Research on physical management intervention for non-athletic college students

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Abstract: *This study aims to delve into the intricate relationship between physical exercise behavior and interpersonal communication skills among non-athlete college students, and further investigate how this correlation impacts their mental well-being. The backdrop of this research underscores the prevalent trend among modern college students to remain indoors and rely heavily on electronic devices, ultimately leading to escalating psychological stress. Additionally, college students encounter numerous challenges in their interpersonal relationships, including issues with roommates, social withdrawal, and reluctance to engage in meaningful conversations with others. However, physical exercise emerges as a viable option for non-athlete college students, serving as a powerful tool for stress alleviation and relaxation. This study focuses on interpersonal communication skills as a representative variable among non-athlete college students, exploring its influence on mental health and the manner in which physical exercise behaviors shape these skills and interpersonal relationships. Furthermore, the study underscores the significance of physical exercise in promoting both physical and mental health among non-athlete college students. By engaging in physical activities, these students can enhance their adaptability to social changes, refine their interpersonal communication skills, and ultimately foster a healthier physical and mental state.*

Keywords: *Non-athlete College Students, Interpersonal Communication, Harmony in Interpersonal Relationship, Mental Health, Social Withdrawal, Physical Exercise,Team Sports, Emotional Regulation, Cognitive Ability, Self-Confidence*

1. Introduction

In contemporary society, the physical and mental well-being of university students is garnering widespread attention. A particular concern arises with non-athlete student populations, who often grapple with sedentary indoor lifestyles and excessive reliance on electronic devices, leading to increasingly pronounced mental health issues. This paper endeavors to explore the nexus between the physical exercise behaviors of non-athlete students and their interpersonal communication skills, and to elucidate how this relationship impacts their mental health. The research backdrop underscores the challenges students face in interpersonal relationships—such as conflicts with roommates, social withdrawal, and deficient communication effectiveness. Physical exercise, as a means to alleviate stress and foster relaxation, holds particular significance for this demographic. By engaging in sports activities, students can not only enhance their adaptability to social changes but also refine their interpersonal communication skills, thereby promoting holistic well-being. This study will offer scientific guidance on physical exercise for students, helping them to achieve balance amidst their hectic academic lives and elevate their overall well-being [1].

1.1 Background of the Study

To improve the development of school sports and improve the recognition of the importance of non-athlete college students of sports behavior, to promote college students' physical and mental health in our country, with the perspective of fitness, selection of non-athlete college students' interpersonal communication ability the representative variables influence on non-athlete college students' mental health, study the effect of sports behavior of college students' interpersonal communication ability and their mutual relations.

It is very important for non-athlete college students to establish harmonious interpersonal relationship, which can not only make students more cheerful and confident in character, but also make

students full of confidence and hope for life and study [2].

Especially during the endemic, communication through network technology has become more and more mainstream, and people's way of communication has gradually become digital. The network transformation of social channels makes the problems of interpersonal communication constantly exposed. When the journey is smooth, due to family factors, environmental factors, personality development and other factors, some college students are selfish, arrogant, look down on others, lack tolerance and patience to treat people, resulting in character defects, unwilling or even do not know how to communicate with people; When the road is rough, some non-athlete college students have great psychological fluctuations and increase pressure. If they cannot find the right outlet and relief method, it is easy to lose their confidence in life, go astray, close themselves and refuse to communicate with others.

The harmonious development of interpersonal relationship is inseparable from interpersonal communication and maintenance. The sports behavior will become the carrier of the non-athlete college students interpersonal, with family and friends in the sports behavior can participate in, not only can be obtained from the physical exercise more abundant professional technical skills and enhance their own physical quality, also can develop more interest, to master more interpersonal issues, improve body shape, increase confidence, satisfaction, so as to realize personal value [3].

