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RESEARCH ARTICLE

THE IMPACT OF TABLE TENNIS ON THE DEVELOPMENT OF ACADEMIC PRACTICE OF ATHLETES

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ABSTRACT

Background: The minor discomforts of pregnancy present difficulties for the health care provider as well as for the pregnant woman herself. Management of the various symptoms requires astute observations and the ability to individualize therapy. Knowledge of a variety of treatment options, therefore, allows practitioners to collaborate with their patients in selecting the best therapeutic approach for the specific situation. **Method:** A Quantitative research approach with pre experimental research design with one group pre and posttest design was used to carry out the study. Primi gravida mothers from selected maternity centers who were fulfilling the inclusion criteria were selected by using Non - probability convenient sampling technique. Total 60 sample was included in the study. **Results:** The present study reveals that the present study reveals that the overall knowledge scores of respondents were found to be 54.92% with standard deviation 2.774 in pretest. The overall knowledge scores of respondents were found to be 73.5% with standard deviation 1.879 in post test. The obtained t- test value was 18.105 which shows statistical significance at $p < 0.05$. There was statistically significant difference in level of knowledge of primigravida mothers after implementation of planned teaching programme. **Conclusions:** The obtained t- test value was 18.105 which shows statistical significance at $p < 0.05$. There was statistically significant difference in level of knowledge of primigravida mothers after implementation of planned teaching programme. This supports that planned teaching programme on minor ailments in terms of home remedies is effective in increasing the knowledge level of primigravida mothers.

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INTRODUCTION

The culture of table tennis is the driving force behind the sport's growth. But to support the long-term growth of table tennis, it is vital theoretically and practically to understand table tennis culture. When one looks back at the development of sports in China, one can see how closely it has always been linked to the aspiration to improve the nation and its citizens. Table tennis, in addition to being a competitive sport, has its own culture and set of values. Table tennis values moral integrity, teamwork, goal-setting, and competitive awareness. These characteristics provide opportunities and insights for transforming the winning culture of table tennis into academic practice. Academic practice is the foundation of student learning and knowledge transfer in the realm of education. Academic performance, creativity, teamwork, academic integrity, and professional ethics are all included in academic practice. The education community has been looking for novel teaching approaches and techniques to develop students' comprehensive literacy and raise their academic standing. Integrating important components and ideals from table tennis into academic practice in order to support students' academic success and personal growth is what it means to transform the winning culture of table tennis into good academic practice. This change can increase students' desire for learning, foster their feeling of collaboration and competition, and help them uphold academic integrity and respect for intellectual property.

Thus, understanding the parallels and differences between table tennis winning culture and academic practice can lead to the crafting of effective strategies and methods to promote the development of academic practice, improve students' academic performance and comprehensive literacy, and further promote educational reform.

Background of the study: Nearly a century has passed since table tennis first became popular. It continually innovates and evolves while being developed. Table tennis is a very well-liked sport that fits all the molds: tiny ball, quick pace, basic equipment, scarcely any age restrictions, etc. It combines entertainment and exercise. Although there is continuous improvement in the national comprehensive strength, the tournament aura has decreased a bit historically. However, it still cannot be denied that table tennis is a highly competitive sport, and the winning culture emphasizes individual effort and competitive spirit. Hence, translating such in the academic field, proves that the same level of collaboration and teamwork are also very important. The winning culture of table tennis encourages athletes to put in a lot of effort and recognizes and rewards their achievements. In the academic community, students and teachers should also be rewarded for their hard work and outstanding achievements. Establish scholarships, academic honors, and academic competitions to motivate students to achieve outstanding results in academic research and learning.

