



## Çocukluk Çağı Obezitesinde Damgalanmanın Etkileri: Anlatısal Bir Derleme

### Makale Bilgileri

### ÖZET

#### Makale Geçmişi

Geliş: 21.11.2025

Kabul: 22.04.2026

Yayınlanma: 25.04.2026

#### Yazarlar:

Naciye Esra  
KOYUNCU,  
Muteber Gizem  
KESER GÜMÜŞ

#### Anahtar Kelimeler:

Çocukluk çağı,  
Obezite,  
Damgalanma, Kilo

Obezite, aşırı yağ birikimi sonucu sağlığı tehdit eden bir hastalık olup, çocukluk çağında giderek artan bir sorun haline gelmiştir. Genetik ve çevresel faktörlerin etkileşimiyle gelişen kronik bir hastalık olan obezite, kardiyovasküler hastalıklar, diyabet ve hipertansiyon gibi ciddi sağlık sorunlarına yol açabilmektedir. Dünya Sağlık Örgütü'ne göre çocukluk çağı obezitesinin prevalansı her geçen gün artmakta olup, bu durum çocukların hem fiziksel hem de psikolojik sağlığını olumsuz yönde etkileyebilmektedir.

Obezite, çocuklarda özgüven kaybı, akran zorbalığı, depresyon ve akademik başarının düşmesi gibi sosyal sorunlara da yol açabilmektedir. Obezite ile ilişkili sosyal damgalanma bu etkileri daha da derinleştirmektedir. Kilo damgalaması, bireylerin olumsuz kalıp yargılara ve ayrımcılığa maruz kalması yoluyla hem fiziksel hem de psikolojik sağlığı olumsuz etkileyebilmektedir. Çocuklarda kilo damgalaması, okulda zorbalığa maruz kalma, yalnızlık ve düşük benlik saygısı gibi sonuçlara yol açabilmektedir. Bu bağlamda, dilin dikkatli kullanılması, damgalamanın önlenmesi ve ailelere yönelik eğitim artırılması, çocukluk çağı obezitesinin önlenmesi ve tedavisinde büyük önem taşımaktadır. Obeziteye duyarlı ve empatik bir yaklaşım benimsenmesi, uzun vadede daha sağlıklı gelişimsel süreçlerin desteklenmesine katkı sağlayabilir.

## The Burden of Stigma in Childhood Obesity: A Narrative Review

### Article Info

### ABSTRACT

#### Article History

Received: 21.11.2025

Accepted: 22.04.2026

Published: 25.04.2026

#### Authors:

Naciye Esra  
KOYUNCU,  
Muteber Gizem  
KESER GÜMÜŞ

#### Keywords:

Childhood, Obesity,  
Stigmatization,  
Weight

Obesity is a disease that poses a threat to health as a result of excessive fat accumulation and has become an increasing problem in childhood. Obesity, which is also a chronic disease that develops through the interaction of genetic and environmental factors, can lead to serious health problems such as cardiovascular diseases, diabetes, and hypertension. According to the World Health Organization, the prevalence of childhood obesity is increasing day by day, and this situation can adversely affect both the physical and psychological health of children. Obesity can lead to social problems such as loss of self-confidence, peer bullying, depression, and low academic achievement in children. The social stigma associated with obesity further deepens these effects. Weight stigma can negatively affect both physical and psychological health by exposing individuals to negative stereotypes and discrimination. Weight stigma in children can lead to consequences such as bullying at school, loneliness, and low self-esteem. In this context, careful use of language, prevention of stigmatization, and increased education for families are of great importance for the prevention and treatment of childhood obesity. Adopting a sensitive and empathetic approach to obesity may support healthier developmental trajectories in the long term.