Therefore, after reviewing a large number of literature, this paper starts from the sports behavior of non-athlete college students to explore its impact on non-athlete college students' interpersonal communication ability, so as to provide reference value and basis for future research on sports behavior and interpersonal communication.Theoretical Framework

This study is anchored on the elf-presentation theory of interpersonal communication by Owen, Goffman and others who put forward the self-presentation theory of interpersonal communication after systematic research. This theory holds that when a person communicates with others, he expresses some things about himself through his own words or actions, and then achieves a kind of communication. Everyone who has the need for communication must present himself. Self-presentation theory highlights the important role of self-presentation in interpersonal communication. Individuals self-manage their impressions through self-presentation, thereby improving interpersonal relationships.

1.2 Significance of the Study

This study envisions to provide benefits to the following recipients:

Students. Cultivating good interpersonal communication ability of non-athlete college students can help them form a correct self-consciousness, maintain a healthy psychological state, and help them socialize smoothly.

Teacher. It helps to improve the communication with non-athlete students, better deal with the problems encountered in the teaching process, and helps to improve classroom teaching through good communication skills.

Parents. Lack of communication is the most dangerous phenomenon in the family. It is a great pity for parents that they cannot enter their children's heart and explore their inner world. This study helps parents master communication skills with their children, gain their children's trust, become their own children, and strengthen their relationship with their children [4].

University administrators. Front-line counsellors working directly on student development provide more effective work programs. To discuss the influence of physical exercise on the interpersonal communication of non-athlete college students can provide practical and possible solutions for the urgent important subjects of college physical education under the background of national fitness strategy.

Future Researchers. It provides a theoretical basis for non-athlete college students to seek the most effective physical exercise mode to deal with interpersonal relationship, and provides scientific support for college students to make strategies to promote mental health [5].

2. Methodology

2.1 Theoretical Framework

This study is anchored on the elf-presentation theory of interpersonal communication by Owen, Goffman and others who put forward the self-presentation theory of interpersonal communication after systematic research. This theory holds that when a person communicates with others, he expresses some things about himself through his own words or actions, and then achieves a kind of communication. Everyone who has the need for communication must present himself. Self-presentation theory highlights the important role of self-presentation in interpersonal communication. Individuals self-manage their impressions through self-presentation, thereby improving interpersonal relationships [6].

Such concept is reflected in the paradigm below:

Following the research direction of this framework, researchers will study the basic characteristics of body management of non-athlete college students in Hunan Financial & Industrial Vocational-Technical College. Then, SPSS software will be used to analyze the basic situation of the respondents' body awareness, spatial awareness, movement quality and relationship, as well as the differences in gender, age and grade level of each variable. Incorporating teachers' opinions and Statistical analysis of the relationship between college students' interpersonal skills, body management. The research results will be used to improve body management, promote the healthy development of interpersonal skills of non-athlete college students, and provide a research basis for the formulation and selection of intervention programs [7].
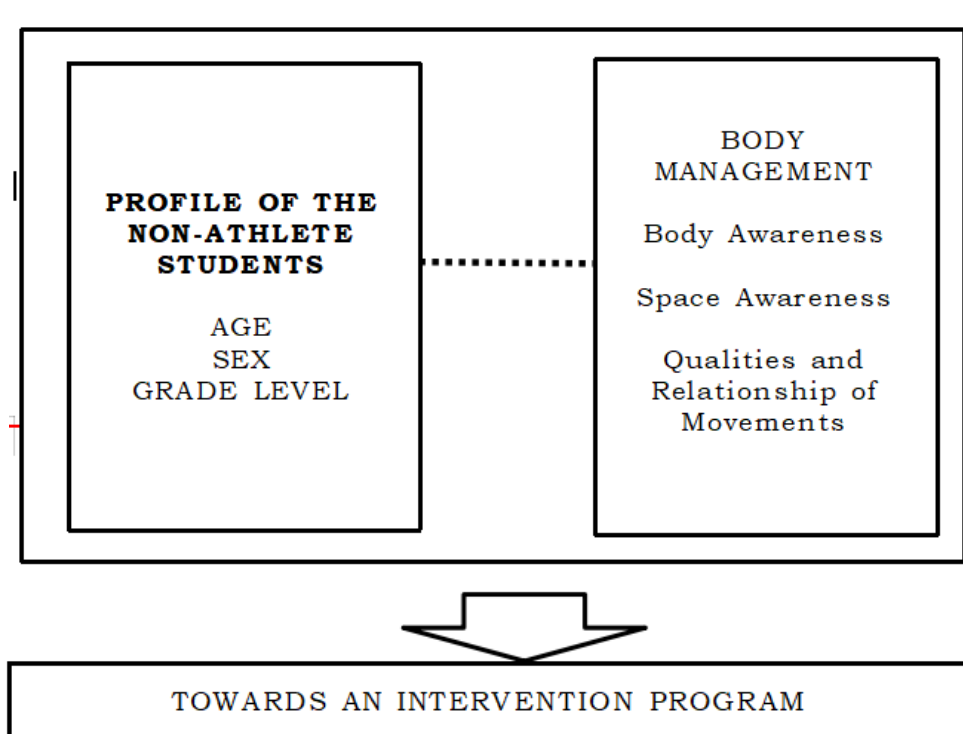

