Effects of COVID-19 in the Status of Childhood Obesity in the United States: A Literature Review

Ana Cruz
Old Dominion University

Follow this and additional works at: https://digitalcommons.odu.edu/gradposters2022_gradschool

Part of the Epidemiology Commons, and the Pediatrics Commons

Recommended Citation
https://digitalcommons.odu.edu/gradposters2022_gradschool/4

This Book is brought to you for free and open access by the 2022 Graduate Research Achievement Day at ODU Digital Commons. It has been accepted for inclusion in The Graduate School Posters by an authorized administrator of ODU Digital Commons. For more information, please contact digitalcommons@odu.edu.
Effects of COVID-19 in the Status of Childhood Obesity in the United States: A Literature Review

Aran Cruz
Old Dominion University

Abstract

Introduction: The main hypothesis is that COVID-19 affects the prevalence of childhood obesity in the United States due the precautions needed to contain the pandemic.

Methods: The methods used in this semi-systematic literature review include web-based searches from the following electronic databases: Google Scholar, ResearchGate, and EBSCOhost. The search was limited to children ages 5 to 19 years old with diagnosed obesity.

Results: The review found that COVID-19 pandemic has greatly increased the rate of childhood obesity in the United States due to changes in diet, increased screen time, and less physical activity. Discussion: There are several pertinent points to bear in mind when interpreting these results. Overall, changes in diet, steep reduction in physical activity, and increased screen time was observed in many children as an effect of COVID-19. Due to the shortage of food supplies, particularly healthier options, it became more difficult to provide a balanced diet for children. In addition, loss of jobs made it more difficult to attain healthier foods, and families in low-to-middle income groups resorted to more processed and unhealthy foods. Due to establishment closings and school closures, school children were also vulnerable to less physical activity, and they were more likely to spend time on their computers, phones, televisions, etc. Virtual learning environments also encouraged more use of screens, thus, contributing to the current sedentary lifestyle children are experiencing today. Despite the contributing factors to childhood obesity, there are still minimal interventions in place. As the pandemic continues, further interventions are still needed to tackle the issue, especially ones that focus on the mental health aspect of children with obesity.

Key Words: Childhood obesity, pandemic, mental health, BMI, COVID-19

Changes in Diet

As the pandemic began, changes in nutrition have become more rampant, especially in middle to low income families (Carducci, B., Keats, E.C., Ruel, M. et al. 2021). The biggest challenge of COVID-19 in terms of nutrition security is the loss of programs such as school meals programs. Many school children are able to have the meals provided in school, and the schools do not have the ability to make a balanced diet. School lunches typically offer foods with protein, carbohydrates, dairy like milk and cheese, and fruits. The schools also regulate eating time for students by allotting lunch times and prohibiting food during class. Throughout the pandemic, eating became an issue as children spent their time at home due to quarantines and implementation of virtual learning. At home, children’s eating times are not as regulated as at school, and they can choose to snack freely (Razi & Nasiri, 2022). The types of food that are also more accessible throughout the pandemic have shifted due to a supply shock, loss of agricultural support, and less production of food, especially the nutritious and healthy ones (Carducci et al. 2021).

Increased Screen Time and Sedentary Behavior

Prior to COVID-19 pandemic, it was acceptable that children spend time in afterschool activities or join various sports clubs. This was a way for the children to enjoy their time outdoors and avoid from screens. These activities were highly beneficial and encouraged as studies showed that too much screen time for children is associated with externalizing and internalizing problems. Externalizing behavior includes aggressiveness and strong cravings for attention, while internalizing behavior includes depression and anxiety (Eirich et al. 2022). Due to the pandemic, after school activities and sports clubs were suspended and temporarily closed to avoid further spread of the virus. Parents of the study mentioned that their children used to be active, but have become more sedentary throughout the pandemic (Razi & Nasiri, 2022). Many parents also observed that their children have increased use of screens, whether it’s for educational purposes or entertainment. Since children are always home, it makes limiting their screen time challenging because children have less access to physical activities. Virtual learning has become more popular, and in addition, virtual socialization through social media has become more rampant. Prior to COVID-19, parents already have raised their concerns about high amounts of screen time in children as this contributes to their sedentary lifestyle, more so now with the pandemic.

Discussions:

This article aims to discuss the effects of the COVID-19 pandemic on childhood obesity. As the researchers reviewed on how changes in diet, increased screen time, and less physical activity contributed to obesity, there have been no mentions of interventions in the articles used for this literature review. There are a few interventions that tackle this issue and help reduce the prevalence of childhood obesity, such as weight loss programs, pharmaceutical interventions, and surgical procedures.

• Weight loss programs are the most practical for children in order to sustain a healthy lifestyle for a long time. Weight loss programs include physical activities as well as educational materials regarding proper nutrition, and the knowledge a child can acquire through these programs may last for a long lasting. Beyond reducing their weight, weight loss programs also aim to boost children’s confidence and self-esteem. This can be considered as interpersonal or community intervention. This is most likely the only intervention that addresses the sedentary lifestyle.

• Pharmaceutical interventions entail several medications created for weight loss that children can use such as phentermine and orlistat. These medications should still be accompanied by physical activity and a balanced diet, and these medications are also only recommended to those extreme cases. Orlistat is one of the common anti-obesity drugs prescribed by pediatricians, and there was a study conducted to prove its effectiveness. A double-blind study was conducted with over 530 obese adolescents ages 12 to 16. The intervention group decreased their BMI by an average of 0.55kg/m² and the control group with placebo increased their BMI (Rogovik, A. L., & Goldman, B. D. 2011).

References:


Old Dominion University

Ana Cruz

Old Dominion University

Contact Email(s): acruz001@odu.edu, anamariellecruz@gmail.com