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## **ROLE OF PHYSICAL EDUCATION IN HIGHER EDUCATION**

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### **ABSTRACT**

The physical education aims at basically to make the body healthy, energetic and strong so that the body can become capable of struggle even in worldly adverse situations and can make life meaningful by becoming a means of attaining Purusharth Chatushtya. Students in physical education receive instruction in physical activities that assist keep them in shape. Students who desire to compete in sports receive specific practice sessions and preparation for contests. The capacity and confidence of a pupil to engage in physical activity are developed through physical education. It was incorporated into the academic program by the Central Board of Secondary Education. The major objective of putting physical education into practice and promoting it is to create physically literate people who have the knowledge and abilities to engage in healthy activities for the rest of their lives. After completing the required training, individuals can continue participating in activities without the assistance of professional trainers. The fundamental goal of physical education is to teach students about how their bodies develop and how to take care of themselves, which includes instruction in everything from basic hygiene to diet management. Knowing exactly what they are doing and why they are doing it requires knowledge. This increases their knowledge in the field of physical education. In this paper we highlight factors that make physical education so crucial and necessary, including how it promotes children's mental health, fosters a spirit of competition, and more. Physical education not only keeps the body in shape, but it also helps children stay healthy physically and mentally.

Keywords: Physical Education, Students, Academic and Sports Skills, Knowledge

### **INTRODUCTION**

There are two aspects of physical education – first theoretical and second functional, it is necessary to emphasize on both the aspects to discharge the remedial, preventive and protective roles of physical education. Correct knowledge of the theoretical side paves the way for the practical side. Along with it, it is necessary to pay attention to another special thing that the form of physical education in Indian tradition is different from western physical education. In the Indian tradition of knowledge, the relation of physical education is not only limited to development or protection, but it is also related to the development of mind and soul. There is a lack of development of this spiritual aspect in western physical education, so while implementing it in the present time, it is necessary to keep in mind which tradition of physical education we are imparting to the students. It would be worth keeping in mind that the goal of physical education is limited only to making the person strong and energetic or it is also developing the feeling that it is to be used to protect the society and its health. It should also be seen whether physical education is becoming a means of spiritual development or not. If we don't consider these points, then probably we will be able to achieve very limited goal only. Yoga and sports both should be essential aspects of physical education. As far as yoga specially keeps the person in the center, the same special center of sports is the society. Yoga makes a person travel from physical

health to spiritual up-liftmen, the same sports makes a person travel from physical health to sociality. Sports is not a display of conflict, but a celebration of sociality, interdependence, symbiosis and collective joy. It should be taken with the same sincerity. Overall, it would be more appropriate to say that we should try to make physical education a means of social happiness along with all-round development of body, mind and soul of boys and girls.

## **OBJECTIVES OF PHYSICAL EDUCATION**

The knowledge of the objectives of physical education is also very important.

(1) The purpose of physical education is to develop the personality of the students, and to develop a sense of sociality in them.

(2) The aim of imparting physical education to the students is to develop the body of the students all round. Making the body beautiful and shapely and strengthening the muscles comes in the program of physical education.

## **The Relationship between Physical Activity and Academic Achievement**

The purpose of the present investigation was to determine the independent contributions of physical activity not associated with structured physical education and school based physical education participation to academic achievement in children. Prior academic achievement and socioeconomic status were also examined. Elementary school participants were selected from the Early Childhood Longitudinal Study-Kindergarten database. Structural equation models were constructed for both mathematics (boys,  $n = 3,226$ ; girls,  $n = 3,256$ ) and reading achievement (boys,  $n = 3,167$ ; girls,  $n = 3,226$ ). Physical activity was significantly and positively related to both mathematics and reading achievement in boys and girls. Physical education participation was not significantly related to achievement. Socioeconomic status accounted for approximately 26% of the physical activity. Future longitudinal research is discussed that incorporates more comprehensive physical activity and achievement variables. Due to interest in the establishment of a relationship between physical activity and academic achievement, reviews have been conducted to attempt to evaluate the overall effects reported across studies (e.g., Sibley & Etnier, 2003; Taras, 2005). Sibley and Etnier conducted a meta-analysis to examine the effects of physical activity upon several measures of cognitive functioning in school aged youth. Their findings demonstrated an overall significant effect size of .32. The size of the effect was moderated by several variables such as publication status (published greater than unpublished), participant age (middle school largest ES), and cognitive assessment (perceptual skills largest effect size). In a qualitative review, Taras evaluated 14 research articles published since 1984 that addressed the relationship between physical activity and or physical education and student performance. Taras concluded that some evidence exists supporting an association between acute physical activity and improved concentration. Taras' review did not indicate that these improvements would translate into enhanced academic achievement. Tara's noted that longitudinal studies with a large sample should be conducted to best understand the role that physical activity plays in students' achievement as the effects may be subtle and may accrue over time. A few recent examples of such studies exist that were not included in the Tara's review that are worthy of mention (i.e., Coe et al., 2006; Grissom, 2005). Coe et al. (2006) employed longitudinal data to study the association between both education and activity and the academic achievement of 214 sixth-grade students. Taking advantage of a scheduling system that randomly assigned half of the students to physical education during the first semester and the other half during the second, the authors compared differences in students' achievement based on the timing of physical education enrollment. No significant differences were found. Unfortunately, the students engaged in a minimal amount of activity in that students only average 19 minutes of moderate to vigorous physical activity