Figure 1: Research Paradigm

2.2 Research Design

This study uses a completely randomized survey study to analyze the differences by profile. This study begins with the concept of non-athlete college students' interpersonal communication, the motivation of college students' interpersonal communication, the characteristics of college students' interpersonal communication, the influence factors of college students' interpersonal communication, the empirical study of college students' interpersonal communication ability, college students' interpersonal communication ability the study advance of summarizing the research achievements of previous scholars, this as the theoretical background for the study [8].

Secondly, this study adopts the method of questionnaire survey and cluster sampling to select some undergraduates of Hunan University of Arts and Science as the research object, and investigates the current situation of college students' interpersonal communication and the development of interpersonal communication ability.

Thirdly, on the basis of the questionnaire survey, this study synthesizes the previous theoretical research results, carries on the comprehensive investigation to the students' interpersonal relationship, and forms the analysis report on the current situation of the contemporary college students' interpersonal relationship on the basis of the survey results. Based on the analysis report of the current situation of the interpersonal relationship of contemporary college students, and aiming at the problems and weaknesses in the interpersonal relationship of college students, a series of training programs and training plans to solve the problems and eliminate the obstacles in interpersonal communication of college students are studied and discussed, and the corresponding theoretical and practical basis is put forward [9].

3. Results

3.1 Profile of the Student Respondents

Table 1 shows the demographic profile of the student respondents in terms of their age, and sex.

Table 1 Frequency Distribution of the Student Respondents' Profile

Profile	Frequency	Percentage
Age		
Below 18 years old	14	5.6%
19 – 20 years old	212	84.8%
21 – 22 years old	24	9.6%
Total	**250**	**100%**
Sex		
Male	171	68.4%
Female	79	31.6%
Total	**250**	**100%**
Grade Level		
Freshman	174	69.6%
Sophomore	45	18%
Junior	31	12.4%
Total	**250**	**100%**
College Affiliation		
College of Accounting	29	11.6%
Intelligent Manufacturing College	88	35.2%
College of Economics and Trade	33	13.2%
College of Information Engineering	48	19.2%
College of Automotive Engineering	25	10%
Modern Logistics College	4	1.6%
Vocational Skills Education College	23	9.2%
Total	**250**	**100%**

In terms of age, 5.6% of student respondents are under 18 years old, 84.8% of student respondents are between 19-20 years old, and 9.6% of student respondents are between 21-22 years old. This means that the majority of student respondents are between the ages of 19-20.

In terms of gender, 68.4% of student respondents are male, and 31.6% of student respondents are female. In terms of gender, the majority of student respondents are male. This indicates that there are more male students than female students in the institution [10].

In terms of grade, 69.6% of the student respondents were freshmen, 18% were sophomores, and 12.4% were juniors. This means that the majority of student respondents are freshmen.

In terms of college affiliation, 35.2% of student respondents come from the School of Intelligent Manufacturing, which means that the majority of student respondents come from the School of Intelligent Manufacturing. This indicates that students' interest mainly comes from the School of Intelligent Manufacturing [11].

