

Research on the influence of families on junior high school students' participation in physical exercise in Huangzhou District under the background of "double reduction" and its countermeasures

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Abstract: This study uses various methods to assess the effect of Huangzhou families on junior high school students' physical exercise under the "double reduction" policy. It examines family demographics, sports culture, and students' exercise habits, emphasizing how family settings influence exercise routines. The research suggests strategies to promote family sports and advises families on encouraging children's physical activities within the policy framework.

Keywords: family sports; participate in physical training; "double reduction"

1. Introduction

1.1 Subjects of the study

The table 1 study examined the impact of family on physical exercise among junior high school students in Huangzhou District, Huanggang City, involving 540 parents from six local middle schools. A total of 540 questionnaires were distributed, with 517 valid responses, resulting in an effective response rate of 95.74%.

Table 1: List of School Names (n=6)

serial number	school	Number of parents of students	total
One	Huanggang Pearl School	Ninety	Ninety
Two	Huanggang City Foreign Chinese School	Ninety	Ninety
Three	Huangzhou Middle School	Ninety	Ninety
Four	Huanggang Qihuang School	Ninety	Ninety

1.2 Research Methods

1.2.1 Documentary Law

Search the Chinese journal database, sports literature database, and the internet using the keywords "family", "junior high school students", and "participation in physical exercise", and over 20 master's theses and more than 10 journal articles were found that studied the impact of family on junior high school students' participation in physical exercise.

1.2.2 Questionnaire method

The study "The Influence of Family on Junior High School Students' Participation in Physical Exercise" surveyed 540 parents from six schools in Huangzhou urban area, offering a robust theoretical basis for the research.

1.2.3 Interview method

The interview revealed the experiences and challenges of families and junior high school students in Huangzhou District participating in physical exercise, providing data for the study.

2. Results & Analysis

2.1 Result & Analyses

2.1.1 Family structure

Table 2: Statistical table of family structure of junior high school students in Huangzhou District (n=517)

Family structure	frequency	Percentage (%)
nuclear family	Three Hundred Twenty Seven	63.25
Three generations in the same house	One Hundred Sixty Eight	32.50
Four generations in the same house	Eight	1.55
Single parent families	Thirteen	2.51
Intergenerational families	One	0.19
total	Five Hundred Seventeen	100.00

The table 2 shows that nuclear and multi-generational families are the most common, making up 63.25% and 32.50% respectively. Single-parent and intergenerational families are less common, at 2.51% and 0.19%. These family types affect children's involvement in physical exercise, offering insight into the family sports environment and students' situations.

2.1.2 Parent's education level

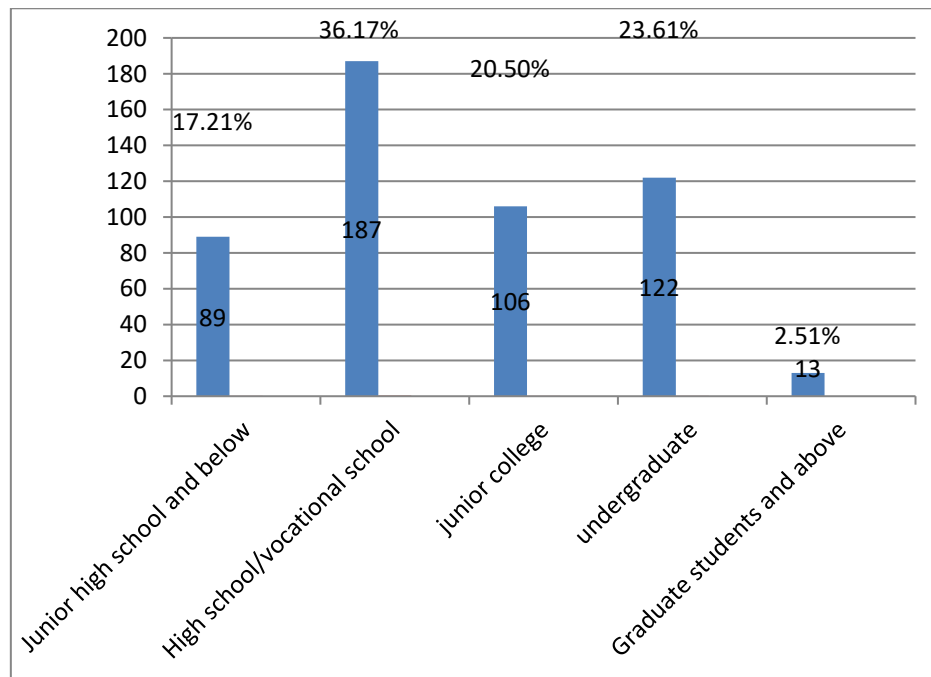


Figure 1: Statistical table of parents' education level

Figure 1 Most students' parents have a high school or technical secondary school education (36.17%), followed by undergraduate (23.61%). Junior college and junior high school levels account for 20.50% and 17.21% respectively, with graduate education at 2.51%. Parental education levels can impact children's sports participation. The survey highlights differences in parental education among junior high school students in Huangzhou District, influencing their sports involvement.

