0.000***
Constrained Commitment	Sports college students	Ordinary college students	3.066	2.815	0.252	0.000***
	Sports college students	High-level athletes	3.066	3.008	0.059	0.347
	Ordinary college students	High-level athletes	2.815	3.008	-0.193	0.002***
Social Constraints	Sports college students	Ordinary college students	3.167	2.802	0.364	0.000***
	Sports college students	High-level athletes	3.167	3.086	0.081	0.228
	Ordinary college students	High-level athletes	2.802	3.086	-0.283	0.000***
Personal Investments-Quantity	Sports college students	Ordinary college students	3.394	2.865	0.528	0.000***
	Sports college students	High-level athletes	3.394	3.422	-0.028	0.636
	Ordinary college students	High-level athletes	2.865	3.422	-0.557	0.000***

Personal Investments-Loss	Sports college students	Ordinary college students	3.25	2.805	0.444	0.000***
	Sports college students	High-level athletes	3.25	3.241	0.009	0.884
	Ordinary college students	High-level athletes	2.805	3.241	-0.435	0.000***

Table 5 and Table 6 presents a comprehensive analysis of differences in the assessment of sports commitment based on various professional categories. The examined indicators include Desire to Excel (both Social Achieve and Mastery Achieve), Social Support (both Informational and Emotional), Social Constraints, Personal Investments (both Quantity and Loss), Other Priorities, Valuable Opportunities, Sport Enjoyment, Constrained Commitment, and Enthusiastic Commitment, within three categories: Sports college students, High-level athletes, and Ordinary college students. The data reveals noteworthy patterns: Sports college students consistently show higher mean scores in Desire to Excel, Social Support, Personal Investments, Valuable Opportunities, Sport Enjoyment, and Enthusiastic Commitment

compared to Ordinary college students, with significant differences indicated by very low p-values (all $p < 0.001$). High-level athletes typically fall between the two student categories, showcasing intermediate mean scores.

However, in terms of Other Priorities and Constrained Commitment, no significant differences were observed among the three categories. In summary, these results suggest that Sports college students generally exhibit stronger sports commitment levels across multiple dimensions, underscoring the potential influence of their professional category on their commitment levels(Lian, C. W et al., 2017; Hochul Shin, & Jongsoo Kim, 2021; Megawaty, M et al., 2022).

Table 7: Differences in the Assessment of Sports Commitment when grouped by Sports Level variables

Indicators	Sports Level	Mean	SD	Computed F-value	Sig	Decision on Ho	Interpretation
Desire to Excel-Social Achieve	Level 1 and above	3.344	0.593	17.713	0.000***	Rejected	Significant
	No level	3.073	0.605				
	Level 2	3.348	0.542				
Desire to Excel-Mastery Achiev	Level 1 and above	3.335	0.581	11.424	0.000***	Rejected	Significant
	No level	3.136	0.581				
	Level 2	3.357	0.56				
Social Support-Informational	Level 1 and above	3.241	0.69	13.587	0.000***	Rejected	Significant
	No level	3.09	0.632				
	Level 2	3.384	0.559				
Social Support-Emotional	Level 1 and above	3.232	0.665	11.675	0.000***	Rejected	Significant
	No level	3.064	0.629				
	Level 2	3.328	0.58				
Social Constraints	Level 1 and above	2.994	0.742	5.959	0.003***	Rejected	Significant
	No level	2.956	0.675				
	Level 2	3.175	0.655				
Personal Investments-Quantity	Level 1 and above	3.433	0.615	25.72	0.000***	Rejected	Significant
	No level	3.078	0.646				
	Level 2	3.422	0.53				
Personal Investments-Loss	Level 1 and above	3.183	0.654	12.771	0.000***	Rejected	Significant
	No level	2.99	0.659				
	Level 2	3.273	0.608				

Other Priorities	Level 1 and above	2.822	0.822	1.229	0.293	Accepted	Not Significant
	No level	2.943	0.63				
	Level 2	2.93	0.721				
Valuable Opportunities	Level 1 and above	3.387	0.616	16.411	0.000***	Rejected	Significant
	No level	3.159	0.607				
	Level 2	3.444	0.546				
Sport Enjoyment	Level 1 and above	3.332	0.608	9.855	0.000***	Rejected	Significant
	No level	3.189	0.586				
	Level 2	3.415	0.551				
Constrained Commitment	Level 1 and above	3.032	0.689	1.135	0.322	Rejected	Significant
	No level	2.929	0.612				
	Level 2	2.97	0.652				
Enthusiastic Commitment	Level 1 and above	3.287	0.63	12.613	0.000***	Rejected	Significant
	No level	3.079	0.627				
	Level 2	3.337	0.579				

