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Nutrition and Lifestyle of Generation Z: Emerging Concerns for Sustainable Development Goals

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ABSTRACT

As the first generation to fully develop in a digital environment, Generation Z is a crucial group for the future of sustainable development and public health. Emerging data shows a contradictory growth in poor diet quality, sedentary habits, and interrupted daily routines among this generation, despite increased exposure to nutrition information and sustainability rhetoric. The Sustainable Development Goals (SDGs), specifically SDG 2 (Zero Hunger), SDG 3 (Good Health and Well-Being), and SDG 12 (Responsible Consumption and Production), are examined in this narrative review, which synthesizes empirical literature published between 2015 and 2024.

According to the review, the twin burden of malnutrition and early onset of non-communicable diseases is caused by an increasing reliance on ultra-processed foods, a decline in nutritional diversity, insufficient physical activity, and inconsistent sleep patterns. This report outlines important policy gaps and stresses the need for integrated, youth-focused nutrition and lifestyle interventions to advance the 2030 Sustainable Development Agenda by directly connecting behavioral patterns with quantifiable SDG indicators.

Keywords: Generation Z, Nutrition Transition, Lifestyle Patterns, Ultra-processed Foods, Sustainable Development Goals

INTRODUCTION

Generation Z, typically defined as individuals born between 1997 and 2012, represents nearly one-third of the global population and a substantial proportion of India's youth demographic (Dimock, 2019; MoHFW, 2019). As digital natives, their food choices, physical activity patterns, and daily routines are heavily shaped by technology, urbanization, and changing social norms.

While Generation Z is often perceived as environmentally conscious and health-aware, recent evidence highlights a concerning rise in poor dietary habits and sedentary lifestyles (Popkin et al., 2020). These shifts have significant implications for sustainable development, as unhealthy nutrition and lifestyle behaviors increase the risk of non-communicable diseases (NCDs), strain healthcare systems, and undermine long-term economic productivity, directly impacting SDG 3 (Good Health and Well-being).

METHODOLOGY

In order to compile the available data on Generation Z's dietary habits and lifestyle choices and how they relate to sustainable development goals, this study uses a structured narrative review approach. A narrative review was

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chosen because of the topic's interdisciplinary nature, which includes studies on sustainability, mental health, public policy, and nutrition science, even if systematic reviews provide greater methodological standards. Conceptual integration across various study designs and geographical contexts is made possible by this method.

PubMed, Scopus, Web of Science, and Google Scholar were the sources of peer-reviewed literature. Studies written in English, published between 2015 and 2024, and concentrating on adolescents or young adults (about 12–27 years old) with a clear discussion of eating patterns, lifestyle choices, or health indicators pertinent to the SDGs met the inclusion requirements. To contextualize policy and population-level changes, grey literature from UNICEF, FAO, NITI Aayog, and WHO was incorporated. Excluded were studies that lacked empirical data, methodological clarity, or relevance to outcomes related to nutrition, lifestyle, or sustainability.

The findings were divided into food patterns, lifestyle behaviors, health outcomes, and SDG links using a thematic framework. While preserving the flexibility inherent in narrative reviews, this structured synthesis improved transparency and decreased selection bias.

Nutritional Patterns of Generation Z

Generation Z exhibits a distinct shift toward convenience-oriented eating patterns, characterized by frequent snacking, meal skipping, and heavy reliance on ready-to-eat and delivered foods (Swiggle & Pringle, 2022). Although this cohort expresses interest in healthy and sustainable diets, actual consumption is often driven by affordability, availability, and time constraints (Halicka & Kaczorowska, 2025).

Ultra-processed foods (UPFs) now constitute a significant share of daily energy intake among young people. These foods are typically high in refined carbohydrates, saturated fats, salt, and added sugars, while being low in essential micronutrients (Monteiro et al., 2019). High consumption of UPFs is strongly associated with obesity, insulin resistance, and metabolic risk factors, even in younger age groups (Popkin et al., 2020).

At the same time, the decline in traditional diets rich in whole grains, pulses, fruits, and vegetables has contributed to widespread micronutrient deficiencies. Iron, vitamin D, and calcium deficiencies remain prevalent among adolescents and young adults, resulting in “hidden hunger” despite adequate caloric intake (MoHFW, 2019). This coexistence of overnutrition and micronutrient deficiency reflects the growing double burden of malnutrition, posing a major challenge to SDG 2 (Zero Hunger

Lifestyle Behaviors and Health Risks

Sedentary lifestyles are increasingly common among Generation Z due to prolonged screen time for education, entertainment, and social interaction. Global data indicate that a majority of adolescents do not meet recommended physical activity guidelines, increasing their risk for obesity and cardiovascular disease (Guthold et al., 2020).

