

Food Habits and Lifestyle Patterns of Adolescents in Dhanbad: A Study on Dietary Behaviour, Nutritional Awareness, and Health Implications

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Abstract— Adolescence is a critical period for developing long-term health and lifestyle habits. In the 21st century, globalization and urbanization have significantly influenced dietary behaviour and lifestyle patterns among Indian adolescents, with Dhanbad, a coal-rich and rapidly urbanizing district in Jharkhand, representing a unique blend of traditional and modern influences. This study investigates the food habits, nutritional awareness, lifestyle behaviours, and associated health implications of 200 adolescents from urban and rural areas of Dhanbad. Data were collected through structured questionnaires, BMI measurements, and interviews. The findings reveal a marked preference for fast foods, irregular meal patterns, and increased screen time, especially among urban adolescents, while rural adolescents primarily consume traditional diets but face nutritional deficiencies due to limited dietary diversity. Health concerns, including obesity, anemia, digestive issues, and fatigue, were observed across both groups. The study emphasizes the need for targeted interventions such as nutrition education, balanced diet promotion, and lifestyle modifications to enhance adolescent health and well-being.

Index Terms— Adolescents, Dhanbad, Food habits, Lifestyle patterns, Nutritional awareness, Fast food, Screen time, Health implications

I. INTRODUCTION

Adolescence, defined as the period between 10 and 19 years, represents a crucial transitional stage in human development, marked by rapid physical growth, hormonal changes, and significant cognitive, emotional, and social development. This period is particularly sensitive because the dietary and lifestyle choices made during adolescence profoundly influence both immediate health and long-term outcomes, including growth trajectories, metabolic health, immune competence, and susceptibility to

chronic diseases in adulthood. The establishment of consistent and balanced dietary habits during this phase is therefore of paramount importance. In India, rapid globalization, urbanization, and exposure to mass media have substantially altered traditional food patterns. Urban adolescents, in particular, increasingly consume calorie-dense, nutrient-poor foods such as fast foods, sugary snacks, and processed beverages, often replacing home-cooked meals that traditionally contained cereals, pulses, vegetables, and dairy products. These shifts have not only affected nutritional intake but have also contributed to the emergence of sedentary lifestyles, characterized by limited physical activity, prolonged screen time, and irregular sleep patterns.

Dhanbad, commonly referred to as the "Coal Capital of India," provides a unique socio-economic and cultural context to study adolescent nutrition and lifestyle patterns. The district encompasses both urbanized areas influenced by industrial development and traditional rural settlements where cultural food practices are more entrenched. Among rural adolescents, dietary patterns remain largely aligned with traditional meals, emphasizing cereals, pulses, seasonal vegetables, and occasional animal-source proteins, though the variety and nutritional quality are often constrained by household income, seasonal availability, and parental knowledge about balanced nutrition. Conversely, urban adolescents in Dhanbad exhibit a growing preference for fast foods, packaged snacks, sugary beverages, and other convenience foods, a trend accelerated by media exposure, peer influence, and changing social norms that associate such foods with modernity and social status. These dietary shifts are often accompanied by an increase in sedentary behaviors, with extended hours spent on smartphones, television, gaming, and other digital

platforms, reducing time for physical activity and social engagement while impacting sleep hygiene and overall wellness.

Despite the observable trends, research focusing specifically on the dietary habits, lifestyle choices, and associated health outcomes of adolescents in Dhanbad remains limited. Understanding the interplay of socio-economic factors, urbanization, cultural practices, media exposure, and gender norms on adolescent nutrition and lifestyle is crucial for developing effective health education, public health policy, and wellness programs tailored to this population. This study aims to address this gap by providing a comprehensive analysis of food consumption patterns, lifestyle behaviours, nutritional awareness, and emerging health implications among both urban and rural adolescents in Dhanbad, thereby contributing valuable insights for promoting balanced diets, healthier lifestyles, and informed nutritional choices among young populations in the region.

II. REVIEW OF LITERATURE

Global and Indian studies indicate significant shifts in adolescent eating habits and lifestyle behaviours due to modernization and media influence. Popkin (2017) highlighted the impact of globalization on dietary transitions, noting a preference for fast foods and processed snacks among urban youth. Story, Neumark-Sztainer, and French (2002) emphasized the role of peer influence, taste preference, and advertising in shaping adolescent food choices. In the Indian context, Rathi, Riddell, and Worsley (2018) observed a growing tendency among urban adolescents to replace traditional diets with calorie-dense, nutrient-poor foods, leading to obesity, micronutrient deficiencies, and metabolic disorders. Screen time has also emerged as a critical determinant of adolescent lifestyle, with excessive digital exposure correlating with reduced physical activity, sleep disruption, and psychosocial stress (Hale & Guan, 2015).

