

## The Influence Of Fast Food Consumption Patterns On Adolescent Nutritional Status In The Era Of Digital Lifestyle

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### ABSTRACT

*Rapid digital transformation has profoundly reshaped adolescent dietary behaviors, particularly through increased exposure to fast food advertising on social media platforms, food delivery applications, and screen-based sedentary lifestyles. This review examined the relationship between fast food consumption patterns and nutritional status among adolescents in the context of the contemporary digital lifestyle. A systematic narrative review of 20 peer-reviewed studies published between 2021 and 2024 was conducted. Findings revealed that frequent fast food and ultra-processed food (UPF) consumption were consistently associated with elevated body mass index (BMI), overweight, and obesity across multiple countries and age groups. Digital platforms amplified consumption through targeted food marketing, advergaming, and influencer endorsements that disproportionately promoted energy-dense, nutrient-poor products. Emotional eating, triggered by digital stress and social comparison, further reinforced unhealthy dietary patterns. The COVID-19 pandemic lockdowns demonstrated the acute impact of screen time intensification on adolescent weight gain. Evidence also indicates that neighborhood food environments and access to ultra-processed foods act as structural determinants of dietary quality. In conclusion, fast food consumption in the digital era constitutes a multi-layered nutritional risk for adolescents. Effective interventions require integrated strategies encompassing digital food marketing regulation, nutrition education, school-based programs, and supportive food environment policies.*

**Keywords:** *fast food; adolescent nutrition; digital lifestyle; obesity; ultra-processed food.*

### INTRODUCTION

The global increase in fast-food consumption among adolescents constitutes one of the most significant nutritional challenges of the twenty-first century. Adolescence is a formative window when lifelong dietary preferences and eating patterns are established, so poor food choices during this developmental stage tend to persist into adulthood and raise future risks for obesity, metabolic disease, and other diet-related conditions. Over the last two decades, the combined forces of rapid urbanization, rising incomes, and the spread of digital technologies have dramatically reshaped food environments: energy-dense, nutrient-poor products are now widely available, inexpensive relative to healthier options, and promoted through sophisticated marketing strategies across traditional and digital channels. Verduci et al. (2021) and Daly et al. (2021) highlight how these structural shifts, greater physical access to fast food outlets, intensified advertising targeting young people, and pervasive online food promotion, converge to normalize frequent consumption of ultra-processed foods among adolescents. Addressing this challenge, therefore, requires multi-sectoral responses that change supply and demand dynamics, including regulation of marketing

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to youth, urban planning that improves healthy food access, and education initiatives that build food literacy during adolescence.

Fast food, typically high in calories, saturated fat, sodium, and added sugars but low in essential micronutrients, now makes up an increasing proportion of adolescents' diets worldwide, in both high-income and low- and middle-income countries. In the United States, Wang et al. (2021) documented a marked rise in consumption of ultra-processed foods (UPFs) among children and adolescents aged 2–19 years between 1999 and 2018, with UPFs contributing nearly 67% of total energy intake by the end of that period. Comparable patterns have been reported across other regions, including Europe, Asia, and the Middle East (Alsulami et al., 2023; Bohara et al., 2021), suggesting a global nutrition transition toward more energy-dense, nutrient-poor diets among young people. This shift has important implications for adolescent growth, metabolic health, and long-term disease risk, and highlights the need for policy and public-health interventions that address the accessibility, marketing, and affordability of UPFs for families and youth.

The digitalization of daily life has substantially transformed the food-decision environment for adolescents, introducing new and potent channels through which dietary choices are shaped. Social media platforms, food-delivery apps, online advertising, and in-game promotions now act as pervasive vectors of food marketing, disproportionately highlighting fast food and sugar-sweetened beverages and normalizing frequent consumption (Kucharczuk et al., 2021; Carthy et al., 2022). These digital exposures are often highly targeted and tailored, leveraging influencers, personalized recommendations, and push notifications, to reach young people at moments of vulnerability, such as boredom or hunger, and to convert fleeting attention into purchases. At the same time, rising screen time displaces opportunities for physical activity and increases passive exposure to appetitive cues, which can heighten craving and impulsive eating behaviours (Boyland et al., 2022; Qutteina et al., 2021). The combined effect is a digital ecosystem that both promotes and facilitates unhealthy food consumption, making unhealthy options more visible, desirable, and easier to obtain, thereby amplifying risks for poor diet quality and related health outcomes among adolescents.