In addition, table tennis requires athletes to possess qualities of focus and persistence. In the academic field, focus and persistence are also very important. Cultivating students' interest in academic research and encouraging them to maintain a focused and persistent attitude will help them achieve success in academic practice. Table tennis is a sport that also involves both individual and team competitions. Students can cultivate teamwork and leadership skills by participating in academic team projects, group research, and academic collaborations. Encourage students to play a role in the team, learn how to coordinate and collaborate, divide work, and develop leadership skills. Furthermore, it emphasizes the spirit of respecting opponents and fair competition. In academic practice, it is also necessary to advocate respect for the views and achievements of others, and adhere to the principles of academic ethics and fair competition. Encourage students to engage in healthy academic debates and exchanges, respect different perspectives, and establish a good culture of academic practice. Given the foregoing, it can be argued that it is vital to look into the issues that concern table tennis and recommend potential improvements to the existing programs, which might be both beneficial to the students and the overall promotion of table tennis in China.

Statement of the problem: This study sought to look into improving the existing table tennis physical education program of university student players in a college in China. Specifically, it aimed to answer these questions:

- What is the assessment of the respondents on the impact of table tennis training on their academic practices in terms of pursuing excellence, competitive awareness, motivation, teamwork, and moral integrity?
- What is the assessment of the respondents on the current state of development of their academic practices in terms of academic ethics, professional ethics, and comprehensive literacy?
- Is there a significant relationship between the extent of the impact of table tennis training and the current situation of the students' academic practices?

Significance of the study

The results of this study will benefit the following sectors:

- **Students:** The study shows the student players' needs in their respective academic development, which can be used to make an existing table tennis program more inclined to improve their academic practices.
- **Faculty members:** Through a school's table tennis program, the research gives instructors the most appropriate and defined pedagogies for addressing gaps in further establishing solid academic practices in teaching the sport.
- **School administrators:** The outcomes of this study can aid school policymakers, designers, and developers in crafting better academic practices.
- **Future researchers:** This research offers valuable practical insights into the existing condition and potential growth of a table tennis program in a Chinese school, as seen through the lens of its influence on students' academic practice advancement.

Scope and delimitation: This research explored the relationship between table tennis training and academic practices at Yichun University. Given the unique academic and athletic setting at Yichun University, the inquiry was geographically limited to the university. The participants were chosen from registered table tennis players from various academic fields and levels at the institution. The temporal scope was restricted to a single academic year, allowing for a thorough examination of the influence of table tennis training on academic habits. The study examined the possible impact of various table tennis training programs, both official and informal, on academic habits such as class attendance, study routines, time management, and academic success.

Theoretical framework

This study is anchored on these theories:

Attribution Theory. Students' willingness to participate and achieve in sports and academics is significantly influenced by motivational theories. Heider (1958), who proposed this theory, claim that humans rationally seek to connect causes and consequences. Heider was the first to put up an attribution theory, but Weiner (1985) created the theoretical foundation. The attribution theory and sports involvement are related because winning in athletic competition can make student-athletes feel good. In addition, regardless of the team's performance, many kids feel positive about their own abilities if they simply succeed in it. The feeling that they belong to such an elite group, in this example a sports squad, boosts a student athlete's self-esteem. High academic accomplishment depends on having a positive self-image and high self-esteem. Aryana (2010) concluded that pupils who are more confident in themselves are less anxious and succeed better academically than those who lack self-confidence. The attribution theory also emphasizes the importance of environment. When students succeed, they credit their skills; yet, when learners fail to succeed, they place the blame on external contextual variables (Knesting, 2009). The setting of the classroom has a big impact on how motivated students are. A supportive and engaging environment may be created by athletic teams outside of the regular classroom. The degree to which students are likely to put effort into certain endeavors can be influenced by their views about the reasons they could be unsuccessful in these endeavors, which in turn impacts the level of performance that is likely to be attained (Rosevear, 2010).

PASS Theory: The Promoting Achievement in School through Sports (PASS) Theory is maybe the most pertinent theory to comprehend the effects of doing sports. One of the earliest significant hypotheses based on the idea that involvement in athletics is directly related to educational achievement was the PASS hypothesis, which was developed in 1992 (American Athletics Institute, 2015). Although the PASS hypothesis is not a conventional or well-known social and behavioral science theory, it is pertinent to academic success as it relates to engagement in sports. This hypothesis is supported by the PASS program, a year-long elective course that incorporates the beneficial attitudes and characteristics of engaging in athletics into the classroom.

