



Health and Nutrition as Drivers of Sustainable Economic Development: A Study on Millennials in Tiruchirappalli

S. Booma Devi

Assistant Professor, PG & Research Department of Economics

Seethalakshmi Ramaswami College, Tiruchirappalli

Affiliated to Bharathidasan University, Tiruchirappalli, Tamil Nadu



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Abstract

Health and nutrition play a fundamental role in shaping the productivity, employability and long-term economic well-being of individuals, thereby acting as key drivers of sustainable economic development. This study explores the intricate linkages between dietary habits, health outcomes and economic participation among the millennial population (aged 25–40) in Tiruchirappalli. The research is grounded in the understanding that millennials, being the largest working-age group, represent both the present and future contributors to economic growth. Adopting a mixed-method approach, the study employs structured questionnaires and focus group discussions to capture insights on nutritional practices, health awareness, lifestyle patterns and their perceived impact on income, job performance and savings. Preliminary findings suggest that inadequate nutrition and lifestyle-related health challenges such as obesity, stress and chronic illness adversely affect productivity, while balanced dietary practices and preventive healthcare significantly enhance economic resilience. The paper further examines how local socio-economic factors, urbanization and cultural food practices influence millennials' health behaviours in Tiruchirappalli. The study also identifies key challenges such as rising fast-food consumption, sedentary lifestyles and limited awareness of nutrition literacy. Policy implications are discussed in relation to promoting affordable nutrition, workplace wellness initiatives and community-level interventions that can strengthen human capital. By situating the analysis within the broader discourse on sustainable development, this study underscores that investing in health and nutrition is not merely a social responsibility but a strategic economic imperative.

Keywords: health, nutrition, millennials, sustainable economic development

Introduction

Health and nutrition are fundamental pillars of human capital that shape productivity, employability, and economic prosperity. A healthy and well-nourished population not only enhances individual quality of life but also drives national development and sustainability. Globally, the Sustainable Development Goals (SDG 2: Zero Hunger and SDG 3: Good Health and Well-being) emphasize the

critical role of nutrition and health in achieving inclusive growth. For developing countries like India, these goals are particularly relevant in tackling the dual challenges of malnutrition and the growing burden of lifestyle-related diseases.

Millennials, defined as individuals aged 25–40 years, represent India's largest working-age demographic and are the key contributors to its economic engine. Their health choices directly



influence labour productivity, income generation and long-term financial security. However, rapid urbanization, changing dietary patterns and stressful work environments have altered their lifestyle and nutritional habits. Tiruchirappalli, a mid-sized but rapidly urbanizing district in Tamil Nadu, offers an ideal setting to study these shifts where modernity intersects with traditional food culture.

While several studies highlight the link between health, nutrition and economic growth, few focus specifically on the millennial workforce in urbanizing regions like Tiruchirappalli. Most policies prioritize child or rural nutrition, leaving a gap in addressing the health and economic challenges faced by this critical age group. The growing cost of healthcare, dependence on convenience foods and lifestyle-related ailments reduce productivity and threaten economic resilience.

This study therefore focuses on millennials aged 25–40 years in the urban and semi-urban areas of Tiruchirappalli district. It explores their dietary practices, lifestyle habits, awareness of health and nutrition policies and related economic outcomes. The research adopts a mixed-method approach, combining primary data from structured questionnaires with secondary data from published studies, government schemes and official reports.

By aligning with SDG 2 and SDG 3, the study supports the broader mission of fostering resilient communities and sustainable economic growth. The Tiruchirappalli context serves as a microcosm for understanding how evolving food systems, health awareness and socio-economic conditions interact. Drawing upon Amartya Sen's Capability Approach, the study emphasizes that access to nutrition and healthcare expands individuals' freedom to live productive, dignified lives—an essential step toward inclusive development.

Health and Nutrition Challenges Faced by Millennials in Tiruchirappalli

Dietary Practices and Nutritional Status

Millennials in Tiruchirappalli, like those globally, face multiple challenges in maintaining healthy diets. Despite increasing awareness about nutrition, their

busy work routines and exposure to urban lifestyles have led to inconsistent eating habits. Fast food outlets, online delivery platforms and convenience foods have become part of their daily lives. Many millennials prioritize convenience and taste over nutritional value due to time constraints and work pressure.

