

Sports-based Physical Education Programs and its Perceived Effectiveness on Physical Activity Levels of Junior High School Students in China



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ABSTRACT: Sport-based physical education focuses on sports and other physical activities. Students have the opportunity to participate in a range of physical activities, learn the rules and regulations of a variety of sports, and develop collaboration and sportsmanship in an organized and extensive sports-based physical education program. As such, this quantitative study examines how sports-based PE affects the physical activity of chosen Chinese junior high school students. Numbers are used to test hypotheses and answer research inquiries. A researcher-made survey questionnaire was given to 349 randomly selected junior high school students at a selected school in China. This was utilized to gather data on their physical activity and sports program perspectives. The mean scores revealed that junior high school students perceive sports-based physical education programs increase physical activity across all four categories. The study indicated no significant difference is the result when grouped according to sex.

KEYWORDS: Physical Education, Sports-based Physical Education Programs, Physical Activity, PE Curriculum

I. INTRODUCTION

Any educational institution in the world recognizes the importance of physical education in the curriculum as a means to promote health and well-being, motor skills, and social and emotional aspects of the students. One area of this course is geared towards sports education. Sport-based physical education is a type of PE curriculum that focuses on sports and other physical activities. Through a well-planned and comprehensive sports-based physical education curriculum, students have the chance to engage in a variety of physical activities, study the rules and regulations of a variety of sports, and build teamwork and sportsmanship. According to Mong et al. (2011), the purpose of the PE program was to encourage healthy behaviors such as physical activity, healthy eating habits, and stress management, as well as to strengthen students' critical thinking abilities and ability to make educated health decisions.

Martin et al. (2012) emphasized that schools should promote physical education and physical activity to improve the academic performance of students, as it was found that they were positively associated with academic performance. In like manner, Guddal et al. (2019) found that physical activity and engagement in sports were related to improved mental health among teenagers. However, it is also found that high exposure to physical activity is associated with an increased risk of musculoskeletal discomfort in the neck/shoulder and lower back areas.

In fact, Healthy China 2030 promotes the importance of physical activity to address the continuous effects of unhealthy practices among learners brought about by various factors. Hence, this study aims to identify the effect of sports-based PE on the physical activity level of selected junior high school students in China.

RESEARCH QUESTION

This research aims to answer the following research questions:

1. What is the perceived effect of sports-based physical education programs on the physical activity levels of junior high school students in China in terms of frequency, duration, type, and motivation?
2. Is there a significant difference between the perceived effect of sports-based physical education programs on the physical activity levels of junior high school students in China when respondents are grouped according to sex?

II. RESEARCH METHODOLOGY

This study made use of a quantitative research design. This involves collecting numerical data to test hypotheses and answer research questions. A research-made survey questionnaire was administered to 345 randomly selected junior high school students in a selected school in China. This was used to collect data on their physical activity levels and their perceptions of sports-based

Sports-based Physical Education Programs and its Perceived Effectiveness on Physical Activity Levels of Junior High School Students in China

programs. The sample size was determined using the Qualtrics calculator, following a 5% margin of error. This instrument was validated by experts in the field of physical education to make sure that statements are relevant based on the research problem. A test of reliability followed right after to ensure the consistency of each item.

III. RESULTS AND DISCUSSION

Table 1. Perceived Effectiveness on Physical Activity Levels of Junior High School Students

Statement	Mean	SD	Interpretation
Frequency			
1. I engage in physical activity more frequently ever since I participated in sports-based PE programs.	2.946	0.656	Effective
2. Sports-based PE programs have motivated me to join in physical activity more frequently.	3.029	0.561	Effective
3. I feel that my physical activity frequency has increased ever since participating in sports-based PE programs.	3.040	0.660	Effective
Duration			
1. I engage in physical activity for a longer time since participating in sports-based PE programs.	3.092	0.575	Effective
2. Sports-based physical education programs motivated and inspired me to engage in physical activity for a longer duration.	3.066	0.698	Effective
3. I feel that my physical activity duration has increased since participating in sports-based physical education programs.	3.034	0.370	Effective
Type			
1. I have engaged in various types of physical activity ever since I participated in sports-based PE programs.	3.000	0.634	Effective
2. Sports-based PE programs have given me opportunities to try new types of physical activity.	3.063	0.510	Effective
3. Participating in sports-based PE programs made me excited to do many types of physical activity.	3.223	0.622	Effective
Motivation			
1. Sports-based physical education programs have motivated me to engage in physical activity outside of school.	3.060	0.686	Effective
2. I feel more motivated to engage in physical activity since participating in sports-based physical education programs.	2.957	0.621	Effective
3. Sports-based physical education programs motivate me to develop new skills and abilities.	3.092	0.575	Effective
OVERALL MEAN	3.050		Effective