**Sorumlu Yazar:** Naciye Esra KOYUNCU **ORCID ID:** [0000-0002-2879-8873](https://orcid.org/0000-0002-2879-8873) **Email:** [naciye.esra.koyuncu@karatay.edu.tr](mailto:naciye.esra.koyuncu@karatay.edu.tr)  
**Adres** : KTO Karatay Üniversitesi, Sağlık Bilimleri Fakültesi, Hemşirelik Bölümü, Konya , Türkiye

## **INTRODUCTION**

### **Obesity**

The aim of this study is to examine the physical, psychological and social effects of childhood obesity in the context of weight stigma and to highlight the importance of sensitive, non-stigmatising approaches in prevention and intervention processes. Obesity is defined as an abnormal or excessive accumulation of body fat that poses a threat to health. It is a chronic disease and has become a global pandemic in modern times. If not prevented or adequately treated, obesity can lead to serious health conditions such as type 2 diabetes, cardiovascular diseases, osteoarthritis, hypertension, sleep apnea, and other complications. Beyond excessive fat accumulation, obesity is also associated with a progressive inflammatory process. It results from the bidirectional interaction of genetic and environmental factors and is characterised by insulin resistance, elevated levels of triglycerides, cholesterol, and fatty acids, as well as increased blood pressure (1). Obesity is classified using various methods, one of the most common being the Body Mass Index (BMI), which is a simple and widely used measure. BMI is calculated by dividing body weight by the square of height ( $\text{kg/m}^2$ ). According to the Endocrinology and Metabolism Society of Turkey (TEMD), the normal BMI range is defined as 18.5–24.9  $\text{kg/m}^2$ . A BMI between 25.0 and 29.9  $\text{kg/m}^2$  is classified as overweight, while a BMI of 30.0  $\text{kg/m}^2$  or higher indicates obesity. In recent classifications, the terms mild, moderate, and morbid obesity are being replaced by Stage 1, Stage 2, and Stage 3 to describe obesity severity (2). Beyond its metabolic consequences, obesity is also associated with significant social stigma. Obesity-related stigmatization in health care and daily life has been shown to reduce health care utilization, impair psychological well-being, and negatively affect adherence to weight management behaviors (3,4).

### **Epidemiology of Obesity**

The obesity pandemic continues to spread worldwide, and Turkey is among the most affected countries. According to the World Health Organization (WHO, 2022), Turkey ranks first in Europe in terms of obesity prevalence. Data from the Turkey Nutrition and Health Survey (TBSA, 2017) indicate that the prevalence of obesity is 13.7% among men and 20.9% among women. Overall, the obesity rate in Turkey is reported to be 17% (5). In a concurrent study conducted during the TBSA-2017 period, it was reported that among individuals aged 15 years and older, 35.6% were classified as overweight and 28.8% as obese (6).

## Childhood Obesity

Overweight in children aged 2 to 19 years is defined as having a body mass index between the 85th and 94th percentiles, based on age- and sex-specific growth charts. Childhood obesity is defined as a body mass index at or above the 95th percentile (see Appendix). Alternatively, childhood overweight and obesity can be defined using weight-for-height z-scores according to the World Health Organization (WHO) growth standards, with values greater than +2 standard deviations (SDs) indicating overweight and values greater than +3 SDs indicating obesity (7). The prevalence of childhood obesity is increasing worldwide. It is estimated that in 2020, approximately 39 million children under the age of five were classified as overweight or obese. Furthermore, more than 340 million children and adolescents aged 5–19 years were reported to be overweight or obese in 2016 (8). Furthermore, body mass index-for-age and skinfold thickness are additional measures used to assess the nutritional and health status of children (9). According to the results of the Turkey Childhood Obesity Surveillance Initiative (COSI) surveys conducted in 2013, 2016, and 2022, the prevalence of overweight among second-grade primary school students in Turkey was 14.2%, 14.6%, and 12.5%, respectively, while the prevalence of obesity was 8.3%, 9.9%, and 9.9%, respectively. The combined prevalence of overweight and obesity was reported as 22.5% in 2013, 24.5% in 2016, and 22.4% in 2022. The findings indicate that the prevalence of overweight and obesity increased between 2013 and 2016 among second-grade students, followed by a declining trend thereafter. However, the reduction in the prevalence of overweight was more pronounced than the reduction in obesity prevalence (10). Table 1 presents the classification of childhood obesity (Table1).

