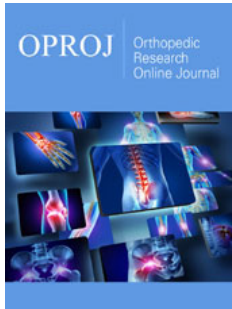


A Narrative Review of the Importance of Weight Management in Children and Adolescents

ISSN: 2576-8875



Onur Oral^{1*}, Zeinab Rezaee², Pramila Thapa³, Evangelia Stavropoulou⁴ and Mumtaz Enser⁵

¹Department of Health Sciences and Sports, Ege University, Faculty of Sports Sciences, Turkey

²Department of Exercise Physiology, Ferdowsi University of Mashhad, Iran

³Life Skill Education Institutes/Yeti Health Science Academy, Nepal

⁴Master of Research in Information and Communication, University of Lorraine, France

⁵Department of Philosophy, Open Education Faculty, Anadolu University, Turkey

Abstract

Background: This comprehensive review article aims to provide an understanding the concept of overweight and obesity in childhood and adolescence, including its causes, health risks, and ways to prevent and manage it.

Materials and Methods: In the search for scientific literature for this review, data from the US National Library of Medicine (PubMed), MEDLINE, PsycINFO and Sport Discus were used, and the terms "obesity", "regular physical activity", "psychological health", "children and adolescents", and "overweight" were used. The relevant literature has also taken its source from the research of relevant articles from reference lists derived from data searches.

Results: Overweight and obesity problems seen in childhood and adolescence have become important public health problems in recent years. It is observed that the problem of overweight and obesity, which can be defined as excessive body fat accumulation that poses a health risk, can have serious physical, psychological, and social consequences for children and adolescents. Since prioritizing the health and well-being of young people is necessary to form the basis of a healthier future, it is of great importance for success to be achieved so that the whole world can act together on this issue.

Conclusion: Overweight and obesity in childhood and adolescence are complex problems with serious health consequences. A comprehensive understanding of the causes, health risks, and prevention strategies of this health problem; is crucial for individuals, families, communities, and policy makers. This serious health problem can be effectively prevented and managed by encouraging healthy eating habits, developing physical activity habits, creating supportive environments for individuals with overweight and obesity problems, and health and social policy changes that will be implemented by comprehensively addressing psychological factors.

Keywords: Overweight; Psychological health; Obesity; Regular physical activity; Children and adolescents


Introduction

Overweight and obesity have become a major public health concern worldwide, with a significant increase in prevalence observed in recent years [1]. To address the issue of overweight and obesity in childhood and adolescence, it is essential first to understand the underlying causes of this global health concern. Only after a comprehensive evaluation can we begin to search for solutions.

It is emphasized that a comprehensive evaluation has been made on the health risks of overweight and obesity and that overweight and obesity during childhood and adolescence

***Corresponding author:** Onur Oral, Department of Health Sciences and Sports, Ege University Faculty of Sports Sciences, Turkey

Submission:  May 09, 2024

Published:  May 21, 2024

Volume 11 - Issue 1

How to cite this article: Onur Oral*, Zeinab Rezaee, Pramila Thapa, Evangelia Stavropoulou and Mumtaz Enser. A Narrative Review of the Importance of Weight Management in Children and Adolescents. Ortho Res Online J. 11(1). OPROJ. 000751. 2024.
DOI: [10.31031/OPROJ.2024.11.000751](https://doi.org/10.31031/OPROJ.2024.11.000751)

Copyright@ Onur Oral, This article is distributed under the terms of the Creative Commons Attribution 4.0 International License, which permits unrestricted use and redistribution provided that the original author and source are credited.

can pose significant health risks in both the short and long term [2]. When the research results are evaluated, it turns out that obese children and adolescents are at higher risk for many chronic diseases, including type 2 diabetes, high blood pressure, cardiovascular diseases, and certain types of cancer [3]. Additionally, obese children and adolescents are more likely to experience mental health problems such as low self-esteem, depression, and anxiety. These health risks experienced during childhood and adolescence can continue in adulthood, which may lead to a decrease in the quality of life, the existence, of some chronic health problems, and an increase in healthcare expenses for treatment in middle and older ages [4,5].

