


## Chapter 11

# Addressing the Public Health Epidemic of Childhood Obesity Using Public Schools as Health Education Learning Laboratories

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### ABSTRACT

*In our society, childhood obesity has become a pressing health issue. Childhood obesity occurs when children are considerably overweight for their age and height. Body mass index (BMI) is used to measure the percentage of body fat; therefore, the higher the BMI, the more body fat an individual has accompanied by the likelihood that the individual is obese. This research aims to address the factors that cause childhood obesity. A total of 116 journal articles were used for the development of this paper; the articles were analyzed and selected based on the occurrence of the following keywords and phrases: (1) childhood obesity, (2) social cognition theory, (3) telemedicine, and (4) nutrition education. The literature review showed a relationship between childhood obesity and body mass index (reduction, the use of telemedicine, and school food gardens). Using telemedicine video conferencing software and adding food gardens to public school curricula may be a strategy educators and policymakers can use to reduce the rate of childhood obesity.*

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## **INTRODUCTION**

Obesity is a global issue with significant health and social consequences (Lake, 2011). More specifically, childhood obesity has continued to grow as a problem in the United States. Obesity is defined as a complex disorder that is affected by many interacting genetic and non-genetic factors (Lake, 2011). Childhood obesity falls under this definition as well but with a focus on a younger demographic. The tool used to aid in the indication of high body fat and to screen different weight categories is Body Mass Index (BMI), (Centers for Disease Control, 2019). For adults, having a BMI of greater than or equal to 30 is considered obese; however, body mass index for children and adolescents is age and sex-specific (Anderson & Butcher, 2006). The prevalence of obesity in the US is 18.5% and affects about 13.7 million children and adolescents (Centers for Disease Control, 2019). Hispanics (25.8%) and non-Hispanic blacks (22.0%) have a higher prevalence than non-Hispanic whites (14.1%) (Centers for Disease Control, 2019). There is a correlation between childhood obesity and adult obesity, where children that are obese tend to grow to become obese adults (Anderson & Butcher, 2006). According to the World Health Organization (2019), most of the world's population lives in nations that are plagued with high death rates from overweight and obesity. In 2016, 41 million children under five years of age were overweight (World Health Organization, 2019).

Child obesity has attained an epidemic level not only in the US but all over the world. The Centers for Disease Control identify overweight as “a BMI at or above the 85th percentile and below the 95th percentile for children and teens of the same age and sex” (Centers for Disease Control, 2018). Children and teens have a BMI above the 95th percentile of their peers of the same age, and sex are considered obese (Centers for Disease Control, 2018). In 2016, the number of overweight children globally had reached over 41 million (World Health Organization, 2019). Childhood obesity remains a critical concern in the US, as indicated by the number of affected children has tripled. According to 2015 and 2016 statistics, 1 in 5 school-aged children is considered obese (Centers for Disease Control, 2018). It is widely believed that obesity and overweight stem from caloric input exceeding caloric output. However, existing literature indicates excessive consumption of sugar through soft drinks, increased portion intake, and continuous decline in physical activity contribute significantly to the increased rates of obesity in the world (Sahoo et al., 2015).

## **THE OBJECT OF RESEARCH**

The purpose of this research is to highlight the factors and influences concerning childhood obesity in schools.

### **The Goal of the Research**

This research is an in-depth review of the existing literature to develop a comprehensive approach to address childhood obesity through the development of innovative school-based intervention strategies.

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