**Table 1.** Childhood Obesity Classification

Percentile	Weight for age definition
≤3. percentile	Underweight
3.percentile< <85. percentile	İdeal
85. percentile< <97. percentile	Overweight
97.percentile≤	Obese

Source: Canadian Pediatric Endocrine Group, (CPEG), 2018)

A wide range of factors influence weight gain during childhood. These factors are generally classified into different categories, including biological, economic, developmental, and psychological factors (11). One of these factors is genetic predisposition. If one parent is obese, the child's risk of developing obesity increases approximately threefold, whereas the risk increases up to fifteenfold if both parents are obese (12). Maternal malnutrition or obesity can affect fetal growth and development, particularly through exposure to external factors such as

endocrine disruptors and pesticides. In addition, an obesogenic environment, the child's age, the timing of the introduction of complementary feeding, and the types of foods included in the infant diet are important contributors to the development of childhood obesity. Some studies have controversially associated severe childhood obesity with perceived parental neglect, while others have linked it to inadequate parenting practices (13). Additionally, maternal obesity, maternal comorbidities during pregnancy, large portion sizes, food neophobia, the use of foods containing added sugars during the initiation of complementary feeding, excessive screen time, sleep habits, and the influence of food-selective parental role models are also associated with an increased risk of childhood obesity. Childhood obesity not only leads to health problems such as an increased risk of cardiovascular diseases in adulthood but is also associated with adverse psychosocial outcomes, including low self-esteem, exposure to bullying, decreased academic performance, stigmatization, and reduced future employment opportunities; collectively, these factors contribute to children becoming more antisocial and more depressive (14).

### **Tips for Childhood Obesity**

The World Health Organization (WHO) established the Commission on Ending Childhood Obesity (ECHO), a specialized body mandated to develop comprehensive strategies and recommendations aimed at addressing and ultimately eliminating childhood obesity at the global level (15). According to the Commission on Ending Childhood Obesity (ECHO), several key principles are essential for preventing and addressing childhood obesity. First, programmes should be developed to promote healthy dietary habits among children and adolescents by reducing the consumption of unhealthy foods and sugar-sweetened beverages. Second, sedentary behaviors should be reduced, and regular physical activity should be encouraged. Third, guidelines should be established to support healthy eating, sleep, and physical activity patterns from early childhood. Fourth, policies promoting healthy school environments, nutrition literacy, and physical activity should be developed for school-aged children and adolescents. Finally, for children and adolescents living with obesity, family-based and multifaceted lifestyle management services should be implemented. In addition, behavior change counseling represents a fundamental component of obesity prevention and management. Patient-centered and empathic behavior change approaches, such as motivational interviewing, are recommended as effective frameworks for supporting children and families in adopting and sustaining healthy lifestyle changes (16). In Turkey, an amendment extending the scope of the Special Consumption Tax to include fruit juice (nectar), lemonade, mineral water, carbonated

beverages, and plain soda was adopted by the General Assembly of the Turkish Grand National Assembly. This measure represents an initial policy step aimed at reducing the consumption of obesogenic beverages through increased taxation (17). At this stage, promoting increased consumption of fruits and vegetables at the national level is crucial for effective obesity prevention.

### **Stigmatization**

According to Link and Phelan, stigma consists of four key components: labeling, stereotyping, separation, and status loss accompanied by discrimination (18). Although individuals may experience different forms of stigmatization, weight stigma is particularly prevalent among children.

### **Weight Stigmatization**

In terminology, the term 'obese' is used as an adjective rather than a disease name, creating a prejudiced, dismissive language (2). Therefore, weight stigma has a significant impact on how individuals perceive themselves and interact with societal norms. Weight stigma, defined as prejudice against individuals based on their body weight, refers to the social devaluation of people with higher body weight through negative stereotyping and discrimination (19). Weight stigma related to obesity is associated with negative physical and psychological consequences that undermine efforts in obesity prevention and treatment (20). Individuals with overweight or obesity experience stigma across multiple contexts, including healthcare settings, employment and income, education, media, and interpersonal relationships (21). Individuals with overweight or obesity are frequently exposed to inequalities in educational settings, healthcare systems, and working life due to pervasive negative stereotypes portraying them as lazy, unmotivated, lacking self-discipline, low-skilled, poorly adapted, and careless (22). Although both men and women experience weight stigma and weight-related pressures, women report higher levels of weight stigma and are more likely to experience eating-related psychopathology than men (23). While previous research has shown that weight stigma is associated with increased maladaptive eating behaviors and decreased motivation to exercise, independent of body mass index (BMI), less is known about its relationship with other common health behaviors, such as alcohol use and sleep (24,25). Weight stigma has been shown to lead to increased short-term consumption of high-fat, high-sugar, and high-calorie foods (26). This eating pattern has been theorized as a form of comfort eating in response to the stress associated with weight stigma, and at least one study has identified a relationship between weight stigma and emotional eating (27). Although this review examined the relationship between obesity and stigma, lower body mass index

(BMI) does not necessarily confer protection against weight stigma. One study reported that individuals with lower BMI were more likely to exhibit disordered eating behaviors and alcohol use in response to weight stigma (25).