Table 8:A POST HOC TEST

Indicators	Sex(I)	Sex(J)	Mean(I)	Mean(J)	Difference(I-J)	Sig
Valuable Opportunities	Sports college students	Ordinary college students	3.418	2.985	0.432	0.000***
	Sports college students	High-level athletes	3.418	3.402	0.015	0.794
	Ordinary college students	High-level athletes	2.985	3.402	-0.417	0.000***
Sport Enjoyment	Sports college students	Ordinary college students	3.422	3.027	0.395	0.000***
	Sports college students	High-level athletes	3.422	3.356	0.065	0.249
	Ordinary college students	High-level athletes	3.027	3.356	-0.33	0.000***
Desire to Excel-Social Achieve	Sports college students	Ordinary college students	3.325	2.903	0.422	0.000***
	Sports college students	High-level athletes	3.325	3.336	-0.01	0.856
	Ordinary college students	High-level athletes	2.903	3.336	-0.433	0.000***
Desire to Excel-Mastery Achiev	Sports college students	Ordinary college students	3.36	2.971	0.389	0.000***
	Sports college students	High-level athletes	3.36	3.367	-0.007	0.901
	Ordinary college students	High-level athletes	2.971	3.367	-0.396	0.000***
Social Support-Informational	Sports college students	Ordinary college students	3.343	2.91	0.432	0.000***
	Sports college students	High-level athletes	3.343	3.331	0.011	0.853
	Ordinary college students	High-level athletes	2.91	3.331	-0.421	0.000***
Social Support-Emotional	Sports college students	Ordinary college students	3.296	2.9	0.396	0.000***
	Sports college students	High-level athletes	3.296	3.299	-0.003	0.963
	Ordinary college students	High-level athletes	2.9	3.299	-0.399	0.000***

Enthusiastic Commitment	Sports college students	Ordinary college students	3.348	2.888	0.461	0.000***
	Sports college students	High-level athletes	3.348	3.309	0.039	0.509
	Ordinary college students	High-level athletes	2.888	3.309	-0.421	0.000***
Constrained Commitment	Sports college students	Ordinary college students	3.066	2.815	0.252	0.000***
	Sports college students	High-level athletes	3.066	3.008	0.059	0.347
	Ordinary college students	High-level athletes	2.815	3.008	-0.193	0.002***
Social Constraints	Sports college students	Ordinary college students	3.167	2.802	0.364	0.000***
	Sports college students	High-level athletes	3.167	3.086	0.081	0.228
	Ordinary college students	High-level athletes	2.802	3.086	-0.283	0.000***
Personal Investments-Quantity	Sports college students	Ordinary college students	3.394	2.865	0.528	0.000***
	Sports college students	High-level athletes	3.394	3.422	-0.028	0.636
	Ordinary college students	High-level athletes	2.865	3.422	-0.557	0.000***
Personal Investments-Loss	Sports college students	Ordinary college students	3.25	2.805	0.444	0.000***
	Sports college students	High-level athletes	3.25	3.241	0.009	0.884
	Ordinary college students	High-level athletes	2.805	3.241	-0.435	0.000***

Table 7 and Table 8 provides an in-depth analysis of variations in the evaluation of sports commitment across different sports levels. The examined indicators encompass Desire to Excel (both Social Achieve and Mastery Achieve), Social Support (both Informational and Emotional), Social Constraints, Personal Investments (both Quantity and Loss), Other Priorities, Valuable Opportunities, Sport Enjoyment, Constrained Commitment, and Enthusiastic Commitment. The data was categorized by sports levels: Level 1 and above, No level, and Level 2. The results indicate that individuals in higher sports levels (Level 1 and above) generally display higher mean scores in Desire to Excel, Social Support, Personal Investments, Valuable Opportunities, Sport

Enjoyment, and Enthusiastic Commitment compared to those with No level or at Level 2. Significant differences were found, supported by very low p-values (all $p < 0.001$), suggesting that higher sports levels correspond to stronger levels of sports commitment(Hochul Shin, & Jongsoo Kim,2021; O'Neil, L., & Hodge, K., 2020). However, for Social Constraints, Other Priorities, and Constrained Commitment, no significant differences were observed among the three sports level categories. This analysis underscores the positive relationship between sports level and commitment dimensions, indicating that individuals at higher sports levels tend to exhibit more robust commitment levels across various dimensions of sports engagement(Zhu Dapeng, & Li Ailin, 2019).

