

Review

Health Professionals' Role in Promoting Health and Environmental Sustainability through Sustainable Food Advocacy: A Systematic Literature Review

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Abstract: The relationship between health, environmental sustainability, and food systems has garnered increasing attention, emphasizing the crucial role of healthcare professionals in advocating for sustainable food practices. This systematic literature review aimed to examine their role in promoting health and environmental sustainability through sustainable food advocacy. Following a systematic and rigorous methodology, eligible articles published in English within the past five years were searched and screened, resulting in a total of five articles for further analysis. The review revealed the fragmented debate on food security and sustainability, emphasizing the need for sustainable food systems to address various challenges. Specific actions identified include reducing plate waste in hospitals, implementing sustainable food sourcing strategies in healthcare to mitigate the climate footprint, and promoting sustainable nutrition. The findings underscore the importance of education, community engagement, governance, and a systemic approach in driving positive change regarding nutrition, health, and sustainability. This review offers important perspectives for healthcare practice, allied health educational programs, research, and public health policy development. It highlights the importance of healthcare professionals in advocating for sustainable food practices, which play a critical role in improving health outcomes and reducing environmental impacts.

Keywords: sustainable practices; health outcomes; sustainable nutrition; health education; environmental impact



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1. Introduction

Within the global health initiative, the interconnectedness between human health and the environment is increasingly being recognized as a key factor in determining the future of global health. As we face the burden related to infectious and non-communicable diseases, access to healthcare, climate change, and food insecurity, the need for innovative solutions and collaborative efforts has become paramount. In particular, in the last three years, food insecurity has shown that today's global food system is far from resistant to crises driven by various reasons. Its disturbance exacerbates already limited access, increases health and social inequalities, and ultimately worsens nutritional statuses worldwide [1]. On the other hand, today's food systems are also associated with the production of unhealthy products, increased food waste, and the environmental degradation resulting from unsustainable practices, including elevated carbon emissions, biodiversity loss, and the pollution of air, land, and water [1–5]. Despite increased awareness regarding healthy dietary habits, dietary patterns are shifting globally, with greater consumption of food of animal origin. This trend contributes to an increased global demand for meat and animal-based food products, further burdening the environment [4,6].

Background

In recent years, a number of studies have highlighted the complex interactions between sustainable food, the environment, and health, highlighting the complexity of these critical areas [7–9]. Sustainable food advocacy, with its focus on promoting health and environmental sustainability through conscious food choices and practices, has emerged as a crucial pathway towards addressing these challenges. Healthcare professionals and other allied health professionals play a vital role in advocating for planetary health, including promoting sustainable dietary guidelines and policies that prioritize the health and sustainability of food systems. Ensuring sustainable food systems and promoting the concept of sustainable nutrition have thus become of great importance also within healthcare systems. A sustainable food system can be described as a system that ensures food security and nutrition for everyone, while also safeguarding the economic, social, and environmental resources necessary to sustain food security and nutrition for future generations. Essentially, this implies that the system remains financially viable (economic sustainability), provides widespread advantages to society (social sustainability), and has a favorable or neutral effect on the natural environment (environmental sustainability) [10]. The primary cause of food insecurity and malnutrition stems from the unsustainability of the food system. To guarantee food security, it is crucial that every aspect of the food system operates in a sustainable, resilient, and efficient manner. Therefore, sustainability plays a vital role in achieving food security [4].

In addition to sustainable food systems, sustainable nutrition, which was introduced back in 1986, refers to dietary patterns and guidelines that have minimal environmental impacts while promoting food and nutrition security. These dietary patterns aim to support a healthy lifestyle, being considerate of biodiversity and ecosystems, and are culturally acceptable, easily accessible, economically fair, and affordable. Furthermore, they are nutritionally balanced, safe, and health-promoting, all the while maximizing the use of natural and human resources [11]. In this context, health systems and healthcare institutions are in a unique position to implement changes and influence changes to other food systems organized within society. The functioning of food systems and the healthcare and policy context that they exist within are complex and require a comprehensive understanding to be able to work towards sustainable change. Environmental impacts of hospital food can be considered across the food supply chain stages, whereby there are decisions that influence environmental sustainability at each point. This food supply chain encompasses food procurement, processing, preparation, consumption, and waste management [5]. In this system, the perspectives of individuals working across the food supply chain and healthcare services cannot be overlooked in transitioning to sustainable hospital food services. Thus, healthcare professionals and allied health professionals have a fundamental role in supporting people in becoming aware of the consequences related to unsustainable food practices for their health and the preservation of the healthy environment and consequently develop sustainable dietary patterns [1,6].

