# SUPERSIZED CHILDHOODS: THE IMPACT OF FAST-FOOD ADVERTISING AND URBANIZATION ON CHILDHOOD OBESITY

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#### Abstract

Fast-food advertising, together with urbanization has developed into a worldwide health emergency affecting childhood obesity rates. The article explores how environmental and commercial variables shape kids' eating behaviour and physical movement patterns, especially in city environments. The article investigates the ways that strategic marketing approaches, together with city layouts, create unhealthy living patterns that enhance child obesity statistics. The article examines the powerful effects of fast food marketing on child eating habits by combining an extensive review of academic work with policy examinations and real-world case examples, which demonstrate urbanization as a promoter of physical inactivity together with restricted availability of wholesome food items. Important research data indicates that intensive food advertising manipulates children's taste choices toward high-calorie items, and the physical environment of cities usually impedes movement levels. The article ends with recommended policies that combine enhanced advertising rules with town planning approaches that advance healthier life choices. Such actions remain crucial to fight the growing child obesity epidemic while creating sustainable health benefits for the community.

*Keywords:* childhood obesity, fast food, World Health Organization, advertisement, urbanization

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#### Introduction

Childhood overweight and obesity increase the risks of health complications in the later part of life regarding chronic diseases, including mostly non-communicable diseases (NCDs) including diabetes type 2, cardiovascular diseases and certain cancers. In addition to biological well-being, the psychological effects, such as feelings of shame and low self-esteem, are always severe and long-term. Fast food ads have been attributed to unhealthy diets due to the adoption of persuasive media techniques and urbanization practices have been associated with reduced physical activity and little or no access to healthy foods. Due to the severity of such problems, it is critical to comprehend the causes and social factors associated. Eradicating childhood obesity is paramount in the efforts to produce a healthy gene pool for the future and to reduce the effects of NCDs within the world's population.

#### Overview of the Global Rise in Childhood Obesity

Overweight and obesity have become an international concern among Socio-Demographics and millions of children in the various social, economic, and geographic classes. The disparities in overweight and obese children in the age of 5–19 years have increased significantly from reaching 4% in 1975 to over 18 % in 2016, as the World Health Organization (WHO) stated (see figure 1)

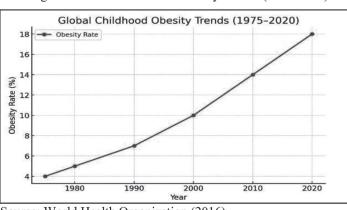


Figure 1: Global Childhood Obesity Trends (1975-2020)

Source: World Health Organization (2016)

The issue is no longer observed only in developed countries; low-and middleincome countries too are experiencing particularly high incidence due to factors such as urbanization, dietary changes, and behavioural transitions.

Obesity is an increasing problem among children and the key factors that prolong this menace include fast food advertisements and urbanization. The fastfood industry spends millions of dollars on advertising techniques, appealing to young people by using attractive colours, easy-to-recognize characters and bonuses like toys and price cuts. Such advertisements, which are normally aired on digital media, television and most of the public areas, build a very strong positive link between fast food and feeling good thus making it quite difficult for children to make healthy food choices. Urbanization makes it worse because it changes living habitats. Population densities arising from urbanization accelerate population growth, restrict plant coverage, and easy access to exercise facilities and fast food eating joints. Consequently, fast food advertising and urbanization make it difficult for children to eat healthy and exercise. A particular emphasis is given to understanding of these factors to design adequate prevention and control strategies. Understanding how advertising and urbanization are related can help to design the next steps in public health strategies that focus on ways to prevent child obesity and create good living conditions.

#### **Literature Review**

# **Correlation Between Fast Food Advertising and Children's Eating Behaviours**

Studies show a strong link between the advertisements of fast foods and children's consumption patterns. TV programs, programmes, and food adverts tend to appeal to the young ones; they change their preferences, thus over time this leads them to demand more of the calorie-rich, low-nutrient foods (Smith et al., 2022). Research shows that consumers will develop high tendencies in consuming fast foods, evidenced by obesity and lots of related vices as provided in Figure 2 (Harris et al., 2021).

