




Environmental Influences on the Dietary Habits of School-Age Children and Adolescents

Utjecaji okoliša na prehrambene navike djece i adolescenata školskog uzrasta

Lucija Rožić

Emergency Medical Institute of Sibenik-Knin County, Sibenik, Croatia

ORCID iD: Lucija Rožić

 <https://orcid.org/0000-0003-4208-5666>

Abstract

The dietary habits of school-age children and adolescents are shaped by the influence of the family, school, peers, and the media environment. Proper nutrition during growth and development is important for physical health and cognitive abilities. Modern lifestyles are increasingly associated with irregular meals, increased consumption of energy-dense foods, and insufficient intake of nutritionally valuable foods. As a result, unhealthy dietary habits represent an important public health problem. This paper presents the review of current knowledge on the dietary habits of children and adolescents and the environmental factors that influence their food choices. Particular attention is given to the role of the family, the school environment, peers, and the media environment. The importance of prevention, health education, and a supportive environment in promoting healthy dietary habits is emphasized. It is important to recognize that the early adoption of healthy habits is essential for preserving health and reducing the risk of adverse health outcomes.

Keywords: dietary habits, children and adolescents, environmental influences, prevention, public health

Sažetak

Prehrambene navike djece i adolescenata školskog uzrasta oblikuju se pod utjecajem obitelji, škole, vršnjaka i medijskog okruženja. Pravilna prehrana tijekom rasta i razvoja važna je za tjelesno zdravlje i kognitivne sposobnosti. Suvremeni način života sve se češće povezuje s neredovitim obrocima, povećanom konzumacijom energetski bogate hrane i nedovoljnim unosom nutritivno vrijednih namirnica. Zbog toga nezdrave prehrambene navike predstavljaju važan javnozdravstveni problem. Ovaj rad revijski prikazuje suvremene spoznaje o prehrambenim navikama djece i adolescenata, te čimbenicima okoline koji utječu na njihov izbor hrane. Posebno se razmatra uloga obitelji, školskog okruženja, vršnjaka i medijskog okruženja. Naglašava se važnost prevencije, zdravstvenog odgoja i poticajnog okruženja u promicanju zdravih prehrambenih navika. Važno je znati kako je rano usvajanje zdravih navika važno za očuvanje zdravlja i smanjenje rizika od nepovoljnih zdravstvenih ishoda.

Cljučne riječi: prehrambene navike, djeca i adolescenti, utjecaj okoline, prevencija, javno zdravstvo

Introduction

Childhood and adolescence are important developmental periods during which habits are formed that often persist into adulthood. School-age children are most commonly defined as children aged 6 to 12 years (1), while adolescence encompasses the period from 10 to 19 years (2). Dietary habits adopted during these years have a long-term impact on health and may increase the risk of chronic diseases in adulthood. Proper nutrition is important for growth, development, and cognitive abilities. However, modern lifestyles are often associated with skipping meals, frequent consumption of energy-dense foods, and in-

sufficient intake of nutritionally valuable foods. As a result, unhealthy dietary habits represent an important public health problem.

Numerous factors influence the dietary habits of children and adolescents. These include the family, school, peers, and the media. Social media have a particular influence. They can promote healthy lifestyles but also unhealthy dietary choices. This influence is especially pronounced during adolescence, when adolescents become more independent and make their own dietary decisions. Unhealthy dietary habits are associated with adverse health outcomes. Therefore, early recognition of risky behaviors and timely preventive measures are important for preserving the



Primljeno / Received 24. 10. 2025
Korigovano / Revised 28. 02. 2026
Prihvaćeno / Accepted 15. 03. 2026

Autor za korespondenciju / Corresponding author: **Lucija Rožić**
Zavod za hitnu medicinu Šibensko-kninske županije, Narodnog preporoda 1,
22 000 Šibenik, Hrvatska | E-mail: lucija.rozic1979@gmail.com

health of children and adolescents. The aim of this paper is to present recent knowledge on the dietary habits of school-age children and adolescents, to analyze environmental factors that influence them, and to highlight possibilities for prevention within the health and education systems.

Methodology

This paper presents the review of current knowledge on the dietary habits of children and adolescents and the environmental factors that influence their food choices.

Nutritional Needs of School-Age Children and Adolescents

During the school-age years, energy requirements increase in proportion to age. Growth and development require a regular intake of a varied diet that provides all essential nutrients. During this period, nutrition affects not only physical growth but also cognitive development, concentration, and everyday functioning. School age represents an important period of growth and development, and appropriate nutrition is essential for achieving optimal health outcomes and may help compensate for earlier nutritional deficiencies (3).