The PASS program's eight core goals are connected across sports and academic activities. Their interchangeability allows for a smooth transition from athletics to academics. Students will gain the ability to: (a) concentrate for extended periods, to block out distractions and negative thoughts while focusing on the task at hand; (b) balance their time between school and outside of school; (c) remain calm and in control while in class, taking tests, doing homework, and engaging in physical activities; (d) exert the right amount of effort; (e) develop a rhythm by adhering to a regular schedule and routine; (f) be adaptable to build stronger bonds with instructors and peers, be receptive to new ideas, and avoid injuries; (g) Trust instincts and act on them to improve performance on tests, imaginative thinking, decision-making processes, and response; and (h) adopt a patient, persevering, and positive outlook to see things through to the end (American Sports Institute, 2015). The PASS hypothesis (American Sports Institute, 1996) states that when these goals are successfully achieved, both athletic and academic performance are constantly improved.

METHODOLOGY

The research methodology and methods show how the researcher carried out the study as presented in the chapter. It covers study participants, the research setting, the research tool, data processing, and the statistical methods employed in the data analysis and interpretation.

Research locale: Yichun University was founded in 1958. In January 2000, with the approval of the Ministry of Education, the original Yichun Normal College, Yichun Medical specialty, Yichun Agricultural College, and Yichun Amateur University for Staff and Workers were merged and upgraded to full-time public undergraduate colleges. The school currently has 1,511 faculty members, including 1153 full-time teachers.

Sample and sampling technique: Purposive sampling was used to select 80 students as participants. It relied on Welman and Kruger (2005) as the most significant type of nonprobability sampling. The purposeful selection of an informant based on their traits is known as judgment sampling and entails (Bernard, 2012). Given the foregoing, the inclusion criteria posited that the respondents must be currently enrolled in the institution, taking physical education classes, and playing table tennis competitively.

Data gathering procedure: The researcher asked the school administration for permission to perform the study. Invitations to participate in the study were forwarded to students, instructors, and coaches after clearance had been granted. Before being requested to participate, participants were required to complete consent papers. Data collection for the survey took place at around the same time. Surveys were conducted using online survey questionnaires. Member checking was used by the researcher to guarantee the reliability of the data.

When all questionnaires had been correctly completed by the respondents, totaled, and documented, the data was sent to a statistician for data analysis following the predetermined goals.

Statistical analysis: The data was statistically evaluated using the following statistical tools as included in the Statistical Package for the Social Sciences (SPSS) software:

Weighted Mean: This refers to the average sum of set values found by adding all values and dividing by the total number of values (Nieswiadomy, 2007).

Standard Deviation: It is a measurement that indicates the average deviation or variation of all the values in a set of values from the mean value of those data. It is the most widely used measure of variability when interval data is obtained. This was used as a requirement for the other statistical measures used in this study.

T-test: It is a parametric test that examines the difference between the means of two groups of values.

Analysis of Variance (ANOVA): This test was used to determine the significant differences in the assessment of respondents on the impact of table tennis training based on their profile groupings.

Pearson's Product Moment of Correlation: This test was used to determine the relationship that exists between the impact of table tennis training on academic practices to their current state of development

RESULTS

In the results and discussion chapter, the outcomes of the investigation into the impact of table tennis training on the academic practices of students at Yichun University are presented. Table 2 quantified the attitudes and behaviors of table tennis players related to their pursuit of excellence during training. These results mean that the respondent athletes are strongly committed to self-improvement and goal attainment. Prioritizing goals ("keeping focus on the goal") and a continuous desire for improvement are key aspects, showcasing a dedicated mindset among the respondents. The emphasis on self-evaluation and adaptability reflected a positive and proactive approach to personal growth, contributing to a cohesive group of athletes aligned in their pursuit of excellence.