Table 9: Analysis of Sports Motivation Variables

Sports Motivation	Mean	SD	Qualitative Description	Interpretation	RANK
Fitness Motivation	3.415	0.584	Agree	High Level	2
Competence Motivation	3.328	0.624	Agree	High Level	5
Enjoyment Motivation	3.422	0.585	Agree	High Level	1
Appearance Motivation	3.397	0.611	Agree	High Level	3
Social Motivation	3.374	0.608	Agree	High Level	4
Over-all Mean	3.387		Agree	High Level	

Legend: 3.50–4.00–Strongly Agree/Very High Level; 2.50–3.49–Agree/High Level; 1.50–2.49–Disagree/Low Level; 1.00–1.49–Strongly Disagree/Very Low Level.

Table 9 offers a comprehensive analysis of various sports motivation variables, shedding light on participants' motivation

levels across different dimensions of sports engagement. In summary, the overall mean motivation score is 3.387, reflecting a generally

agreeable attitude towards sports motivation among participants. Enjoyment motivation stands out as the most prominent driver, highlighting the importance of positive experiences in influencing engagement decisions. Appearance motivation, social motivation, and fitness motivation also hold considerable significance, while competence motivation ranks comparatively lower.

Furthermore, a study by Leyton-Román, M., de la Vega, R., & Jiménez-Castuera, R. (2021) emphasized the impact of appearance motivation on exercise adherence and recognized the importance of appearance-related factors in influencing individuals' exercise behavior. This supports the participants' expressed motivation towards appearance-related aspects in this study.

Table 10: Differences in the Assessment of Sports Motivation when grouped by sex variables

Indicators	Sex	Mean	SD	Computed T-value	Sig	Decision on Ho	Interpretation
Fitness Motivation	Male	3.441	0.65	1.374	0.170	Accepted	Not Significant
	Female	3.39	0.513				
Competence Motivation	Male	3.395	0.676	3.253	0.001***	Rejected	Significant
	Female	3.265	0.564				
Enjoyment Motivation	Male	3.427	0.644	0.247	0.805	Accepted	Not Significant
	Female	3.418	0.524				
Social Motivation	Male	3.394	0.668	1.029	0.304	Accepted	Not Significant
	Female	3.354	0.546				
Appearance Motivation	Male	3.365	0.673	-1.591	0.112	Accepted	Not Significant
	Female	3.428	0.545				

Note: ***, **, * represent 1%, 5%, and 10% significance levels, respectively.

Table 11: A POST HOC TEST OF Competence Motivation

Indicators	Sex(I)	Sex(J)	Mean(I)	Mean(J)	Difference(I-J)	Sig
Competence Motivation	Male	Female	3.395	3.265	0.13	0.001***

Table 11 provides a comprehensive analysis of differences in the assessment of sports motivation when grouped by sex variables, examining various indicators, their means, standard deviations, and statistical significance. These insights illuminate potential disparities in sports motivation across gender categories.

In conclusion, the analysis reveals gender-related differences in specific aspects of sports motivation. Males exhibit higher competence motivation compared to females, possibly reflecting their emphasis on skill improvement. However, both genders

share comparable levels of motivation in fitness, enjoyment, social engagement, and appearance-related dimensions. These findings corroborate prior research. For instance, Wang, M. T., Chow, A., & Amemiya, J. (2017) and Ryan, R. M., & Deci, E. L. (2017) identified gender-related differences in competence motivation, aligning with the results observed in this study. Moreover, Trigueros, R et al. (2020) emphasized the universal nature of enjoyment and social motivations in sports participation, supporting the consistent findings across genders.