3.2 Assessment of Student Respondents on the Self-Assessment of the Non-athlete Student Respondents' on their Body Management

The Table 2 to 4 shows the self-assessment of the non-athlete student respondents on their body management based on body awareness, space awareness, and qualities and relationship of movements.

Table 2 Assessment of Student-Respondents on the Self-Assessment of the Non-athlete Student Respondents' on their Body Management based on Body Awareness

	Mean	SD	Qualitative Description	Interpretation	Rank
1. When I hit something and hurt myself, I can always tell if it leaves a bruise.	2.31	1.09	Not Quite Consistent	Good	7
2. When I am tired, I am able to notice different reactions in my body.	2.61	1.07	Quite Consistent	Very Good	1
3. When my exercise habits change, I can accurately predict how this will affect my body.	2.40	1.04	Not Quite Consistent	Good	4
4. I pay attention to the seasonal regularity of my body movements	2.32	1.05	Not Quite Consistent	Good	6
5. I am able to notice specific responses of the body to changes in the weather.	2.35	1.05	Not Quite Consistent	Good	5
6. Before I get a cold, I always notice.	2.49	1.05	Not Quite Consistent	Good	3
7. I can always tell if I'm tired and sore the next day.	2.50	1.09	Not Quite Consistent	Good	2
Overall Mean	**2.42**	**.86**	**Not Quite Consistent**	**Good**	

Legend: 3.51-4.00 Completely Consistent/ Excellent; 2.51-3.50 Quite Consistent/ Very Good; 1.51-2.50 Not Quite Consistent/ Good; 1.00-1.50 Completely Inconsistent/ Poor

Table 3 Assessment of Student-Respondents on the Self-Assessment of the Non-athlete Student Respondents' on their Body Management based on Space Awareness

	Mean	SD	Qualitative Description	Interpretation	Rank
1. When exercising, I can know the relationship between my body and the exercise equipment.	2.41	1.02	Not Quite Consistent	Good	4
2. I am able to know where my arms are when doing the movement.	2.51	1.03	Quite Consistent	Very Good	1
3. When I learn new movements, I can always imitate and learn them quickly.	2.39	.97	Not Quite Consistent	Good	5
4. When I am in a complex environment, I can clearly identify the direction.	2.39	.99	Not Quite Consistent	Good	5
5. When I am still, I am able to know the various gestures of the body.	2.44	1.00	Not Quite Consistent	Good	2
6. I can move my body to any position smoothly.	2.42	1.03	Not Quite Consistent	Good	3
7. I can control the speed and strength of my body when performing asymmetrical movements.	2.36	1.00	Not Quite Consistent	Good	7
Overall Mean	**2.42**	**.83**	**Not Quite Consistent**	**Good**	

Legend: 3.51-4.00 Completely Consistent/ Excellent; 2.51-3.50 Quite Consistent/ Very Good; 1.51-2.50 Not Quite Consistent/ Good; 1.00-1.50 Completely Inconsistent/ Poor

The overall mean of 2.42 shows that the students say that they do not consistently observe body management and indicates that the non-athlete student body management based on body awareness is

good. While students may claim that they do not consistently observe body management practices, this does not necessarily negate the fact that non-athlete student body management based on body awareness is good. Inconsistencies in body management can stem from various factors such as busy academic schedules, lack of time, and sometimes a lack of immediate consequences from neglecting self-care practices. Despite these challenges, many non-athlete students still demonstrate a solid understanding of their body's needs and signals, which is indicative of good body awareness. This awareness helps them recognize when they are overexerting themselves, feeling stressed, or needing rest, even if they do not always act on this knowledge consistently [12].

The overall mean of 2.42 shows that the students say that they do not consistently observe body management and indicates that the non-athlete student body management based on space awareness is good. Although students may claim that they do not consistently observe body management practices, this does not necessarily undermine the fact that non-athlete students possess good space awareness, which is a critical aspect of effective body management. Inconsistent body management practices can be attributed to several factors, including demanding academic schedules, lack of time, and the absence of immediate negative consequences from neglecting self-care. However, these factors do not diminish the inherent spatial awareness that many non-athlete students have developed [13]. This awareness allows them to intuitively understand and navigate their physical environment, manage their movements, and avoid injuries, even if they do not always actively engage in structured body management routines.