### **Weight Stigma in Children**

In children, weight stigma is commonly experienced in the form of bullying, victimization, and ridicule across multiple settings, including schools, homes, and other social environments. A meta-analysis demonstrated that children with overweight and obesity were 19% and 51% more likely, respectively, to experience peer bullying compared with children without overweight or obesity (28). Wagner and Cook (2024) reported that children with overweight or obesity are frequently exposed to peer bullying in school settings (29). In a prospective study of 5,128 middle school students, nearly one-third reported experiencing at least one incident of perceived weight-based discrimination by peers. The study found that weight stigma was associated with increased social anxiety, somatic symptoms, body dissatisfaction, and feelings of loneliness (30). Another study by Gold et al. found that parents who experienced weight-related stigma themselves reported restricting their children's food intake due to concerns about their children's weight (31). Similarly, a study involving children aged 9–18 years reported that weight bias was significantly associated with increased peer teasing and lower self-esteem (32). Gmeiner et al. reported an association between body weight and weight-related teasing; however, no gender differences were identified (33). According to the findings of a qualitative study conducted by Hoeg et al. with parents of children with obesity, some parents were reluctant to inform their children that they were overweight due to fears of stigmatization and reported difficulty explaining the need for dietary restriction. In contrast, other parents used negative and stigmatizing language (e.g., lazy, careless, eats excessively, lacks self-control) when describing their children (34). In healthcare settings, physicians have been shown to provide less education to patients with obesity compared with patients of lower weight. Moreover, the use of stigmatizing language by healthcare professionals contributes to mistrust, increased stress, and poor treatment adherence (35,36). However, evidence suggests that restrictive maternal feeding practices may paradoxically lead to overeating in children. Parents who experience weight-related stigma may also respond by stigmatizing their own children, thereby increasing their children's risk of weight gain (37). In addition, some studies indicate that mothers with overweight or obesity feel shamed by family members who criticize their parenting or feel dismissed by healthcare professionals who question their feeding practices during routine clinical visits (38).

## **Conclusion**

Childhood obesity is increasing globally at an alarming rate, highlighting the need for greater attention to this vulnerable population. Children affected by obesity may carry the burden of weight stigma into adulthood, with potentially long-lasting consequences. Such judgmental approaches can lead to a wide range of negative physical, psychological, and social effects during childhood. To prevent these harms and to raise awareness of weight stigma, careful and respectful language should be adopted in both prevention and treatment efforts. Labeling, derogatory terms, and stigmatizing expressions should be avoided. In this context, it is essential that individuals who have primary contact with children—particularly parents and healthcare professionals—approach this issue with sensitivity and caution. Furthermore, by speaking out against stigmatizing portrayals in the media, health professionals can play a critical role in raising awareness of weight stigma and mitigating its harmful impact on children’s self-esteem across the life course.