Table 12: Differences in the Assessment of Sports Motivation when grouped by Professional category variables

Indicators	Professional category	Mean	SD	Computed F-value	Sig	Decision on Ho	Interpretation
Fitness Motivation	Sports college students	3.506	0.554	12.087	0.000***	Rejected	Significant
	High-level athletes	3.471	0.65				
	Ordinary college students	3.316	0.576				
Competence Motivation	Sports college students	3.491	0.566	32.705	0.000***	Rejected	Significant
	High-level athletes	3.406	0.66				
	Ordinary college students	3.16	0.621				
Enjoyment Motivation	Sports college students	3.509	0.562	10.065	0.000***	Rejected	Significant
	High-level athletes	3.464	0.648				
	Ordinary college students	3.333	0.574				
Appearance Motivation	Sports college students	3.445	0.595	2.087	0.125	Accepted	Not Significant
	High-level athletes	3.378	0.651				
	Ordinary college students	3.36	0.612				
Social Motivation	Sports college students	3.459	0.583	9.567	0.000***	Rejected	Significant
	High-level athletes	3.424	0.665				
	Ordinary college students	3.282	0.601				

Note: ***, **, * represent 1%, 5%, and 10% significance levels, respectively.

Table 13:A POST HOC TEST

Indicators	Sex(I)	Sex(J)	Mean(I)	Mean(J)	Difference(I-J)	Sig
Fitness Motivation	Sports college students	Ordinary college students	3.506	3.316	0.19	0.000***
	Sports college students	High-level athletes	3.506	3.471	0.035	0.552
	Ordinary college students	High-level athletes	3.316	3.471	-0.155	0.007***
Competence Motivation	Sports college students	Ordinary college students	3.491	3.16	0.332	0.000***
	Sports college students	High-level athletes	3.491	3.406	0.085	0.167
	Ordinary college students	High-level athletes	3.16	3.406	-0.247	0.000***
Enjoyment Motivation	Sports college students	Ordinary college students	3.509	3.333	0.176	0.000***
	Sports college students	High-level athletes	3.509	3.464	0.045	0.442
	Ordinary college students	High-level athletes	3.333	3.464	-0.131	0.024**
Social Motivation	Sports college students	Ordinary college students	3.459	3.282	0.177	0.000***
	Sports college students	High-level athletes	3.459	3.424	0.035	0.570
	Ordinary college students	High-level athletes	3.282	3.424	-0.142	0.019**

The data presents the mean and standard deviation for different indicators of sports motivation, grouped by professional category variables: Sports college students, High-level athletes, and Ordinary college students.

For the indicator of Fitness Motivation, the mean scores differ among the groups. Sports college students have the highest mean (3.506), followed by High-level athletes (3.471), and then Ordinary college students (3.316). The ANOVA test indicates a significant difference among these groups ($F = 12.087, p < 0.001$). This finding suggests that sports college students exhibit higher fitness motivation compared to the other two groups.

Similarly, in terms of Competence Motivation, there are significant differences among the groups ($F = 32.705, p < 0.001$). Sports college students show the highest mean (3.491), followed by High-level athletes (3.406), and Ordinary college students (3.16). This implies that sports college students perceive higher competence motivation compared to the other groups.

Enjoyment Motivation also shows significant differences ($F = 10.065, p < 0.001$) among the groups. Sports college students have the highest mean (3.509), followed by High-level athletes (3.464), and then Ordinary college students (3.333). This indicates that

sports college students experience greater enjoyment motivation in sports than the other groups.

In terms of Appearance Motivation, there are no significant differences among the groups ($F = 2.087, p = 0.125$). The mean scores are relatively close, with Sports college students having the highest mean (3.445), followed by High-level athletes (3.378), and then Ordinary college students (3.36).

Finally, for Social Motivation, there are significant differences among the groups ($F = 9.567, p < 0.001$). Sports college students exhibit the highest mean (3.459), followed by High-level athletes (3.424), and then Ordinary college students (3.282). This suggests that sports college students perceive higher social motivation in the context of sports.

These findings are consistent with previous research conducted by Xiao Tao, & Yao Jie (2022); Wang, M. T., Chow, A., & Amemiya, J. (2017), who found similar trends in sports motivation across different professional categories. Wang, Zebo. (2018) also supported these findings in their study on sports psychology. The results highlight the importance of considering professional category variables when assessing sports motivation, as these differences can impact an individual's motivation in sports and related activities.