Table 4 Assessment of Student-Respondents on the Self-Assessment of the Non-athlete Student Respondents' on their Body Management based on Qualities and Relationship of Movements

	Mean	SD	Qualitative Description	Interpretation	Rank
1. I can control the movement rhythm reasonably.	2.39	.97	Not Quite Consistent	Good	2
2. When exercising, I can distribute my physical strength reasonably.	2.37	.98	Not Quite Consistent	Good	4
3. I am able to complete the movements accurately and as required by the movements.	2.39	1.01	Not Quite Consistent	Good	2
4. When there is a wrong action, I can feel it.	2.45	.95	Not Quite Consistent	Good	1
5. When learning complex movements, I can understand the structure and sequence of movements.	2.36	.98	Not Quite Consistent	Good	6
6. I can say exactly how similar two similar actions are.	2.37	.94	Not Quite Consistent	Good	4
7. I am able to link two or more actions and effectively produce positive transfer.	2.31	.96	Not Quite Consistent	Good	7
Overall Mean	**2.38**	**.80**	**Not Quite Consistent**	**Good**	

Legend: 3.51-4.00 Completely Consistent/ Excellent; 2.51-3.50 Quite Consistent/ Very Good; 1.51-2.50 Not Quite Consistent/ Good; 1.00-1.50 Completely Inconsistent/ Poor

The overall mean of 2.38 shows that the students say that they do not consistently observe body management and indicates that the non-athlete student body management based on qualities and relationship of movements is good. Students may acknowledge that they do not consistently observe body management practices, yet this admission does not necessarily diminish the fact that non-athlete students possess good body management based on the qualities and relationships of movements. Inconsistent body management can be attributed to a variety of factors, including demanding academic schedules, lack of awareness, and the absence of immediate negative consequences. Despite these challenges, many non-athlete students exhibit a strong understanding of how their bodies move and interact with their environment. This intrinsic understanding enables them to maintain effective body mechanics, even if they do not engage in structured body management routines regularly.

In conclusion, while non-athlete students may not consistently observe body management practices,

their good understanding of the qualities and relationships of movements enables them to manage their bodies effectively. This inherent knowledge allows them to perform tasks efficiently, detect and correct improper movements, and prevent injuries. By fostering a greater awareness of the importance of consistent body management routines and providing educational resources, institutions can help students build on their existing knowledge and develop more structured approaches to body management. This will enhance their overall well-being and ensure they can maintain their physical health throughout their academic and personal lives [14].

3.3 Summary of the Self-Assessment of the Non-athlete Student Respondents on their Body Management

Table 5 Assessment of Student-Respondents on the Self-Assessment of the Non-athlete Student Respondents on their Body Management based on Body Awareness

	Mean	SD	Qualitative Description	Interpretation	Rank
1. Body Awareness	2.42	.86	Not Quite Consistent	Good	1
2. Space Awareness	2.42	.83	Not Quite Consistent	Good	1
3. Qualities and Relationship of Movements	2.38	.80	Not Quite Consistent	Good	3
Overall Mean	**2.41**	**.78**	**Not Quite Consistent**	**Good**	

Legend: 3.51-4.00 Completely Consistent/ Excellent; 2.51-3.50 Quite Consistent/ Very Good; 1.51-2.50 Not Quite Consistent/ Good; 1.00-1.50 Completely Inconsistent/ Poor

The overall mean score of 2.41 with a standard deviation of .78 in table 5 encapsulates the general sentiment of "Not Quite Consistent" but "Good" across all dimensions. This comprehensive self-assessment underscores that non-athlete students possess a strong baseline of body management skills. They recognize the importance of body awareness, space awareness, and the qualities and relationships of movements, even if their implementation of these skills is not always uniform. The relatively low standard deviations suggest that there is some consistency in the self-assessed responses, indicating a shared understanding among students about their strengths and areas for improvement [15].