Regular meals and snacks should be based on whole grains, fruits, vegetables, dairy products, lean meat, fish, and plant-based sources of protein. Adolescence is characterized by rapid growth and increased nutritional requirements, particularly for energy, calcium, and iron. Adequate intake of these nutrients is important for bone development, hematological status, and muscle mass. Due to the influence of peers, media, and the broader social environment, adolescence is a period of intensive formation of dietary habits, which may contribute to the adoption of unhealthy eating patterns. Nutrition in earlier stages of life has a long-term impact on health outcomes in adulthood, further emphasizing the importance of proper nutrition during school age and adolescence (4).

Environmental Factors and Dietary Habits of Children

The dietary habits of children and adolescents are shaped by numerous interrelated factors, including the family environment, the school system, peers, and media influences. Therefore, promoting healthy dietary habits requires action at multiple levels—through support for families, school-based programs, public health policies, and the regulation of digital food marketing.

Family has a significant influence on children's dietary habits. Authoritative parents combine a high level of control and warmth and set clear and consis-

tent rules. Authoritarian parents apply high control with less emotional closeness, while permissive parents set few demands and boundaries. A neglectful parenting style, in which both demands and emotional closeness are lacking, may lead to a lack of structure in children's dietary habits (5). Parental feeding practices further shape children's dietary habits. Pressure, emotional feeding, and restriction are associated with unfavorable dietary habits, whereas encouragement, a structured approach, and responsive feeding contribute to healthier habits (6–8). The effectiveness of these practices is greater in a supportive family environment, confirming the key role of the family in shaping dietary habits (9). A study conducted in the United Arab Emirates showed that a more favorable home food environment is associated with better dietary habits, more frequent family meals, and better academic performance among adolescents (10). Although parents often possess knowledge about proper nutrition, it is not always applied in everyday practice, with sociodemographic factors playing an important role in shaping attitudes and behaviors (11).

It is also important to understand the factors that adolescents perceive as facilitators and barriers to healthy eating. Key facilitators include concern for health and appearance, intrinsic motivation, nutrition knowledge, family support, and the influence of peers and digital media. Barriers include the appeal and availability of unhealthy food, lack of motivation, negative peer influence, and the advertising of unhealthy food (12).

The school environment represents an important setting for shaping dietary habits. Programs that combine nutrition education and physical activity can improve dietary habits and contribute to reductions in body mass index, although the long-term sustainability of these effects remains uncertain (13). The World Health Organization emphasizes the key role of schools in promoting healthy dietary habits and recommends increasing the availability of nutritious foods and limiting unhealthy products in order to improve children's health (14).

The dietary habits of children and adolescents are also shaped within a broader social context. Obesity, undernutrition, and climate change are interconnected global challenges arising from shared societal and environmental drivers. Changes in food systems and living environments are essential for improving nutrition and protecting population health (15).

Exposure to unhealthy food advertising increases food intake among children and promotes a preference for energy-dense products (16). Social media further influence dietary habits. Problematic use of social media is associated with poorer dietary habits, including less frequent consumption of fruits and vegetables and skipping breakfast (17). Systematic reviews indicate that digital content influences the diets of children and adolescents through food advertising, peer pressure, and distraction during meals (18). Re-

search also shows that the promotion of unhealthy foods by influencers can increase calorie intake and the consumption of unhealthy snacks among children (19).

Eating Disorders, Prevention, and Interventions in School-Age Children and Adolescents

Eating disorders are complex mental health conditions characterized by disturbed eating patterns and excessive preoccupation with body image. They do not represent a transient phase or a diet, but rather serious disorders that require professional help and treatment (20). The most common disorders include anorexia nervosa, characterized by extremely low body weight and an intense fear of weight gain; bulimia nervosa, characterized by episodes of binge eating followed by compensatory behaviors; and binge-eating disorder, which involves a loss of control over food intake. These conditions are often associated with low self-esteem, depressive symptoms, and excessive concern about body appearance (21).

Eating disorders are increasingly recognized in children and adolescents. Although anorexia nervosa and bulimia nervosa are less common than in adults, they can occur as early as childhood, while binge-eating disorder is the most common form and occurs more frequently in girls. The clinical presentation may differ from that in adults, and parents or caregivers are often the first to notice changes in eating habits, body weight, or attitudes toward food. Diagnosis includes disturbances in eating behavior, concerns about body appearance, and impaired social and school functioning. Treatment recommendations include a multidisciplinary approach involving medical care, nutritional counseling, and psychological interventions. Early recognition and timely intervention are crucial for improving treatment outcomes and reducing the risk of long-term consequences (22).