during a 55-minute physical education class. Therefore, the students' activity level might not have been high enough to elicit any effect on their academic behavior. It is important to note that when students were assigned to a physical education course rather than a classroom period, their achievement did not decline. Coe et al. did find that students who engaged in some vigorous activity, as defined by the Healthy People 2010 guidelines, had significantly higher grades than those students who reported no vigorous activity across the two semesters. The authors found no significant relationship between physical education or physical activity and standardized test scores. Unfortunately, the authors failed to account for differences in socioeconomic backgrounds of the students and cited this omission as an important limitation of the study.

## METHODOLOGY

Participants were children selected from the Early Childhood Longitudinal Study-Kindergarten (ECLS-K) database (NCES, 2002). The ECLS-K is a collaborative project involving the U.S. Department of Agriculture, U.S. Department of Health and Human Services, and the U.S. Department of Education. This project has involved ongoing assessment of 22,000 children and families attending more than 1,200 public and private schools. The purpose of this project is to provide data to assist in the investigation of school readiness, elementary school transitions, relationships between the kindergarten experience and subsequent school performance, and growth in cognitive and non-cognitive domains. Data have been collected from parents, teachers, schools, and children themselves. The ECLS-K sample was designed to be nationally representative of kindergartners who began school during the 1998-99 school calendar years. The most recent publication of ECLS-K data included data collection points at kindergarten (fall and spring semesters), first grade (fall and spring semesters), third grade (spring semester), and fifth grade (spring semester). Because we were interested in fifth grade academic achievement in the context of the students' earlier physical activity, physical education, academic achievement and SES, participants included in the present study were those with data points from kindergarten through their fifth grade school year. This sample was then split by sex. Due to attrition over the five years of the study as well as the presence of missing data, the sample of girls included 3,256 participants for the mathematics achievement analysis and 3,226 for the reading achievement analysis. The sample of boys included 3,226 participants for the mathematics achievement analysis and 3,167 for the reading achievement analysis.

## FINDINGS

The Relationship of Physical Activity and Mathematics Achievement Tables 1 and 2 contain the descriptive and inter correlations for all variables included or used to construct latent variables in the tested models. The LISREL 8.72 program (Joreskog & Sorbom, 1993) using the SIMPLIS programming language was utilized to evaluate the proposed model's fit across all samples. Maximum likelihood estimation was utilized, and parameter estimation matrices were positive definite, with no parameter estimates outside their permissible range. Goodness of fit indexes revealed an adequate fit to the data for the sample of boys, with CFI = .97 and SRMR = .06 ( $\chi^2 = 760.84 (49), p < .001$ ). All paths revealed relationships in the expected direction with the exception of physical education to mathematics achievement. Although all parameter estimates were statistically significant (see Figure 2), this was clearly related to the large sample size as some significant estimates were nearly zero. Not surprisingly, prior mathematics achievement was the strongest predictor of mathematics achievement. Parent reported physical activity of their children did contribute to the prediction of mathematics achievement (parameter estimate -.11) whereas the contribution of school administrator reported physical education involvement of their children was -.04. The amount of variance accounted for in prior mathematics achievement by socioeconomic status was 15% and the amount of variance accounted for in physical activity by socioeconomic status was 27%. In total, 71 % of the variance of

mathematics achievement was accounted for by the prior mathematics achievement, physical activity, and physical education variables. The model fit to the sample of girls was also evaluated. Maximum likelihood estimation was utilized, and parameter estimation matrices were positive definite, with no parameter estimates outside their permissible range. Goodness of fit indexes revealed an adequate fit to the data, with CFI = .97 and SRMR = .06 ( $\chi^2 = 705.04$  (49),  $p < .001$ ). All paths revealed relationships in the expected direction with the exception of physical education to mathematics achievement. All parameter estimates were statistically significant with the exception of the path from physical education to mathematics achievement. As expected, prior mathematics achievement was the strongest predictor of mathematics achievement. Physical activity did contribute to the prediction of mathematics achievement (parameter estimate .11). The amount of variance accounted for in prior mathematics achievement by socioeconomic status was 13% and the amount of variance accounted for in physical activity by socioeconomic status was 25%. Overall, 65% of the variance of mathematics achievement was accounted for by the prior mathematics achievement, physical activity, and physical education variables.