The importance of a balanced diet for patients cannot be overstated, as it is a cornerstone in promoting optimal health outcomes and facilitating effective recovery in the healthcare setting. A balanced diet enriched with essential nutrients plays a critical role in boosting immune function, accelerating wound healing, and improving chronic disease management [12]. While both meat-based and plant-based diets offer avenues to meet patients' nutritional needs, a growing emphasis on sustainable food practices has taken center stage. Sustainable food choices encompass a holistic approach that not only prioritizes the health and well-being of patients but also acknowledges the environmental implications of dietary selections [13]. Although a plant-based diet is more environmentally sustainable than a meat-based diet and has a smaller environmental footprint, the integration of sustainable dietary approaches based on animal or plant sources in health facilities should be consistent with the general principles of environmentally conscious healthcare [14,15]. By adopting practices that include the local sourcing of ingredients, the consideration of seasonal availability, and responsible production methods, healthcare

facilities can align themselves with sustainable nutrition frameworks. This alignment not only promotes patient well-being, but also plays an active role in promoting a resilient and ecologically oriented food system [13].

This systematic literature review aims to explore the role of healthcare professionals in promoting health and environmental sustainability through sustainable food advocacy.

The objectives of the systematic literature review include (a) identifying the key roles and responsibilities of healthcare professionals in sustainable food advocacy, (b) examining the strategies used by healthcare professionals to promote sustainable food practices, (c) assessing the outcomes and impacts of healthcare professionals' involvement in sustainable food advocacy, and (d) identifying gaps in the literature and suggesting future research directions.

The overarching research question is the following: what are the roles, responsibilities, and strategies employed by healthcare professionals in promoting sustainable food practices, and what are the outcomes and impacts of their involvement in sustainable food advocacy? The intentional formulation of the research question facilitates a constructive exploratory approach, centered on the identification of literature gaps, which can serve as a foundation for future research on sustainable food advocacy.

2. Materials and Methods

To examine the role of healthcare professionals in promoting health and environmental sustainability through sustainable food advocacy, a systematic literature review design was used. A systematic review was undertaken, guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) reporting standards [16].

2.1. Eligibility Criteria

Eligible articles were those explicitly describing the role of healthcare professionals in promoting health and environmental sustainability through sustainable food advocacy, published in English in the past 5 years, including full texts, clinical trials, randomized controlled trials, and systematic reviews. The exclusion criteria were articles inconsistent with the research objective, published in languages other than English, published before the specified publication period, editorials, letters to the editor, case studies, dissertations, discussions, or conference abstracts.

2.2. Literature Search

The search for relevant literature was carried out using a comprehensive range of databases, including EBSCO—Medline with full text, Science Direct, PubMed, Springer Link, Wiley Online Library, and Sage Journals. The search encompassed articles published between January 2018 and May 2023, thereby capturing the most recent research in the field. To optimize the search process, a search strategy was used combining relevant keywords and their variations to cover a wide range of relevant articles. To define our search terms, we used a comprehensive approach by combining titles, phrases, and free-text keywords within the Medical Subject Headings (MeSH) search engine. Our goal was to obtain relevant and specific results related to our research topic. Therefore, the following English-language search terms were used: “healthcare professionals”, “health promotion”, “environmental sustainability”, “sustainable food advocacy”, and related concepts. Boolean operators, including AND and OR, were used to combine these keywords and improve the precision and relevance of the search results.

2.3. Study Selection Process

The study selection process was visually depicted using the PRISMA flow chart, which provides a comprehensive overview of the article screening and inclusion process [9]. Implementing the search strategy outlined previously and applying appropriate filters to ensure accurate classification, a total of 731 articles were initially identified from the selected databases.

Upon removing duplicates from the initial pool of articles, a total of 556 articles remained for further evaluation. After removing articles due to other reasons, 518 articles were screened for titles and abstracts. Two authors independently screened the articles for inclusion. Any differences in the selected articles were discussed. Subsequently, 41 articles underwent through another rigorous screening process based on the predefined inclusion criteria. After a thorough evaluation, 37 articles were excluded as they did not meet the specified inclusion criteria (Figure 1).