The etiology of eating disorders is complex and involves the interaction of sociocultural, psychological, and biological factors. Societal pressures toward the thin ideal, internalization of such ideals, and exposure to media messages represent important risk factors. Psychological traits such as perfectionism and negative emotionality further increase vulnerability, while genetic and neurobiological factors may contribute to the development of these disorders. Genetic predisposition often manifests through interaction with psychological and environmental factors, highlighting the importance of a biopsychosocial approach in understanding and preventing these disorders (23).

Research indicates that social media use is associated with body dissatisfaction and disordered eating behaviors. Activities such as viewing and posting photographs and seeking feedback about one's appearance are particularly problematic. Comparing one's appearance with others further increases con-

cerns about body image (24). The growing use of social media exposes adolescents to idealized body images and messages promoting thinness, dieting, and weight-loss products. Such content can reduce self-esteem and contribute to negative body image, particularly in early adolescence. Therefore, the need for education and preventive programs that encourage critical evaluation of media content and a healthy relationship with the body is emphasized (25).

Obesity and eating disorders often overlap and share common risk factors. Children with obesity more frequently experience episodes of binge eating and unhealthy methods of weight control, which increases the risk of developing eating disorders (26). Research also indicates an association between excess body weight and negative body image, lower self-esteem, and unhealthy lifestyle habits, highlighting the need for an integrated preventive approach (27).

Schools play an important role in prevention because they provide access to a large number of children and adolescents. Programs aimed at reducing body dissatisfaction and strengthening self-esteem can improve adolescents' mental health. Such programs often include psychoeducation, body acceptance, the development of stress-coping skills, and the promotion of healthy lifestyle habits (28). Media literacy-based interventions can improve dietary habits, encourage critical evaluation of food advertising, and increase body satisfaction. Involving families and strengthening communication about media content are considered important elements of successful prevention (29). Systematic reviews also show that school-based preventive programs may have positive short-term effects, although further research is needed to assess long-term outcomes (30).

Due to the complexity of eating disorders, prevention requires coordinated action by families, schools, and the health system. Early recognition of risky behaviors, a supportive environment, and a multidisciplinary approach are essential for effective intervention. Eating disorders are serious conditions with long-term physical and psychological consequences. Early recognition of symptoms, strengthening self-confidence, and developing a positive relationship with the body and food are important for preserving the health of children and adolescents. Preventive programs should be long-term and involve all relevant stakeholders.

Conclusion

The dietary habits of school-age children and adolescents are shaped by numerous interrelated factors, among which the family environment, school, peers, and the media play a key role. During periods of intensive growth and development, proper and balanced nutrition is important for physical health, cognitive abilities, and overall functioning, while the adoption of un-

healthy dietary patterns may increase the risk of chronic diseases and psychosocial difficulties later in life.

The modern environment, characterized by the widespread availability of energy-dense foods, intensive advertising, and the influence of digital media, further complicates the adoption of healthy dietary habits. At the same time, the school system and health education activities provide important opportunities to promote healthy lifestyles and to develop a critical approach to food choices.