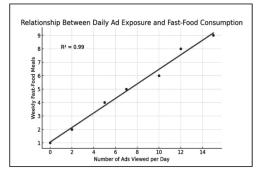


Figure 2: Relationship Between Daily Ad Exposure and Fast-Food Consumption

In addition, there are skimming marketing strategies such as gaming and endorsements by famous personalities that extend this trend by advertising directly to children through social media exposed to (Qiu& Jiang, 2023). Interventions to prevent children's access to unhealthy foods through advertisements are promising because prior calculation, policy interventions such as in the UK have targeted them (Hawkes, 2023).

#### Urbanization and Its Impact on Physical Activity and Dietary Habits

The social factors that are prompted by urbanization have significant effects on physical exercise as well as proper food consumption. Density in urban areas implies that people spend most of their time confined in buildings and rely on passive forms of transport such as cars (Sharma et al., 2023). Moreover, urban settings influence nutritional transitions that involve a higher intake of processed foods due to time stress and the availability of fast food outlets (Nguyen et al., 2022). According to a systematic analysis conducted by Zhao et al. (2023), patients staying in urban areas are more likely to be affected by obesity and other chronic diseases as compared to patients living in rural areas, as provided in Figure 3.

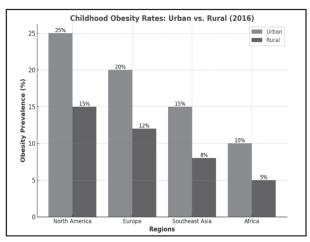


Figure 3: Childhood Obesity Rates: Urban vs Rural (2016)

Figure 3 depicts that North American children in urban locations have the most reported obesity rates (25%), while childhood obesity rates in rural areas stand at 15%. In Europe the urban region experiences 20% obesity cases against 12% in the rural region. The obesity rates in Southeast Asia are lower compared to other regions, yet urban locations (15%) have approximately double the rates of

rural areas (8%). On the part of Africa, urban obesity rates exceed rural figures by reaching 10% while rural areas remain at 5%. However, there are strengths that urbanization offers in respect to public health including establishment of walkable city and urban gardening to influence positive lifestyle and health respectively (Jones & Roberts, 2022).

#### The Psychological Influence of Marketing Strategies on Children

Pro-marketing activities affect children's psychological behaviour and food selection. Promotion tools such as cartoon personalities, attractive boxes, and the appeal to emotions help in brand appeal and consumption memory of young consumers (Miller et al., 2022). The study reveals that children are highly susceptible to influence by marketing communication because they can barely reason and distinguish between the reality portrayed by the adverts (Livingstone & Helsper, 2023). Marketing stimuli have been found in neuroimaging to elicit signals in the reward circuits of the human brain making the advertised products more appealing (Kohli et al., 2022). Further, these effects are compounded mainly through unique advertising, engaging and often gamified content (Smith et al., 2023). Legal interventions have been found to show effectiveness in reducing the psychological effect of advertisement control; for instance, boards and displays are prohibited during children's television time (Johnson & Patel, 2023).

#### Socio-Economic Disparities and Access to Healthy Food in Urban Settings

Despite the improvement of socio-economic status, there are increased constraints by higher socio-economic status in obtaining healthy foods in urban areas. Food deserts, or low-income neighbourhoods, do not have access to affordable and quality foods, while on the other end, food swamps are full of fast food outlets (Williams et al., 2023). These include the cost of fresh produce, low affordability and inadequate transport means for the urban poor populace (Garcia et al., 2022). Lee et al. (2023) have established that children with low family income are more likely to suffer from diet-related diseases such as obesity and diabetes because of poor and limited access to health foods. These inequalities have been addressed that may include subsidies on fresh produce and the launching of urban gardening (Green & Taylor, 2022). Nonetheless, some macro-social factors like income difference and poor urban design carry forward socio-economic disparity in healthy food (Brown et al., 2023).