The rise in overweight and obesity during childhood and adolescence can be attributed to a multitude of factors, including genetic, environmental, and behavioral factors. Genetic factors play a significant role in weight management. It is becoming increasingly clear that they play a role in determining an individual's susceptibility to gain weight [6,7]. However, they alone cannot explain the increasing prevalence of overweight and obesity problems. It seems that genetic factors, as well as easy access to low-cost, energy-dense foods a lack of physical activity, and environmental factors such as a sedentary lifestyle, contribute significantly. Furthermore, it seems that behavioral factors, such as unhealthy eating habits, excessive screen time, frequent and long-term use of social media, and limited physical activity, may also contribute to this problem [8].

It is widely acknowledged that a multifaceted approach is essential for the prevention and management of overweight and obesity in children and adolescents. This approach should involve individuals, families, communities, and policymakers. To prevent overweight and obesity in children and adolescents, it would be beneficial to first encourage healthy eating habits. It would be beneficial to consider including a balanced diet with plenty of fruits, vegetables, whole grains, and lean protein in the nutrition program for children and adolescents [9]. Limiting sugary drinks, processed foods, and high-fat, high-sugar snacks could also be beneficial. In order to prevent the establishment of fast food-style eating habits, it might be helpful for families to consider prioritizing cooking at home, involving children in the meal preparation process, and introducing portion control practices [10,11].

It is also worth noting that encouraging regular physical activity is an important factor in preventing overweight and obesity in children and adolescents. While it is widely acknowledged that regular physical activity has a positive effect on weight control, it is also becoming increasingly clear that incorporating activities such as running, swimming, cycling, and team sports into daily life can be an effective method of preventing overweight and obesity in children and adolescents [12]. Furthermore, it may be beneficial to consider reducing screen time, minimizing social media habits, and encouraging outdoor play as potential contributors to a healthier lifestyle [13]. Particularly in social media use, limiting video game screen time could create opportunities for children to engage in physical exercise. Since regular exercise is known to have a positive

effect on preventing overweight and obesity, physical activity behavior can be a very effective method in preventing screen addiction, which is frequently seen in children and adolescents, as well as ensuring healthy weight control [14-16].

Another approach that could be beneficial in preventing overweight and obesity in children and adolescents is the creation of supportive environments. It would be beneficial to provide students with high-nutrition foods in schools, to increase their participation in physical activity and encourage active transportation between home and school. It would be beneficial for public health if suitable and safe areas were created that would allow regular physical activity, such as parks and walking paths [17]. This would help to spread sports to the entire population. It would be beneficial for healthcare providers to consider ways in which they can support healthy lifestyles. It is hoped that by implementing such social strategies, we can help to prevent overweight and obesity during childhood and adolescence, and also support effective weight control methods.

Discussion

Childhood obesity is a global health concern that affects children and adults alike. According to the World Health Organization (WHO), approximately 41 million children under the age of five worldwide are overweight or obese (2021) [18]. The WHO also notes that overweight and obesity have a multitude of adverse effects on health, increasing the risk of chronic diseases in adulthood [3]. To help prevent childhood obesity, it might be helpful to consider some potential interventions. These could include promoting healthy eating habits away from fast food, increasing physical activity in schools and playgrounds, and reducing sedentary behaviors such as screen time.

It would be beneficial to consider the various factors that contribute to childhood obesity. These may include genetic predisposition, unhealthy diets, a lack of physical activity, and environmental factors. It is important to recognize that these factors may have long-term effects on childhood and adolescence, as well as on morbidity and early mortality in adulthood. It is useful to encourage healthy eating habits to prevent overweight and obesity in childhood. Since parents play an important role in shaping their children's healthy nutrition and healthy life behaviors, the implementation of weight control methods in the family may increase the chance of success in preventing the development of excess weight and obesity [19]. In addition to the family environment, school-based weight control methods have been shown to support excessive weight in childhood and adolescence. To increase the success of these interventions, it is thought that it is necessary to increase physical activity during school hours and it may be beneficial to provide education on healthy lifestyle behaviors by encouraging healthy eating habits [20].