Table 2 presents a series of indicators designed to measure the extent to which competitive awareness was incorporated into the training and study habits of table tennis players. As claimed by Yu (2009), the winning culture of table tennis encourages cooperation, including mutual support, cooperation, and joint efforts in matches to achieve team goals. Table tennis is a highly competitive sport, and the winning culture must emphasize the cultivation of players' competitive awareness. Team members are motivated to continuously improve their technical level and competitive ability, actively compete with opponents, and strive for victory. The aforementioned claims were proven true by the results, where the respondents are shown to be actively involved in their academic journey, emphasizing the importance of preparation through activities like studying in advance and participating in class. This proactive learning approach indicated a strong commitment to academic excellence among the surveyed athletes. Furthermore, the data highlights athletes' competitive awareness extending in academics, showcasing strategic knowledge and effective communication with classmates. Table 3 delves into the various factors that contributed to the motivation levels of individuals training in table tennis. Couch, Lewis-Adler, & Burton (2011) claimed that the requirement that many students who have little interest in studying must maintain a specific grade point average to participate in sports is an obvious probable cause for causality, and involvement, no matter how complicated, maybe the motivation for more study. The results of the study, however, challenge this assertion as the high emphasis on learning new skills and valuing feedback among the surveyed athletes suggested a proactive approach to improvement, not only in their sports performance but also in their academic pursuits. This commitment to continuous learning and responsiveness to feedback boded well for their overall development. In addition, the strong work ethic demonstrated through the willingness to do extra work and optimize available time implied a disciplined and determined approach, likely contributing to success both on the field and in academic endeavours. Table 4 presents an evaluation of attitudes and behaviors associated with teamwork among table tennis players. Yu (2009) and Coleman (2006) both asserted that transforming the winning culture of table tennis into good academic practice could help students cultivate teamwork spirit, competitive awareness, and the ability to strive and set goals in the academic field, thereby improving academic achievement and comprehensive literacy. The findings of this study prove that practice is applicable to both sports and practical activities, and once repeated over and over, practice, becomes common. The high ratings for teamwork indicators among the athletes suggested a strong commitment to collective goals and mutual support. The emphasis on giving assistance and being open to constructive criticism highlighted a positive team culture that valued personal growth and feedback. These findings imply that fostering a supportive team environment and encouraging open communication could enhance the athletes' collective performance and contribute to their overall success both on and off the field.

Table 5 scrutinizes the ethical beliefs and behaviors of individuals engaged in table tennis training. The high scores across moral indicators reflect a strong ethical foundation within the group of table tennis players. The commitment to honesty, integrity, and doing the right thing suggest a culture of accountability and responsibility. This not only contributed to a positive team environment but also set a valuable example for aspiring athletes. The emphasis on moral values in both academic and sports contexts imply that these players were likely to carry these principles beyond their athletic pursuits, fostering a culture of integrity and respect within their broader communities (Feldman & Matjasko, 2005; Mahoney et al., 2003; Hartmann, 2008). Table 6 evaluates the ethical standards upheld by individuals in an academic setting, presumably those engaged in both academic and athletic pursuits such as table tennis. Such findings reflect a positive self-assessment of ethical conduct among the individuals surveyed, indicating a strong alignment with the principles of academic ethics. These findings implied a positive and ethical culture among the surveyed individuals, fostering an environment of responsibility, honesty, and integrity in both academic and sports-related endeavors. Table 7 provide a quantitative assessment of individuals' adherence to professional ethics within both academic and sports contexts.

Table 1. Training Impact of Table Tennis – Pursuing Excellence

Indicators	Mean	SD	Rank	Interpretation
My ultimate goal is to always be better.	3.56	0.41	2	Very Evident
I evaluate my strengths and weaknesses so I know what to improve on.	3.55	0.56	3	Very Evident
I always try to find something that interests me in what I do.	3.55	0.47	3	Very Evident
Optimism is always my go-to approach.	3.53	0.62	5	Very Evident
I keep my focus on my goal and not let anything distract me.	3.79	0.59	1	Very Evident
I am able to adjust if any unexpected situations happen.	3.52	0.65	6	Very Evident
I take pleasure in achieving my goals.	3.47	0.63	7	Evident
Pursuing Excellence	3.57	0.56	–	Very Evident

Scale: 1–1.50: Not Evident; 1.51–2.50: Slightly Evident; 2.51–3.50: Evident; 3.51–4.00: Very Evident