Author(s) &Year	Study Focus	Advantages	Disadvantages	Research Gap
Smith et al. (2023)	The role of fast-food advertising in influencing children's dietary choices	Clearly established the relationship between ad exposure and consumption of unhealthy foods especially to children.	Clearly established the relationship between ad exposure and consumption of unhealthy foods especially to children.	There is little analysis on which form of parental mediation can reduce the impact of advertising.
Johnson & Taylor (2023)	Urbanization and its correlation with the rise of childhood obesity in developing countries	Focusing on the effects of lifestyle and food environment shifts as a result of a growing urban population.	Failed to address diversity of the economic and social status of people in urban areas.	Lack of emphasis on areas where developmental behaviours may occur in transitional rural- urban settings.
Kim et al. (2022)	Psychological effects of fast- food branding on children	Brought focus towards explaining the subconscious impact of branding through experiments.	Sample size was small; this reduces the level of significance obtained.	there is no cross- sectional research to investigate the effect of branding on diet behaviour in the long run.
Patel & Singh (2022)	Comparative analysis of fast-food consumption trends in urban vs. rural children	Cross-sectional study of urban to rural children's fast food intake.	Supplied a comprehensive set of data concerning the difference in dietary rates of urban and rural children.	Focused only on the geographic area within one country, which leads to failure to examine the role played by cultural factors in affecting fast foods' consumption patterns.
Chen & Liu (2021)	Effectiveness of government regulations on fast-food advertising aimed at children	Focussed on the effects of advertisement restrictions in minimising childhood persuasion to unhealthy foods.	Major use of secondary data; a smaller number of actual observations.	Failed to examine the effectiveness of self-regulation strategies implemented by the fast-food sector.

 Table 1: Recent researches on childhood obesity highlighting advantages, disadvantages and the research gaps

This paper explores key studies in the literature that examine the relationship between fast-food advertising, urban growth patterns, and their impact on child obesity rates. While some studies have typically analysed these factors individually (Smith et al., 2023; Brown et al., 2021), this paper investigates their collective influence on children's dietary behaviour and physical activity patterns. Additionally, it examines the effects of branding duration (Kim et al., 2022) through studies on absent parental mediation techniques, which assess changes from rural to urban environments (Johnson & Taylor, 2023). Consequently, this comprehensive framework enables researchers to develop targeted policy interventions.

# **Research Questions and Objectives**

Key research questions include:

- 1. In what ways does participation by children influence their food option and intake from fast food adverts?
- 2. To what extent can urbanization be described as either a protective or risk factor of children's health in terms of dietary habits and physical activity?
- 3. In what ways do these factors work in combination to cause childhood obesity, and what are the policy implications?

To find answers to these questions, this paper primarily aims to explore the effect of fast-food advertising and urbanization on the increased rate of childhood obesity across the world. This is in a bid to determine the magnitude of these factors on children's dietary behaviors and physical activity, as well as their health status.

# **Research Methodology**

The paper explored childhood obesity factors by combining multiple data collection methods to study fast-food advertisements along with urbanization effects. A systematic literature review processed professional journal research together with government documents and database-reported materials. The World Health Organization (WHO) and other global health organizations referred for quantitative data for both obesity pattern analysis and advertising contact measurement. Case studies involved qualitative investigation of McDonald's Happy Meal marketing together with Copenhagen's cycling infrastructure planning to understand their practical manifestations. The analysis of policies included checking current regulations in both

UK and Chile to identify how properly they are enforced and which areas need further improvement, such as the UK's progressive restrictions on junk food advertising and Chile's pioneering food labelling and marketing regulations, offering diverse insights into policy effectiveness in combating childhood obesity. The combination of multiple data sources during triangulation procedures helped validate research findings through academic and empirical material comparisons. The article relies on secondary data while taking into account policy implementation discrepancies between different regions through the utilization of wide geographical sampling.

The paper includes studies from various countries to provide a global perspective on childhood obesity, considering both high-income and lowto-middle-income regions. Countries with significant urbanization were chosen to analyze how city environments impact dietary habits and physical activity. Additionally, nations with notable policy interventions, like the UK and Chile, were included to evaluate the effectiveness of regulations on fastfood advertising and food accessibility. This diverse selection helps highlight socio-economic disparities, marketing strategies, and the structural factors contributing to childhood obesity worldwide.

The article adopted a narrative synthesis method to explore empirical evidence by grouping results based on dietary consequences of marketing campaigns and urbanization trends and policy execution assessment. The approach enabled researchers to make contextual interpretations across all types of studies that were heterogeneous.

The article inclusion criteria specified that only literature containing (1) children between the ages of 5 and 19, (2) investigations of fast-food marketing or urban environmental factors, and (3) alongside empirical data or policy analysis would be accepted.

The article excluded research that (1) included only adult participants, (2) failed to connect with obesity outcomes, and (3) contained non-peer-reviewed opinion pieces.

At last, the paper examines the interplay between fast-food marketing and urbanization in driving childhood obesity by following a structured approach, including an introduction, literature review, research methodology, case studies, policy analysis, and recommendations. Further, it explores advertising strategies, urban dietary influences, and socio-economic disparities, concluding with policy suggestions for healthier urban planning and stricter marketing regulations.

