



“Impact of Physical Education on Obesity among School Children of Pioneer Convent School Gajjan Majra Punjab”

¹Rajwinder Pal Singh Gill, ²Dr. Ravi Kumar, ³Mr. Ravinder Singh Sohi

¹Research scholar, Department of physical, Guru Kashi University Talwandi, Punjab.

²Assistant Professor, Department of physical, Guru Kashi University, Punjab.

²Assistant Professor, Department of Social Sciences, Tara Vivek College, Punjab

ABSTRACT

In response to the dramatic rise in childhood obesity in district Sangrur, the Centers for Disease Control (CDC) and other organizations have advocated increasing the time that secondary school children spend in physical education (PE) classes. However, little is known about the effect of PE on child weight. This paper measures that effect by instrumenting for child PE time with state policies, using data from the Early Childhood Longitudinal Study. Results from research models indicate that PE lowers BMI score and reduces the probability of obesity among 10th graders (in particular, boys), while the instrument is insufficiently powerful to reliably estimate effects for younger children. This represents some of the first evidence of a causal effect of PE on youth obesity, and thus offers at least some support to the assumptions behind the CDC recommendations. We find no evidence that increased PE time crowds out time in academic courses or has spillovers to achievement test scores.

Key words: Obesity, Pioneer Convent School, Punjab

INTRODUCTION

The National Policy on Education (1968) recommended the development in games and sports with the objectives of improving sportsmanship and physical fitness of the students who can excel in sports and for those who are average in studies. Under the chairmanship of Ishwarbai J Patel a review committee on ten year school curriculum (1971) emphasised physical education and games in school, where it was pointed that an adequate time is required in the curriculum for sports. The review committee also suggested the inclusion of Games, Dance, Athletics, Training in Yoga, Gymnastics, Swimming and Combative events (for boys only). Physical Education was considered as a compulsory subject under 10 + 2 + 3 pattern of education. We cannot isolate schools from our social structure; rather it is a miniature society in itself. By and large it is the responsibility of the school to develop the inherent qualities in children according to their society. Different types of children



from various families and cultures enter into a moulding centre, where they stay and learn together. A school is an appropriate location for promoting the physical activities, sports and other health related activities and behaviour. A broad and balanced curriculum, promotes the physical, mental, cultural and spiritual development of pupils (National Curriculum Council - 1990).

REVIEW OF LITERATURE

The sports have travelled a long journey on its way to uplift the Indian society. India won many events since independence in athletics and in other games with a sign of positivity. Government and other Non Government agencies worked a lot for the cause of sports in the country; still a lot is to be done in this regard. It also affirmed that to promote sports activities in the country, the government of India and other regional sports organizations established a number of sports schemes time to time. Various institutions and organizations have been also established for encouraging the people to participate in sports activities. Many researchers stated that it is a pity for the country that even after more than fifty years of independence; we still found physical education as a co-curricular activity in our schools. A separate Sports Ministry was created in 1984 by the Union Government, but failed to bring the required changes in the attitude and implementation of physical education. Physical education did not get much significance as it required. There is no proper maintenance of programs and records in schools. Also the progress shown by a student is not maintained in a better way for better results and achievement. Physical Education was recommended as a compulsory subject by our various commissions, but the situation did not improved. In our school curriculum four periods are allotted per week for physical education. It is imposed over the Physical Education Teacher (PET) to look after the other needs of a school other than his teaching and ground activities. It is also demanded from a single physical education teacher to conduct sports activities of the entire school irrespective of strength of students.

RESEARCH METHODOLOGY

The study consisted of two parts: 1) Cross-sectional survey of children in grade tenth DAV schools randomly selected from the state of Punjab. Data were checked for completeness and accuracy. Coded data were computerized and analysed by using IBM SPSS Statistics Version 25. The descriptive statistics were presented in frequency tables, range, minimum and maximum descriptive, mean, standard deviation and variance for boys and girls separately (Ricardo, Gil, & Araújo, 2002). The school teachers from department of physical education personally took different anthropometric (height, weight, triceps, biceps, abdomen, suprailiac, calf and fat percentage) measurements at the examination room after instructing the students to took off heavy clothes. The sample size (N) of students is 150. One suitable weight balance measuring to nearest 0.5 kg was used (Division & Report, 2017). Students were weighed while wearing light school uniform. Suitable metallic meter scale measuring to the nearest 0.5 cm, fixed on the scale was used. Body Mass Index was calculated by dividing weight in kg by square height in meters (Chou & Huang, 2017).