In rural areas, adolescents maintain more traditional diets but often suffer from limited dietary diversity and nutrient inadequacy due to economic constraints and low parental awareness (NSSO, 2020). While studies in other Indian cities have examined adolescent nutrition and lifestyle, Dhanbad-specific research remains scarce. This study addresses this gap, integrating dietary habits, lifestyle patterns, screen

exposure, and health outcomes to provide a holistic understanding of adolescent well-being in the district.

III. METHODOLOGY

A descriptive survey design was employed. The sample included 200 adolescents aged 13–19 years, divided equally between urban and rural areas of Dhanbad.

Data Collection Tools:

- Structured questionnaires assessing food intake, meal frequency, snack habits, and lifestyle patterns.
- Informal interviews to capture qualitative insights into dietary preferences and reasons for skipping meals.
- Anthropometric measurements (height, weight, BMI) to assess health status.

Data Analysis: Responses were analysed using percentage distributions, mean comparisons, and narrative interpretation. Key variables examined include dietary trends, screen time, physical activity, and health outcomes.

IV. DATA ANALYSIS AND INTERPRETATION

Adolescents in Dhanbad display clear differences between urban and rural dietary habits. Urban participants reported higher consumption of fast foods, packaged snacks, and sugary drinks, while rural adolescents adhered more to traditional diets comprising rice, pulses, and seasonal vegetables.

The following table illustrates the observed food trends among adolescents:

Table 1: Food Trends among Adolescents in Dhanbad (N=200)

Food Category	Urban (%)	Rural (%)
Fast Food (burgers, pizza, noodles)	68%	32%
Packaged Snacks (chips, biscuits)	74%	41%
Traditional Meals (rice, dal, sabzi)	52%	89%
Sugary Beverages (colas, energy drinks)	61%	28%

This data demonstrates that urban adolescents are increasingly adopting fast-food culture, influenced by convenience, taste preferences, peer pressure, and media advertising. Conversely, rural adolescents continue to rely on traditional meals but often suffer from limited dietary diversity due to socio-economic constraints and seasonal availability of foods.

Screen time is another critical lifestyle factor. Adolescents spend varying hours per day on digital devices, significantly impacting physical activity and sleep patterns.

Table 2: Screen Time and Its Effects (N=200)

Screen Time (hours/day)	% of Adolescents	Common Effects
Less than 2	18%	Minimal impact
2-4	46%	Reduced outdoor play, mild sleep delay
More than 4	36%	Eye strain, late sleep, fatigue, low activity

Prolonged screen time contributes to decreased outdoor physical activity, irregular sleep, eye strain, and general fatigue. The pattern is more pronounced among urban adolescents, who have greater access to smartphones, gaming devices, and social media platforms.

Dietary and lifestyle habits have direct implications on health outcomes. Among the adolescents surveyed, urban participants showed higher prevalence of overweight and obesity, while rural participants faced higher rates of anemia and general fatigue due to nutrient gaps

Table 3: Common Health Problems among Adolescents (N=200)

Health Issue	Urban (%)	Rural (%)
Obesity/Overweight	19%	7%
Anaemia	14%	22%
Gastric/Digestive Problems	27%	18%
Weak Immunity/Fatigue	33%	41%

These findings suggest that urban adolescents' exposure to fast foods and sedentary lifestyle contributes to obesity and digestive problems. Meanwhile, rural adolescents, despite consuming traditional diets, experience anemia and fatigue due to limited dietary diversity and inadequate intake of protein and micronutrients.

V. DISCUSSION

The study highlights a pronounced urban-rural divide in dietary behaviour and lifestyle patterns among adolescents in Dhanbad, revealing how social, economic, and environmental factors influence food choices and health outcomes. Urban adolescents appear particularly susceptible to the growing influence of Western food culture, facilitated by the rapid proliferation of fast-food outlets, extensive advertising on social and digital media, and peer group reinforcement. Exposure to such environments encourages frequent consumption of calorie-dense, nutrient-poor foods, including burgers, pizzas, fried snacks, and sugary beverages. These dietary trends are often accompanied by irregular meal patterns, including breakfast skipping and late-night snacking, which further compromise nutritional balance. The adoption of these modern eating habits reflects not only convenience and taste preferences but also aspirational notions of modernity among urban youth, who often associate fast foods with social status and lifestyle sophistication. In contrast, rural adolescents largely adhere to traditional dietary practices centered on cereals, pulses, seasonal vegetables, and occasional dairy or animal-source foods. While this reflects the persistence of cultural food norms and locally available resources, rural diets are frequently limited in diversity. Seasonal availability, economic constraints, and minimal access to protein-rich or fortified foods result in nutritional gaps that can affect growth, immunity, and overall health. Despite consuming staple foods regularly, rural adolescents may not meet the recommended intake of essential micronutrients, which manifests in deficiencies such as anemia, fatigue, and susceptibility to infections.