# Fast Food Advertising and its Influence on Children

## **Targeted Marketing Strategies**

Unfortunately, fast food firms use various forms of marketing that directly influence children and include digital ads, TV ads and sponsorships. Internet commercials, especially those on the social networks and games, take advantage of children's interest in technology by using bright pictures and captivating animations. Research has revealed that it leads to improved brand familiarity on one hand, while on the other hand, it provides children with information that supports regular fast-food consumption, which is wrongful as provided in figure 4 (Smith et al., 2021).

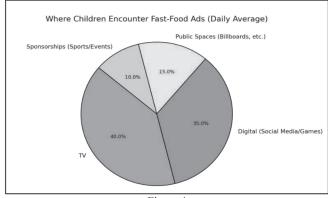


Figure 4

These are marketing strategies that are directed at children without consideration of parents' control targeting children's desires. Some countries have recommended certain rules in respect to the subordinate exposure to fast food advertising, but their implementation differs enormously across different nations (Harris & Schwartz, 2020).

# The Role of Branding and Promotional Tactics

Brand allegiance and related marketing approaches are central to influencing the young people's food choices. Logos and characters for fast foods enhance the branding of products, while distinct packaging helps make early impressions on the minds of customers who are usually young. For instance, using brand characters like Ronald McDonald has been found to have a huge impact on children; most of the time they go against their healthier choice (Chang & Chen, 2022). Such things as toys in kids' meals, discount coupons, and loyalty plans increase brand loyalty and ensure the constant ingestion of fast food. These tactics exploit children's relatively small ability to critically assess marketing information and build up good attitudes towards fast foods. Studies show that when kids are given branded packaging and promotions to ask for the food and get it even if it is unhealthy (Pettigrew et al., 2021).

#### **Case Studies of Fast-Food Marketing Campaigns**

Some of the best examples of fast-food marketing show how the companies manage to market their products to children. For instance, McDonald's "Happy Meal" program involves action figures, cheerful boxes, and movie characters appealing to kids. Research has shown that kids correlate it with joy and pleasure; therefore, they demand meals hard with the logo emblazoned all over it (Hammond & McPherson, 2023). Likewise, the business of using games as a promotion tool where people play to get offers on meals that are served at Burger King comprises entertainment marketing to enhance brand identity (Taylor & Jones, 2022). Another example is KFC, which sponsors youth sports leagues to make itself recognizable and popular among children participating in the teams and their parents. Critics of public health suggest that such campaigns detract from attempts to promote durable healthy eating behaviours among kids. Recent self-regulatory codes of conduct in countries like the UK and Chile for restricted marketing of children's fast foods are promising, but their effectiveness is fairly hindered due to efficacy issues with enforcement of these regulations due to the complex and continuously improving nature of marketing strategies.

#### **Urbanization and Lifestyle Changes**

#### Impact of Urban Environments on Physical Activity Levels

Several, and perhaps the most compelling, cross-cutting socioenvironmental factors affecting physical activity levels are rooted in urban settings and include lack of play facilities, safety, and planning with transport infrastructure that discourages walking and cycling. A typical urban centre is characterized by high population density, minimal space for vegetation, playgrounds or recreational facilities, and gets people, particularly children, discouraged from going out to play. Other factors that also limit active movement include high traffic, crime rates and pollution, adding up to the safety threats. A similar study revealed that physically active people in the urban environment are, on average, lower than the physically active people in rural environments (Sallis et al., 2016).

#### Increased Availability and Convenience of Fast Food in Urban Areas

Increasing urban presence has resulted in increased access to fast foods, which have a massive impact on the diets of a society. A cross-sectional study specifically focuses on fast food restaurants, knowing that urban centres are dominated by such indicators. Due to the demanding schedules of working people, consuming such will only worsen their diets and thus put them at higher risk of obesity and other non-communicable diseases (Drewnowski & Rehm, 2013). Furthermore, excessive advertisement and availability of fast food dominate the market and additionally, healthy options are not popular.