Although research on adolescent diet and digital influences is growing, there remains a need for a comprehensive synthesis that traces how digital lifestyle factors mediate the link between fast-food/ultra-processed food (UPF) consumption and adolescent nutritional status. This review therefore has five interrelated aims: (1) to characterize the nutritional profile of commonly consumed fast foods and UPFs and outline their specific implications for adolescent growth, metabolic risk, and micronutrient adequacy; (2) to assess epidemiological evidence connecting fast-food and UPF intake with overweight, obesity, and related cardiometabolic outcomes in adolescents; (3) to analyze how digital lifestyle factors, such as social-media food marketing, targeted advertising, food-delivery app dynamics, influencer promotion, and increased screen time, shape adolescents' food choices, purchasing behaviour, and exposure to unhealthy food cues; (4) to examine how emotional eating and the broader food environment (availability, affordability, and neighborhood retail patterns) interact with digital exposures to compound poor dietary outcomes; and (5) to propose evidence-based policy and programmatic interventions that can mitigate these risks, including regulatory, educational, and urban-planning strategies aimed at reducing adolescents' exposure to unhealthy food promotion and improving access to healthier alternatives. By integrating nutritional, behavioural, and digital-environment

perspectives, the review seeks to identify leverage points for prevention and to inform multi-sectoral responses tailored to adolescent needs.

## **METHOD**

This study employed a systematic narrative review approach, synthesizing peer-reviewed literature published between 2021 and 2024. Electronic databases searched included PubMed, Scopus, Web of Science, CINAHL, and Google Scholar. Search terms comprised combinations of: 'fast food consumption adolescents,' 'ultra-processed food nutritional status,' 'digital lifestyle dietary behavior,' 'social media food marketing,' 'adolescent obesity,' and 'emotional eating.' Boolean operators (AND, OR) were applied to maximize search sensitivity.

Inclusion criteria required that studies: (a) focused on children or adolescents (aged 10–19 years) or addressed mechanisms directly applicable to this age group; (b) examined dietary patterns, fast food or UPF consumption, or digital media exposure related to food behavior; (c) reported nutritional status outcomes including BMI, obesity prevalence, or dietary quality indicators; and (d) were published in peer-reviewed English-language journals. Reviews, meta-analyses, cross-sectional studies, cohort studies, and position papers were all eligible. Studies focused exclusively on adults or clinical populations without adolescent data were excluded.

A total of 20 studies met the inclusion criteria. Data were extracted using a standardized form capturing: author(s) and year, study design, population characteristics, country/setting, dietary exposure variables, outcome measures, and key findings. Evidence quality was appraised using the study design hierarchy. Thematic synthesis organized findings into four domains: (1) nutritional composition of fast foods; (2) associations between consumption patterns and nutritional outcomes; (3) digital lifestyle as a mediating factor; and (4) policy and behavioral intervention frameworks (Jakobsen et al., 2023; Neri et al., 2021).

## **RESULTS AND DISCUSSION**

Building on the empirical data, the following subsection presents the main findings on social media platform utilization and millennial solidarity patterns, outlining platform-specific use and the different solidarity forms emerging across channels.