2.1.3 Total monthly household income

Table 3 indicates that 72.34% of households earn between 3,000 to 4,999 yuan monthly, 10.44% earn between 5,000 to 9,999 yuan, 8.31% earn less than 3,000 yuan, and 8.91% earn over 10,000 yuan. This suggests that the average household income in Huangzhou District is low, potentially constraining spending on sports.

Table 3: Gross Monthly Household Income (n=517)

Total monthly income	frequency	Percentage (%)
Less than 3,000 yuan	Forty Six	8.91%
3000-4999 yuan	Three Hundred Seventy Four	72.34%
5000-9999 yuan	Fifty Four	10.44%
1-20,000 yuan	Twenty Six	5.03%
20,000 yuan and above	Seventeen	3.28%
	517	100.00

2.1.4 Average monthly sports consumption of households

The Figure 2 data shows that 84.53% of families spend less than 300 yuan per month on sports, 8.90% spend between 300 to 499 yuan, and only 6.57% of families spend more than 500 yuan per month on sports. This indicates that the families of junior high school students in Huangzhou District have limited spending on sports consumption, which is not enough to support their children's comprehensive participation in sports activities.

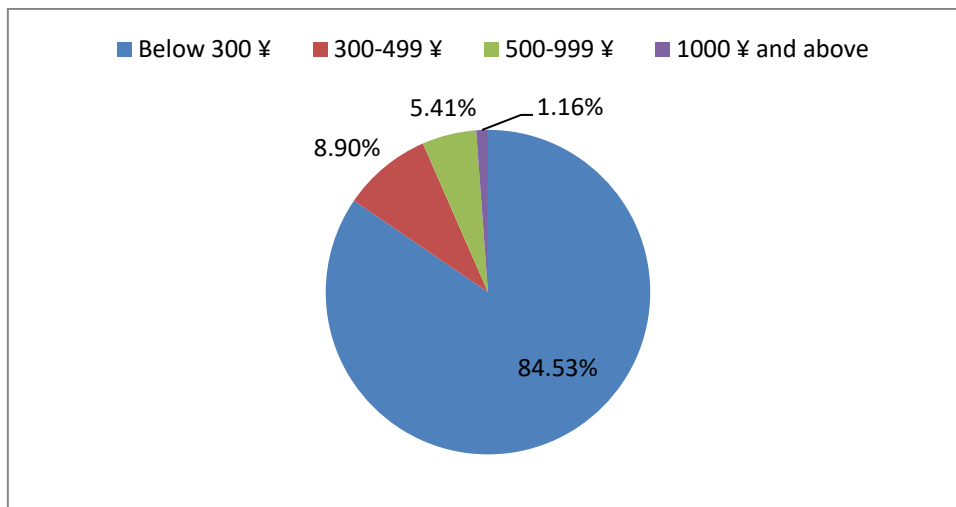


Figure 2: Statistical chart of average monthly sports consumption of households

2.1.5 Sports equipment available in the home

The Table 4 majority of families own 1-2 or 3-4 pieces of sports equipment, making up 65.18% and 28.43% respectively. Only a small fraction, 2.13%, have none. Most households in Huangzhou District have enough sports gear to support their children's physical activities, fostering a positive exercise culture

Table 4: Household sports equipment statistics (n=517)

Sports equipment	frequency	percentage
0 pcs	Eleven	2.13%
1-2 pcs	Three Hundred Thirty Seven	65.18%
3-4 pcs	One Hundred Forty Seven	28.43%
5-6 pcs	Fourteen	2.71%
6 pieces and more	Eight	1.55%
total	Five Hundred Seventeen	100.00

2.2 The basic situation of family participation in physical exercise under the background of double reduction

2.2.1 The participation of parents and children in physical exercise in the context of double reduction

The table 5 indicates that most parents and children exercise 1-2 times weekly, with 28.63% not exercising at all and 6.19% exercising 3-4 times together. Only 1.74% exercise with their children 5 or more times weekly, showing that the majority of families have low to moderate physical activity levels with their children.