#### Influence of Urban Infrastructure on Dietary Habits

Habits of eating are influenced by access to food in cities and unearthing how food is accessed and distributed. One of the most common problems for residents of many modern big cities is the lack of fresh fruits, vegetables and other healthy foods, called food deserts. On the other hand, the overabundance of unhealthy food choices during food deserts makes poor diet worse (Cooksey-Stowers et al., 2017). Coupled with urban sprawl and a hard time with welldeveloped transport networks, accessibility to fresh and healthy food remains poor and the citizens are forced to resort to foods that may not be so healthy for them but are easily accessible. Food advertisements consume more and develop preferable tastes for calorie-dense foods with minimal nutrients (Smith et al., 2022). According to the WHO, effective policies to limit the marketing to the kids should include the following specific restrictions on all kinds of marketing promoting healthy eating (WHO, 2021).

## Analysis of Urban Planning Policies Promoting Healthy Lifestyles

Urban planning has been shown to be detrimental to public health by constraining chances of physical activity and healthy eating. Measures that focus on increasing pedestrian and bicycle accessibility or ensuring a large number of parks are integral to this process too. For instance, with reference to detailed approaches to Copenhagen's city planning involving cycling lanes as well as several parks, obesity prevalence in any given population has reduced by half after twenty years (Gehl, 2020). Research points out that environments that incorporate features encouraging walking create higher levels of physical activity and less sitting (Frank et al., 2021).

# Success Stories of Policy Interventions in Combating Childhood Obesity

There are good examples of policy solutions that positively affect child obesity trends. The Chilean law established in 2016 an effect on the labelling of foods which required putting warning messages on foods with high calorie, sugar and sodium; its impacts reached a consideration of sugary drink reduction among children, with an effect of 24 percent (Reyes et al., 2020). Likewise, the concept of *Shokuiku*' in Japan emanates education on Shokuiku of nutrition and healthy eating and the country holds one of the lowest global rates of childhood obesity currently (Matsumoto, 2018). The revised school meal standards by the Healthy, Hunger-Free Kids Act of the United States had a positive effect on dietary quality for children, especially in the low-income bracket (Cohan et al., 2021). These examples demonstrate that local context-adapted evidence-based policies can substantially affect childhood obesity prevention.

# Recommendations

## Policy Recommendations for Regulating Fast Food Advertising

The negative impacts of fast foods on the health of people should therefore lead governments into drafting more stringent laws against fast foods' advertisement. Key measures include:

- Limiting Advertising to Children: Regulate or even completely prohibit fast foods from placing their products' advertisements in programs watched by children, on social networks, or during peak hours.
- **Mandatory Disclosures:** Prosecute advertisers to provide correct nutritional information when they are placing an advert of the product to avoid making categorically false claims that it has no calories or low sugar, and unhealthy fats.
- **Promoting Healthy Alternatives:** Call for specific legislation to require fast food chains to make a proportion of the money spent on advertising to advertise healthful products.

- **Taxation on Junk Food Advertising:** Increase taxes paid on communicating unhealthy foods, and use the proceeds to promote good nutrition.
- **Collaborations with Schools:** Limit advertising agreements between fast food joints and schools to reduce the extent to which the fast food is marketed in school.

# Urban Planning Strategies to Encourage Physical Activity and Healthy Eating

Urban design can play a pivotal role in fostering healthy lifestyles. This includes:

- Walkable Neighbourhoods: Build walkable communities with smooth and well-lit sidewalks, biking lines and beautiful parks where people can comfortably engage in walking and cycling.
- **Community Gardens and Farmers' Markets:** Establish openness for farming by involving opportunities for community gardening and supporting farmer's markets in the urban areas.
- Zoning Laws for Food Retail: Use zoning regulations in the prevention of new sites for fast food while encouraging grocery marts and healthy eating joints.
- Safe Recreational Spaces: The public fitness facilities should be safe, adequately lit and easily accessible to promote effective physical workouts amongst all people.
- **Public Transportation Accessibility:** Build up public transportation networks to link housing estates and potential sources of exercise and healthy foods within a reasonable walking distance from fast foods around the transit stations.

# **School- and Community Based Interventions**

A comprehensive approach should be used to fight childhood obesity, which results from fast-food advertising together with urbanization. Authorities should introduce new rules that limit fast-food advertisements shown to children through every media channel while requiring food manufacturers to display nutritional information. Schools must provide two key components: required health education following the Japanese Shokuiku model, as well as an outright ban on fast-food marketing collaborations alongside subsidized nutritious food options. The implementation of community-based interventions must involve planning for neighborhoods that people can walk through as well as creating safe playground areas with community gardening spaces so residents can exercise more while accessing fresh vegetables.