**Ethical Approval:** Ethical committee approval is not required for this study.

**Conflict of Interest:** There is no conflict of interest among the authors.

**Financial Support:** No financial support was received for this review.

**Author Contribution:** All authors contributed equally.

## REFERENCES

1. Gupta, P., Tyagi, S., Mukhija, M., Saini, A. S., Goyal, R., & Sharma, P. L. (2011). Obesity: An introduction and evaluation. *Journal of Advanced Pharmacy Education and Research*, 1(2), 125–137.
2. Türkiye Endokrinoloji ve Metabolizma Derneği. (2024). *Obezite tanı ve tedavi kılavuzu*. <https://file.temd.org.tr/Uploads/publications/guides/documents/obezitetanitedavikilavuzu-2024.pdf>
3. Kadam, S. J., Srivastava, A., & Ravi, U. (2025). Physical and psychological effects of weight bias and social stigma on weight management. *European Journal of Medical and Health Sciences*, 7(4), 86–89. <https://doi.org/10.24018/ejmed.2025.7.4.2400>
4. Hansson, L. M., & Rasmussen, F. (2014). Association between perceived health care stigmatization and BMI change. *Obesity Facts*, 7(3), 211–220. <https://doi.org/10.1159/000363557>
5. T.C. Sağlık Bakanlığı. (2017). *Türkiye beslenme ve sağlık araştırması (TBSA) 2017: Özet bulgular*. [https://hsgm.saglik.gov.tr/depo/birimler/saglikli-beslenme-ve-hareketli-hayat-db/Dokumanlar/Kitaplar/TBSA\\_2017\\_Ozet\\_Bulgular.pdf](https://hsgm.saglik.gov.tr/depo/birimler/saglikli-beslenme-ve-hareketli-hayat-db/Dokumanlar/Kitaplar/TBSA_2017_Ozet_Bulgular.pdf)
6. Uner, S., Bacilar, M., & Erguder, T. (2018). *National household health survey in Turkey: Prevalence of noncommunicable disease risk factors*. Republic of Turkey Ministry of Health.
7. World Health Organization. (2006). WHO child growth standards based on length/height, weight and age. *Acta Paediatrica Supplement*, 95(S450), 76–85. <https://doi.org/10.1111/j.1651-2227.2006.tb02378.x>
8. World Health Organization. (2023). *Obesity and overweight*. <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>
9. Bharti, A., & Kulshrestha, K. (2019). Childhood obesity: An overview. *International Journal of Current Microbiology and Applied Sciences*, 8(1), 963–980. <https://doi.org/10.20546/ijcmas.2019.801.105>
10. Childhood Obesity Surveillance Initiative (COSI). (2022). *Türkiye çocukluk çağı obezite araştırması*. <https://hsgm.saglik.gov.tr/tr/yayinlarimiz-v2.html>
11. Haqq, A. M., Kebbe, M., Tan, Q., Manco, M., & Salas, X. R. (2021). Complexity and stigma of pediatric obesity. *Childhood Obesity*, 17(4), 229–240. <https://doi.org/10.1089/chi.2021.0003>

12. Whitaker, R. C., Wright, J. A., Pepe, M. S., Seidel, K. D., & Dietz, W. H. (1997). Predicting obesity in young adulthood from childhood and parental obesity. *The New England Journal of Medicine*, 337(13), 869–873. <https://doi.org/10.1056/NEJM199709253371301>
13. Kalinowski, A., Krause, K., Berdejo, C., Harrell, K., Rosenblum, K., & Lumeng, J. C. (2012). Beliefs about the role of parenting in feeding and childhood obesity among mothers of lower socioeconomic status. *Journal of Nutrition Education and Behavior*, 44(5), 432–437. <https://doi.org/10.1016/j.jneb.2010.09.017>
14. Lobstein, T., Baur, L., & Uauy, R. (2004). Obesity in children and young people: A crisis in public health. *Obesity Reviews*, 5(Suppl. 1), 4–104. <https://doi.org/10.1111/j.1467-789X.2004.00133.x>
15. Nishtar, S., Gluckman, P., & Armstrong, T. (2016). Ending childhood obesity: A time for action. *The Lancet*, 387(10021), 825–827. [https://doi.org/10.1016/S0140-6736\(16\)00140-9](https://doi.org/10.1016/S0140-6736(16)00140-9)
16. Broccoli, S., Davoli, A. M., Bonvicini, L., Fabbri, A., Ferrari, E., Montagna, G., & Rossi, P. G. (2016). Motivational interviewing to treat overweight children: 24-month follow-up of a randomized controlled trial. *Pediatrics*, 137(1), Article e20151979. <https://doi.org/10.1542/peds.2015-1979>
17. T.C. Resmî Gazete. (2018). *Ulusal mevzuat*. <https://www.resmigazete.gov.tr>
18. Link, B. G., & Phelan, J. C. (2001). Conceptualizing stigma. *Annual Review of Sociology*, 27, 363–385. <https://doi.org/10.1146/annurev.soc.27.1.363>
19. Puhl, R. M., Andreyeva, T., & Brownell, K. D. (2008). Perceptions of weight discrimination. *International Journal of Obesity*, 32(6), 992–1000. <https://doi.org/10.1038/ijo.2008.22>
20. Pont, S. J., Puhl, R., Cook, S. R., Slusser, W., Bolling, C. F., & Armstrong, S. (2017). Stigma experienced by children and adolescents with obesity. *Pediatrics*, 140(6), e20173034. <https://doi.org/10.1542/peds.2017-3034>
21. Puhl, R. M., & Heuer, C. A. (2009). The stigma of obesity: A review and update. *Obesity*, 17(5), 941–964. <https://doi.org/10.1038/oby.2008.636>
22. Vaidya, V. (2006). Psychosocial aspects of obesity. *Advances in Psychosomatic Medicine*, 27, 73–85. <https://doi.org/10.1159/000090965>
23. Boswell, R. G., & White, M. A. (2015). Gender differences in weight bias internalisation. *Advances in Eating Disorders*, 3(3), 259–272. <https://doi.org/10.1080/21662630.2015.1047881>
24. Puhl, R. M., Himmelstein, M. S., & Pearl, R. L. (2020). Weight stigma as a psychosocial contributor to obesity. *American Psychologist*, 75(2), 274–289. <https://doi.org/10.1037/amp0000538>