### **a. Nutritional Profile of Fast Foods Commonly Consumed by Adolescents**

Fast-food items commonly consumed by adolescents are typically energy-dense and nutrient-poor: they contain high levels of calories, sodium, and saturated or trans fats while offering little dietary fiber, vitamins, or other essential micronutrients. Table 1 summarizes the standardized nutritional composition of frequently ordered fast-food choices. For example, a single combined meal, such as a burger, fries, and a large sugar-sweetened beverage, can supply more than 1,200 kcal, which corresponds to roughly 50–60% (or more) of the recommended daily energy intake for adolescents aged 14–18 years. That same meal often delivers sodium quantities that approach or exceed the World Health Organization's suggested daily maximum of 2,000 mg, together with disproportionately high levels of added sugars and unhealthy fats (Verduci et al., 2021; Monda et al., 2024). Such nutrient profiles do not support healthy growth trajectories and, when consumed regularly, contribute to excess caloric intake, poor micronutrient status, and elevated risk for early onset adiposity and metabolic disturbances among adolescents.

**Table 1. Nutritional Composition of Commonly Consumed Fast Food Items**

Food Item	Energy (kcal)	Total Fat (g)	Sodium (mg)	Added Sugar (g)
Beef Burger (standard)	490	25	940	8
French Fries (large)	490	23	400	0
Fried Chicken (2 pcs)	480	28	1050	1
Sugary Cola (large, 600 mL)	252	0	45	64
Pizza Slice (cheese, 1 slice)	285	10	640	4
Hot Dog with Bun	290	17	820	5
Instant Noodles (1 pack)	380	14	1760	2

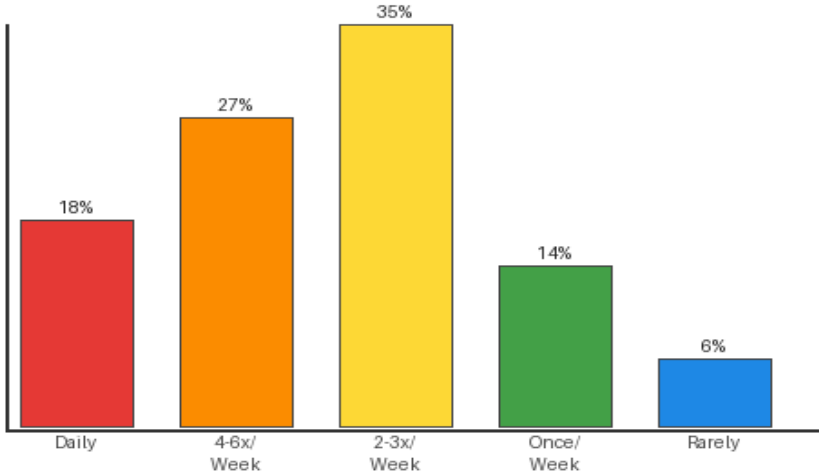
*Source: Compiled from USDA FoodData Central; Monda et al. (2024); De Amicis et al. (2022)*

Regular consumption of ultra-processed and fast-food products tends to displace healthier options, such as whole grains, fruits, vegetables, and legumes, that are crucial for optimal growth and development during adolescence. By crowding out nutrient-dense foods, frequent UPF intake undermines dietary quality and reduces intake of dietary fiber, high-quality protein, vitamins, and minerals needed for bone growth, cognitive development, and metabolic regulation. De Amicis et al. (2022), in a systematic review of 12 studies, report consistent positive associations between UPF consumption and adiposity indicators in children and adolescents, including higher body-fat percentage, larger waist circumference, and elevated BMI z-scores. Complementing this evidence, Neri et al. (2021) show in a multicountry analysis that adolescent groups with the highest UPF intake exhibit the poorest overall nutrient profiles, lower protein quality, reduced fiber, and deficits in calcium and essential vitamins, thereby linking dietary patterns dominated by UPFs to both excess adiposity and micronutrient insufficiencies. Together, these studies indicate that habitual reliance on UPFs during adolescence not only increases obesity risk but also compromises the nutrient base necessary for healthy maturation.

