

## Review

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Volume 2 : Issue 1

Article Ref. #: 1000OROJ2108

**Article History**Received: July 2<sup>nd</sup>, 2015Accepted: July 21<sup>st</sup>, 2015Published: July 22<sup>nd</sup>, 2015**Citation**

Davis KL. Physical education teacher education: the key to eliminating childhood obesity. *Obes Res Open J.* 2015; 2(1): 42-45. doi: [10.17140/OROJ-2-108](https://doi.org/10.17140/OROJ-2-108)

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# Physical Education Teacher Education: The Key to Eliminating Childhood Obesity

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**ABSTRACT**

Physical Education Teacher Education (PETE) will be the key to eliminating childhood obesity for the future by preparing physical education teacher candidates in the knowledge and skills they need to teach P-12 students, as well as to prepare them for the sensitivity and caring needed to teach overweight and obese students. The purpose of this article is to advocate for more time in physical education at all levels of schooling to increase P-12 students' motivation to participate, to increase their academic achievement, and to increase their skills to enable them to participate in sport and physical activities for many years. Childhood obesity has become an epidemic in the last 30 years, and school physical education is the best venue for educating children about the proper nutrition and exercise needed to control weight. Children spend most of their time in the day in schools. Budget cuts to physical education are unwise in our current history, and school "physical activity" programs cannot take the place of educating children on how best to use their physical skills in the future to participate for a lifetime in physical activities. Quality school physical education delivered by quality physical educators may be the answer to the childhood obesity epidemic.

**KEYWORDS:** Obesity; Teacher education; School physical education.**INTRODUCTION**

The rise in childhood obesity rates in the United States has created the need to address the activity patterns and nutritional habits of school-aged children. There has been a drastic rise in obesity rates among adults, but childhood obesity rates have reached epidemic proportions.<sup>1</sup> Diets of fast food and sugary drinks, along with declining amounts of physical activity, have contributed to a tripling of childhood obesity rates in last 30 years.<sup>2</sup> Obese children and adolescents are more likely to be overweight or obese as adults.<sup>3</sup> Obesity is related to an increased risk of asthma, type 2 diabetes, hypertension, orthopedic complications, and sleep apnea.<sup>4</sup> These risk factors also lead to approximately \$14 billion in national health care costs each year.<sup>5</sup> In contrast to these physical risk factors, obesity also exerts a social and psychological burden on adolescents in the form of depression and low self-esteem – the likelihood of a low quality of life for obese adolescents is 5.5 times greater than for their healthy weight counterparts.<sup>6</sup> In addition, the sedentary lifestyles of children are exacerbated due to and increased use of television, video games, computers and the internet. Children in America spend 75% of their waking hours being inactive, compared to very little time in physical activity – estimates at 12 minutes per day.<sup>7</sup>

Today's youth are considered the most inactive generation in history.<sup>8</sup> Physical education teachers can help overweight children build healthy bodies and establish healthy lifestyles by teaching their students ways to include physical activity in their daily lives. Physical educators can play an important role in the treatment and prevention of overweight in children by giving them the skills and confidence they need to participate in physical activity for a lifetime and educating children about the importance of health-related fitness concepts. Children and

adolescents who regularly run, play, and sweat also demonstrate fewer behavioral problems, greater concentration, and improved performance on standardized tests.<sup>9</sup>

#### PHYSICAL EDUCATION TEACHER EDUCATION

Physical education teacher education (PETE) programs prepare teachers to teach physical education in P-12 schools. As in other content areas, PETE is constantly looking to improve the delivery of content to increase the accountability of physical education programs. There are diverging points of view as to what the content of physical education is, and how that content relates to preparing future physical education teachers. Prior to Franklin Henry's<sup>10</sup> call for reinventing physical education as an academic discipline, the philosophy was that a physical education teacher needed to have knowledge and skill to be a quality physical educator. Since 1964, PETE programs have emphasized a more "academic" curriculum, with content knowledge defined as the information found in exercise physiology, anatomy, biomechanics, and motor learning.<sup>11</sup> Teacher candidates in physical education spend far too much time studying about the science of movement and for too little time studying about the games and sports content they are likely to teach. The professionals who emphasize health-related fitness as the content for physical education often show little regard for the overt messages they send to school-aged children about bodies, weight and normality.<sup>12</sup> Currently, there is research<sup>13</sup> to show that future teachers with greater knowledge and skills tend to give more specific and richer feedback when they teach activity. In addition, Lund<sup>11</sup> stated that good physical education involves more than just measuring fitness or keeping kids active. When P-12 students engage in sports, games, or activities, they tend to participate for longer periods of time and get the same or better fitness benefits than participating in fitness activities.<sup>14</sup>

