

The Current Situation and Pathfinding Study on Family Physical Education

Yuan Yao

Moray House School of Education and Sports, University of Edinburgh, Edinburgh EH8 9YL, UK

Abstract: Purpose: Investigate the impact of family physical education on students' health and fitness interests. Method: Literature review and questionnaire survey. Results: Family physical exercise significantly impacts students' health and future growth. Conclusion: Parents should guide children's physical activities to foster a healthy family atmosphere, enhancing parent-child relationships.

Keywords: Family Physical Education; Home Education; Exercise

1. Introduction

1.1 Research Background and Purpose

In recent years, Chinese students have faced increasing health issues, including obesity, vision problems, and mental health concerns such as anxiety and depression. Efforts outlined in the "China Children's Development Outline (2011-2020)" have not fully met goals for controlling obesity and improving mental health (Yuan, 2019). Boys have shown a significant increase in obesity rates compared to girls (Bai, 2023; Fan, 2022). Educational reforms are focusing on integrating physical education into curricula and adjusting high school entrance exams to emphasize physical education scores (Li, 2023). Despite growing awareness of family physical education's importance, challenges such as limited resources and varying parental attitudes persist.

This study aims to:

Investigate students' after-school physical exercise. Examine parents' concerns and practices regarding their children's physical activities. Analyze the impact of different parental practices on children's fitness and interest in sports.

2. Research Objects and Methods

2.1 Research Methods

2.1.1 Literature Research Method

A comprehensive collection of books, journal articles, theses, and other relevant literature was performed through the Nanjing Normal University Library website and China National Knowledge Infrastructure, using keywords like "family physical education" and "youth physical exercise." The collected literature provided a theoretical foundation for this study (He and Chen, 2008; Zhang and Tian, 2010).

2.1.2 Questionnaire Survey Method

The questionnaire aimed to investigate the real situation of family physical education among students and parents. It was distributed using the "Questionnaire Star" applet and covered aspects like students' basic information, preferred sports, and actual physical exercise practices with parents. The questionnaire's design was based on previous research (He and Chen, 2008) and refined with input from academic advisors.

Reliability and Validity Tests:

The questionnaire was pre-tested with 100 participants, yielding 90 valid responses, meeting expectations for reliability and validity. In total, 650 questionnaires were distributed, with a recovery rate of approximately 95.4% (620 valid responses).

2.1.3 Data Statistics Method

Data was screened, counted, and analyzed using statistical tools. Excel was employed for calculations and chart creation to

present data intuitively. A paired T-test was used to assess differences between male and female students, considering $P < 0.05$ as significant and $P < 0.01$ as highly significant.

3. Results and Analysis

3.1 Students' Basic Health Status

The survey at Zilanghu Experimental School (Junior School) showed normal BMI levels in grades 7 and 8, but significant differences in grade 9 ($P < 0.01$). The average BMI was around 20, within the normal range of 18.5-23.9. However, some students had a BMI over 26.9, indicating overweight or obesity issues, requiring attention.

Table 1 Statistics on height, weight and BMI of students							
Grade	Male			Female			P-value for BMI
	Average height (cm)	Average weight (kg)	Average BMI	Average height (cm)	Average weight (kg)	Average BMI	
7 grade	164.3±7.3	61.3±12.1	20.5±4.1	161.0±5.9	51.6±8.0	20.0±4.2	0.134
8 grade	175.0±5.6	56.3±13.5	22.2±3.8	168.1±6.0	56.3±7.9	19.9±3.5	0.194
9 grade	168.7±5.5	56.3±15.8	22.7±4.1	167.9±5.5	60.6±9.3	20.2±2.9	0.002

Additionally, myopia statistics showed no significant gender difference. About 22% of boys and 27% of girls had myopia above 300 degrees, highlighting the need for better eye care and balanced nutrition to support eye health (Herryanto et al., 2023).

Table 2 Statistics on students' myopia				
Myopia	Male		Female	
	Quorum (n=299)	Percentage	Quorum (n=321)	Percentage
0-100	94	31.4%	70	21.8%
100-200	65	21.7%	80	24.9%
200-300	73	24.4%	86	26.8%
300-400	41	13.7%	43	13.4%
400-500	12	4.0%	28	8.7%
500-600	14	4.7%	14	4.4%

3.2 Students' Expectations for After-school Physical Exercise

Over 60% of students expressed a positive expectation for physical exercise with their parents after class, indicating a desire to enhance the parent-child relationship through physical activity. However, 30% had a neutral attitude, and about 5% showed resistance, reflecting potential family relationship issues that need addressing.