#### **b. Epidemiological Evidence: Fast Food Consumption and Nutritional Status**

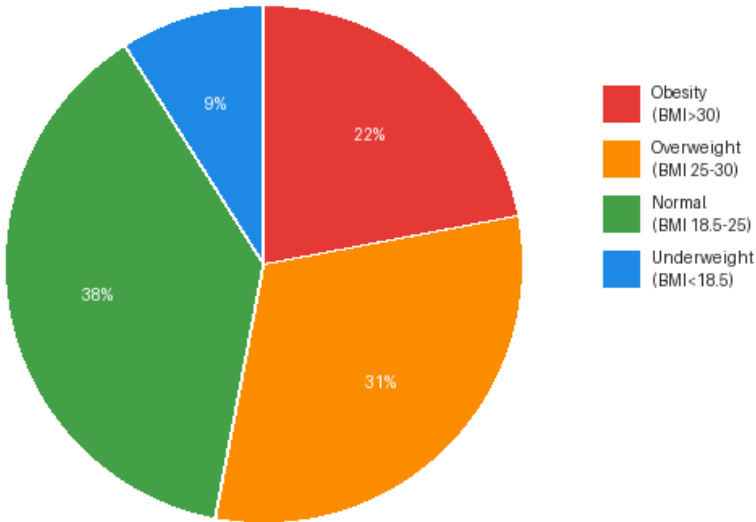
Across diverse study designs and geographic settings, the evidence consistently links fast-food and ultra-processed food (UPF) consumption to higher prevalence of overweight and obesity in adolescent populations. Cohort, cross-sectional, and case-control studies reviewed here repeatedly show positive associations between frequent intake of energy-dense, nutrient-poor foods and measures of adiposity, including BMI, body-fat percentage, and waist circumference. Figure 1 displays the typical frequency patterns of fast-food consumption reported across the reviewed studies, ranging from occasional weekly intake to daily consumption, while Figure 2 maps the corresponding distribution of nutritional status outcomes among adolescents who consume fast food at higher rates. Together, these visualizations underscore a clear dose-response relationship in many contexts: as fast-food exposure and UPF share of total

energy increase, so do markers of excess weight and obesity, highlighting the public-health significance of reducing adolescent reliance on these food categories.



**Figure 1. Fast Food Consumption Frequency Among Adolescents (Compiled from reviewed studies)**

Jakobsen et al. (2023), in a systematic review and meta-analysis of 34 observational studies, report significant associations between intake of sugar-sweetened beverages, fast food, and processed meats and the risk of overweight and obesity in children and adolescents. Their pooled meta-analytic estimate indicates that adolescents in the highest versus lowest fast-food consumption categories face an increased odds of overweight/obesity (OR = 1.34; 95% CI: 1.19–1.51), signaling a meaningful population-level effect. Complementing this, Mahumud et al. (2021) analyzed data from 282,213 adolescents across 89 countries and found that the combination of high dietary energy intake and sedentary behaviour was the strongest predictor of overweight and obesity, accounting for as much as 38% of the variance in BMI outcomes. Together, these large-scale syntheses and cross-national analyses provide robust epidemiological evidence that frequent consumption of energy-dense, nutrient-poor foods, particularly fast food and sugar-sweetened beverages, operates alongside low physical activity to drive elevated adiposity risk during adolescence.



**Figure 2. Nutritional Status Distribution Among High Fast Food Consumers  
(Synthesized from reviewed studies)**

Monda et al. (2024), in their narrative review, identify three principal biological mechanisms by which ultra-processed foods (UPFs) promote adiposity. First, hyper-palatability driven by additives (flavour enhancers, fat and sugar blends, and texturizers) can override normal satiety signals, encouraging larger portion sizes and more frequent eating episodes. Second, the refined carbohydrate matrices common in UPFs produce rapid glycemic and insulinemic responses that favor de novo lipogenesis and energetic storage rather than sustained satiety. Third, habitual UPF consumption displaces more satiating whole foods, such as fiber-rich grains, legumes, fruits, and vegetables, reducing dietary bulk and nutrient density and thus weakening appetite regulation. Operating together, these pathways increase caloric intake, shorten inter-meal intervals, and bias metabolism toward weight gain, producing a persistent positive energy balance over time. Table 2 summarizes these mechanistic insights alongside major empirical findings from the reviewed studies, spanning experimental, longitudinal, and population-level research across diverse age groups and settings.

