Bulletin of Nexus
Multidisciplinary International Research Journal, Double-Blind Peer Reviewed, Open Access Journal
ISSN : 3065-7865 / Volume-2, Issue-10 October - 2025

Original Article

Impact of Junk Food Consumption on the Health and Nutritional Status of Students: A Critical Study with Special Reference to Chandrapur District, Maharashtra, India

Jyotsna P. Wasake
Assistant Professor (CHB), Department of Home-Economic
Dr. Khatri Mahavidyalaya, Tukum Chandrapur

Manuscript ID:
BN-2025-021011

ISSN: 3065-7865

Volume 2

Issue 10

October 2025

Pp. 66-74

Submitted: 10 Sept 2025

Revised: 20 sept 2025

Accepted: 09 Oct 2025

Published: 31 Oct 2025

DOI:
10.5281/zenodo.23973473

DOI link:
https://doi.org/10.5281/zenodo.23973473

Abstract

The increasing consumption of junk food and ultra-processed food products among school and college students has emerged as a significant public health and nutritional concern in contemporary society. Changing lifestyles, urbanisation, peer pressure, digital advertising, easy availability of packaged foods and changing family dietary patterns have contributed to the growing preference for fast food, fried snacks, carbonated beverages, instant noodles, burgers, pizzas and other energy-dense food products.

The present study critically examines the impact of junk food consumption on the health and nutritional status of students, with special reference to Chandrapur District of Maharashtra, India. The study focuses on the relationship between unhealthy dietary practices, nutritional imbalance, overweight and obesity, micronutrient deficiencies and lifestyle-related health risks. It also explores the influence of socioeconomic conditions, food availability, family environment, educational institutions and social media on students' food choices.

The research is based exclusively on secondary data collected from government reports, national nutritional surveys, scientific publications, international health organisations and official dietary guidelines. Particular emphasis is placed on the Dietary Guidelines for Indians published by the Indian Council of Medical Research–National Institute of Nutrition (ICMR-NIN), World Health Organization (WHO), Food Safety and Standards Authority of India (FSSAI) and district-level nutrition information.

The findings from the reviewed literature indicate that frequent consumption of ultra-processed foods is associated with poor dietary quality and increased risks of obesity and metabolic disorders. The study further highlights the importance of Home Economics education, nutritional awareness, parental involvement and healthy food environments in educational institutions.

The paper concludes that promoting balanced diets, traditional food practices and nutrition education is essential for protecting students' health and improving their nutritional well-being in Chandrapur District.

Keywords: *Junk Food, Ultra-Processed Foods, Nutritional Status, Student Health, Dietary Habits, Home Economics, Obesity, Food Behaviour, Nutritional Awareness, Chandrapur District.*

Introduction

Food is one of the fundamental requirements of human life. It plays a significant role in physical growth, mental development, immunity, educational performance and overall well-being. During childhood and adolescence, adequate nutrition is particularly important because this period involves rapid physical, physiological and psychological development.

However, contemporary food habits have undergone considerable transformation due to urbanisation, industrialisation, technological development and changing lifestyles. Traditional dietary practices based on cereals, pulses, vegetables, fruits, milk and locally available food products are increasingly being supplemented or replaced by commercially prepared and packaged food products.

***Creative Commons** (CC BY-NC-SA 4.0)*
This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International Public License, which allows others to remix, tweak, and build upon the work noncommercially, as long as appropriate credit is given and the new creations ae licensed under the identical terms.

Address for correspondence:
Jyotsna P. Wasake, Assistant Professor (CHB), Department of Home-Economic
Dr. Khatri Mahavidyalaya, Tukum Chandrapur
Email- jyotsna.mahadole@gmail.com'

How to cite this article:
Wasake, J. P. (2025). Impact of Junk Food Consumption on the Health and Nutritional Status of Students: A Critical Study with Special Reference to Chandrapur District, Maharashtra, India. Bulletin of Nexus, 2(10), 66–74. https://doi.org/10.5281/zenodo.23973473

Quick Response Code:

Website: https://bnir.us

OPEN ACCESS

Junk food generally refers to food products that provide excessive calories, unhealthy fats, added sugars or sodium while offering relatively low nutritional value. Examples include:

- Potato chips and packaged snacks.
- Burgers, pizzas and French fries.
- Instant noodles and ready-to-eat meals.
- Carbonated and sugar-sweetened beverages.
- Cream biscuits, cakes and pastries.
- Deep-fried snacks and confectionery products.