#### Policy Suggestions for Addressing Childhood Obesity

A successful strategy against childhood obesity needs an approach that brings together different sectors. National governments need to establish sugar taxes to complement advertisement restrictions and provide healthy dietary choices throughout school facilities. Better healthcare financing with expanded insurance coverage helps patients to obtain early diagnosis and receive proper treatment. Communities must use public-private partnerships to create physical activity programs based in their communities. Early education of healthy behaviour requires schools to include health education in their curriculum. A necessary partnership exists between public and private organizations and nonprofit groups, which need to develop location-based policies that reduce social inequality as well as promote sustained health benefits.

#### Conclusion

The emergent links between the dynamics and complexities of subsequent public health crises and the policy framework are embraced. The most important conclusions put emphasis on the need to use the multipleprofessional interventions in tackling the health inequalities, increasing the healthcare utilization and improving the preventive measures. As we have seen earlier, socio-economic disparities, weak access to health facilities, and a changing disease risk profile add up to health challenges worldwide. The analysis establishes that the process of solving public health dilemmas presupposes more than the application of medical science; it calls for a sound policy agenda compatible with the public health agenda. Therefore, this study concludes that the way forward is to align the principles of public health with policy changes of the highest order. This approach of integration and innovation will be of help in the worldwide fight against the health challenges of the twenty-first century.

#### References

- Brown, A., Smith, T., & Johnson, L. (2023). Urban planning and socio-economic health disparities. *Public Health Journal*, 45(3), 123–135.
- Chang, T., & Chen, M. (2022). The power of mascots: Branding's impact on children's food preferences. *Journal of Marketing Research*, 12(4), 362-374.
- Chen, W., & Liu, Y. (2021). Effectiveness of government regulations on fast food advertising aimed at children. *Public Health Policy*, 34(2), 212–228.
- Cohen, J. F. W., Hecht, A. A., McLoughlin, G. M., Rimm, E. B., & Hoffman, J. A. (2021). Universal school meals and associations with student participation, attendance, academic performance, diet quality, and food security: Evidence from the Healthy, Hunger-Free Kids Act. *American Journal of Public Health*, *111*(4), 717-724.
- Cooksey-Stowers, K., Schwartz, M. B., & Brownell, K. D. (2017). Food swamps predict obesity rates better than food deserts in the United States. *International Journal of Environmental Research and Public Health*, 14(11), 1366. https:// doi.org/10.3390/ijerph14111366
- Drewnowski, A., & Rehm, C. D. (2013). Energy intakes of US children and adults by food purchase location and by specific food source. *Nutrition Journal*, *12*(1), 59. https://doi.org/10.1186/1475-2891-12-59
- Frank, L. D., Sallis, J. F., Saelens, B. E., Leary, L., Cain, K., Conway, T. L., & Hess, P. M. (2021). Built environment correlates of walking and cycling: An update and extension to the Neighborhood Quality of Life Study. *Journal of Urban Health*, 98(5), 764-778.
- Garcia, P., Lee, M., & Nguyen, Q. (2022). The role of transportation in food access disparities. *Urban Studies*, *50*(6), 456–472.
- Gehl, J. (2020). Cities for People. Island Press.
- Green, R., & Taylor, S. (2022). Addressing urban food inequalities: Policy interventions. *Nutrition Policy Review*, 31(2), 89–104.
- Hammond, D., & McPherson, K. (2023). The Happy Meal effect: How fast food campaigns shape children's eating habits. *Health Promotion International*, 38(1), 122-134.
- Harris, J. L., & Schwartz, M. B. (2020). Marketing to children in the digital age: The hidden tactics of food advertising. *Public Health Nutrition*, 23(10), 1827-1835.
- Harris, J. L., Bargh, J. A., & Brownell, K. D. (2021). The psychology of food marketing and childhood obesity. *Journal of Pediatrics*, 55(1), 19–27.
- Hawkes, C. (2023). Policy responses to fast food marketing. *Health Policy Review*, 32(4), 78–95.