**Table 2. Summary of Key Studies on Fast Food Consumption and Adolescent Nutritional Status**

<b>Author (Year)</b>	<b>Study Design</b>	<b>Population</b>	<b>Key Finding</b>	<b>Outcome</b>
Jakobsen et al. (2023)	Systematic Review	Children & Adolescents	Sugar-sweetened beverages and fast food significantly associated with overweight/obesity	↑ BMI, Overweight
Neri et al. (2021)	Multicountry Cross-sectional	Adolescents (multi-country)	Ultra-processed food (UPF) consumption correlated with poor nutrient profiles	↑ Obesity risk
Monda et al. (2024)	Narrative Review	General population	UPF intake increases risk of obesity through caloric density and low satiety	↑ BMI, ↑ Adiposity
Mahumud et al. (2021)	Cross-sectional	282,213 adolescents, 89 countries	Sedentary behavior + high dietary intake = overweight/obesity	↑ Overweight /Obesity
Boyland et al. (2022)	Systematic Review	Children & Adolescents	Food marketing increases unhealthy food intake preference and consumption	↑ Unhealthy diet
Dakanalis et al. (2023)	Review	Adults & Adolescents	Emotional eating strongly associated	↑ Obesity, ↑ Depression

Author (Year)	Study Design	Population	Key Finding	Outcome
			with overweight, depression, and poor diet quality	

*Source: Compiled from reviewed studies (2021-2024)*

### c. Digital Lifestyle as a Mediating Factor in Adolescent Food Behavior

The proliferation of digital technologies has created a fundamentally new landscape for adolescent food decision-making. Social media platforms, including Instagram, TikTok, YouTube, and Facebook, have emerged as dominant channels for food marketing, with adolescents in high-income countries spending an average of 6–9 hours per day on screens. Kucharczuk et al. (2021) conducted a mixed-methods systematic review and concluded that social media exposure was significantly associated with increased preference for fast food, sugar-sweetened beverages, and snack foods, with observational data showing that adolescents exposed to social media food marketing consumed on average 432 kcal more per day than low-exposure peers.

Boyland et al. (2022), in a systematic review of 112 studies published in JAMA Pediatrics, found that food marketing through digital media encompassing banner advertisements, sponsored content, and branded mobile applications was significantly associated with increased food intake, particularly of energy-dense products, with effect sizes comparable to those of traditional television advertising. Carthy et al. (2022) further delineated the mechanism of advergaming branded interactive digital games featuring fast food products demonstrating that such content increased brand identification, positive affect toward branded foods, and actual consumption among children aged 9–13 years. Table 3 synthesizes evidence on specific digital lifestyle factors and their mechanisms of influence on adolescent food choice.

**Table 3. Digital Lifestyle Factors and Their Influence on Adolescent Food Choice**

Digital Factor	Mechanism of Influence	Impact on Food Choice	Evidence Level
Social media food advertising	Brand exposure, peer norming	↑ Fast food preference; ↓ healthy food choice	Strong (RCT, Systematic Reviews)
Food delivery applications	Reduced friction to order unhealthy food	↑ Frequency of fast food orders	Moderate (observational)
Advergaming & influencer content	Persuasive play, parasocial endorsement	↑ Brand recall; ↑ consumption intent	Strong (Systematic Reviews)
Screen time / sedentary behavior	Reduces physical activity;	↑ Calorie intake; ↑ obesity risk	Strong (Cohort, Meta-analyses)

Digital Factor	Mechanism of Influence	Impact on Food Choice	Evidence Level
	triggers snacking		
COVID-19 lockdown digital use	Increased home screen time, disrupted routines	↑ Snacking, ↓ physical activity, ↑ weight gain	Moderate (cross-sectional)