In school-based obesity prevention programs, the gaining of physical activity habits and teaching healthy nutrition methods are regarded as effective methods for preventing excessive weight gain in children and adolescents. A study that emphasized the positive

contributions of school-based obesity prevention programs showed that physical activity and healthy nutrition programs led to a decrease in BMI and the prevalence of obesity in children and adolescents [21].

Another research study conducted in China revealed the efficacy of an obesity prevention program comprising school-based nutritional education, physical activity development, and the integration of environmental changes in reducing the prevalence of excess weight and obesity in children and adolescents [22].

As a result, obesity and overweight problems in childhood and puberty are considered a health problem that needs to be evaluated versatily. For an effective weight control method, it is very important to implement comprehensive approach combinations such as encouraging healthy lifestyles, involving the whole family in these programs, implementing school-based interventions, and reducing exposure to obesogenic environments. So, it will be possible to prevent negative health results of overweight and obesity during childhood and adolescence with the application of these strategies.

Conclusion

Children and adolescent's obesity has been increasing rapidly around the world, especially in recent years, and this negative development poses significant health risks for individuals. To achieve a permanent solution to this problem, it is of great importance to develop a comprehensive approach to this health problem by evaluating together the causes and possible solutions that cause this health problem. In addition, alarming health conditions are observed in terms of child health and approximately 41 million children under the age of five are considered overweight or obese, revealing that child obesity is a very serious health problem for the whole world.

The cause of excessive weight gain is energy imbalance caused by increased consumption of high-calorie and high-fat foods and decreased physical activity. Radical changes in the world of work, transportation, and urbanization in recent years have contributed to a sedentary lifestyle, and the decrease in physical activity also plays a role in the development of obesity. It is well known that these environmental and social changes lead to unhealthy, unbalanced eating habits and limited access to healthy food. To combat these reasons; Supportive measures should be taken in areas such as healthy, balanced nutrition and health-conscious behaviors should be encouraged.

It is necessary to develop effective strategies that include personal preferences, environmental factors, and social influences to reduce the risk of overweight and obesity. Many scientific research studies examine the awareness of the health problems caused by overweight and obesity and the global impact of this health problem and examine the causes and possible interventions of this chronic health problem. In light of these studies, the necessity of encouraging healthy living habits and creating a supportive environment is emphasized.

As a result, to prevent the problems of overweight and obesity, regular physical activity and healthy, balanced eating habits stand out as the most effective methods known for a healthy life. It is observed that as a result of the loss of physical activity habits due to sedentary life, which has become rapidly widespread all over the world, especially in recent years, there are quite negative effects on the general health conditions of children and adolescents. Since regular exercise habits have versatile positive effects on physical, mental, and psychological health, it is of great importance to raise social awareness about regular physical activity habits.

Acknowledgment

We would like to express our special thanks to Dr. George N. NOMIKOS for his very successful contribution to the literature research process and unique academic support in the publication during the process of this review article.

Conflict of Interest

The author certifies that there is no conflict of interest with any financial organization regarding the material discussed in the manuscript.

Funding

The author certifies that there is no funding from any financial organization regarding the material discussed in the manuscript or contributions.

Author Contributions

All the authors read and approved the final version of the manuscript.