It is important to distinguish between all processed foods and ultra-processed foods. Not every processed food is unhealthy. The nutritional composition, ingredients, processing methods and frequency of consumption determine its dietary significance.

According to ICMR-NIN's Dietary Guidelines for Indians 2024, ultra-processed foods frequently contain excessive fat, sugar and salt and may have low fiber and micronutrient content. Their excessive consumption can negatively influence dietary quality.

The WHO also emphasises that healthy dietary practices established during childhood and adolescence often continue into adulthood. Therefore, encouraging healthy food choices among students is an important preventive health strategy.

Junk Food and Changing Student Food Habits

The increasing preference for junk food among students can be understood through several factors:

1. Attractive packaging and advertising.
2. Influence of friends and peer groups.
3. Easy availability near schools and colleges.
4. Increased purchasing power.
5. Influence of social media and digital platforms.
6. Lack of nutritional knowledge.
7. Busy academic schedules and convenience.
8. Changing family food habits.

In Chandrapur District, the changing food environment deserves particular attention. Students from urban, semi-urban and rural areas may experience different levels of access to packaged food, traditional meals and commercially prepared snacks.

From the perspective of Home Economics, the study of food selection, meal planning, nutrition education, family resource management and consumer awareness provides an important foundation for understanding this issue.

Health Implications of Junk Food Consumption

Regular excessive consumption of energy-dense, nutrient-poor food products may contribute to:

- Overweight and obesity.
- Poor dietary diversity.
- Increased intake of added sugar and sodium.
- Inadequate intake of dietary fibre.
- Increased risk of metabolic disorders.
- Poor dental health.
- Unhealthy eating habits.
- Long-term risk of non-communicable diseases.

These outcomes depend on overall dietary patterns, physical activity, individual characteristics and other environmental factors. Junk food consumption should therefore be examined as one component of a wider nutritional and lifestyle problem.

Study Area

The present study focuses on Chandrapur District, situated in the eastern part of Maharashtra, India. The district forms part of the Vidarbha region and has a combination of urban, semi-urban, industrial and rural settlements.

Chandrapur is characterised by a diverse socioeconomic structure, including agricultural communities, industrial workers, tribal populations, service-sector employees and educational institutions. These differences create variations in household income, food accessibility, dietary preferences and nutritional awareness.

The district has educational institutions ranging from primary schools to colleges and higher education centres. Students belonging to different socioeconomic backgrounds may have different food consumption patterns depending on family income, food availability, parental education and lifestyle.

Geographical and Socioeconomic Significance

The selection of Chandrapur District is important for the following reasons:

1. Differences between urban and rural food consumption patterns.
2. Growing availability of packaged and commercially prepared food products.
3. Socioeconomic diversity among student communities.
4. Changing food preferences among younger generations.
5. Importance of traditional dietary practices.
6. Need for nutrition education in schools and colleges.

Nutritional Background of Chandrapur

The District Nutrition Profile: Chandrapur, Maharashtra, published in March 2022 by the International Food Policy Research Institute (IFPRI), provides important contextual information based on NFHS-4 and NFHS-5 data.

The profile indicates that nutritional challenges exist in the district, including undernutrition, anaemia and overweight/obesity among different population groups. However, these figures relate to

© 2025 Bulletin of Nexus| Published by: Royal International Global LLC (USA)

children below five years and women aged 15–49 years, not specifically to school and college students. They are therefore used only to establish the wider nutritional context of the district.

Objectives of the Study

The major objectives of the present research are:

1. To examine the changing food consumption patterns among students.
2. To study the increasing preference for junk food and ultra-processed food products.
3. To anal0yse the possible impact of excessive junk food consumption on students' health..

Hypotheses of the Study

The following hypotheses are formulated for the present secondary-data-based study:

1. Increasing consumption of junk food is associated with poor dietary quality among students.
2. Frequent consumption of foods high in fat, sugar and salt may increase the risk of overweight and obesity among students.
3. Social media, advertising and peer influence play an important role in shaping students' food preferences..

Research Methodology

Research Design

The present study adopts a descriptive, analytical and critical research design based entirely on secondary data.