In conclusion, the self-assessment highlights that non-athlete students have a good fundamental understanding of body management across key areas. Their body awareness, space awareness, and understanding of movement qualities and relationships are all rated positively, though the application of these skills is not always consistent. This points to a significant potential for improvement through targeted education and practice, which could help students develop more consistent and effective body management routines, enhancing their overall physical well-being and performance in daily activities.

4. Conclusion

1) The demographic profile of the student respondents revealed that the majority of the student respondents are between 19-20 years old, are males in terms of sex, are freshmen, and are from Intelligent Manufacturing College.

2) While non-athlete students might not consistently practice body management, their good body awareness indicates a strong potential for maintaining their health and well-being. This awareness enables them to recognize and respond to their body's needs, even if their actions are not always regular. With appropriate support and resources, these students can build on their existing awareness to establish more consistent and beneficial body management routines, ultimately enhancing their overall quality of life.

3)While non-athlete students may not always observe body management practices consistently, their good space awareness indicates a strong foundation in effective body management. This spatial awareness allows them to navigate their physical environments with ease, perform tasks with precision, and avoid injuries. Recognizing and fostering this inherent ability can help students balance their busy schedules with their physical well-being, leading to improved overall health and academic performance. By building on their existing spatial awareness, non-athlete students can develop more consistent body management habits, enhancing their quality of life and ensuring long-term well-being.

4) While non-athlete students may not consistently observe body management practices, their good understanding of the qualities and relationships of movements enables them to manage their bodies effectively. This inherent knowledge allows them to perform tasks efficiently, detect and correct improper movements, and prevent injuries. By fostering a greater awareness of the importance of

consistent body management routines and providing educational resources, institutions can help students build on their existing knowledge and develop more structured approaches to body management. This will enhance their overall well-being and ensure they can maintain their physical health throughout their academic and personal lives.

5) While there are slight variations in the self-assessment scores across different age groups for body awareness, space awareness, and qualities and relationship of movements, these differences are not statistically significant.

6) The self-assessment data indicates that there are no significant differences between male and female non-athlete students in how they perceive their body management skills across body awareness, space awareness, and qualities and relationship of movements.

7) The self-assessment data reveals that there are no significant differences in how non-athlete students perceive their body management skills across different grade levels for body awareness, space awareness, and qualities and relationship of movements.

8) While there are noticeable variations in mean scores across different colleges for body awareness, space awareness, and qualities and relationship of movements, these differences do not reach statistical significance.

5. Recommendations

1) Develop targeted educational programs that emphasize consistent practice and awareness-building exercises for body management. These programs should be designed to address specific areas where students indicated "Not Quite Consistent" ratings, such as body awareness and qualities and relationship of movements. Providing structured sessions or workshops can help students develop a more consistent approach to monitoring and improving their physical capabilities.

2) Incorporate a variety of physical activities and exercises into curriculum and extracurricular programs. By diversifying movement experiences, students can enhance their spatial awareness and adaptability in different environments. Activities that encourage exploration of movement qualities and relationships can also deepen students' understanding and control of their bodies.

3) Encourage peer learning and feedback mechanisms within student communities. Peer observation and constructive feedback can help students recognize their strengths and areas for improvement in body management skills. This approach fosters a supportive environment where students can learn from each other's experiences and perspectives.

4) Integrate technology and tools that enhance body awareness and movement assessment. Virtual reality simulations, motion tracking devices, and mobile applications can provide real-time feedback on body movements, helping students to refine their techniques and develop more precise control over their bodies.

5) Provide opportunities for personalized coaching and support for students who may require additional guidance in specific areas of body management. This could include one-on-one sessions with fitness trainers, physiotherapists, or movement specialists who can offer tailored advice and exercises based on individual needs and goals.

6) Emphasize the connection between physical health and overall well-being. Encourage students to adopt healthy lifestyle practices, including adequate sleep, nutrition, and stress management techniques. A holistic approach to body management supports not only physical performance but also mental and emotional resilience.

7) Continuously evaluate the effectiveness of educational interventions and adjust them based on student feedback and outcomes. Regular assessments of body management skills can provide insights into areas of improvement and inform future program developments to better meet student needs.

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