3.3 Actual Situation of Students Exercising with Parents After Class

Data indicated that nearly 80% of students spent less than an hour per week on physical exercise with their parents, with almost

Table 3 Types of sports favoured by students		
Type	Quorum (n=620)	Percentage
Basketball	325	52.42%
Football	113	18.23%
Volleyball	91	14.68%
Table tennis	109	17.58%
Badminton	309	49.84%
Tennis	22	3.55%
Dance	85	13.71%
Fitness	50	8.06%
Swim	103	16.61%
Golf	11	1.77%
Martial Arts	39	6.29%
Other (jumping rope, running, etc.)	120	19.35%

50% exercising only once a week. This insufficient exercise does not meet the recommended standards for students, especially those aged 13-16 years old (Wang et al., 2005).

3.4 Types of Sports Favored by Students and Parents

Basketball and badminton were popular among both students and parents. The common preference for these sports can be leveraged to foster shared physical activities, promoting a healthier family dynamic.

3.5 Opinions on Promoting Physical Exercise Among Students and Parents

Parents' involvement in physical exercise is crucial for students, particularly during the transitional puberty phase. Participating in physical activities together can improve students' physical and psychological health, strengthen parent-child bonds, and alleviate academic stress.

4. Research Conclusions and Suggestions

4.1 Research Conclusions

This study, focused on Nantong Zilanghu Experimental School, identifies several challenges in family physical education: reduced after-school time due to increased school hours, parents' lack of understanding of effective physical education models, and the negative impact of family dynamics and academic pressures on communication and physical activity. To address these issues, it suggests the importance of balancing academic and physical development, especially given the increased emphasis on physical education in high school entrance exams. Parents should adopt tailored physical education models that consider their children's psychological needs and actively participate in shared physical activities. This approach can serve as a stress relief mechanism, fostering common interests, reducing stress, and promoting a healthier and more harmonious family environment.

4.2 Research Recommendations

Given the research conclusions, the following suggestions are put forward:

Ensure Practice Time: Parents should ensure their children have dedicated time for physical fitness in their free time after class.

Learn Relevant Knowledge: Parents should educate themselves on family physical education and its importance.

Joint Participation: Students and parents should engage in physical education together to build a healthy and harmonious family atmosphere.

Increase Frequency and Duration: Parents and students should increase the frequency and duration of physical exercises together after class, selecting appropriate activities based on family circumstances.

4.3 Research Prospects

This study focuses on family physical education at Nantong Zilanghu Experimental School (Junior School). Future research should aim for more systematic and scientific explorations, enhancing understanding in areas such as family education, physical education, and family physical education. By promoting physical fitness, improving personality, fostering lifelong sports thinking, and raising awareness of sports' importance, the study aims to benefit more families and society.

References:

- [1] Bai, N. B. (2023). A survey study on after-school sports services in primary schools in Beijing (Master's thesis, Central University for Nationalities). Central University for Nationalities, 2023.DOI:10.27667/d.cnki.gzymu.2022.000343.
- [2] Fan, P. L. (2022). Out of the "growing trouble". Shandong Business News,013.DOI:10.28685/n.cnki.nsdbsb.2022.000006.
- [3] He, Z. W. & Chen, W. J. (2008). Reflections on the Decline of Physical Fitness and Health of Adolescent Students (Part II) - On the Hazards of Decline of Physical Fitness and Health of Adolescent Students. Bulletin of Sports Science and Technology Literature (07), 3-5.
- [4] Herryanto, C., Aldy, F., & Amra, A. A. (2023). Relationship between nutritional status and myopia degree in adolescents at Prof. CPL USU Hospital. Indonesian Journal of Multidisciplinary Science, 3(3), 203-210.<https://doi.org/10.55324/ijoms.v3i3.793>
- [5] Li, Z. J. (2023). Investigation and Research on the Application of Photographic Camera Technology in Junior High School Physical Education Teaching (Master's thesis, Nanjing Institute of Physical Education).DOI:10.27247/d.cnki.gnjtc.2022.000077.
- [6] Wang, Z. P., Peng, L. G.& Shao, S. (2005). A preliminary study on the basic model of building a lifelong sports system in China. Journal of Sports Culture(04),51-53.

About the author:

Yuan Yao, From 2019 to 2023, he studied in Nanjing Normal University and received his Bachelor's degree in 2023. From 2023 to 2024, he studied in University of Edinburgh. His research interests are included physical activities and rehabilitation training.