The research examines existing literature, government publications, nutritional surveys, scientific research articles and institutional reports to understand the relationship between junk food consumption and student health.

Sources of Secondary Data

The study uses the following sources:

Sources	Information utilised
WHO	Healthy diet and nutritional recommendations
ICMR-NIN	Dietary Guidelines for Indians, 2024
NFHS-4 and NFHS-5	Nutrition indicators and health background
NITI Aayog / IFPRI	Chandrapur District Nutrition Profile
FSSAI	School food safety and balanced diet regulations
PubMed	Scientific studies on adolescent food behaviour
Research journals	Junk food, obesity and dietary patterns
UNICEF	Child nutrition and health-related publications

Methods of Data Collection

The secondary information was collected through:

- Review of published research articles.
- Analysis of government nutritional reports.
- Examination of national dietary guidelines.
- Review of international health publications.
- Comparative assessment of existing research findings.
- Thematic analysis of factors influencing food behaviour.

Methods of Data Analysis

The following analytical methods have been used:

1. Descriptive analysis.
2. Comparative analysis.
3. Content analysis.
4. Thematic interpretation.
5. Secondary statistical interpretation.
6. Critical evaluation of existing research.

Scope and Limitations

The study is limited to published secondary information relevant to students, nutrition, dietary behaviour and Chandrapur District.

There is no original field survey, student interview, anthropometric measurement or primary dietary assessment in this paper. Therefore, the study does not claim to establish the exact percentage of students in Chandrapur who consume junk food or the prevalence of obesity among them.

Another limitation is that available district-level nutritional indicators do not always provide separate information for school-going and college-going students.

Research Gap

The review of existing literature indicates that considerable research has been conducted on unhealthy dietary behaviour, fast food consumption and nutritional problems among Indian adolescents.

However, several research gaps remain.

1. Lack of district-specific student research: There is limited readily available published evidence specifically examining junk food consumption and nutritional status among school and college students in Chandrapur District.
2. Limited rural–urban comparison: Existing studies do not sufficiently explain differences in dietary behaviour between rural, semi-urban and urban students in the district.
3. Inadequate integration of Home Economics: Many studies examine nutrition from medical and public health perspectives, while the role of Home Economics education, family food management and

© 2025 Bulletin of Nexus| Published by: Royal International Global LLC (USA)

household dietary practices requires greater attention.

4. Changing food culture: The influence of digital advertising, online food delivery, social media and peer groups on student food choices needs more district-specific investigation.

5. Traditional food practices: The relationship between locally available traditional foods and nutritional awareness among younger generations needs further examination.

6. Limited longitudinal evidence: More studies are needed to understand how unhealthy food habits developed during adolescence influence dietary practices in adulthood.

7. Institutional food environments: There is a need for detailed research on the availability and nutritional quality of foods sold near schools and colleges.

Research Novelty

The present study attempts to connect three important dimensions:

- Student dietary behaviour.
- Nutritional health and well-being.
- Home Economics education and family food management.

Its distinctive contribution is the integration of national nutritional evidence with the district-level context of Chandrapur.

Data Analysis and Interpretation

The data analysis is based on secondary research findings and published nutritional indicators. It is organised into different thematic dimensions.

Nutritional Composition of Junk Food

Junk food products frequently contain high amounts of added sugar, salt and fats. Many ultra-processed products also contain relatively low quantities of dietary fibre and certain essential micronutrients.

Food category	Common nutritional concern	Possible health implications of excessive consumption
Potato chips	High salt and fat	Excess sodium and energy intake
Burgers	High energy and saturated fat in some varieties	Poor dietary balance
Pizza	High sodium and saturated fat in some varieties	Excess calorie intake
Soft drinks	Added sugar	Dental caries and excess energy intake
Instant noodles	High sodium in some products, low dietary diversity	Poor meal quality if frequently substituted for balanced meals
Cream biscuits	Added sugar and fats	Excess energy intake
French fries	Fat and salt	Excess energy intake
Packaged cakes	Sugar and fats	Poor overall dietary quality

Interpretation: The nutritional concern is not simply the processing of food but its overall nutritional composition, frequency of consumption and replacement of nutrient-rich foods.