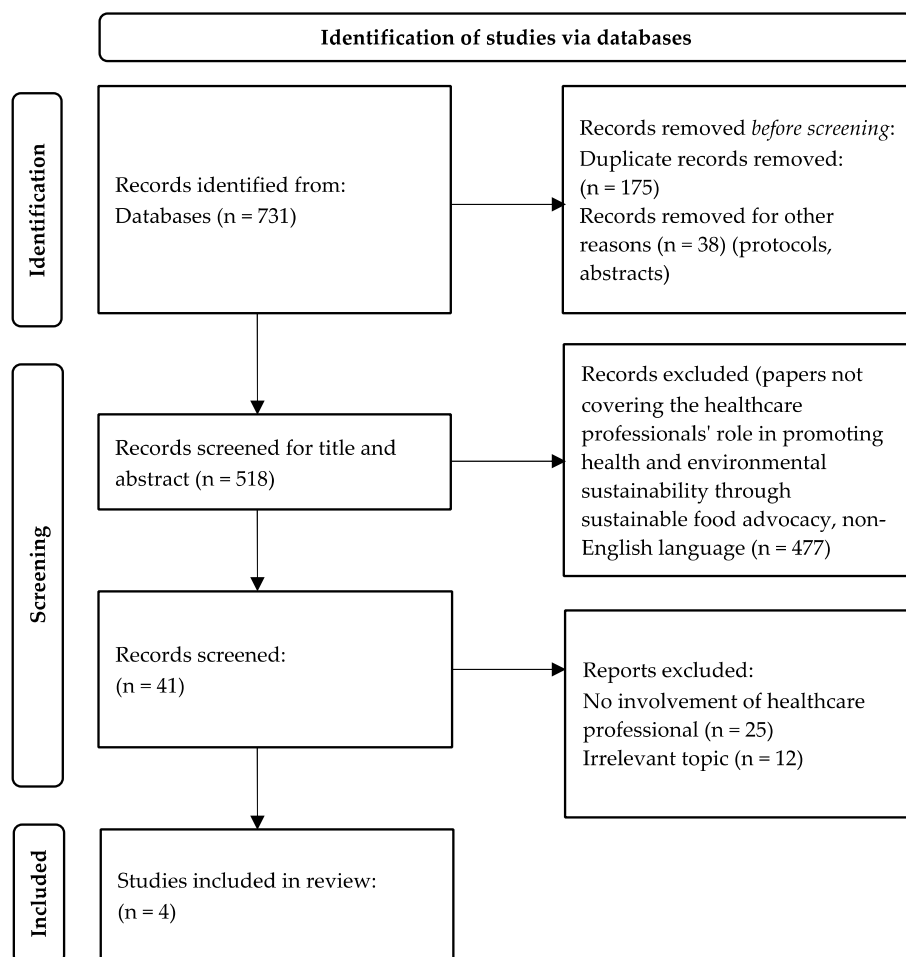


Figure 1. The PRISMA flow diagram of the study.

2.4. Data Collection Process

This systematic literature review used a rigorous and well-defined protocol for the data collection process to ensure a comprehensive and systematic search for relevant studies. To ensure a rigorous evaluation of the methodological quality of the included studies, the segment for qualitative studies of the Mixed Methods Appraisal Tool (MMAT) developed by Pluye et al. [17] was used. The MMAT was specifically designed to assess studies included in systematic reviews of mixed methods research. It provides a comprehensive assessment of methodological quality in five categories, with each category consisting of five defined criteria to assess the quality of the studies.

3. Results

The review examined four articles to explore the role of health professionals in promoting health and environmental sustainability through sustainable food advocacy. The articles included in the review were as follows: (1) Guillaumie et al. (2020) (Canada) [3]; (2) Alberdi and Begiristain-Zubillaga (2021) (Spain) [2]; (3) Alberdi and Begiristain-Zubillaga (2021) (Spain) [6], and (4) Antasouras et al. (2023) (Greece) [18] (Table 1).

Table 1. Main characteristics of the studies involved.

Authors, Country	Research Design	Objective	Target Population
Guillaumie et al., 2020 Canada [3]	Systematic review	To identify factors that influence whether professionals in health-related institutions integrate sustainable nutrition into their practice and to provide recommendations for the promotion of sustainable nutrition.	Healthcare professionals, students, public health officers, or hospital food service managers
Alberdi and Begiristain-Zubillaga, 2021 Spain [2]	Scoping review	To identify the nature and extent of the evidence found in the literature on the processes related to food procurement within healthcare systems and analyze them from the perspective of sustainability dimensions.	Healthcare systems and public settings
Alberdi and Begiristain-Zubillaga, 2021 Spain [6]	Scoping review	Assess the size and scope of the available literature regarding the promotion of sustainable nutrition in the healthcare system and obtain a reliable approximation of the processes and roles related to sustainable nutrition promotion within healthcare systems.	/
Antasouras et al., 2023 Greece [18]	Systematic review	To identify the most common measures used to reduce plate waste in hospitals and to provide recommendations to improve food waste management in hospitals.	Hospitals

The findings underscore the importance of developing strategies for sustainable food procurement, promoting sustainable nutrition, addressing food waste in healthcare settings, and recognizing the central role of healthcare professionals in promoting positive change towards health and environmental sustainability through advocacy for sustainable food.