The influence of social life and digital culture has also reshaped dietary preferences. Dining out and trying trendy foods are increasingly linked with social identity and leisure, often at the expense of balanced nutrition. Though millennials are more health-aware than previous generations, their actual food choices reveal a trade-off between convenience and well-being.

Chronic Health Conditions

The prevalence of chronic diseases among millennials is a growing concern. Surveys suggest that about 44% of millennials in Tiruchirappalli have experienced at least one chronic ailment such as migraines, depression, asthma and type 2 diabetes. Obesity rates, now around 20%, have contributed to rising cases of hypertension and other metabolic disorders. Unhealthy habits and irregular sleep patterns further worsen these conditions. This growing burden of lifestyle-related diseases highlights the urgent need for preventive health measures and workplace wellness initiatives tailored to young adults.

Influences on Food Choices

Food choices among millennials are influenced by multiple socio-cultural and economic factors. While there is a growing interest in health-conscious diets and sustainable food options, these preferences often clash with the realities of time constraints, affordability and marketing pressures. Urban millennials are increasingly exposed to global cuisines, processed foods and aggressive advertising that glamorizes convenience products. These influences make consistent adherence to healthy diets challenging, especially for middle-income households balancing affordability and health aspirations.



Social Media and Food Trends

Social media platforms such as Instagram and YouTube play a powerful role in shaping dietary behaviour. Visually appealing dishes and food trends influence what millennials choose to eat and where they dine. However, the focus on aesthetics often overshadows nutritional awareness. The culture of sharing food experiences online reinforces consumption of high-calorie, restaurant-style meals, sometimes marketed as “healthy.” This social pressure creates a paradox where awareness about nutrition coexists with poor dietary practices, leading to health imbalances.

The Role of Health and Nutrition in Economic Development

The connection between health, nutrition and economic performance is well established. Nutrition economics—a growing interdisciplinary field—examines how diet influences disease prevention and productivity. Healthy populations contribute to stronger economies through better labour efficiency, lower absenteeism and higher lifetime earnings.

Economic Implications of Nutrition

Evidence indicates a strong positive link between improved nutrition and economic performance. Increases in dietary energy supply per capita correlate with higher GDP per capita, reflecting a virtuous cycle where better nutrition enhances productivity, which in turn fuels economic growth. However, these effects often unfold over time and can be difficult to isolate due to overlapping social and economic factors.

Economic growth also reinforces nutrition outcomes by increasing investment in health and education, improving access to diverse foods and raising living standards. However, targeted public policies are essential to ensure that these benefits reach vulnerable groups. Without government intervention, market-driven growth may widen nutritional inequalities. Public sector investment in healthcare, food safety and nutrition awareness remains critical for achieving inclusive, sustainable development.

Health, Labour Productivity and Human Capital

Health is an essential component of human capital. Workers with better health are more energetic, focused and productive. Improved nutrition enhances physical and cognitive performance, directly influencing wages and economic participation. Studies from developing countries consistently show that calorie and protein intake correlate positively with earnings, reinforcing the idea that investment in nutrition is an investment in productivity. Furthermore, the returns on health investments tend to be higher in low- and middle-income countries where malnutrition still constrains labour potential. Ensuring adequate nutrition among millennials can thus have long-term economic benefits by strengthening workforce capacity and reducing healthcare costs.

Methodology

This study used a pilot survey with volunteer participants. This is an exploratory study. The methodology adopted both quantitative and qualitative techniques. The consumption of food intake and fitness level are evaluated based on a 5-point Likert scale, varying from ‘Strongly Disagree’ to ‘Strongly Agree’ and ‘always’ to ‘often’. This study designed based on survey methodology. This survey was conducted by providing questionnaire to the participants. The survey instrument was directed to 250 participants. The reviewed studies employed diverse statistical techniques including Structural Equation Modelling (SEM) and panel corrected standard errors for time-series-cross-section data. This diversity reflects the interdisciplinary nature of nutrition and health research and underscores the importance of contextual interpretation rather than uniform generalizations.