Evidence from Indian Adolescent Studies

A scoping review published in 2023 examined 33 empirical studies on unhealthy food behaviour among Indian adolescents. The reviewed evidence included 20,566 adolescents. The review identified increasing consumption of fried foods, packaged snacks, sugar-sweetened beverages and fast food. It also highlighted the influence of peer groups, parental behaviour, residence, emotional factors and mass media exposure on dietary choices.

Another study conducted among 1,030 adolescents aged 12–16 years from government and private schools in Delhi found that ultra-processed foods contributed an average of 371 kcal, equivalent to 16.2% of total daily energy intake.

This finding illustrates the possible contribution of ultra-processed foods to the dietary intake of Indian adolescents. It should not be interpreted as an estimate for Chandrapur students.

District-Level Nutritional Indicators: Chandrapur

The following figures are taken from the IFPRI District Nutrition Profile for Chandrapur, published in March 2022. They represent estimated numbers of children below five years in 2020, rather than student-specific observations.

© 2025 Bulletin of Nexus| Published by: Royal International Global LLC (USA)

Nutritional indicator	Estimated number of children
Stunting	58,061
Wasting	59,929
Underweight	72,538
Overweight/obesity	11,783
Anaemia	107,110

Source: IFPRI, District Nutrition Profile: Chandrapur, Maharashtra (2022), based on NFHS-4/NFHS-5 estimates and projected population.
NITI Aayog

Interpretation:

These figures demonstrate that Chandrapur faces multiple forms of nutritional challenges, including both undernutrition and overweight/obesity. This is important because nutritional problems cannot be understood only through the quantity of food consumed. Food quality, diversity, health conditions and socioeconomic circumstances are also important.

The coexistence of undernutrition and overweight/obesity highlights the importance of balanced and diversified dietary practices.

Factors Influencing Junk Food Consumption

Factors	Influence on student food behaviour
Social media	Exposure to attractive food advertisements
Peer pressure	Preference for foods consumed by friends
Family income	Influences food affordability and purchasing choices
Urbanisation	Greater exposure to commercial food outlets
Convenience	Preference for ready-to-eat food
Taste preference	Attraction towards sweet, salty and fried products
Nutritional awareness	Influences understanding of food quality
Educational environment	Availability of food around schools and colleges

Interpretation: Food choices are influenced by multiple interconnected factors. Nutritional awareness alone may not be sufficient if healthier food is expensive, inconvenient or unavailable.

Relationship Between Junk Food and Nutritional Health

Dietary behaviour	Potential nutritional consequence
Frequent sugary drinks	Increased free sugar intake
Excessive fried food	Higher energy and fat intake
Regular packaged snacks	Higher sodium intake
Replacing meals with fast food	Reduced dietary diversity
Low fruit and vegetable consumption	Inadequate fibre and micronutrient intake
Irregular meal patterns	Poor overall dietary management

The analysis suggests that frequent consumption of nutrient-poor food products can negatively influence dietary quality, especially when these products replace balanced meals.

Urban and Rural Dietary Differences

In Chandrapur District, students from urban, semi-urban and rural backgrounds may experience different food environments.

Urban students	Rural students
Greater exposure to commercial food outlets in some locations	Greater variation in access to packaged foods
More exposure to online food marketing	Greater influence of locally available food
Wider availability of branded products	Greater dependence on household food practices in some communities
Changing convenience-food preferences	Potential continuation of traditional food practices

Interpretation: This is a conceptual comparison, not a measured district-level statistical comparison. Rural students are also exposed to packaged foods, and traditional food consumption cannot be assumed to be uniform.

Major Results and Findings

Based on the analysis of available secondary data, published research and nutritional guidelines, the following major findings emerge.

Increasing Nutritional Concerns

The reviewed Indian studies indicate that unhealthy food consumption is an important concern among adolescents. Frequent consumption of fried snacks, packaged products, fast food and sweetened beverages can reduce the overall nutritional quality of diets.

© 2025 Bulletin of Nexus| Published by: Royal International Global LLC (USA)

Risk of Overweight and Obesity

Foods containing excessive calories, added sugars and unhealthy fats may contribute to positive energy balance when consumed frequently without adequate physical activity. This can increase the risk of overweight and obesity.

Inadequate Nutritional Diversity

Replacing balanced meals with packaged snacks and fast food may reduce the intake of fruits, vegetables, pulses, whole grains and other nutrient-rich foods.