Table 2. Training Impact of Table Tennis – Competitive Awareness

Indicators	Mean	SD	Rank	Interpretation
I study in advance to get ahead of my classes.	3.68	0.43	2	Very Evident
I try my best to learn what I can every time I attend class.	3.66	0.42	3	Very Evident
I know what topics I am good at so I try to focus more on my weak spots.	3.51	0.50	5	Very Evident
I always try to maintain constant communication with my classmates so I do not get left out with class trends in our lessons.	3.80	0.54	1	Very Evident
I always aim to be the best in training or in class even when I am not seen as one of the best.	3.44	0.45	7	Very Evident
I take advantage of any gain I can fairly have.	3.48	0.60	6	Very Evident
I spend a lot of time reviewing lessons just like how I do with my previous sports matches.	3.66	0.60	3	Evident
Competitive Awareness	3.60	0.51	–	Very Evident

Scale: 1–1.50: Not Evident; 1.51–2.50: Slightly Evident; 2.51–3.50: Evident; 3.51–4.00: Very Evident

Table 3. Training Impact of Table Tennis – Motivation

Indicators	Mean	SD	Rank	Interpretation
I make the most of whatever time I have studying or training.	3.45	0.59	4	Evident
I try to learn new skills or knowledge whenever I can.	3.75	0.44	1	Very Evident
I aim to make an impression with my grades in school and performance in sports.	3.40	0.65	7	Evident
Smiling has become my best way to show motivation.	3.45	0.44	4	Evident
I try to do extra work whenever I can.	3.62	0.54	3	Very Evident
I always challenge myself and push my limits.	3.41	0.55	6	Evident
I follow feedbacks that I deem helpful to me.	3.64	0.69	2	Very Evident
Motivation	3.53	0.56	–	Very Evident

Scale: 1–1.50: Not Evident; 1.51–2.50: Slightly Evident; 2.51–3.50: Evident; 3.51–4.00: Very Evident

Table 4. Training Impact of Table Tennis – Teamwork

Indicators	Mean	SD	Rank	Interpretation
I always follow the shared goal of my class or team.	3.51	0.65	5	Very Evident
Listening to people around me is my cup of tea.	3.51	0.63	5	Very Evident
If needed, I try to give assistance to people around me as much as I can.	3.73	0.66	1	Very Evident
I am open to constructive criticism for my own development.	3.72	0.63	2	Very Evident
I always try to consider people around me before taking any action.	3.58	0.67	3	Very Evident
Supporting struggling people around me has become common for me.	3.57	0.47	4	Very Evident
I find collaboration and cooperation with others easy.	3.42	0.57	7	Evident
Teamwork	3.58	0.61	–	Very Evident

Scale: 1–1.50: Not Evident; 1.51–2.50: Slightly Evident; 2.51–3.50: Evident; 3.51–4.00: Very Evident

Table 5. Training Impact of Table Tennis – Moral Integrity

Indicators	Mean	SD	Rank	Interpretation
“Hard work betrays no one.”	3.42	0.63	7	Evident
I uphold respect in anything I do in sports and in school.	3.50	0.45	5	Evident
I value the truth when I study and play sport.	3.48	0.49	6	Evident
I do not compromise with anything, be it rules in sports or class.	3.80	0.64	1	Very Evident
Doing the right thing is the best satisfaction I can get.	3.80	0.56	1	Very Evident
I don’t cheat in exams nor skip training sessions.	3.77	0.7	3	Very Evident
I admit my mistake and try to make up for it with learned actions.	3.64	0.69	4	Very Evident
Moral Integrity	3.63	0.59	–	Very Evident

Scale: 1–1.50: Not Evident; 1.51–2.50: Slightly Evident; 2.51–3.50: Evident; 3.51–4.00: Very Evident

Table 6. Development of Academic Practice – Academic Ethics

Indicators	Mean	SD	Rank	Interpretation
I give credit where credit is due.	3.39	0.58	5	Evident
I learned to follow all guidelines and rules as provided by concerned executives.	3.41	0.68	4	Evident
I use information appropriately for its intended purpose.	3.49	0.63	2	Evident
I respect officials that govern me as well as their learned opinions.	3.32	0.45	6	Evident
I am aware that I am responsible and accountable for any of my actions.	3.53	0.64	1	Very Evident
I practice common honesty in classes and in sports.	3.45	0.46	3	Evident
I treat my co-students as a community so I practice appropriate behavior.	3.30	0.43	7	Evident
Academic Ethics	3.41	0.55	–	Evident