The school physical education curriculum is the primary source of physical activity instruction for adolescents.<sup>15</sup> It has been suggested that the quantity, and in particular, the quality of school physical education has a significant positive effect on the health-related fitness of adolescents by increasing their participation in moderate to vigorous physical activities.<sup>16</sup> High quality physical education gives adolescents the opportunity to learn the fundamental movement skills needed to establish and maintain physically active lifestyles throughout their lives. States and local school districts determine the amount of required physical education children and adolescents receive on a daily basis. In 2006, few schools provided daily physical education or its equivalent for the entire school year to all students.<sup>17</sup> Across the nation in 2007, only 30% of high school students attended physical education classes for five days in an average school week, compared with 42% in 1991.<sup>18</sup> To promote physical activity and its resulting benefits, school systems should require at least 225 minutes per week of required daily physical education in all secondary schools. Sedentary behavior in adolescents may be influenced by insufficient motor or physical fitness, because

competence in movement is crucial to activity participation.<sup>19</sup>

A recent revolutionary study by Cawley, Frisvold, and Meyerhoefer<sup>20</sup> presented some of the first evidence showing that physical education at the elementary school level helps to reduce obesity. In doing so, this study provides support for the recommendations by the United States Surgeon General<sup>4</sup> that time in school physical education should be increased in order to reduce the risk of childhood obesity. Although there is a large amount of research on the correlation between time in physical education and childhood obesity, few studies estimate the causal impact of physical education on weight. In the Cawley, et al. study,<sup>20</sup> results indicated that additional time in physical education lowers a child's BMI z-score and the probability of becoming obese. Increasing the amount of time in physical education up to the recommended amount of 150 minutes per week would lower BMI z-scores by 8% of a standard deviation, which is 12% of the mean, and would reduce the probability of obesity by four percentage points. The results of this study represent some of the first evidence that physical education for elementary school children has a causal impact on obesity. Thus, it confirms the critical policy assumptions that physical education time should be increased in order to reduce the risk of childhood obesity.

#### OBESITY/OVERWEIGHT DISCRIMINATION

Students who are overweight or obese are often discriminated against or stereotyped as being lazy, and some physical educators may fail to provide the safety, encouragement, and instruction these students need.<sup>21</sup> Much attention has been given lately to the effects of bullying and teasing in schools. Teasing often targets another student's weight or appearance, and this bullying has been shown to contribute to social isolation, depression, low self-esteem, and even suicide.<sup>22</sup> The childhood obesity epidemic requires the development of appropriate attitudes toward overweight and obese individuals who may feel especially ostracized in physical activity settings. Research has shown that individuals who are overweight and obese are often victims of prejudice, marginalization, oppression, and stereotyping. The social consequences of obesity are equally, if not more, detrimental to their well-being than the physical consequences. Being the victim of harassment and weight bias and feeling dissatisfied with their bodies further contributes to childhood obesity.<sup>23</sup>

Physical educators may also inadvertently demonstrate these negative biases.<sup>22</sup> Research on the attitudes of physical education majors found that they held strong, negative stereotypes and prejudices against obese people.<sup>23</sup> In fact, a study comparing the attitudes of physical education majors and psychology majors found that the physical education majors possessed higher levels of anti-fat biases than their psychology counterparts.<sup>24</sup> Preparing future physical education teachers to be aware of their biases and to become more sensitive to the diverse body types of their students will help alleviate the anti-fat biases. Although our

field is committed to helping people acquire healthy lifestyles, we also need to understand the causes and ways to prevent obesity and develop programs that make a positive contribution to the well-being of obese and overweight students. Physical education teachers and teacher candidates should be trained about the impact of weight stigmatization on their P-12 students, and they should receive professional development about strategies to reduce teasing at school.<sup>25</sup> Physical education teachers can develop organizational and dispositional strategies that can help children feel comfortable in an educational setting and also experience a sense of accomplishment as they become physically skilled.<sup>26</sup>

## CONCLUSION

One of the best ways that physical education teachers can be successful in teaching overweight or obese students is to meet their needs and interests. Over the past 20 years, an increasingly diverse assortment of physical activities has developed in the popular culture. New activities such as disc golf, corn hole, geocaching, yoga, adventure racing, skateboarding, Pilates, cross fit, and home exercise systems like Wii Fit or Xbox Kinect, make this an exciting time to be looking for ways that physical education can contribute to educating children to become more physically active. Most adults and children are looking for a sense of novelty and engagement in their play and physical activities that are different from what is commonly provided in physical activity settings and in physical education curriculums.<sup>27</sup>

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