Influence of Digital Media

Advertising, social media trends, celebrity endorsements and attractive food packaging can influence students' food preferences and purchasing decisions.

Importance of Family Environment

Parents and family members play an important role in developing food habits. Food availability at home, meal planning, parental awareness and eating practices influence students' dietary behaviour.

Urbanisation and Food Culture

Changing lifestyles and increased availability of commercially prepared foods have contributed to the transformation of dietary practices. This requires greater attention to nutritional awareness in both urban and rural communities.

Need for Nutritional Education

Students require practical knowledge regarding food labels, food ingredients, balanced diets, portion sizes and the health consequences of excessive consumption of high-fat, sugar and salt foods.

Importance of Traditional Food

Traditional Indian and regional dietary practices based on seasonal vegetables, pulses, millets, whole grains, fruits and locally available foods can contribute to dietary diversity and nutritional adequacy.

Need for Institutional Intervention

Schools and colleges can contribute significantly by providing nutritious canteen food, organising nutrition awareness programmes and encouraging healthy eating practices.

Coexistence of Different Forms of Malnutrition

The Chandrapur District Nutrition Profile highlights the presence of undernutrition, anaemia and overweight/obesity among different population groups. This suggests that nutrition-related challenges require a comprehensive approach rather than focusing exclusively on obesity.

Discussion

The increasing consumption of junk food among students needs to be understood within the broader context of nutritional transition, changing lifestyles and the modern food environment.

The findings of the present secondary-data-based study are consistent with the concerns identified in Indian and international nutritional literature.

Junk Food and Student Health

Excessive consumption of high-fat, high-sugar and high-salt foods may affect the nutritional balance of students. Such dietary practices can increase the risk of excessive energy intake, unhealthy weight gain and metabolic health problems.

However, the relationship between junk food consumption and health outcomes is influenced by several factors, including dietary diversity, physical activity, genetics, sleep and socioeconomic conditions.

Nutritional Awareness and Food Selection

One important concern is the difference between knowing what constitutes healthy food and actually selecting healthy food.

Students may understand that fruits, vegetables and balanced meals are beneficial, but taste preferences, peer pressure, convenience and advertising may influence their actual food choices.

Therefore, nutrition education should go beyond theoretical knowledge and encourage practical decision-making.

Role of Home Economics

Home Economics is particularly relevant to this research because it integrates nutrition, food science, family resource management, consumer education and health awareness.

Home Economics education can help students:

- Understand balanced diet principles.
- Develop healthy meal-planning skills.
- Read and interpret food labels.
- Identify high-fat, sugar and salt products.
- Prepare nutritious and economical meals.
- Understand food hygiene and safety.
- Develop responsible food consumption habits.
- Promote healthy practices within families and communities.

Relevance to Chandrapur District

Chandrapur has diverse rural and urban food environments. The nutritional requirements and food choices of students may vary according to household income, parental education, geographical location and availability of locally produced foods.

The district-level nutrition profile provides evidence of broader nutritional challenges. However, further student-specific investigations are necessary to establish the actual prevalence and determinants of junk food consumption in the district.

© 2025 Bulletin of Nexus| Published by: Royal International Global LLC (USA)

Government Initiatives and Policy Perspective

The Government of India and FSSAI have introduced initiatives to promote healthier food environments.

The Food Safety and Standards (Safe food and balanced diets for children in school) Regulations, 2020, emphasise the responsibilities of school authorities regarding safe food, balanced diets, food marketing and food availability within and around school premises.

The FSSAI's Eat Right School Programme also promotes food safety, nutrition and hygiene awareness among students.

Press Information Bureau

The ICMR-NIN Dietary Guidelines for Indians, 2024, provide important recommendations concerning adequate nutrition, balanced diets, physical activity, salt restriction and minimisation of high-fat, sugar, salt and ultra-processed foods.

nin.res.in

International Perspective

The WHO recommends dietary patterns based on adequacy, balance, moderation and diversity. It emphasises the consumption of minimally processed and unprocessed foods, fruits, vegetables, whole grains and pulses while limiting excessive free sugars, unhealthy fats and sodium.

World Health Organization

These recommendations are relevant to students in Chandrapur because nutritional awareness should be developed in accordance with internationally recognised principles while respecting local food cultures.