Table 14:Differences in the Assessment of Sports Motivation when grouped by Sports Level variables

Indicators	Sports Level	Mean	SD	ComputedF-value	Sig	Decision on Ho	Interpretation
Fitness Motivation	Level 1 and above	3.463	0.684	1.618	0.199	Accepted	Not Significant
	No level	3.397	0.566				
	Level 2	3.485	0.611				
Competence Motivation	Level 1 and above	3.407	0.705	3.372	0.035**	Rejected	Significant
	No level	3.301	0.613				
	Level 2	3.435	0.624				

Enjoyment Motivation	Level 1 and above	3.447	0.679	0.724	0.485	Accepted	Not Significant
	No level	3.41	0.567				
	Level 2	3.473	0.623				
Appearance Motivation	Level 1 and above	3.333	0.689	0.619	0.539	Accepted	Not Significant
	No level	3.399	0.597				
	Level 2	3.428	0.638				
Social Motivation	Level 1 and above	3.411	0.732	0.938	0.392	Accepted	Not Significant
	No level	3.359	0.588				
	Level 2	3.43	0.633				

Table 15:A POST HOC TEST

Indicators	Sports Level(I)	Sports Level(J)	Mean(I)	Mean(J)	Difference(I-J)	Sig
Competence Motivation	Level 1 and above	Level 2	3.407	3.435	-0.029	0.741
	Level 1 and above	No level	3.407	3.301	0.106	0.144
	Level 2	No level	3.435	3.301	0.135	0.021**

The data displays the mean and standard deviation for various indicators of sports motivation, categorized by Sports Level: Level 1 and above, No level, and Level 2.

For Fitness Motivation, there are no significant differences observed among the groups ($F = 1.618, p = 0.199$). The mean scores are as follows: Level 1 and above (3.463), No level (3.397), and Level 2 (3.485).

Regarding Competence Motivation, there is a significant difference among the groups ($F = 3.372, p = 0.035$). Level 1 and above has a mean of 3.407, No level has a mean of 3.301, and Level 2 has a mean of 3.435. This suggests that individuals at Level 1 and above exhibit higher competence motivation compared to those at No level.

Enjoyment Motivation does not show any significant differences among the groups ($F = 0.724, p = 0.485$). The mean scores are as follows: Level 1 and above (3.447), No level (3.41), and Level 2 (3.473).

Similarly, there are no significant differences in Appearance Motivation among the groups ($F = 0.619, p = 0.539$). The mean scores for this indicator are: Level 1 and above (3.333), No level (3.399), and Level 2 (3.428).

For Social Motivation, no significant differences are observed ($F = 0.938, p = 0.392$). The mean scores for Social Motivation are: Level 1 and above (3.411), No level (3.359), and Level 2 (3.43).

These findings align with the research conducted by Amaro, N et al. (2023); Berestetska, K. (2016); Gomez-Lopez, M et al. (2019), who found similar results regarding the impact of sports level on motivation. Additionally, Gomez-Lopez, M et al. (2019) highlighted the complexities of assessing motivation within varying sports levels. Thus, it can be concluded that while some differences in competence motivation exist based on sports level, other motivational factors such as fitness, enjoyment, appearance, and social motivation do not exhibit significant variations across different sports levels.

Table 16:ANOVA on Sports commitment and motivation of college students at different Sports levels

Variable	Sports Level	Mean	SD	ComputedF-value	Sig	Decision on Ho	Interpretation
Sports commitment	Level 1 and above	3.218	0.578	10.875	0.000***	Rejected	Significant
	No level	3.057	0.572				
	Level 2	3.282	0.522				
Sports motivation	Level 1 and above	3.412	0.666	1.146	0.318	Accepted	Not Significant
	No level	3.373	0.546				
	Level 2	3.45	0.6				

Table 17:A POST HOC TEST of Sports commitment

Indicators	Sports Level(I)	Sports Level(J)	Mean(I)	Mean(J)	Difference(I-J)	Sig
Sports commitment	Level 1 and above	Level 2	3.218	3.282	-0.063	0.424
	Level 1 and above	No level	3.218	3.057	0.161	0.014**
	Level 2	No level	3.282	3.057	0.225	0.000***

In this analysis, we delve into the differences in sports commitment and motivation among college students at different sports levels, as presented in Table 16. The table provides the mean and standard deviation for two variables: Sports commitment and Sports motivation, categorized by Sports Level: Level 1 and above, No level, and Level 2.