FINDINGS

The results of this paper indicate that increased PE leads to greater overall participation by schoolchildren in structured physical activity and more physical activity overall. Beyond its impact on youth weight, this is important because increased physical activity by youths is associated with cardiovascular benefits such as a reduction in low-density lipoproteins (bad cholesterol) and the prevention or delay of hypertension; musculoskeletal benefits such as increased bone-mineral density and increased strength and endurance; mental and emotional benefits such as reduced stress and anxiety; and prevention of chronic disease (IOM, 2005). This paper finds no evidence that additional PE time crowds out academic subjects. We also find no evidence that PE has any spillover effects onto achievement test scores. These findings are consistent with those of Dills et al. (2011). Concerned by the possibility of policy endogeneity that might bias the IV estimates, we control in our models for a host of state characteristics related to income, education, and health, including per capita income, education levels, prevalence of obesity, pupil-to-teacher ratio, tax revenues per student, expenditures per teacher, and participation in subsidized school meal programs. Moreover, we conduct several falsification tests and find no evidence that increased PE time affects weight-related variables that it shouldn't, specifically: birth weight, BMI z-score in the fall of kindergarten, and height z-score. In summary, we find no evidence that policy endogeneity biases the research results, but caution that evidence from falsification tests is only suggestive, not definitive.

LIMITATIONS

Limitation of this paper is that the weight-related outcomes we examine (BMI z-score, overweight, obesity) are based on body mass index, which is a flawed measure of fatness because it ignores the distinction between fat and muscle. Physical activity that builds muscle and burns fat will have an ambiguous impact on BMI. An ideal dataset would include measures of both fat mass and lean mass (which can be calculated using technology such as Bioelectrical Impedance Analysis or Dual X-Ray Absorptiometry), allowing researchers to measure the effect of PE on muscle and fat. However, this limitation is less relevant for elementary school students, whose PE involves less muscle-building exercise and who are less prone than adolescents to adding muscle mass.

BIBLIOGRAPHY

- [1]. Chou, C., & Huang, C. (2017). Effects of an 8-week yoga program on sustained attention and discrimination function in children with attention deficit hyperactivity disorder. <https://doi.org/10.7717/peerj.2883>
- [2]. Division, I. S., & Report, P. (2017). Body Mass Index of Primary 1 Children in Scotland, (December).
- [3]. Ricardo, D. R., Gil, C., & Araújo, S. De. (2002). Body Mass Index : A Scientific Evidence-Based Inquiry, 79(n° 1).



- [1]. Abuse, D., Disease, A., Lateral, A., Fibrillation, A., Deficit, A., Pain, B., ... Diabetes, G. (2016). 101 Health Conditions Benefited by Yoga (as found in scientific studies as of October 2016), (October). <https://doi.org/10.3233/JAD-150653>.
- [2]. Chou, C., & Huang, C. (2017). Effects of an 8-week yoga program on sustained attention and discrimination function in children with attention deficit hyperactivity disorder. <https://doi.org/10.7717/peerj.2883>
- [3]. Division, I. S., & Report, P. (2017). Body Mass Index of Primary 1 Children in Scotland, (December).
- [4]. Health, N., & Survey, E. (2002). National Health and Nutrition Examination Survey ANTHROPOMETRY PROCEDURES, (January).
- [5]. Nutrition, F., & Management, S. (2000). BMI - Body Mass Index: BMI for Children and Teens.
- [6]. Pandit, M. A., & Ojha, S. N. (2013). Clinical evaluation of Guduchyadi Yoga and its combination with Udvartana by Haritaki in the management of Sthaulya with special reference to obesity, 3, 100–104.
- [7]. Ricardo, D. R., Gil, C., & Araújo, S. De. (2002). Body Mass Index : A Scientific Evidence-Based Inquiry, 79(n° 1).
- [8]. Therapy, Y. (2016). Intervention Of Classical Yoga In Pediatric Obesity- A Case Study Dr Chandra Nanthakumar (PhD in Yoga Therapy), 5(1), 34–43. <https://doi.org/10.9790/1959-05163443>