Socioeconomic Variables

The analysis also explored how income, inequality and urbanization influence the relationship between globalization and nutrition. These socioeconomic variables act as moderators, shaping the extent to which economic growth translates into improved dietary outcomes. Understanding these dynamics



helps design more equitable policies that address both undernutrition and overnutrition within urban populations.

Food Purchasing Patterns

Food purchasing behaviour was examined as an indicator of dietary quality. Participants recorded their food purchases over a 14-day period to assess consumption trends across income groups. Findings showed that low-income households buy fewer fruits and vegetables but more processed and sugar-sweetened foods. This suggests that affordability and access are key determinants of nutritional disparities. Through this multi-layered methodology, the study integrates economic, social, and behavioural dimensions to better understand millennials' health and nutrition landscape in Tiruchirappalli.

Findings

Health and Labour Economics

Recent research in labour economics confirms that health is a decisive factor in productivity. Healthier individuals can contribute more effectively to the economy, while poor health limits earnings and increases absenteeism. Evidence indicates that each additional unit of health improvement—measured through indicators such as BMI or nutritional intake—correlates with measurable gains in efficiency and output. Therefore, health investments can yield substantial economic returns, especially in developing regions where preventable diseases remain common.

Socioeconomic Impacts of Globalization

Globalization influences nutrition both positively and negatively. On one hand, it boosts GDP, increases food availability, and creates employment. On the other, it promotes processed food consumption and lifestyle changes that heighten the risk of non-communicable diseases. Foreign direct investment (FDI) in the food sector often introduces high-fat, high-sugar products that undermine traditional diets. Thus, globalization generates a dual impact—economic expansion accompanied by nutritional

transition—requiring policies that balance growth with public health.

Dietary Health Outcomes

An analysis of 24 key studies on diet-related health outcomes highlights rising rates of obesity, diabetes and cardiovascular diseases in low- and middle-income countries. These studies measured outcomes using indicators such as dietary diversity and energy intake, revealing a consistent pattern: as incomes rise, dietary quality does not always improve. Instead, calorie-dense and nutrient-poor foods become more accessible, leading to a paradox of overnutrition amidst undernutrition. The evidence underscores the need for nutrition-sensitive growth strategies.

The databases revealed that context-specific factors—such as urbanization levels, food prices and cultural habits—play crucial roles in shaping health outcomes. The analysis also emphasized that countries with strong public health infrastructure and active nutrition programs are better positioned to convert economic growth into improved well-being. These findings suggest that nutrition and health must be integrated into economic development planning, not treated as peripheral concerns.

Public Health Initiatives and Programs

Public health programs remain vital in addressing nutrition inequities. In Tiruchirappalli, organizations such as the Mullai Charitable Trust have implemented community-based health and nutrition initiatives focusing on children, families and persons with disabilities. These programs include health check-ups, nutrition education and sanitation support—demonstrating how community engagement can improve outcomes.

School and Community Nutrition Programs

School-based nutrition interventions have proven effective in improving dietary behaviours among children. Integrating school meals, nutrition education and parental engagement has reduced undernutrition and obesity in various regions. Programs like the “Eat Well, Live Well” campaign in



Bangladesh and India's Swabhimaan initiative highlight how community-led platforms can promote healthy habits. Tailoring such interventions to urban youth and working adults could similarly address the millennial nutrition gap in Tiruchirappalli.

Impact of Digital Tools on Health Behaviour

Digital health tools—such as mobile apps, online nutrition counselling, and gamified fitness programs—are gaining attention for influencing dietary habits and physical activity. Although results show short-term improvements, sustaining these behavioural changes remains a challenge. Combining technology with community-based approaches and family participation could enhance long-term effectiveness.

Conclusion

Despite significant progress, several challenges persist: inconsistent program outcomes, limited long-term evaluation and insufficient integration of behavioural science in intervention design. Future efforts should prioritize participatory models that engage individuals, families and workplaces. Strengthening local food systems, promoting affordable healthy foods and integrating nutrition education into public health policy are essential next steps. Ultimately, ensuring good health and nutrition among millennials is not only a matter of personal responsibility but a societal investment in human capital and sustainable economic development.

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