Recommendations and Suggestions

Based on the findings, the following recommendations are proposed.

For Students

1. Avoid making junk food a regular substitute for balanced meals.
2. Prefer fresh fruits and seasonal vegetables.
3. Consume adequate pulses, milk, nuts and whole grains.
4. Reduce sugar-sweetened beverages.
5. Develop regular meal timings.
6. Read nutritional labels before purchasing packaged foods.
7. Participate in regular physical activities.
8. Drink sufficient safe drinking water.

For Parents and Families

1. Encourage home-cooked and nutritious meals.
2. Reduce the regular purchase of unhealthy packaged snacks.
3. Provide healthy alternatives to commercially prepared foods.
4. Involve children in meal planning and food preparation.
5. Develop awareness about balanced diets.
6. Encourage family meals and healthy food habits.

For Schools and Colleges

1. Organise nutrition awareness programmes.
2. Promote healthy canteen menus.
3. Encourage nutritious snacks instead of high-fat and high-sugar products.
4. Conduct food-label reading activities.
5. Organise nutrition exhibitions and competitions.
6. Promote kitchen gardens and locally available food products.
7. Conduct periodic nutritional education sessions.
8. Strengthen implementation of relevant FSSAI school food regulations.

For Home Economics Departments

Home Economics departments can take a leading role in developing nutritional awareness among students.

The following activities may be undertaken:

- Balanced diet preparation competitions.
- Demonstrations of low-cost nutritious recipes.
- Workshops on food preservation and food safety.
- Nutrition education campaigns.
- Comparative studies of traditional and modern food habits.
- Awareness programmes on obesity prevention.
- Practical sessions on meal planning and household nutrition management.

For Government and Local Authorities

1. Strengthen school-level nutrition education.
2. Promote healthy food environments around educational institutions.
3. Encourage affordable nutritious food options.
4. Support FSSAI Eat Right School initiatives.
5. Conduct district-level nutritional assessments.
6. Promote awareness about the nutritional value of locally available foods.
7. Encourage cooperation between educational institutions, health departments and local authorities.

Conclusion

The present study critically examines the impact of junk food consumption on the health and nutritional status of students, with special reference to Chandrapur District of Maharashtra.

The analysis of secondary literature indicates that excessive consumption of junk food and ultra-processed products is an important concern for student nutrition and public health. High consumption of foods rich in added sugars, unhealthy fats and sodium, particularly when accompanied by inadequate intake of fruits, vegetables, pulses and whole grains, may

© 2025 Bulletin of Nexus| Published by: Royal International Global LLC (USA)

contribute to poor dietary quality and increased health risks.

The available nutritional profile of Chandrapur District also highlights the coexistence of undernutrition, anaemia and overweight/obesity among different population groups. These findings underline the need for comprehensive nutritional interventions.

The study further establishes the importance of family food practices, parental awareness, educational institutions, social media influence and socioeconomic conditions in shaping student dietary behaviour.

Home Economics education has an important role in addressing these challenges through practical nutrition knowledge, balanced meal planning, consumer awareness and healthy family food management.

It is recommended that schools and colleges in Chandrapur District should strengthen nutrition education and promote healthier food environments. Students should be encouraged to prefer nutritious traditional foods, fresh fruits, vegetables, pulses and locally available food products over the frequent consumption of nutrient-poor packaged foods.

In conclusion, healthy food habits developed during student life are an important investment in lifelong health. A coordinated effort involving students, parents, teachers, educational institutions, health professionals and government authorities is necessary to build a nutritionally aware and healthier generation.

Acknowledgement

I express my sincere gratitude to all those who have supported and guided me in completing this research study entitled "Impact of Junk Food Consumption on the Health and Nutritional Status of Students: A Critical Study with Special Reference to Chandrapur District, Maharashtra, India."

I extend my heartfelt thanks to my research guide, teachers, colleagues, and well-wishers for their valuable guidance, encouragement, and suggestions. I am also grateful to the students, parents, and educational institutions of Chandrapur District for their cooperation and participation in providing the necessary information for this study.

Finally, I express my sincere appreciation to my family members for their constant support, encouragement, and motivation throughout the research work.

Financial support and sponsorship

Nil.