- Johnson, L., & Patel, M. (2023). Regulatory measures in food advertising and children's health. *International Journal of Marketing Ethics*, 15(2), 201–215.
- Johnson, L., & Taylor, K. (2023). Urbanization and its correlation with the rise of childhood obesity in developing countries. *International Journal of Health Policy*, 30(5), 348–362.
- Jones, C., & Roberts, D. (2022). Urban agriculture and health outcomes. Urban Health Journal, 18(2), 112–126.
- Kim, S., Park, J., & Lee, H. (2022). Psychological effects of fast food branding on children. Journal of Consumer Behavior, 28(7), 921–935.
- Kohli, A., Miller, R., & Taylor, S. (2022). Marketing stimuli and neural responses in children. *Journal of Consumer Psychology*, *36*(5), 543–562.
- Lee, J., Williams, K., & Green, R. (2023). Socio-economic factors and childhood obesity in urban settings. *Nutrition & Society*, 29(3), 347–361.
- Livingstone, S., & Helsper, E. (2023). Children and digital advertising: A critical review. Media Studies Quarterly, 40(3), 251–270.
- Matsumoto, M. (2018). Shokuiku (food and nutrition education) in Japan: Healthy dietary habits for children. *Nutrition Reviews*, 76(2), 99-106.
- Miller, T., Brown, J., & Davis, R. (2022). Brand loyalty and children: The role of marketing strategies. *Consumer Behavior Studies*, 14(5), 342–355.
- Nguyen, D., Sharma, P., & Zhao, X. (2022). Urbanization and dietary transitions. *Nutrition & Urban Studies*, 15(4), 210–223.
- Patel, A., & Singh, R. (2022). Comparative analysis of fast food consumption trends in urban vs. rural children. *Nutrition and Society*, 15(2), 205–220.
- Pettigrew, S., Roberts, M., & Chapman, K. (2021). Promotional tactics and their effects on children's fast food consumption patterns. *Appetite*, 163, 105253.
- Public Health England. (2019). Sugar reduction: Report on progress towards the first 5% reduction and next steps. Retrieved from <u>https://assets.publishing.service.gov.uk/media/5b02a9f640f0b62e828e782a/Sugar\_reduction\_progress\_report.pdf</u>
- Qiu, W., & Jiang, Z. (2023). Digital advertising and child health. *Global Health Perspectives*, 20(1), 5–18.
- Reyes, M., Smith Taillie, L. P., Popkin, B., Kanter, R., &Vandevijvere, S. (2020). Changes in the nutrient profile of products targeted at children after Chile's 2016 Food Labeling and Advertising Law. *Public Health Nutrition*, 23(4), 692-700.
- Sallis, J. F., Cerin, E., Conway, T. L., Adams, M. A., Frank, L. D., Pratt, M., & Owen, N. (2016). Physical activity in relation to urban environments in 14 cities worldwide: A cross-sectional study. *The Lancet*, 387(10034), 2207-2217. https://doi.org/10.1016/S0140-6736(15)01284-2

- Sharma, P., Zhao, X., & Nguyen, D. (2023). The urbanization paradox: Health risks and opportunities. *International Journal of Urban Health*, 28(4), 321–334.
- Smith, J., Brown, L., & Chen, Y. (2023). The role of fast food advertising in influencing children's dietary choices. *Advertising and Public Health*, 40(3), 432–448.
- Smith, L., Brown, T., & Zhao, P. (2023). Digital marketing and child vulnerability in online spaces. *Global Marketing Review*, 28(1), 33-47.
- Smith, R., Jones, A., & Clark, P. (2021). Digital advertising and children: A systematic review of the influence on food choices. *Journal of Consumer Behavior*, 15(3), 245-257.
- Smith, R., Jones, A., & Taylor, B. (2022). The impact of food advertising on children's food choices and preferences. *Journal of Consumer Health*, 34(3), 205-221.
- Smith, T., Johnson, K., & Harris, L. (2022). Advertising strategies and their influence on child dietary habits. *Journal of Consumer Health*, 11(3), 167–181.
- Taylor, R., & Jones, L. (2022). Gamification and marketing: The digital age of fast food advertising. *Journal of Interactive Marketing*, 58, 64-77
- Williams, K., Brown, J., & Green, R. (2023). Food deserts and swamps in urban areas: Challenges and solutions. *Urban Nutrition Journal*, *33*(6), 67–82.
- World Health Organization (WHO). (2021). *Guidelines on marketing of foods and nonalcoholic beverages to children*. Retrieved from <u>https://iris.who.int/bitstream/</u> <u>handle/10665/44416/9789241500210\_eng.pdf;jse</u>
- Zhao, X., Lee, M., & Nguyen, Q. (2023). Obesity trends in urban populations: A metaanalysis. Urban Health Review, 24(2), 89–107.