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## Addressing the Relationship between Socioeconomic Status and Childhood Obesity: An Inter-Professional Approach

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## Introduction

Childhood obesity is prevalent today, especially in children of low socioeconomic status (SES). (Lee, H., Harris, & Lee, 2013). Obesity results when an individual has high energy intake with low energy expenditure and body mass index (BMI) is above 95 percentile determined by age, sex, weight and height standards of the U.S. population (Kant & Graubard, 2013). Low SES is a predictor of childhood obesity resulting in chronic medical conditions with lasting adverse health that continue into adulthood. Children with obesity are associated with the onset of serious health conditions including diabetes, asthma, sleep apnea and hypertension (Moreno, Johnson, Shelton, & Boles, 2013). Researchers found a link between poverty and childhood obesity. According to the U.S. Bureau of Census over 43 million people live in poverty with decrease access to healthy foods in the surrounding environment and lack of rec centers or parks, limiting physical activity. Poverty is defined as income-to-needs ratio (PIR) based on family income and number of people living together that varies yearly on market and inflation determined by the U.S. Bureau of Census (2016). Low SES is related to family income, parent education and occupation which are indicators for childhood obesity (Lee, H., Harris, & Lee, 2013).

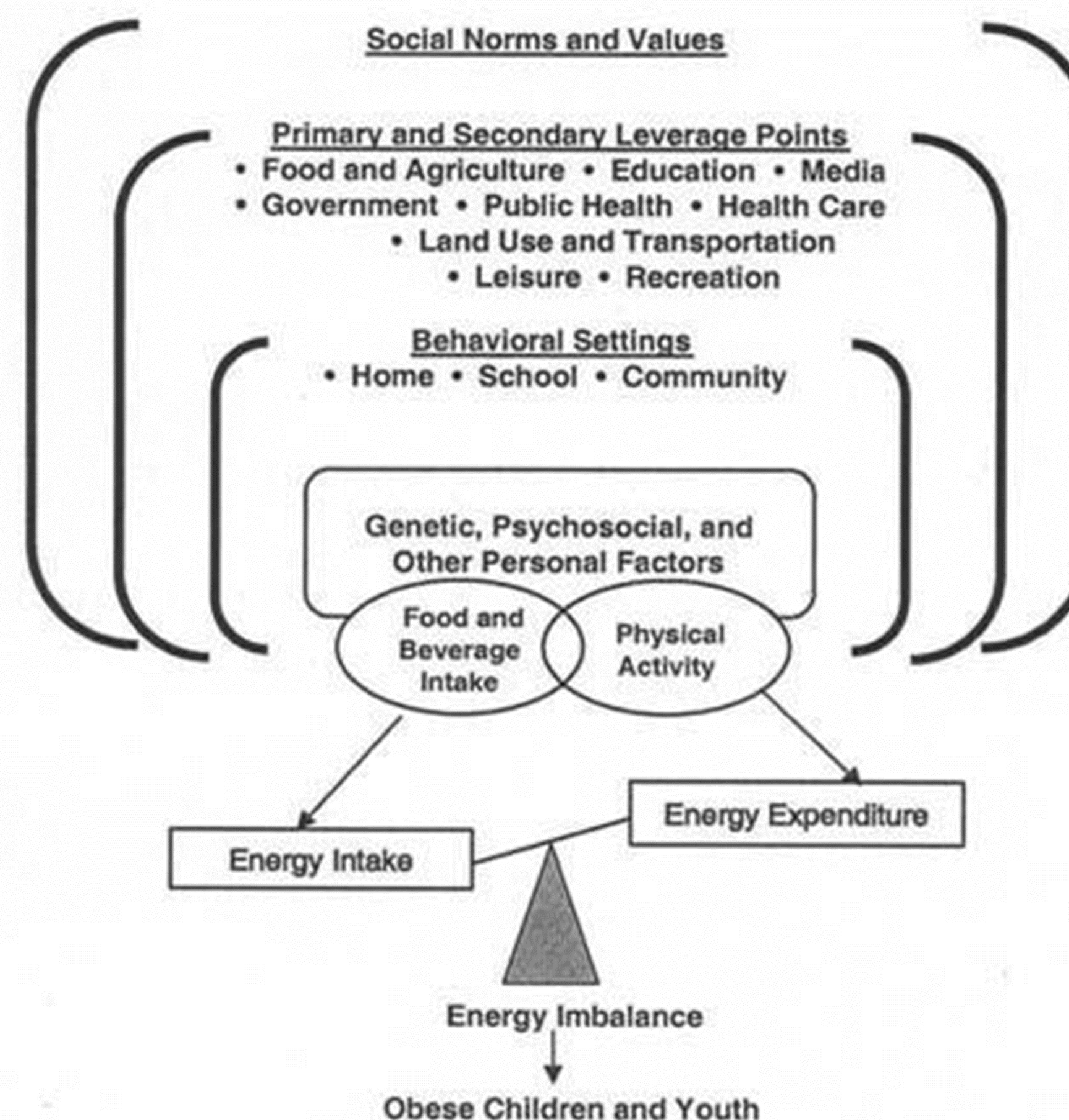
## Review of the Literature

In the United States, the prevalence of childhood obesity has tripled since 1980 and remains high at 17 % (Ogden, Carroll, Kit, & Flegal, 2014). Obesity found at an early age combined with poverty along with low parent education contributed to childhood obesity (Singh, Kogan, & van Dyck 2007; Lee, H., Andrew, Gebremariam, Lumeng, & Lee, 2014; Cunningham, Kramer, & Venkat Narayan 2014; Lee, H., Harris, & Lee 2013). Food and beverage intake of high fat foods, sugar sweetened beverages increased within the lowest SES group and high BMI scores (Kant & Graubard, 2013; Moreno et al., 2013; Carter & Gupta, 2014). The environment lacked access to fruit and vegetables and education-related knowledge gaps in food quality were identified. One in three children of house-hold incomes with less than 100% of poverty live in run down neighborhoods without parks or rec centers. Additionally, many fast food restaurants are associated with obesity and decreased physical activity (Bethell, Simpson, Stumbo, Carle, & Gumbojav 2010; Frederick et al., 2014; Grow et al., 2010).