For the variable of Sports commitment, significant differences are observed among the groups ($F = 10.875, p < 0.001$). The mean scores for Sports commitment are as follows: Level 1 and above

(3.218), No level (3.057), and Level 2 (3.282). This indicates that individuals at Level 1 and above demonstrate a higher level of sports commitment compared to those at No level(Hochul Shin, & Jongsoo Kim, 2021; Gómez-López, M et al., 2020; Zhu Dapeng, & Li Ailin, 2019).

As for Sports motivation, there are no significant differences among the groups ($F = 1.146, p = 0.318$). The mean scores for Sports motivation are: Level 1 and above (3.412), No level (3.373), and Level 2 (3.45).

These findings are consistent with the research conducted by by Xiao Tao, & Yao Jie (2022); Wang, M. T., Chow, A., & Amemiya, J. (2017), who identified similar trends in sports commitment across different sports levels among college students. Gomez-Lopez, M et al. (2019) also highlighted the complex relationship between sports motivation and commitment. Therefore, it can be concluded that while sports commitment shows variations based on sports level, sports motivation remains relatively consistent among college students across different sports levels.

Table 18: Pearson correlation analysis of exercise motivation and exercise commitment

	Sports Commitment	Sports Motivation
Sports Commitment	1(0.000***)	0.625(0.000***)
Sports Motivation	0.625(0.000***)	1(0.000***)

Note: ***, **, * represent 1%, 5%, and 10% significance levels, respectively.

In this analysis, we delve into the relationship between exercise motivation and exercise commitment using Pearson correlation analysis, as presented in Table 18. The table displays the Pearson correlation coefficients and associated significance levels between the two variables: Sports Commitment and Sports Motivation.

The correlation between Sports Commitment and Sports Motivation is highly significant ($r = 0.625$, $p < 0.001$). This indicates a strong positive SIGNIFICANT correlation between the two variables, suggesting that individuals with higher exercise commitment tend to have higher exercise motivation, and vice versa.

These findings align with the research conducted by Avci, K. S et al., (2018), who identified a significant positive correlation between exercise motivation and commitment in their study on sports psychology. Similarly, Avci, K. S et al., (2018); Scanlan, T.K et al. (2016); Weiss, W. M., & Aloe, A. M. (2019) also found a strong relationship between these variables in their research on exercise behavior. This consistent evidence highlights the importance of both exercise motivation and commitment in promoting consistent engagement in physical activities.

In conclusion, the Pearson correlation analysis confirms the strong positive correlation between exercise motivation and exercise commitment, which has been supported by prior research by authors such as Albert, E et al., (2021) and Cid, L et al., (2019). This suggests that individuals who are more motivated are likely to be more committed to their exercise routines, emphasizing the interconnectedness of these two factors in promoting a healthy and active lifestyle.

4 Summary of Findings, Conclusion, Recommendations

This chapter presents the summary of findings culled from the results of the survey and casual interview with the respondents, conclusions based on the summary of findings, and recommendations that are culled from the conclusions.

4.1 Summary of findings

1. Based on this study, a total of 968 respondents were interviewed, of which 498 were male and 470 were female. Most of the respondents were average students with a low percentage of high level athletes.

2. Among the indicators of sport commitment, "Sport Enjoyment" with a mean of 3.23 and "Valuable Opportunities" with a mean of 3.21 ranked the highest and showed strong consistency. The critical role of intrinsic satisfaction and recognition of enriching experiences in promoting commitment is emphasized.

3. Across all dimensions of sport participation, men typically perceive higher levels of commitment than women. College students majoring in physical education and those with high levels of athleticism had the highest mean scores on all indicators of sports motivation, which emphasizes the important influence of students' professional category and athletic level on their level of commitment.

4. Respondents held relatively positive attitudes toward sport motivation. Enjoyment motivation takes the lead with a mean score of 3.422. Emphasize the importance of positive experiences in influencing participation in decision-making.

5. Males exhibit higher competence motivation compared to females. However, both genders share comparable levels of motivation in fitness, enjoyment, social engagement, and appearance-related dimensions. There were significant differences in the motivation of college students in different types of majors, with college students majoring in physical education having the highest motivation for sports.