Table 5: Parents' average weekly participation in physical activity with their children (n=517)

Number of workouts	frequency	percentage
Zero	One Hundred Forty Eight	28.63%
one-two	Three Hundred Twenty Eight	63.44%
three-four	Thirty Two	6.19%
5 times or more	Nine	1.74%
total	Five Hundred Seventeen	100.00

2.2.2 Parents and children discuss sports topics in the context of double reduction

Figure 3 indicates that 69.83% of families rarely discuss sports with their children, 19.54% never do, and only 8.70% regularly. Just 0.58% never and 1.35% always discuss sports. This suggests most parents in Huangzhou District are not very interested in sports discussions with their children.

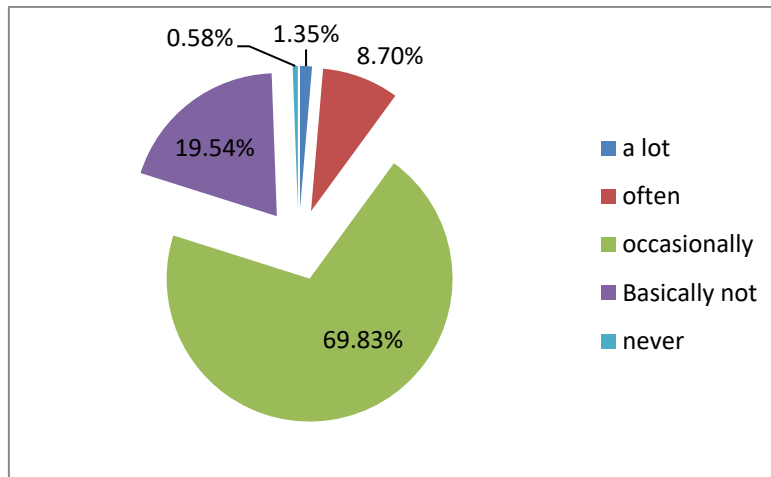


Figure 3: Statistical chart of parents discussing sports topics with their children

2.2.3 Parents' sports consumption of their children in the context of double reduction

Figure 4 shows that parents spend 54.74% of their sports budget on physical goods and 44.10% on participatory activities for their children, with only 1.16% going to spectator sports. This indicates the varying levels of support for children's sports participation and reflects parents' attitudes towards sports consumption.

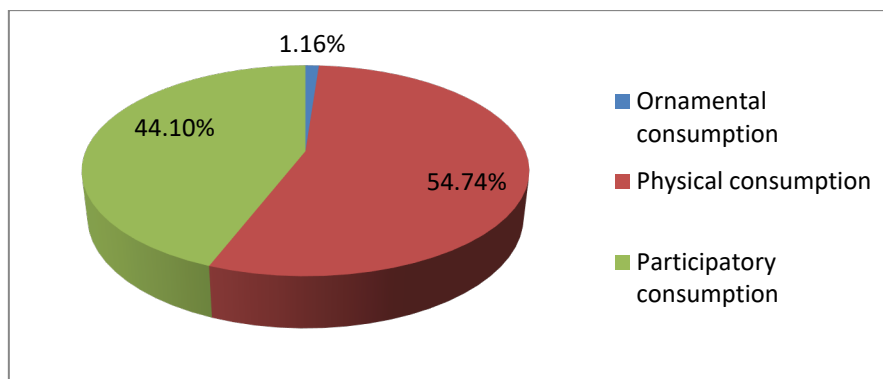


Figure 4: Parents' consumption of sports for their children

2.2.4 Parents' physical exercise habits under the background of double reduction

The table 6 indicates that 62.48% of parents exercise once or twice weekly, 29.40% never, 6.38% three to four times, and 1.74% five or more times a week. Frequency of physical activity is crucial for evaluating sports behavior and performance. The data suggests that most parents do not exercise frequently, which may not positively impact their children's physical exercise habits.

Table 6: Statistics on the average number of physical activities per week (n=517)

The number of times parents exercise	frequency	percentage
0 times	One Hundred Fifty Two	29.40%
1-2 times	Three Hundred Twenty Three	62.48%
3-4 times	Thirty Three	6.38%
5 times or more	Nine517	1.74%
		100.00

The table 7 reveals that 67.12% of people exercise for under 30 minutes, 25.15% for 30 minutes to 1 hour, 6.58% for 1 to 2 hours, and 1.16% for over 2 hours. It's advisable for the average Chinese individual to exercise for over 30 minutes at a time. Survey findings also indicate that most parents exercise less than the average person.