## Implications for Practice and Policy

Childhood Obesity, if related to lack of food access and physical activity in disadvantaged communities will decrease through community actions by creating a coalition of people to find solutions. The University of California UCSF and NBCC (garden program) serve as a model for childhood education and interventions that improve family health and prevent childhood obesity (Chaufan, Yeh, & Sigal, 2015). Health care professionals, local politicians and community residents must partner together with state and federal organizations to designate money to create healthy food markets at low cost, a community garden and public spaces designated for physical activity. Law makers can change the availability of WIC and SNAP programs to benefit more low SES children meeting eligibility requirements to gain access to food.

Fig 1. Institute of Medicine (IOM) Childhood Obesity Prevention Policies, Washington D.C. The National Academies Press, 2011



## An Inter-professional Approach

An inter-professional approach to address this population health issue of social disadvantage and childhood obesity requires a community action plan. School policies that require students to engage in 60 minutes of physical activity every day with a school lunch that includes fresh fruit and vegetables. Also, a Mandatory Nutrition class with a pre and post test to determine what learning took place. Collaboration between the child, family and health care professionals are imperative for the success of preventing obesity by addressing causes of and strategies to decrease obesity and improve health while monitoring success. The plan needs financing through the federal government and state bills that designate money to build grocery stores, start a farmer's market, bring in a food bank, and food pantry to low income family areas. Other groups would devise plans to rebuild parks, bike paths and walking parks, in low SES neighborhoods.

## Evaluation Plan

Evaluation of the community and the prevention of childhood obesity in relation to food access and physical activity is ongoing. The evaluation focus is on assessing policy, monitor environmental changes, survey of food access and physical activity. The neighborhood committee will monitor the status of the community by collecting data from health care providers, school health educators and after school programs to assess prevalence of childhood obesity before and after implementing the program. The data is collected and summarized for supporting legislation to fund programs for low SES neighborhoods. The community will guide the evaluation process and determine how often and the duration between assessments needed to see actual changes. Effective data collection of defined interventions will help other researchers understand the data results to compare with their research for future research and evaluation. Healthy People 2020 has a website that links resources to allow tracking and progress of objectives in low SES communities