6. There was a significant difference in sports commitment between college students with higher levels of physical activity and those with lower levels of physical activity. However, there were no significant differences in sport motivation between university students with different levels of physical activity. Finally, there was a significant positive correlation between sport motivation and sport commitment, emphasizing the interrelatedness of these two factors in promoting a healthy and active lifestyle.

4.2 Conclusion

1. The relatively balanced gender distribution means that the survey is representative of both genders and the results may have wider applicability. The low proportion of high level athletes may affect the depth and breadth of the study, particularly in terms of conclusions relating to professional sports.

2. Intrinsic satisfaction and enriching experiences play a key role in fostering commitment, with "Sport Enjoyment" and "Valuable Opportunities" being important factors in supporting commitment to sport. Interventions should be tailored to individual differences, social contexts, and intrinsic needs to promote commitment.

3. Gender influences the level of commitment in all dimensions of sports participation, with men being more committed. University students majoring in sports, as well as high-level athletes, showed higher mean scores, emphasizing the positive relationship between the category of major, the level of sport and the dimensions of sports commitment, showing stronger levels of commitment.

4. Positively motivated attitudes towards sport help to promote participants' engagement in physical activity. Positive experience and enjoyment are important factors that influence an individual's decision to participate, and are key motivators that lead to sustained participation. Different motivational factors, such as appearance, socialization and health, play an important role in influencing participants' level of engagement.

5. Males placed more emphasis on skill improvement, which may account for their higher competitive motivation, while health,

enjoyment, socialization, and appearance motivations performed similarly between the genders. College students majoring in sports showed higher levels of motivation on several motivational dimensions, which may be related to their professional environment and goals. Professional category variables have an impact on sport motivation, and researchers need to fully consider these differences to more accurately understand individual motivation.

6. there is an association between physical activity levels and sport commitment among college students, and students with higher levels of physical activity may be more inclined to have stronger sport commitments. Despite the different levels of physical activity, college students were relatively consistent in their sport motivation, which may imply that motivational factors are to some extent independent of physical activity level. The positive correlation between sport motivation and sport commitment implies a strong link between these two factors in encouraging an active lifestyle.

4.3 Recommendations

1. In the follow-up study, the proportion of high-level athletes can be increased by collecting more data in order to obtain more accurate conclusions in the field of professional sports. In view of the low proportion of high-level athletes, the follow-up study can try to cooperate with professional sports organizations in order to obtain the participation of more professional athletes.

2. Targeted trainings and activities can be conducted for different dimensions of commitment to enhance participants' intrinsic motivation and sense of personal involvement. Emphasis is placed on providing enriching experiences and rewarding opportunities to promote participants' satisfaction and commitment to physical activity. Provide appropriate challenges and support for participants seeking personal proficiency and athletic recognition to maintain their level of commitment.

3. Given the gender differences in commitment, female participants could be provided with more targeted support and motivation to promote their level of commitment across the dimensions. For college students majoring in sports, further research

can be conducted on the specific impact of career background on commitment and the findings can be used to develop targeted training and support programs. In promoting the development and commitment of sport participants, special attention should be given to high-level athletes by providing appropriate support and challenges to maintain their strong commitment levels.

4. In promoting participation in sports activities, emphasis should be placed on positive experiences and enjoyment to motivate participants' enthusiasm and commitment. Understanding participants' personal motivations, especially appearance, social and health motivations, can help develop more targeted promotion strategies. Physical activities can be designed to incorporate a variety of motivational factors in order to create a more engaging participation experience, which in turn will increase sustained participation rates among participants.

5. Motivational and training strategies can be tailored to better meet the needs of participants of different genders based on their different motivational emphases. Strategies for fostering health, enjoyment, and social motivation can be further explored in professional settings, such as colleges of physical education, to keep students actively engaged. Consider differences in professional category variables when designing motivational programs and activities to ensure that individual motivation is effectively supported and directed.

6. Encouraging and supporting university students to engage in more physical activity may help to increase their level of commitment to sport, thereby promoting healthy lifestyles. Although motivation is relatively consistent across physical activity levels, different aspects of motivation should be considered in physical activity promotion to better meet the needs of different individuals. When promoting active lifestyles, it is possible to focus on both motivation and commitment to achieve a more integrated health promotion effect.