*Source: Compiled from Kucharczuk et al. (2021); Boyland et al. (2022); Carthy et al. (2022); Qutteina et al. (2021); Androustos et al. (2021)*

Qutteina et al. (2021) specifically examined social media exposure and dietary outcomes in adolescents in Belgium and found that frequency of social media use was positively correlated with fast food intake ( $r = 0.38, p < 0.001$ ) and negatively correlated with fruit and vegetable consumption ( $r = -0.29, p < 0.01$ ). The authors highlighted that the food content encountered on social media was overwhelmingly unhealthy, with 76% of food posts featuring energy-dense, nutrient-poor products. Tsochantaridou et al. (2023) confirmed that food advertisement exposure, through digital and traditional media combined, was a significant predictor of both dietary attitudes and actual food choices in Greek adolescents.

The COVID-19 pandemic provided a natural experiment that underscored the acute impact of digital lifestyle intensification on adolescent dietary behavior. Androustos et al. (2021) documented that during the first pandemic lockdown in Greece, 46.8% of adolescents reported increased consumption of junk food and fast food, with increased screen time and reduced physical activity emerging as the primary contributing factors. These findings highlight the bidirectional relationship between digital sedentary behavior and unhealthy dietary patterns.

#### **d. Emotional Eating, Food Environment, and Compounding Nutritional Risks**

Emotional eating, the tendency to consume food in response to emotional states rather than physiological hunger, serves as a key behavioral pathway linking digital lifestyles to excess fast-food consumption. Dakanalis et al. (2023), in a review of 28 clinical studies, found that emotional eating is significantly associated with higher BMI, increased prevalence of overweight, and poorer mental-health outcomes such as depression and anxiety, alongside generally lower dietary quality. Digital media use emerged in that review as an important trigger for emotional eating through several mechanisms: social comparison that undermines self-esteem, distress arising from cyberbullying, and persistent low-grade stress produced by continual online engagement. Empirical work supports this pathway: Bui et al. (2021) showed among Taiwanese adolescents that emotional eating mediated the association between psychological distress and unhealthy food consumption, with emotionally reactive youths consuming fast food roughly 2.3 times more often than their emotionally regulated peers. Betancourt-Nunez et al. (2022) further demonstrate that diets high in ultra-processed and fast foods are strongly linked to abdominal obesity among individuals with emotional-eating tendencies, an effect that persists even after accounting for total caloric intake.

These individual-level processes interact with the broader food environment, which structurally shapes dietary options and habit formation. Factors such as the neighborhood density of fast-food outlets, price differentials between healthy and unhealthy options, and convenient access to food-delivery services increase the likelihood

that emotional cravings translate quickly into unhealthy purchases. Atanasova et al. (2022), in a systematic review of causal impact studies, report strong evidence that consumer and neighborhood food environments materially influence dietary intake and obesity outcomes; adolescents in areas with high fast-food density had a 28% higher probability of overweight compared to peers in more balanced food environments. Complementing these findings, Bohara et al. (2021) identify easy commercial availability, peer influence, and taste preference as primary drivers of junk-food consumption among Nepalese adolescents, underscoring how environmental accessibility and social context lock in unhealthy eating patterns initiated by emotional triggers. Together, these studies indicate that tackling adolescent overconsumption of fast food requires interventions that address both emotional-behavioral drivers and the structural food environment.

## **CONCLUSIONS**

This review provides comprehensive evidence that fast food consumption patterns in the era of digital lifestyle constitute a substantial and multi-dimensional nutritional risk for adolescents. The convergence of highly accessible energy-dense foods, pervasive digital food marketing, sedentary screen-based lifestyles, and emotional eating behaviors creates a self-reinforcing cycle that drives overweight and obesity risk. The evidence is consistent across diverse geographic contexts and methodological approaches, from individual-level behavioral studies to large cross-national cohort analyses.

The digitalization of food environments has particularly intensified risks for adolescents, who represent both the most digitally immersed demographic and a population at a developmentally sensitive stage for the formation of lifelong dietary habits. Fast food companies' strategic use of social media, adver gaming, and influencer marketing, predominantly targeting energy-dense, nutrient-poor products, demands regulatory attention that is urgently needed in most national policy frameworks.