Parental education and household income emerge as critical determinants in shaping adolescent food choices. Families with higher levels of education and financial stability tend to provide more diverse and balanced diets, often combining traditional meals with occasional exposure to fast foods, thereby ensuring nutritional adequacy alongside modern dietary experiences. Conversely, adolescents from lower-income or less-educated households frequently rely on staples such as rice, wheat, or maize, with minimal incorporation of fruits, vegetables, and protein sources. Such dietary limitations, compounded by inadequate knowledge of nutritional needs, increase

the risk of chronic deficiencies and health problems. Another crucial lifestyle factor is screen time, which has become increasingly pervasive among adolescents. The study indicates that adolescents spending more than four hours per day on smartphones, television, or gaming devices report reduced outdoor physical activity, delayed sleep onset, eye strain, and general fatigue. Extended sedentary behaviour interacts with poor dietary habits to create a cumulative risk for lifestyle-related disorders, including obesity, gastrointestinal disturbances, and metabolic imbalances. Collectively, these patterns underscore the need for integrated interventions that address both dietary behaviour and lifestyle practices, emphasizing balanced nutrition, moderated screen exposure, and regular physical activity to promote the health and well-being of adolescents in Dhanbad.

VI. FINDINGS

Urban adolescents in Dhanbad display a distinct transition from traditional diets to fast foods and packaged snacks. Breakfast skipping, late-night eating, and preference for calorie-dense snacks are common, reflecting the influence of urban lifestyle and media culture. Rural adolescents continue traditional eating patterns, but nutrient gaps, especially protein and iron deficiencies, are evident due to socio-economic and seasonal constraints.

Lifestyle patterns across both groups show high screen exposure, reduced physical activity, and disrupted sleep cycles. Health implications are equally divided: urban adolescents face obesity, gastric problems, and low immunity related to poor dietary balance, while rural adolescents show higher prevalence of anemia, general fatigue, and micronutrient deficiencies.

Socio-economic factors, parental education, and media exposure strongly correlate with both dietary habits and lifestyle behaviours. Adolescents from higher-income, better-educated households have more diverse diets and are more aware of nutritional needs, whereas lower-income adolescents often lack adequate awareness or access to nutritious foods.

VII. CONCLUSION

The present study provides a comprehensive analysis of the dietary habits, lifestyle patterns, nutritional awareness, and associated health implications among adolescents in Dhanbad. The findings reveal a clear urban-rural divide in food consumption and lifestyle behaviour. Urban adolescents are increasingly influenced by Western food culture, social media, and peer pressure, resulting in frequent fast-food consumption, irregular meal patterns, and higher screen time. These patterns contribute to health issues such as obesity, digestive disorders, and reduced immunity. Rural adolescents, while largely adhering to traditional diets, face challenges related to limited dietary diversity, seasonal unavailability of fruits and vegetables, and inadequate protein intake, which predispose them to anemia, fatigue, and other micronutrient deficiencies.

Socio-economic status and parental education significantly affect adolescent dietary choices and nutritional awareness. Households with higher income and educational levels tend to provide balanced meals that combine traditional and modern food options, ensuring better nutritional adequacy. Conversely, lower-income families often prioritize staple foods, which may compromise dietary quality. Screen time emerged as a critical determinant of lifestyle, influencing physical activity levels, sleep patterns, and overall health. The combined effect of poor dietary practices and sedentary behaviour underscores the urgent need for public health interventions targeting adolescents.

To address these challenges, school-based nutrition programs, community awareness campaigns, parental guidance, and the promotion of physical activity are essential. Emphasizing traditional diets alongside moderated consumption of fast foods can help preserve cultural eating practices while ensuring nutritional balance. Additionally, regulating media influence and educating adolescents about healthy lifestyle choices can significantly reduce the risk of lifestyle-related disorders. Overall, fostering a holistic approach to diet and lifestyle among adolescents in Dhanbad is critical to promoting long-term health, growth, and well-being in the 21st-century context.

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