25. Lee, K. M., Hunger, J. M., & Tomiyama, A. J. (2021). Weight stigma and health behaviors. *International Journal of Obesity*, 45(7), 1499–1509. <https://doi.org/10.1038/s41366-021-00814-5>
26. Tomiyama, A. J. (2014). Weight stigma is stressful. *Appetite*, 82, 8–15. <https://doi.org/10.1016/j.appet.2014.06.108>
27. Vartanian, L. R., & Porter, A. M. (2016). Weight stigma and eating behavior. *Appetite*, 102, 3–14. <https://doi.org/10.1016/j.appet.2016.01.034>
28. Van Geel, M., Vedder, P., & Tanilon, J. (2014). Are overweight youths more often bullied? *International Journal of Obesity*, 38(10), 1263–1267. <https://doi.org/10.1038/ijo.2014.117>
29. Wagner, B. E., & Cook, S. (2024). Weight bias and stigma in pediatric obesity. *Pediatric Clinics of North America*, 71(5), 819–830. <https://doi.org/10.1016/j.pcl.2024.07.005>
30. Juvonen, J., Lessard, L. M., Schacter, H. L., & Suchilt, L. (2017). Emotional implications of weight stigma. *Journal of Clinical Child & Adolescent Psychology*, 46(1), 150–158. <https://doi.org/10.1080/15374416.2016.1188703>
31. Gold, J. M., & Vander Weg, M. W. (2020). Parental weight stigma and feeding practices. *Appetite*, 149, 104635. <https://doi.org/10.1016/j.appet.2020.104635>
32. Fields, L. C., Brown, C., Skelton, J. A., Cain, K. S., & Cohen, G. M. (2021). Internalized weight bias in children. *Childhood Obesity*, 17(1), 43–50. <https://doi.org/10.1089/chi.2020.0150>
33. Gmeiner, M. S., & Warschburger, P. (2023). Weight stigma in youth. *European Child & Adolescent Psychiatry*, 32(4), 697–704. <https://doi.org/10.1007/s00787-021-01922-3>
34. Hoeg, D., Frohlich, K. L., Christensen, U., & Grabowski, D. (2023). Mechanisms of stigmatization. *Children*, 10(10), 1590. <https://doi.org/10.3390/children10101590>
35. Gudzone, K. A., Bennett, W. L., Cooper, L. A., & Bleich, S. N. (2014). Patients who feel judged about their weight. *Patient Education and Counseling*, 97(1), 128–131. <https://doi.org/10.1016/j.pec.2014.06.019>
36. Phelan, S. M., Burgess, D. J., Yeazel, M. W., Hellerstedt, W. L., Griffin, J. M., & van Ryn, M. (2015). Impact of weight bias on quality of care. *Obesity Reviews*, 16(4), 319–326. <https://doi.org/10.1111/obr.12266>
37. Birch, L. L., Fisher, J. O., & Davison, K. K. (2003). Learning to overeat. *American Journal of Clinical Nutrition*, 78(2), 215–220. <https://doi.org/10.1093/ajcn/78.2.215>
38. Gorlick, J. C., Gorman, C. V., Weeks, H. M., Pearlman, A. T., Schvey, N. A., & Bauer, K. W. (2021). Weight stigma by association. *Childhood Obesity*, 17(1), 68–75. <https://doi.org/10.1089/chi.2020.0199>