Irregular sleep patterns and sleep deprivation have emerged as critical lifestyle concerns. Excessive screen exposure, particularly at night, disrupts circadian rhythms and reduces sleep quality, contributing to fatigue, impaired concentration, and metabolic dysfunction (Chahal et al., 2020). Combined with poor dietary habits, these lifestyle behaviors accelerate the early development of lifestyle-related NCDs such as type 2 diabetes and hypertension.

Nutrition, Lifestyle, and Sustainable Development Goals

The nutrition and lifestyle patterns of Generation Z have direct implications for the achievement of the SDGs. Poor diet quality and physical inactivity undermine SDG 3 by increasing the future burden of chronic diseases and healthcare costs. Simultaneously, the reliance on ultra-processed and convenience foods contributes to excessive packaging waste and resource-intensive food systems, challenging SDG 12 (Responsible Consumption and Production).

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Conversely, Generation Z's environmental awareness and openness to dietary change present a significant opportunity. Shifting toward sustainable dietary practices—such as plant-forward diets and reduced food waste—can simultaneously improve health outcomes and reduce environmental impact, supporting multiple SDGs (Ruzgys, 2023).

The relationship between the Sustainable Development Goals and lifestyle choices and nutrition is not just theoretical; it can be quantified using particular metrics. SDG 2 is directly undermined by high consumption of ultra-processed foods and decreasing intake of micronutrients, which exacerbate diet-related disparities and hidden hunger. SDG 3 targets pertaining to early mortality from non-communicable diseases are simultaneously jeopardized by sedentary lifestyles, sleep deprivation, and early metabolic risk. SDG 12 is challenged by a reliance on packaged and convenience foods, which increases resource use, the production of plastic waste, and carbon emissions. The findings' policy relevance is strengthened by strengthening these connections, which make it clearer how individual behavioral patterns transfer into systemic sustainability problems.

Strategies and Policy Implications

Improving nutrition and lifestyle outcomes among Generation Z requires integrated, youth-focused interventions. Nutrition education programs should emphasize practical food skills, balanced diets, and critical evaluation of digital food marketing. Educational institutions can play a central role by promoting healthy campus food environments and encouraging active lifestyles.

At the policy level, integrating youth nutrition and lifestyle indicators into national SDG monitoring frameworks is essential. Regulation of digital marketing of unhealthy foods, promotion of sustainable diets, and urban planning that supports physical activity are key strategies for aligning Generation Z health with sustainable development goals.

The results are consistent with research from around the world showing the shift in diet among younger populations, but regional differences are still not well understood. While ultra-processed food intake and sedentary behavior are common in high-income nations, low- and middle-income contexts—including India—face a double burden of metabolic risk and inadequate nutrition. Micronutrient deficits coexist with the increased frequency of overweight in Indian adolescents and young adults, in contrast to Western cultures where obesity is more common. The necessity of context-specific interventions as opposed to standard worldwide solutions is highlighted by this comparative insight.

Limitations

It is important to recognize the various limitations of this review. First, the narrative review design lacks the rigorous bias evaluation and reproducibility of systematic reviews, although being appropriate for multidisciplinary synthesis. Second, the use of secondary data restricts the ability to draw conclusions about the relationship between particular SDG outcomes and dietary and lifestyle choices. Third, there is a lack of actual evidence from low-income contexts, and regional coverage is still uneven. Finally, comparability may be impacted by variations in age definitions and measuring methods among research. These drawbacks emphasize the necessity of mixed-methods and longitudinal research to bolster the body of data.

CONCLUSION

The dietary habits and way of life of Generation Z are a vital lever for promoting sustainable development. In addition to raising long-term public health and environmental costs, the combination of low diet quality, physical inactivity, and interrupted habits jeopardizes progress toward SDGs 2, 3, and 12. Coordinated policy action that incorporates youth-centered sustainability efforts, control of unhealthy food marketing, and nutrition knowledge is necessary to address these issues. Transforming improvements in generational health into advances in

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sustainable development will require bolstering empirical evidence and coordinating behavioral treatments with SDG monitoring mechanisms.Sources

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