In their studies, Guillaumie et al. [3] identified the key factors in promoting sustainable nutrition as perceived knowledge of sustainable diet nutrition, self-efficacy, awareness of environmental issues, and recognition of the role of promoting sustainable nutrition as part of one's professional responsibilities. Their study also identified concrete ways to promote sustainable nutrition, such as strengthening societal support through awareness-raising campaigns and strengthening institutional support through guidelines, information tools, and financial support.

Alberdi and Begiristain-Zubillaga [2,6] highlighted the importance of sustainable food procurement strategies and the promotion of sustainable nutrition in addressing environmental and public health impacts. Key action areas for a sustainable food procurement strategy included multi-level governance, a sustainable food supply system, and healthy and sustainable food services. In addition, six overarching characteristics that contribute to a successful strategy were identified: long-term commitment, investment, evaluation, communication, gender, and a holistic approach. In particular, the potential of public health professionals to bring about a paradigm shift in nutrition and health was recognized, but their current role and influence in health systems was seen as undervalued.

In addition, Antasouras et al. [18] focused on the critical issue of food waste in hospitals and its negative impact on health, the economy, society, and the environment. They highlighted that plate waste, i.e., uneaten food served to patients, contributes significantly to food waste in healthcare settings. The study suggested several measures to curb plate waste, including the introduction of flexible portion sizes, selective menus, nutritional counselling, and improved ordering practices. Among these measures, flexible portion sizes were identified as the most effective approach.

Table 2 provides a summary of the key features of the new approaches examined in this review that aim to promote sustainable food practices.

Table 2. Features of new approaches to promote sustainable food practices.

Authors	Key Roles	Challenges	Intervention/Strategies	Outcomes
Guillaumie et al., 2020 [3]	Increasing awareness and knowledge, advocating for sustainable food options, incorporating sustainable nutrition into patient care plans, providing education and training opportunities, and collaborating with food service providers and stakeholders.	Lack of knowledge and awareness, limited availability of sustainable food options, limited institutional support and resources, conflicting priorities and time constraints, lack of patient demand or interest, and limited training and education opportunities for health professionals.	Increasing societal support through awareness campaigns and increasing institutional support through guidelines, information tools, and financial support.	/
Alberdi and Begiristain-Zubillaga, 2021 [2]	Healthcare professionals can play a vital role in implementing sustainable food procurement strategies in healthcare systems. They are responsible for food service provision, product selection, and minimizing food waste.	Key challenges include resistance to change, limited knowledge and awareness, lack of political will, limited availability and accessibility of sustainable food options, and inadequate monitoring and evaluation systems.	Multilevel governance in the organization's food policy, promoting healthy and sustainable diets and food services, and establishing a sustainable food supply system. These interventions encompass six transversal features: long-term commitment, investment, evaluation, communication, gender considerations, and a holistic approach.	A sustainable food procurement strategy can help to counteract the negative effects of environmentally harmful activities, such as food waste production and energy consumption, which are associated with the food service offered in healthcare systems.
Alberdi and Begiristain-Zubillaga, 2021 [6]	The role of healthcare professionals is to promote sustainable diets among patients by educating them and guiding their diets towards sustainability.	The current role and potential impact of health professionals in driving sustainable food practices are underestimated within healthcare systems.	Education, community and clinical health services, community engagement and policy advocacy, governance, and social support.	Promoting sustainable diets is key to countering the negative consequences of the current global food system for the environment and the health of the population.
Antasouras et al., 2023 [18]	Healthcare professionals can work with hospital food departments to develop and implement strategies to reduce plate waste. They can also educate patients and staff on the importance of reducing food waste and the potential benefits for health, economy, society, and the environment.	Limited resources and funding, lack of awareness and education among healthcare professionals and patients about food waste reduction, and inadequate infrastructure and technology, such as electronic ordering systems, to support interventions.	Flexible portion sizes, increased food choices, additional nutritional support, better ordering and delivery systems.	By reducing plate waste, hospitals can improve the quality and quantity of food available for patients, which can lead to better nutrition and health outcomes. Additionally, reducing food waste can have positive economic and environmental impacts by reducing costs associated with food waste disposal and reducing greenhouse gas emissions.

Table 3 provides a concise overview of the strengths and areas for development found within the selected studies in this systematic literature review. It highlights the positive aspects and potential areas of improvement in each study, offering valuable insights for further research and practical implementation (Table 3).