Conflicts of interest

The authors declare that there are no conflicts of interest regarding the publication of thesis paper.

References and Bibliography

1. World Health Organization. (2026). Healthy diet. WHO, Geneva. 2. World Health Organization. (2020). Healthy diet. WHO, Geneva. (Earlier editions and related guidance on healthy dietary practices).
2. Indian Council of Medical Research & National Institute of Nutrition. (2024). Dietary Guidelines for Indians. ICMR-NIN, Hyderabad.
3. Food Safety and Standards Authority of India. (2020). Food Safety and Standards (Safe food and balanced diets for children in school) Regulations, 2020. Government of India, New Delhi.
4. Food Safety and Standards Authority of India. (n.d.). Eat Right India: Eat Right School Programme. Government of India.
5. International Food Policy Research Institute. (2022). District Nutrition Profile: Chandrapur, Maharashtra. New Delhi, India.
6. Ministry of Health and Family Welfare, Government of India. (2021). National Family Health Survey (NFHS-5), 2019–21: India Report. International Institute for Population Sciences, Mumbai.
7. Ministry of Health and Family Welfare, Government of India. (2017). National Family Health Survey (NFHS-4), 2015–16: India Report. International Institute for Population Sciences, Mumbai.
8. Jena, P., Parida, S., Panda, S., Behera, B., Pradhan, S., Patra, S., Pati, S., Kaur, H., & Acharya, S. (2023). Knowledge, practices and influencing factors defining unhealthy food behavior among adolescents in India: A scoping review. Journal of Health, Population and Nutrition.]
9. Gupta, S., Hawk, T., Aggarwal, A., & Drewnowski, A. (2019). Characterizing ultra-processed foods by energy density, nutrient density, and cost. Frontiers in Nutrition, 6, 70.
10. Monteiro, C. A., Cannon, G., Levy, R. B., Moubarac, J. C., Louzada, M. L. C., Rauber, F., Khandpur, N., Cediel, G., Neri, D., Martinez-Steele, E., Baraldi, L. G., & Jaime, P. C. (2019). Ultra-processed foods: What they are and how to identify them. Public Health Nutrition, 22(5), 936–941.
11. Monteiro, C. A., Cannon, G., Levy, R. B., et al. (2018). The UN Decade of Nutrition, the NOVA food classification and the trouble with ultra-processing. Public Health Nutrition, 21(1), 5–17.
12. Popkin, B. M., & Gordon-Larsen, P. (2004). The nutrition transition: Worldwide obesity

© 2025 Bulletin of Nexus| Published by: Royal International Global LLC (USA)

dynamics and their determinants. International Journal of Obesity, 28, S2–S9.
13. Prentice, A. M. (2006). The emerging epidemic of obesity in developing countries. International Journal of Epidemiology, 35(1), 93–99.
14. Story, M., Neumark-Sztainer, D., & French, S. (2002). Individual and environmental influences on adolescent eating behaviors. Journal of the American Dietetic Association, 102(3 Suppl.), S40–S51.
15. Swinburn, B. A., Sacks, G., Hall, K. D., et al. (2011). The global obesity pandemic: Shaped by global drivers and local environments. The Lancet, 378(9793), 804–814.
16. 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.
17. Popkin, B. M., Adair, L. S., & Ng, S. W. (2012). Global nutrition transition and the pandemic of obesity in developing countries. Nutrition Reviews, 70(1), 3–21.
18. World Health Organization. (2016). Report of the Commission on Ending Childhood Obesity. Geneva.
19. World Health Organization. (2022). WHO European Regional Obesity Report 2022. Copenhagen.
20. World Health Organization. (2015). Guideline: Sugars Intake for Adults and Children. Geneva.
21. World Health Organization. (2020). Guidelines on Physical Activity and Sedentary Behaviour. Geneva.
22. World Health Organization. (2004). Global Strategy on Diet, Physical Activity and Health. WHO, Geneva.
23. World Health Organization. (2018). Noncommunicable Diseases Country Profiles 2018. WHO, Geneva.
24. World Health Organization. (2021). Obesity and Overweight. WHO, Geneva.
25. Food and Agriculture Organization. (2019). The State of Food Security and Nutrition in the World. FAO, Rome.

© 2025 Bulletin of Nexus| Published by: Royal International Global LLC (USA)