References

1. Ng M, Fleming T, Robinson M, Thomson B, Graetz N, et al. (2014) Global, regional, and national prevalence of overweight and obesity in children and adults during 1980–2013: a systematic analysis for the Global Burden of Disease Study 2013. *The Lancet* 384(9945): 766-781.
2. Katzmarzyk PT, Mire E, Bouchard C, Spence JC (2019) Physical activity and obesity: what we know and what we need to know. *Obesity Reviews* 20(4): 330-345.
3. Afshin A, Forouzanfar MH, Reitsma MB, Sur PJ, Estep K, et al. (2019) Health effects of overweight and obesity in 195 countries over 25 years. *New England Journal of Medicine* 377(1): 13-27.
4. Dietz WH, Gortmaker SL (2001) Preventing obesity in children and adolescents. *Annual review of public health* 22(1): 337-353.
5. Lau DC, Douketis JD, Morrison KM, Hramiak IM, Sharma AM, et al. (2007) 2006 Canadian clinical practice guidelines on the management and prevention of obesity in adults and children [summary]. *CMAJ* 176(8): S1-S13.
6. Heitkamp M, Siegrist M, Molnos S, Brandmaier S, Wahl S, et al. (2021) Obesity genes and weight loss during lifestyle intervention in children with obesity. *JAMA Pediatrics* 175(1): e205142-e205142.
7. Kiess W, Galler A, Reich A, Müller G, Kapellen T, et al. (2001) Clinical aspects of obesity in childhood and adolescence. *Obesity Reviews* 2(1): 29-36.
8. Benaich S, Mehdad S, Andaloussi Z, Boutayeb S, Alamy M, et al. (2021) Weight status, dietary habits, physical activity, screen time and sleep duration among university students. *Nutrition and Health* 27(1): 69-78.

9. Moreno LA, Ochoa MC, Wärnberg J, Marti A, Martínez JA, et al. (2008) Treatment of obesity in children and adolescents. How nutrition can work? *International Journal of Pediatric Obesity* 3(sup1): 72-77.
10. Van der Horst K, Ferrage A, Rytz A (2014) Involving children in meal preparation. Effects on food intake. *Appetite* 79: 18-24.
11. Hetherington MM, Blundell-Birtill P (2018) The portion size effect and overconsumption towards downsizing solutions for children and adolescents. *Nutrition Bulletin* 44(2): 130-137.
12. Janssen I, Carson V, Lee IM, Katzmarzyk PT, Blair SN, et al. (2019) Years of life gained due to leisure-time physical activity in the US. *American Journal of Preventive Medicine* 56(5): 645-652.
13. Strasburger VC, Jordan AB, Donnerstein E (2012) Children, adolescents, and the media: health effects. *Pediatric Clinics* 59(3): 533-587.
14. Boone JE, Gordon-Larsen P, Adair LS, Popkin BM (2007) Screen time and physical activity during adolescence: longitudinal effects on obesity in young adulthood. *International Journal of Behavioral Nutrition and Physical Activity* 4: 1-10.
15. Cox M, Schofield G, Kolt GS (2010) Responsibility for children's physical activity: Parental, child, and teacher perspectives. *Journal of Science and Medicine in Sport* 13(1): 46-52.
16. Lassi ZS, Salam RA, Das JK, Wazny K, Bhutta ZA (2015) An unfinished agenda on adolescent health: opportunities for interventions. In *Seminars in Perinatology* 39(5): 353-360.
17. Sallis JF, Glanz K (2006) The role of built environments in physical activity, eating, and obesity in childhood. *The Future of Children* 16(1): 89-108.
18. World Health Organization. (2021) Obesity and overweight.
19. Reilly JJ, Kelly J (2011) Long-term impact of overweight and obesity in childhood and adolescence on morbidity and premature mortality in adulthood: systematic review. *International Journal of Obesity* 35(7): 891-898.
20. Kropfski JA, Keckley PH, Jensen GL (2013) School-based obesity prevention programs: an evidence-based review. *Obesity* 21(12): 2422-2428.
21. Wang Y, Wu Y, Wilson RF, Bleich S, Cheskin L, et al. (2015) Childhood obesity prevention programs: comparative effectiveness review and meta-analysis. *Comparative Effectiveness Review* (115): 1-322.
22. Li S, Huang H, Lu Q, Liu G (2016) Effectiveness of school-based obesity interventions for Chinese students: a systematic review and meta-analysis. *Asia Pacific Journal of Clinical Nutrition* 25(1): 163-172.