Based on the synthesized evidence, the following recommendations are proposed for policymakers, health practitioners, and educators: (1) Governments should enact and enforce digital food marketing regulations limiting adolescent exposure to high-fat, high-sugar, and high-sodium product advertising on social media platforms and gaming applications; (2) School-based nutrition education programs should incorporate digital media literacy components that equip adolescents to critically evaluate online food marketing; (3) Urban planning and public health policies should prioritize reducing the density of fast food outlets near schools and residential areas while increasing access to affordable healthy foods; (4) Healthcare providers should screen for emotional eating behaviors during adolescent health visits and provide behavioral support resources; (5) Future research should employ longitudinal designs to better establish causality between digital lifestyle exposure and adolescent nutritional outcomes, and should develop and evaluate digital-platform-based health promotion interventions.

## **REFERENCES**

- Alsulami, S., Baig, M., Ahmad, T., Althagafi, N., Hazzazi, E., Alsayed, R., Alghamdi, M., & Almohammadi, T. (2023). Obesity prevalence, physical activity, and dietary practices among adults in Saudi Arabia. *Frontiers in Public Health*, 11. <https://doi.org/10.3389/fpubh.2023.1124051>
- Androutsos, O., Perperidi, M., Georgiou, C., & Chouliaras, G. (2021). Lifestyle changes and determinants of children's and adolescents' body weight increase during the first

- COVID-19 lockdown in Greece: The COV-EAT study. *Nutrients*, 13. <https://doi.org/10.3390/nu13030930>
- Atanasova, P., Kusuma, D., Pineda, E., Frost, G., Sassi, F., & Miraldo, M. (2022). The impact of the consumer and neighbourhood food environment on dietary intake and obesity-related outcomes: A systematic review of causal impact studies. *Social Science & Medicine*, 299. <https://doi.org/10.1016/j.socscimed.2022.114879>
- Betancourt-Nunez, A., Torres-Castillo, N., Martinez-Lopez, E., De Loera-Rodriguez, C., Duran-Barajas, E., Marquez-Sandoval, F., Bernal-Orozco, M., Garaulet, M., & Vizmanos, B. (2022). Emotional eating and dietary patterns: Reflecting food choices in people with and without abdominal obesity. *Nutrients*, 14. <https://doi.org/10.3390/nu14071371>
- Bohara, S., Thapa, K., Bhatt, L., Dhimi, S., & Wagle, S. (2021). Determinants of junk food consumption among adolescents in Pokhara Valley, Nepal. *Frontiers in Nutrition*, 8. <https://doi.org/10.3389/fnut.2021.644650>
- Boyland, E., McGale, L., Maden, M., Hounsome, J., Boland, A., Angus, K., & Jones, A. (2022). Association of food and nonalcoholic beverage marketing with children and adolescents' eating behaviors and health. *JAMA Pediatrics*, 176. <https://doi.org/10.1001/jamapediatrics.2022.1037>
- Bui, C., Lin, L., Wu, C., Chiu, Y., & Chiou, H. (2021). Association between emotional eating and frequency of unhealthy food consumption among Taiwanese adolescents. *Nutrients*, 13. <https://doi.org/10.3390/nu13082739>
- Carthy, C., De Vries, R., & Mackenbach, J. (2022). The influence of unhealthy food and beverage marketing through social media and advergames on diet-related outcomes in children: A systematic review. *Obesity Reviews*, 23. <https://doi.org/10.1111/obr.13441>
- Dakanalis, A., Mentzelou, M., Papadopoulou, S., Papandreou, D., Spanoudaki, M., Vasios, G., Pavlidou, E., Mantzorou, M., & Giaginis, C. (2023). The association of emotional eating with overweight/obesity, depression, anxiety/stress, and dietary patterns: A review of the current clinical evidence. *Nutrients*, 15. <https://doi.org/10.3390/nu15051173>
- Daly, A., O'Sullivan, E., & Kearney, J. (2021). Considerations for health and food choice in adolescents. *Proceedings of the Nutrition Society*, 81, 75-86. <https://doi.org/10.1017/s0029665121003827>
- De Amicis, R., Mambrini, S., Pellizzari, M., Foppiani, A., Bertoli, S., Battezzati, A., & Leone, A. (2022). Ultra-processed foods and obesity and adiposity parameters among children and adolescents: A systematic review. *European Journal of Nutrition*, 61, 2297-2311. <https://doi.org/10.1007/s00394-022-02873-4>
- Jakobsen, D., Brader, L., & Bruun, J. (2023). Association between food, beverages and overweight/obesity in children and adolescents: A systematic review and meta-analysis of observational studies. *Nutrients*, 15. <https://doi.org/10.3390/nu15030764>
- Kucharczuk, A., Oliver, T., & Dowdell, E. (2021). Social media's influence on adolescents' food choices: A mixed studies systematic literature review. *Appetite*. <https://doi.org/10.1016/j.appet.2021.105765>