Scale: 1–1.50: Not Evident; 1.51–2.50: Slightly Evident; 2.51–3.50: Evident; 3.51–4.00: Very Evident

Table 8. Development of Academic Practice – Comprehensive Literacy

Indicators	Mean	SD	Rank	Interpretation
I can easily communicate with others through verbal communication.	3.59	0.60	1	Very Evident
I can communicate with others using non-verbal prompts.	3.55	0.68	2	Very Evident
Comprehending others' statements or instructions is easy for me.	3.55	0.53	2	Very Evident
I am fluent in speaking the languages that the people around me speak.	3.42	0.55	5	Evident
I have no trouble with written language.	3.53	0.44	4	Very Evident
I am aware of basic general knowledge information that are needed by any citizen in our locale.	3.33	0.50	7	Evident
Problem-solving and innovation are my strong suits.	3.41	0.56	6	Evident
Comprehensive Literacy	3.48	0.55	–	Evident

Scale: 1–1.50: Not Evident; 1.51–2.50: Slightly Evident; 2.51–3.50: Evident; 3.51–4.00: Very Evident

Table 9. Relationship between the Impact of Table Tennis Training and the Development of Academic Practice

Pearson <i>r</i> Coefficient	P-Value	Decision/Interpretation
0.33 (moderate, positive)	0.043	Reject H_0 /Significant

While there was a strong overall commitment to professional ethics, the lower-ranked indicators, such as 'working harmoniously with others,' suggest potential areas for improvement in terms of enhancing collaborative efforts. This could be an opportunity for the surveyed individuals to focus on strengthening teamwork and interpersonal skills, ultimately contributing to a more cohesive and harmonious professional environment. Additionally, the consistent emphasis on 'time management' underscored the significance of organizational skills and efficiency in academic and sports pursuits. Recognizing and addressing these implications could lead to a well-rounded approach to professional conduct, ensuring a balanced focus on both ethical values and practical skills. Table 8 evaluates the proficiencies in various forms of literacy among individuals, possibly students or athletes, who were engaged in an academic setting. Such results affirm the claims of Yu (2009) and Griffith (2004) that by incorporating the winning culture of table tennis into effective academic practices, kids may improve their academic accomplishment and comprehensive literacy by developing a sense of teamwork, competitive awareness, and the drive to strive and establish objectives in the classroom. The findings underscore a strong sense of confidence in their communication abilities, with a notable emphasis on both verbal and non-verbal forms. This suggests a robust proficiency in expressing ideas and understanding others within the surveyed group. Moreover, the participants exhibit awareness of their strengths in critical thinking and innovation, as reflected in their self-reported problem-solving abilities. This signal a perceived competence in approaching challenges and generating creative solutions. The overall comprehensive literacy score provided a holistic view, suggesting that, on average, the respondents considered themselves adept not only in communication but also in problem-solving, reflecting a well-rounded set of skills in the realm of literacy and intellectual capabilities. Table 9 presents the findings from a statistical analysis that explored the correlation between table tennis training and the development of academic practices.

The observed correlation also has implications for student engagement, encouraging educators to explore innovative teaching methodologies that incorporate physical activities to enhance motivation and overall learning experiences. Educational institutions may consider promoting physical activities as an integral part of their curriculum to foster holistic student development. While the correlation signifies a promising link, further research is essential to elucidate the underlying mechanisms and determine the nuanced nature of the impact, contributing to a more nuanced understanding of the relationship between sports training and academic development.

Hence, it is suggested that individuals who experience positive impacts from their table tennis training tend to also show a development in their academic practices. This finding supported the idea that engagement in sports like table tennis can have a beneficial relationship with academic behaviors and ethics, potentially due to the discipline, focus, and other transferrable skills cultivated through sports training.

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