Legend: 3:25-4.00 (Highly Effective); 2.50-3.24 (Effective); 1.75-2.49 (Ineffective); 1.00-1.74 (Highly Ineffective)

Sports-based Physical Education Programs and its Perceived Effectiveness on Physical Activity Levels of Junior High School Students in China

The report provided the mean and standard deviation for four variables linked to the perceived impact of sports-based physical education programs on the physical activity levels of junior high school students in China. Frequency, duration, type, and motivation are the four factors. For each factor, participants were asked to score their level of agreement with three statements using a 4-point Likert scale. After calculating the mean values for each statement, an overall mean value was derived by averaging the 12 statement mean values.

The cumulative mean score of 3.050 suggests that junior high school students in a selected Chinese school view sports-based physical education programs as beneficial in promoting physical activity levels across all four categories. Particularly, the mean values for the majority of the statements were larger than 3. This suggests that most of the participants agreed with the assertions made in each statement. Thus, it shows that the programs have a beneficial impact on the frequency, length, type, and motivation of their physical activity. The standard deviation values for each factor indicate that participants' responses vary, with some students reporting higher levels of agreement than others. However, the mean values indicate that the majority of students thought the PE programs related to sports were effective. Moreover, it can be noticed that the level of agreement among participants was relatively consistent. The data then gives a positive finding on its implications for their physical fitness. Zheng et al. (2023) proved that physical fitness is correlated to the well-being, motivation, and enjoyment of the learners. In fact, Trudeau, & Shephard (2008), found that there is a positive correlation between physical activity and academic achievement, particularly in math and reading. In support of the general findings of this study, Sierra-Díaz et al. (2019) mentioned that this PE program could be an effective tool in promoting physical activity and sports participation among students. Thus, it could likewise increase their self-efficacy, motivation, and enjoyment.

Table 2. Difference in the Perceived Effectiveness on Physical Activity Levels of Junior High School Students When Respondents are Grouped According Sex

VARIABLES	t	df	p	Cohen's d	SE Cohen's d	95% CI for Cohen's d	
						LOWER	UPPER
Frequency 1	0.073	346	0.942	0.008	0.116	-0.219	0.236
Frequency 2	0.371	346	0.711	0.043	0.116	-0.184	0.270
Frequency 3	0.732	345	0.465	0.085	0.116	-0.143	0.312
Duration 1	-0.014	346	0.989	-0.002	0.116	-0.229	0.225
Duration 2	1.018	346	0.310	0.118	0.116	-0.109	0.345
Duration 3	0.226	346	0.821	0.026	0.116	-0.201	0.253
Type 1	0.674	345	0.501	0.078	0.116	-0.149	0.305
Type 2	-0.265	346	0.791	-0.031	0.116	-0.258	0.196
Type 3	0.167	346	0.867	0.019	0.116	-0.208	0.246
Motivation 1	-1.385	346	0.167	-0.160	0.116	-0.388	0.067
Motivation 2	0.622	346	0.534	0.072	0.116	-0.155	0.299
Motivation 3	-1.222	346	0.223	-0.142	0.116	-0.369	0.086

Table 2 illustrates the differences in perceived effectiveness on physical activity levels of junior high school pupils according to their sex. The table above shows the 95% confidence intervals for Cohen's d for each of the variables, which are frequency, duration, type, and motivation. Cohen's d is a measure of effect size that shows the difference between two groups or conditions in terms of standard deviation units. It is important to note that a p-value indicates the level of statistical significance, and a p-value of less than 0.05 is usually considered statistically significant. Therefore, the null hypothesis is accepted. As can be observed, most of the variables have confidence intervals that include zero, indicating that the difference in their responses is not statistically significant. Therefore, the study found no significant difference on the perceived effectiveness of physical activity levels between male and female students across all variables.

IV. CONCLUSION

Sports-based physical education programs have proven their benefits in terms of increasing the physical activities of the students. It is without doubt that school administrators should focus themselves on promoting this type of program that would eventually benefit physically, mentally, and emotionally all students in general. Although, considering the limitations of this research, a step forward

Sports-based Physical Education Programs and its Perceived Effectiveness on Physical Activity Levels of Junior High School Students in China

has to deal with a more extensive and in-depth understanding of sport-based physical education and its relationship to the physical activity of students.

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