

### Purpose

- The purpose of this review of literature was to examine the effectiveness of both school and home-based interventions in preventing obesity among the children and adolescent population.<sup>1</sup>

### Introduction

- Childhood obesity has become a serious health concern in this population.<sup>1</sup> In the United States, the percentage of children and adolescents who have been affected by obesity has more than tripled since the 1970's.<sup>1</sup> Many children and adolescents are at risk for poor health throughout their lifetime, due to developing obesity at a young age.<sup>1</sup> It is vitally important for children and adolescents to receive the appropriate intervention for obesity at this time in their lives.<sup>1</sup>

### Methods

- Research for this literature review was conducted among a variety of databases to broaden the research and see if anything can be found intriguing about my topic. The databases that were searched for in my research findings included: the Tennessee Technological University Library Search Services, Google Scholar, the Journal of the Academy of Nutrition and Dietetics, the American Journal of Clinical Nutrition, ProQuest, and the United States Library of Medicine National Institutes of Health. Key words that were used in searching these databases included: "obesity," "obese," "intervention," "school-based intervention," "adolescent," and "adolescent interventions."
- Articles that were found to be peer-reviewed and had strong and detailed information about the subject at hand were included in the selection of articles that were to be used in this paper.

# Obesity Interventions Among Adolescents and Children Interventions in the Home and School

Hailey Angel, DPD Student

Samantha Hutson, PhD, RDN, LDN, Faculty Advisor

### Home Based Interventions

- It has been shown that parental involvement while treating obesity in children and adolescents has been associated with modest improvements in BMI and associated metabolic risk factors.<sup>3</sup>
- It has been shown that including parents in an intervention is vital for childhood obesity treatment because parental obesity has been linked to adolescent obesity.<sup>3</sup>
- Parents have been shown to be powerful role models for their children in determining eating and exercise behaviors.<sup>3</sup>
- Concordance and Discordance played a major role in overall health.<sup>5</sup>
- If parents were concordant and displayed a positive home environment, the adolescents in the home were more likely to display healthy eating patterns and engage in hours of physical activity.<sup>5</sup>
- If parents were discordant, adolescents consumed more fast food and had unhealthy weight control behaviors.<sup>5</sup>

### School Based Interventions

- It may also be beneficial for children and adolescents to receive interventions at school.
- Many children may not receive the appropriate help at home, making a school-based intervention more feasible for them.
- The Verstraeten study targeted dietary behaviors and physical activity for the prevention of obesity in children and adolescents ages six to eighteen years of age.<sup>7</sup>
- Verstraeten found that 82% of nutrition education interventions done at school had a positive effect on dietary behaviors as well as physical activity.<sup>7</sup>
- Effective interventions targeted both the participant's diet and physical activity, involved many different stakeholders and integrated educational activities for children and adolescents into the school curriculum.<sup>7</sup>
- Hawkins examined a school based obesity prevention intervention that could successfully reduce children's selection and consumption of sodium and added sugars. This study showed decreases in both sodium intake and added sugars.<sup>8</sup>



### Conclusions

- The research examined in this literature review focused on the effectiveness of interventions that took place in the home and school settings. It has been shown that including parents in an intervention is vital for childhood obesity treatment because parental obesity has been linked to adolescent obesity. While interventions that take place in the home are important, it may also be beneficial for children and adolescents to receive proper interventions at school. It is vitally important for children and adolescents to receive the appropriate intervention for obesity at this time in their lives. Whether it be in the child's home, if the resources are available to them, or if the individual lacks proper assistance from the home, being able to receive the intervention in a school setting can help prevent adult obesity-related morbidity and decrease the risk of future chronic health conditions.

### References

- Obesity. (2018, September 18). Retrieved November 09, 2020, from <https://www.cdc.gov/healthyschools/obesity/index.htm>
- Defining Childhood Obesity. (2018, July 03). Retrieved November 09, 2020, from <https://www.cdc.gov/obesity/childhood/defining.html>
- Bean MK, Caccavale LJ, Adams EL, et al. Parent Involvement in Adolescent Obesity Treatment: A Systematic Review. *Peds.* 2020;146(3). doi:10.1542/peds.2019-3315.
- Robson SM, Couch SC, Peugh JL, et al. Parent Diet Quality and Energy Intake Are Related to Child Diet Quality and Energy Intake. *Journal of the Academy of Nutrition and Dietetics.* 2016;116(6):984-990. doi:10.1016/j.jand.2016.02.011
- Berge JM, Maclehorse RF, Meyer C, Didericksen K, Loth KA, Neumark-Sztainer D. He Said, She Said: Examining Parental Concordance on Home Environment Factors and Adolescent Health Behaviors and Weight Status. *Journal of the Academy of Nutrition and Dietetics.* 2015;116(1):46-60. doi:10.1016/j.jand.2015.05.004
- Verstraeten R, Roberfroid D, Lachat C, et al. Effectiveness of preventive school-based obesity interventions in low- and middle-income countries: a systematic review. *The American Journal of Clinical Nutrition.* 2012;96(2):415-438. doi:10.3945/ajcn.112.035378
- Hawkins KR, Burton JH, Apolzan JW, Thomson JL, Williamson DA, Martin CK. Efficacy of a school-based obesity prevention intervention at reducing added sugar and sodium in children's school lunches: the LA Health randomized controlled trial. *Intrntl. Journal of Obes.* 2018;42(11):1845-1852. doi:10.1038/s41366-018-0214-y