References

1. MedlinePlus. School-age children: development [Internet]. Bethesda (MD): U.S. National Library of Medicine; 2024 [cited 2025 Jun 1]. Available from: <https://medlineplus.gov/ency/article/002017.htm>
2. World Health Organization. Adolescent health [Internet]. Geneva: World Health Organization; [cited 2025 Jun 1]. Available from: <https://www.who.int/health-topics/adolescent-health>
3. Saavedra JM, Prentice AM. Nutrition in school-age children: a rationale for revisiting priorities. *Nutr Rev* 2023;81(7):823-43.
4. Koletzko B. Basic concepts in nutrition: nutritional needs of children and adolescents. *e-SPEN Eur e-J Clin Nutr Metab* 2008;3(4):e179-84.
5. Scaglioni S, De Cosmi V, Ciappolino V, Parazzini F, Brambilla P, Agostoni C. Factors influencing children's eating behaviours. *Nutrients* 2018;10(6):706.
6. Sleddens EFC, Kremers SPJ, Stafleu A, Dagnelie PC, De Vries NK, Thijs C. Food parenting practices and child dietary behavior: prospective relations and the moderating role of general parenting. *Appetite* 2014;79:42-50.
7. Santos KF, Reis MA, Romano MCC. Parenting practices and child eating behavior. *Texto Contexto Enferm* 2021;30:e20200026.
8. Costa A, Oliveira A. Parental feeding practices and children's eating behaviours: an overview of their complex relationship. *Healthcare* 2023;11(3):400.
9. Dessi A, Petza S, Di Carlo A, Infantino F, Zanco F, Galimberti L, et al. Parenting style and social media: impact on children's dietary patterns. *Nutrients* 2025;17(20):3254.
10. Sohail R, Hasan H, Saqan R, Barakji A, Khan A, Sadiq F, et al. The influence of the home food environment on the eating behaviors, family meals, and academic achievement of adolescents in schools in the UAE. *Int J Environ Res Public Health* 2024;21(9):1187.
11. Rodoman I, Timotin A, Lozan O. Parental socio-demographic influences on school-aged children's diets: a comprehensive study in the Republic of Moldova. *One Health Risk Manag* 2024;5(2):25-33.
12. Louey J, He J, Partridge SR, Allman-Farinelli M. Facilitators and barriers to healthful eating among adolescents in high-income countries: a mixed-methods systematic review. *Obes Rev* 2024;25(11):e13813.
13. Chatterjee P, Nirgude A. A systematic review of school-based nutrition interventions for promoting healthy dietary practices and lifestyle among school children and adolescents. *Cureus* 2024;16(1):e53127.
14. World Health Organization. WHO urges schools worldwide to promote healthy eating for children [Internet]. Geneva: World Health Organization; 2026 Jan 27 [cited 2026 Feb 25]. Available from: <https://www.who.int/news/item/27-01-2026-who-urges-schools-worldwide-to-promote-healthy-eating-for-children>
15. Swinburn BA, Kraak VI, Allender S, Atkins VJ, Baker PI, Bogard JR, et al. The global syndemic of obesity, undernutrition, and climate change: The Lancet Commission report. *Lancet* 2019;393(10173):791-846.
16. Boyland EJ, Nolan S, Kelly B, Tudur-Smith C, Jones A, Halford JCG, et al. Advertising as a cue to consume: a systematic review and meta-analysis of the effects of acute exposure to unhealthy food and nonalcoholic beverage advertising on intake in children and adults. *Am J Clin Nutr* 2016;103(2):519-33.
17. Khan A, Feng J, Chachay V, Tsang JH, Huang WY, Sit CHP, Minichiello V. Bytes and bites: social media use and dietary behaviours among adolescents across 41 countries. *Pediatr Res* 2025;98(6):2101-8.
18. Sina E, Boakye D, Christianson L, Ahrens W, Hebestreit A. Social media and children's and adolescents' diets: A systematic review of the underlying social and physiological mechanisms. *Adv Nutr* 2022;13(3):913-37.
19. Coates AE, Hardman CA, Halford JCG, Christiansen P, Boyland EJ. Social media influencer marketing and children's food intake: a randomized trial. *Pediatrics* 2019;143(4):e20182554.
20. Centar BEA. Parent handbook for children and youth with eating disorders [Internet]. Zagreb: Centar BEA; [cited 2025 Jun 1]. Available from: <https://www.centarbea.hr/sites/default/files/A%20PRIRU%C4%8CNIK%20ZA%20RODITELJE.pdf>
21. Treasure J, Duarte TA, Schmidt U. Eating disorders. *Lancet* 2020;395(10227):899-911.
22. Ram JR, Shelke SB. Understanding eating disorders in children and adolescent population. *J Indian Assoc Child Adolesc Ment Health* 2023;19(1):60-9.
23. Culbert KM, Racine SE, Klump KL. Research review: What we have learned about the causes of eating disorders - a synthesis of sociocultural, psychological, and biological research. *J Child Psychol Psychiatry* 2015;56(11):1141-64.
24. Holland G, Tiggemann M. A systematic review of the impact of the use of social networking sites on body image and disordered eating outcomes. *Body Image* 2016;17:100-10.
25. Suhag K, Rauniyar S. Social media effects regarding eating disorders and body image in young adolescents. *Cureus* 2024;16(4):e58674.
26. Stabouli S, Erdine S, Suurorg L, Jankauskienė A, Lurbe E. Obesity and eating disorders in children and adolescents: the bidirectional link. *Nutrients* 2021;13(12):4321.
27. Wąsacz M, Sarzyńska I, Ochojska D, Błajda J, Bartkowska O, Brydak K, et al. Psychosocial consequences of excess weight and the importance of physical activity in combating obesity in children and adolescents: a pilot study. *Nutrients* 2025;17(10):1690.
28. Wong RS, Chan BNK, Lai SK, Tung KTS. School-based eating disorder prevention programmes and their impact on adolescent mental health: systematic review. *BJPsych Open* 2024;10(6):e196.
29. Kaiser CK, Edwards Z, Austin EW. Media literacy practices to prevent obesity and eating disorders in youth. *Curr Obes Rep* 2024;13(1):186-94.
30. Berry SL, Burton AL, Rogers K, Lee CM, Berle DM. A systematic review and meta-analysis of eating disorder preventative interventions in schools. *Eur Eat Disord Rev* 2025;33(2):390-410.