Table 3. Brief overview of the strengths and areas for development in the selected studies.

Authors	Strengths	Areas for Development
Guillaumie et al., 2020 [3]	The article provides specific and practical ways to promote sustainable diets that will prove valuable to policymakers, healthcare professionals, and other stakeholders working to promote sustainability in the food system.	Clinical outcomes of implementing sustainable nutrition practices in healthcare settings. Cultural acceptability and affordability. Profession-specific training modules to improve the integration of sustainable nutrition.

Table 3. Cont.

Authors	Strengths	Areas for Development
Alberdi and Begiristain-Zubillaga, 2021 [2]	Comprehensive identification of key action areas and overarching characteristics for sustainable food procurement strategies, as well as its emphasis on the importance of long-term commitment and a holistic approach to sustainability.	Elaboration of how nurses can contribute to sustainable food procurement strategies. Recommendations on how suitable, cost-effective protein alternatives that could be easily integrated into hospital food systems.
Alberdi and Begiristain-Zubillaga, 2021 [6]	Identification of key areas for healthcare professionals to promote sustainable nutrition, emphasizing the importance of a systems approach to the food system, and highlighting the potential of healthcare professionals to create a paradigm shift in nutrition and health.	Health professionals should be educated in various fields, such as nutrition, environmental science, agriculture, and food policy. Recommendations for promotion of local and seasonal foods and linking consumers to local producers.
Antasouras et al., 2023 [18]	The article provides a comprehensive review of food waste studies, offers practical solutions for minimizing plate waste in hospitals, and effectively highlights the negative health, economic, social, and environmental impacts of food waste.	Specific recommendations for healthcare professionals to implement sustainable nutrition practices in their facilities. Recommendations on tailoring the menu to dietary requirements without increasing waste. Recommendations on how cultural variations in food choices affect waste.

The overall result offers valuable insights for healthcare practice, health professional education programs, research, and policy development. It highlights the importance of healthcare professionals in advocating for sustainable foods to improve health outcomes and mitigate environmental impacts.

3.1. Clinical Practice

Guillaumie et al. [3] suggest several ways to facilitate the integration of sustainable nutrition into professional practice, including clinical settings. They suggest the institutionalization of professional practices, better guidance through training and practice recommendations, and raising awareness of environmental issues among health professionals as means to promote sustainable nutrition.

Alberdi and Begiristain-Zubillaga [2] propose using their framework to gather additional evidence on the implementation of sustainable food systems in healthcare settings and emphasize the importance of evaluating and using this framework to advance sustainable food strategies.

In their study, Alberdi and Begiristain-Zubillaga [6] explore the potential role of healthcare professionals in promoting sustainability in clinical and community settings. They emphasize the importance of supporting clients and patients to choose environmentally sustainable and healthy food. The authors recommend connecting with local producers, offering locally grown produce and animal products, and educating patients about seasonal foods and responsible consumption to facilitate sustainable food choices. They also suggest integrating sustainable food sourcing and menu planning strategies into clinical settings to advise and educate patients about sustainable foods.

Antasouras et al. [18] focus on the implementation of measures to reduce plate waste in hospitals and cite flexible portion sizes, selective menus, additional nutritional counselling, and improved ordering and delivery systems as common measures. The authors call for well-designed, multicenter clinical trials to identify novel and effective approaches to improve food waste management in hospitals.

3.2. Study Programs

Regarding study programs, Alberdi and Begiristain-Zubillaga [2] emphasize the need for an innovative approach to curricula design and the training of healthcare professionals

in sustainability issues. They suggest that future healthcare professionals need to take on new roles and responsibilities, including policy advocacy and community engagement. The authors emphasize the importance of developing a common language and vision for sustainable food systems and the promotion of sustainable diets, along with tools to evaluate implementation and impacts.

Guillaumie et al. [3] highlight the need for better guidance through training and practice recommendations in study programs targeting both future healthcare professionals and patients.

3.3. Research

In terms of research, Alberdi and Begiristain-Zubillaga [6] call for more research from a health sciences perspective to establish standard practices focused on sustainable food systems and promoting sustainable diets. They emphasize the need for a consensus on definitions of sustainable food systems, diets, and related concepts.

Guillaumie et al. [3] also note that most research has focused on nutritionists' views of sustainable nutrition, while acknowledging the multifaceted nature of sustainable nutrition and the challenges of integrating them into complex professional practice. They advocate for further research to identify additional factors that influence the integration of sustainable nutrition into the practice of healthcare professionals in various health-related settings.

3.4. