

Influence of Nutritional Knowledge on Dietary Choices: A Global Perspective

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ABSTRACT

Nutritional knowledge has a crucial role in shaping dietary choices, with substantial implications for public health globally. This review sightsees how nutritional awareness influences food intake, emphasizing the gaps across different population. The increasing prevalence of non-communicable diseases (NCDs) such as obesity, diabetes, and cardiovascular diseases emphasize the crucial need for better nutritional education to promote healthier dietary habits. Recent studies underscore a strong correlation between advanced nutritional knowledge and enhanced dietary behaviors, such as increased consumption of fruits, vegetables, and grains, along with fall in canned foods and sugary beverages. However, this correlation is intricate, molded by socio-economical factors, cultural norms, and convenience to exact nutritional knowledge. Economic challenges often obstruct the application of nutritional knowledge in impoverished regions, while in well-off regions lifestyle adoption and food marketing continue to promote detrimental dietary patterns in spite of widespread access to nutritional knowledge. This review also scrutinizes the role of public policies, public health inventives, and educational platforms in improving nutritional knowledge and promising healthier dietary.

Keywords: Nutritional Knowledge, Dietary Choices, Food Consumption Patterns, Healthy Eating Habits.

I. INTRODUCTION

Adequate nutritional knowledge significantly influences both dietary choices and overall health. The significance of choosing a

healthy diet is increasingly crucial in the face of worldwide increases in non-communicable diseases like obesity, cardiovascular diseases, and diabetes. An individual's comprehension includes the functions, nutrients in food, and health effects of various foods. This article examines the impact of nutrition knowledge on dietary choices and its effects on public health. Nutritional knowledge significantly impacts dietary choices, resulting in varying health outcomes worldwide. An individual's understanding of a food's nutritional content and dietary guidelines is essential for making informed decisions about what to eat. The relationship between nutritional knowledge and dietary habits is complex due to various socio-economic, cultural, and environmental influences. This review explores the global impact of nutritional knowledge on dietary choices, revealing population variations and the influence of education on shaping these behaviors.^[1] Government policies and public health initiatives can bridge the gap between knowledge and practice to promote healthier eating habits globally. Nutritional knowledge significantly influences dietary habits with notable differences across various regions.^[2] In well-off nations, the disparity between knowing healthy food choices and practicing them is frequently evident. While recognition of the merits of eating fruits and vegetables is widespread, intake in developed nations falls short of recommended amounts due to influences like convenience, taste preference, and intense food advertising.^[3] In contrast, nutritional knowledge in low- and middle-income countries is often hindered by limited access to education and health information. In Sub-Saharan Africa and South Asia, economically constrained populations need nutritional education to make healthy food

choices despite the high cost of healthier options.^[4]

Socio-Economic Influences on Dietary Choices

Nutritional knowledge significantly impacts dietary choices based on socio-economic status.^[5] People with higher socioeconomic status tend to have better nutritional knowledge linked to healthier eating habits. In higher socioeconomic groups, despite higher levels of education, unhealthy dietary habits persist due to time constraints, convenience, and lifestyle preferences that frequently result in the consumption of processed and fast foods, which was accentuated during the COVID-19 pandemic.^[6] Due to food insecurity, their diets were adversely affected, despite their nutritional knowledge.

Cultural Factors and Dietary Habits

Despite nutritional knowledge, cultural beliefs and practices significantly influence dietary decisions. The shift from traditional diets heavy in whole grains, fruits, and vegetables to Western-style diets loaded with processed foods and sugars is a major factor in the widespread increase of obesity and non-communicable diseases worldwide.^[7,8] In certain cultures, individuals' adherence to traditional beliefs or dietary customs can hinder their acceptance of healthy foods despite acknowledging their health benefits. In Japan and India, there's a growing need for nutritional education programs that consider cultural practices while encouraging healthier choices, given the increasing adoption of Western diets leading to both malnutrition and obesity.^[9]

The Role of Public Health Policies and Educational Initiatives

Government policies and initiatives significantly improve nutritional education and encourage healthier eating habits.^[10] Implementing nutritional education in schools, public health campaigns, and food labeling initiatives have all led to improved dietary habits. Finland's program, which involved public education and industry collaboration to reduce salt intake, led to population-level improvements in blood pressure and cardiovascular disease rates.^[11] In recent years, efforts have been a digital tools made to use to improve nutritional education. Mobile apps and online platforms are increasingly offering personalized nutritional advice, diet tracking, and public education on healthy eating. These tools have effectively engaged younger audiences with digital content.^[12]

Public Health Campaigns and Their Impact

Effective public health campaigns, such as Mexico's sugary drink tax and the UK's "5 Day," can lead to significant dietary changes and improved health outcomes. Ignoring cultural and socio-economic contexts can hinder campaign success.^[13] Effectiveness of public health messages can be considerably improved by adapting them to the unique dietary practices and beliefs of specific communities.

Although nutritional knowledge is readily accessible, it frequently fails to transform into healthy eating habits due to various impediments. The food environment, with its easy access to unhealthy food options and conflicting dietary advice, significantly impacts consumers' food choices.^[14]

The spread of fad diets and inconsistent nutritional information on social media exacerbates the confusion.^[15] Health authorities and nutrition professionals must communicate evidence-based information effectively to help individuals distinguish between credible nutrition information and pseudoscience, supporting informed dietary choices that align with established nutritional guidelines.

The Role of the Food Industry in Shaping Dietary Choices

The food industry significantly influences dietary decisions. The food industry's pervasive marketing of unhealthy foods, especially to children, poses a significant challenge to healthy eating despite regulatory efforts in some countries.^[16] Initiatives to reformulate processed foods, reducing sugar, salt, and fat content, contribute to public health enhancement. The absence of mandatory regulations can slow down and make progress in these efforts inconsistent and voluntary.^[17] To foster healthy dietary choices, stronger partnerships between governments and the food industry and stricter regulations are required.^[18]

Impact of Nutritional Knowledge on Dietary Choices and Health

Nutritional knowledge significantly influences global dietary choices, promoting healthier foods, better nutrition, and lower risk of chronic diseases.^[19] Due to growing consumer awareness, the food industry responds by producing more nutritious options. Decreased diet-related diseases, lowered healthcare costs, and heightened productivity result from this. Choosing informed options for food can promote

sustainability and decrease the environmental impact.^[20] Global understanding and adoption of healthy dietary practices are fostered by the sharing of nutritional knowledge across cultures, resulting in enhanced overall well-being.

Nutritional Literacy and Its Role in Promoting Sustainable Eating Habits

Mastering nutritional literacy, essential for fostering individual health and environmental sustainability, enables informed dietary choices.^[21] This encompasses abilities like deciphering food labels, recognizing nutritional necessities, and assessing the origins and repercussions of food choices. Individuals with nutritional knowledge make more sustainable food choices, like adopting plant-based diets, reducing food waste, and favoring local and seasonal produce.^[22]

In developed nations, nutrition knowledge fuels the trend toward organic and plant-based diets. Despite the convenience of processed foods and socioeconomic disparities, sustainable practices have not yet been universally adopted.^[23] In developing countries, the lack of education and information reduces nutritional literacy, causing less sustainable food choices. Effective public health campaigns and educational programs can enhance nutritional literacy and foster sustainable diets worldwide.

Though nutritional literacy holds the potential to encourage sustainable food choices, obstacles persist. Socioeconomic barriers, cultural resistance, and information overload hinder the improvement of nutritional literacy and the promotion of sustainable eating, but education and accessible nutritional information can empower individuals to make healthier and environmentally-friendly food choices for a sustainable future.^[24]

II. CONCLUSION

Nutritional knowledge is an important factor in determining dietary choices. While increased nutritional literacy generally leads to healthier eating patterns, various barriers, including economic constraints, cultural practices, and the impact of food marketing, can weaken its impact, yet its impact is moderated by a range of socio-economic, cultural, and environmental factors. The actual method to improve dietary choice is combined with education with the help of policies and involvement that are required for a different population. Increase in global diet-related-diseases, a comprehensive approach that combines,

education, policy and community-based effort is crucial for encouraging healthier dietary habits and justifying the impact of this situation.

REFERENCES

- [1]. World Health Organization. Global report on the epidemiology and burden of sepsis: Current evidence, identifying gaps, and future directions [Internet]. World Health Organization; 2021 [cited 2024 Aug 31]. Available from: (<https://www.who.int/publications/i/item/9789240029392>)
- [2]. Darmon N, Drewnowski A. Does social class predict diet quality? *Am J Clin Nutr* [Internet]. 2008 May [cited 2024 Aug 31];87(5):1107-17. Available from: (<https://doi.org/10.1093/ajcn/87.5.1107>)
- [3]. Glanz K, Rimer BK, Viswanath K. *Health behavior and health education: Theory, research, and practice*. 4th ed. Jossey-Bass; 2008.
- [4]. Food and Agriculture Organization of the United Nations. *The state of food security and nutrition in the world 2020: Transforming food systems for affordable healthy diets* [Internet]. Food and Agriculture Organization of the United Nations; 2020 [cited 2024 Aug 31]. Available from: (<https://doi.org/10.4060/ca9692en>)
- [5]. Food and Agriculture Organization of the United Nations. *The state of food security and nutrition in the world 2022: Repurposing food and agricultural policies to make healthy diets more affordable* [Internet]. Food and Agriculture Organization of the United Nations; 2022 [cited 2024 Aug 31]. Available from: (<https://doi.org/10.4060/cc0639en>)
- [6]. Parmenter K, Waller J, Wardle J. Demographic variation in nutrition knowledge in England. *Health Educ Res* [Internet]. 2000 Apr [cited 2024 Aug 31];15(2):163-74. Available from: (<https://doi.org/10.1093/her/15.2.163>)
- [7]. Janssen I, Boyce WF, Simpson K, Pickett W. Influence of individual- and area-level measures of socio-economic status on obesity, unhealthy eating, and physical inactivity in Canadian adolescents. *Am J Clin Nutr* [Internet]. 2006 Jan [cited 2024 Aug 31];83(1):139-45. Available from: (<https://doi.org/10.1093/ajcn/83.1.139>)

- [8]. Lallukka T, Laaksonen M, Rahkonen O, Roos E, Lahelma E, Valkonen T. Multiple socio-economic circumstances and healthy food habits. *Eur J Clin Nutr* [Internet]. 2007 Jun [cited 2024 Aug 31];61(6):707-15. Available from: (<https://doi.org/10.1038/sj.ejcn.1602579>)
- [9]. Food and Agriculture Organization of the United Nations. The state of food security and nutrition in the world 2021: Transforming food systems for food security, improved nutrition and affordable healthy diets for all [Internet]. Food and Agriculture Organization of the United Nations; 2021 [cited 2024 Aug 31]. Available from: (<https://doi.org/10.4060/cb4474en>)
- [10]. Popkin BM. Relationship between shifts in food system dynamics and acceleration of the global nutrition transition. *Nutr Rev* [Internet]. 2017 Feb [cited 2024 Aug 31];75(2):73-82. Available from: (<https://doi.org/10.1093/nutrit/nuw064>)
- [11]. Dutta MJ. Communicating about culture and health: Theorizing culture-centered and cultural sensitivity approaches. *Commun Theory* [Internet]. 2007 Aug [cited 2024 Aug 31];17(3):304-28. Available from: (<https://doi.org/10.1111/j.1468-2885.2007.00297.x>)
- [12]. Lock K, Smith RD, Dangour AD, Keogh-Brown M, Pigatto G, Hawkes C, et al. Health, agricultural, and economic effects of adoption of healthy diet recommendations. *Lancet* [Internet]. 2009 Jun [cited 2024 Aug 31];374(9693):2029-37. Available from: ([https://doi.org/10.1016/S0140-6736\(09\)61612-3](https://doi.org/10.1016/S0140-6736(09)61612-3))
- [13]. Katanoda K, Matsumura Y, Matsuda T. Recent trends in body mass index among young Japanese women, 1985-2015: A systematic review. *Nutrients* [Internet]. 2020 Nov [cited 2024 Aug 31];12(11):3427. Available from: (<https://doi.org/10.3390/nu12113427>)
- [14]. Satia, J. A. (2009). Diet-related disparities: Understanding the problem and accelerating solutions. *Journal of the American Dietetic Association*, 109(4), 610-615.
- [15]. Available from: (<https://doi.org/10.1016/j.jada.2008.12.019>)
- [16]. NIN (National Institute of Nutrition). (2022). The dual burden of malnutrition in India: Policies and challenges. National Institute of Nutrition, India.
- [17]. Karppanen, H., & Mervaala, E. (2006). Sodium intake and hypertension. *Progress in Cardiovascular Diseases*, 49(2), 59-75. Available from: (<https://doi.org/10.1016/j.pcad.2006.07.001>)
- [18]. WHO. (2022). World health statistics 2022: Monitoring health for the SDGs, sustainable development goals. World Health Organization.
- [19]. Available from: (<https://www.who.int/data/gho/publication/s/world-health-statistics>)
- [20]. Colchero, M. A., Popkin, B. M., Rivera, J. A., & Ng, S. W. (2016). Beverage purchases from stores in Mexico under the excise tax on sugar-sweetened beverages: Observational study. *BMJ*, 352, h6704. Available from: (<https://doi.org/10.1136/bmj.h6704>)
- [21]. Capewell, S., & Capewell, A. (2017). An effectiveness hierarchy of preventive interventions: Neglected paradigm or self-evident truth? *Journal of Public Health*, 39(2), 273-278. Available from: (<https://doi.org/10.1093/pubmed/fdw091>)
- [22]. Roberto, C. A., Swinburn, B., Hawkes, C., Huang, T. T. K., Costa, S. A., Ashe, M., ... & Brownell, K. D. (2015). Patchy progress on obesity prevention: Emerging examples, entrenched barriers, and new thinking. *The Lancet*, 385(9985), 2400-2409.
- [23]. Available from: ([https://doi.org/10.1016/S0140-6736\(14\)61744-X](https://doi.org/10.1016/S0140-6736(14)61744-X))
- [24]. Story, M., Kaphingst, K. M., Robinson-O'Brien, R., & Glanz, K. (2008). Creating healthy food and eating environments: Policy and environmental approaches. *Annual Review of Public Health*, 29, 253-272.
- [25]. Available from: (<https://doi.org/10.1146/annurev.pubhealth.29.020907.090926>)
- [26]. Nestle, M. (2013). Food politics: How the food industry influences nutrition and health. University of California Press
- [27]. Byrd-Bredbenner, C., Eck, K., & Quick, V. (2020). Psychosocial influences on food choice, dietary behavior, and health



- outcomes in adolescents. *Journal of the Academy of Nutrition and Dietetics*, 120(12), 1935-1941. Available from: (<https://doi.org/10.1016/j.jand.2020.07.006>)
- [29]. Harris, J. L., Bargh, J. A., & Brownell, K. D. (2009). Priming effects of television food advertising on eating behavior. *Health Psychology*, 28(4), 404-413. Available from: (<https://doi.org/10.1037/a0014399>)