### EDUCATIONAL IMPLICATIONS AND FUTURE RESEARCH

Despite the aforementioned limitations, the ECLS-K database provided the opportunity to evaluate the relationship between physical activity and achievement from a longitudinal perspective utilizing a large population of students and accounting for SES, gender, and prior achievement. The results do suggest that the influence of physical activity on achievement may build over time. The findings also indicate that a link does exist between physical activity and achievement. Even though this relationship is small, the recommendation that students engage in physical activity and that physical education should include physical activity opportunities daily appears warranted. The well-established positive association between physical activity and overall health makes it easy to make such a recommendation. In addition recent research has demonstrated that physical fitness, a result of consistent and vigorous physical activity engagement, was related to enhanced neuronal indicators of cognitive functioning in children (mean age = 9.6 years) compared to unfit children as well as unfit college aged participants (Hillman et al., 2005). Conclusion The goal of physical education and sports programmes in educational institutions should be to enhance students' athletic performance as well as their health and physical fitness. Anybody who is physically healthy and emotionally sound can improve their athletic performance in any sport. Thus, physical education involves using scientific methods to encourage the orderly, all-around development of the human body and thereby preserve very high levels of human fitness. Therefore, physical education is crucial for the society's and schoolchildren's growth of physical fitness.

### REFERENCES

1. Juraevich, M. J. (2020). Actual problems of teaching physical culture in schools. *Asian Journal of Multidimensional Research (AJMR)*, 9(11), 181-187.
2. Azimovna, F. M. (2020). Formation of spiritual and moral values of pupils in physical education lessons. *Asian Journal of Multidimensional Research (AJMR)*, 9(11), 99-103.
3. Welk, G. J., Corbin, C. B., & Dale, D. (2000). Measurement issues in the assessment of physical activity in children. *Research quarterly for exercise and sport*, 71(sup2), 59-73.
4. Bailey, R. (2006). Physical education and sport in schools: A review of benefits and outcomes. *Journal of school health*, 76(8), 397-401.
5. Subramaniam, P. R., & Silverman, S. (2007). Middle school students' attitudes toward physical education. *Teaching and teacher education*, 23(5), 602-611.

6. Bidzan-Bluma, I., & Lipowska, M. (2018). Physical activity and cognitive functioning of children: a systematic review. *International journal of environmental research and public health*, 15(4), 800.
7. Linda Rikard, G., & Banville, D. (2006). High school student attitudes about physical education. *Sport, Education and Society*, 11(4), 385-400.
8. Bentler, P. M. (1990). Comparative fit indices in structural models. *Psychological Bulletin* 707,238-246.
9. Block, M., & Burke, K. (1999). Are children with disabilities receiving appropriate physical education? *Teaching Exceptional Children*, 31(3), 18-23.
10. Crews, D. J., Lochbaum, M. R., & Landers, D. M. (2004). Aerobic physical activity effects on physiological well-being in low-income Hispanic children. *Perceptual & Motor Skills*. 95,319-324.
11. Evans, G. W., & Kantrowitz, E. (2002). Socioeconomic status and health: The potential role of environmental risk exposure. *Annual Review of Public Health*. 23,303-331.
12. Friedman, S. L., Belsky, J., Booth, C, Bradley, R. E., Brownell, C. A., Campbell, S. B., et al. (2003). Frequency and intensity of activity of third-grade children in physical education. *Archives of Pediatrics and Adolescent Medicine*. 157, 185-190.
13. Frost, J. L., Wortham, S. C, & Reifel, S. (2005). *Play and child development* (2nd ed.). Upper Saddle River, NJ: Pearson Merrill Prentice Hall.
14. Grissom, J. B. (2005). Physical fitness and academic achievement. *Journal of Exercise Physiology*, 8,11-25.
15. Tremarche, P.V., Robinson, E.M., & Graham, L.B. (2007). Physical education and its effect on elementary testing results. *Physical Educator*, 64,58-64.
16. World Health Organization (WHO) (2008). *Obesity: Preventing and managing a global epidemic. Report of WHO consultation. World Health Organization Technical Report Series*. 894 A-253.