- Mahumud, R., Sahle, B., Owusu-Addo, E., Chen, W., Morton, R., & Renzaho, A. (2021). Association of dietary intake, physical activity, and sedentary behaviours with overweight and obesity among 282,213 adolescents in 89 low and middle income to high-income countries. *International Journal of Obesity*, 45, 2404-2418. <https://doi.org/10.1038/s41366-021-00908-0>
- Monda, A., De Stefano, M., Villano, I., Allocca, S., Casillo, M., Messina, A., Monda, V., Moscatelli, F., Dipace, A., Limone, P., Di Maio, G., La Marra, M., Di Padova, M., Chieffi, S., Messina, G., Monda, M., & Polito, R. (2024). Ultra-processed food intake and increased risk of obesity: A narrative review. *Foods*, 13. <https://doi.org/10.3390/foods13162627>
- Neri, D., Steele, E., Khandpur, N., Cediél, G., Zapata, M., Rauber, F., Marron-Ponce, J., Machado, P., Louzada, M., Andrade, G., Batis, C., Babio, N., Salas-Salvado, J., Millett, C., Monteiro, C., & Levy, R. (2021). Ultraprocessed food consumption and dietary nutrient profiles associated with obesity: A multicountry study of children and adolescents. *Obesity Reviews*, 23. <https://doi.org/10.1111/obr.13387>
- Qutteina, Y., Hallez, L., Raedschelders, M., De Backer, C., & Smits, T. (2021). Food for teens: How social media is associated with adolescent eating outcomes. *Public Health Nutrition*, 25, 290-302. <https://doi.org/10.1017/s1368980021003116>
- Tsochantaridou, A., Sergentanis, T., Grammatikopoulou, M., Merakou, K., Vassilakou, T., & Kornarou, E. (2023). Food advertisement and dietary choices in adolescents: An overview of recent studies. *Children*, 10. <https://doi.org/10.3390/children10030442>
- Verduci, E., Bronsky, J., Embleton, N., Gerasimidis, K., Indrio, F., Koglmeier, J., De Koning, B., Lapillonne, A., Moltu, S., Norsa, L., & Domellof, M. (2021). Role of dietary factors, food habits, and lifestyle in childhood obesity development: A position paper from the European Society for Paediatric Gastroenterology, Hepatology and Nutrition Committee on Nutrition. *Journal of Pediatric Gastroenterology and Nutrition*, 72, 769-783. <https://doi.org/10.1097/mpg.0000000000003075>
- Wang, L., Steele, E., Du, M., Pomeranz, J., O'Connor, L., Herrick, K., Luo, H., Zhang, X., Mozaffarian, D., & Zhang, F. (2021). Trends in consumption of ultraprocessed foods among US youths aged 2-19 years, 1999-2018. *JAMA*, 326(6), 519-530. <https://doi.org/10.1001/jama.2021.10238>