5 Innovative Student Athletic Incentive Programs

Areas of concern	Objectives	Programs/strategies	Persons involved	Budget	Success indicators
Enhancing the level of commitment of physical activity participants	Focus on intrinsic motivation, social interaction, and personal engagement dimensions. Promote positive experiences and enrichment opportunities in physical activity to foster intrinsic satisfaction and commitment in participants.	Intrinsic Motivation Cultivation: Organize motivational activities that emphasize the fun and self-improvement of participating in sports activities to promote intrinsic motivation cultivation. Social Interaction Creation: Planning social activities and team projects to promote interaction and collaboration among participants and enhance the experience of social interaction. Personal Engagement Support: Provide individualized training plans and goal setting to help participants engage more deeply in sports activities.	Physical Education Teachers All students	2000CNY	Participants' satisfaction and positive experiences with physical activity increased, participants' level of commitment to sport continued to grow, and physical activity participation and sustained participation increased.

<p>To raise the level of commitment of individuals of different genders in terms of sports participation, covering several dimensions.</p>	<p>Enhancing the level of commitment of female participants in sport participation, with special attention to intrinsic motivation for commitment.</p>	<p>Commitment cultivation of female participants: organizing special symposiums and discussions to emphasize the intrinsic motivation and value of female participants in sports. Social Support Network: Create a sports social platform to encourage interaction and support among participants. Experience Enrichment Activities: Design diverse sports activities and competitions to provide enriching experiences and opportunities to inspire participants' commitment. Incentive Reward Programs: Design reward programs to encourage participants to demonstrate stronger commitment in sport.</p>	<p>Sports psychologist Event planners Activity Staff</p>	<p>10000CNY</p>	<p>Female participants showed significantly higher levels of sport commitment, especially in the intrinsic motivation dimension. Participants' sustained engagement in sports activities increased significantly. Participation and effectiveness of reward programs increased significantly.</p>
<p>Enhancing Student Motivation in Sports</p>	<p>Enhancement of participants' motivation to engage in positive sport, with special emphasis on the role of pleasurable motivation and positive experiences. Motivate participants to be more active in sport through strategies for different motivational factors. Enhance the role of appearance, social and health motivation in sport participation to promote more holistic motivational support.</p>	<p>Pleasurable Motivation Fostering: Organizes physical activities that are pleasurable experiences and emphasizes the importance of positive experiences in promoting motivation. Education on motivational factors: Awareness-raising and educational activities on motivational factors to help participants better understand the role of different motivations. Health promotion activities: designing health and fitness activities to highlight the importance of health motivation in physical activity. Appearance and Social Motivation Incentives: Design appearance and socialization related competitions and activities to stimulate support for different motivational factors.</p>	<p>physical education teacher Health Specialist Advocacy staff</p>	<p>2000CNY</p>	<p>Participants' experience and motivation in the pleasure motivation dimension increased significantly. Participants have increased knowledge and awareness of different motivational factors. Participation and motivation in appearance and socialization related activities increased. Participation and effectiveness of motivational incentive reward programs increased significantly.</p>

<p>Consider the impact of different occupational categories on motivation in sport and promote positive individual motivation in sport and related activities.</p>	<p>Reduce gender differences and equalize the performance of men and women in sports motivation. Strategies to stimulate positive individual motivation in the dimensions of health, pleasure, socialization and appearance through different motivational factors.</p>	<p>Promoting gender-balanced motivation: organizing sports activities and competitions that encourage female participation and emphasize the importance of women's skills enhancement. Cultivation of diverse motivational factors: Health, pleasure, socialization and appearance-related activities are conducted to stimulate different dimensions of positive motivation. Differential support for occupational categories: Individualized motivational programs are designed for individuals in different occupational categories. Professional guidance: Provide sport psychology counseling to help individuals understand the impact of motivational differences and coping strategies.</p>	<p>physical education teacher Psychologist Activity staff</p>	<p>5000CNY</p>	<p>Participating females showed an increase in sports motivation and a decrease in gender differences. Activities with different motivational factors had positive participant feedback and stimulated individual positive motivation. Participants in different occupational categories showed increased performance in sport motivation. Individuals have increased diversity and motivation in sport motivation. Participation and satisfaction in diverse sports activities increased.</p>
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