Table 7: Average duration of physical activity per parent (n=517)

Parent exercise duration	frequency	percentage
30 minutes or less	Three Hundred Forty Seven	67.12%
30 minutes - 1 hour	One Hundred Thirty	25.15%
1-2 hours	Thirty Four	6.58%
More than 2 hours	Six	1.16%
total	Five Hundred Seventeen	100.00

2.3 Analysis of the influence of families on junior high school students' participation in physical exercise under the background of double reduction

2.3.1 The effect of family structure on junior high school students' participation in physical exercise

The survey indicates that Huangzhou District families are primarily nuclear or three-generation households. Scholarly research by Yang Jiapeng and others supports this finding.[11] Hu Jiajia [12], and Jia Xinxing [16], Students from nuclear and three-generation families exercise more than those from other family types. Surveys show that these structures encourage physical activity and boost students' interest in exercise. Huangzhou District's family dynamics may foster a supportive sports environment, and with the double reduction policy, junior high school students are likely to engage more in physical exercise.

2.3.2 The influence of parental education level on junior high school students' participation in physical exercise

Parents' education level impacts children's engagement in physical activities. In Huangzhou District, about half of junior high school students' parents have university or undergraduate degrees, with higher-educated parents more inclined to support weekend sports participation. The "Double Reduction" policy may result in varied levels of enthusiasm for physical activities among students, depending on their parents' education.

2.3.3 The effect of monthly household income on junior high school students' participation in physical exercise

Monthly income determines a family's lifestyle, including sports spending. Huanggang City, Hubei, has four minimum wage levels, from 1520 to 2010 yuan. This suggests that Huangzhou District's junior high school students have average incomes around these levels, limiting their sports spending and activity opportunities. Scholars Feng X S and Shi P have observed this problem.[26], Luo X [27] and others believe that the higher the socioeconomic status of parents, the more they can promote their children's participation in physical exercise.

2.3.4 The effect of monthly household physical activity consumption on junior high school students' participation in physical exercise

Sports consumption refers to spending on sports activities and viewing. It includes attending events, participating in sports, and buying sports equipment.[25] Sports consumption becomes notably active when the Engel coefficient falls below 40%. This coefficient is affected by household income, leading to a decrease in food expenditure and an increase in other areas. In 2022, China's Engel coefficient was 30.5%, and Huanggang City's was slightly higher at 36.9%. Furthermore, junior high school students in Huangzhou District spend less than 300 yuan on sports monthly, with about 85% of them spending

only a small fraction of their household income.

2.3.5 The impact of existing sports equipment at home on junior high school students' participation in physical exercise

The survey indicates that most families with junior high school students in Huangzhou District possess 1-2 or 3-4 sports items, such as skipping ropes, basketballs, table tennis equipment, and footballs. Hu Jiajia [12], Dong Baolin [17], Guo Yiming [21] and other scholars believe that having more family sports equipment can improve the family sports atmosphere and stimulate students' motivation to participate in physical exercise. After visiting, it was found that most families in Huangzhou District's junior high school students supervise their children's sports activities, mainly due to the need for the physical education entrance examination. Huangzhou District's junior high school students have sports equipment, but their lack of active participation in sports is harming their physical and mental development. Parents and schools should address this issue.

2.3.6 The Effect of Parents' Physical Attitudes on Junior High School Students' Participation in Physical Exercise

Survey results show that many parents in Huangzhou District seldom engage in physical activities with their children, with nearly 29% not doing so weekly. Also, around 70% of parents occasionally discuss sports with their children, and 20% rarely. This indicates a passive approach to sports among parents. The Chinese government's educational and health policies stress the need for parental involvement in children's physical education. Therefore, parents in Huangzhou District should become more aware and actively participate in physical exercise.

3. Conclusions and Recommendations

3.1 Conclusion

Nuclear and extended families with three or four members are more likely to encourage sports participation in middle school students. These families are more patient in encouraging and accompanying children in sports, and better understand their intentions and attitudes towards physical activities.

There is a positive correlation between parents' educational level, monthly household income, and family sports consumption, which may have a significant impact on children's sports exercise habits and lifelong sports awareness.

Parents' attitudes and practices towards physical exercise significantly influence their children's engagement in sports. However, families in the Huangzhou District junior high school area show a weak approach to exercise and limited sports facilities for their children.

3.2 Suggestion

We're combining educational tech, multimedia, and traditional methods to boost physical exercise awareness among junior high students in Huanggang City. Our goal is to improve understanding among parents and students, encouraging them to participate in physical activities.

Schools and communities should offer diverse physical activities. Schools can enhance sports festivals, while communities can organize family sports events to promote parent-child activities, allowing students and parents to join together and foster a harmonious atmosphere for family sports.

Sports departments need to improve social sports facilities and ensure they are accessible. They should also boost the organization and management of community sports events. It is suggested to create a home-school cooperation model, assigning home sports homework reasonably and involving parents in supervising and guiding their children to complete it, thus encouraging students' physical activity.

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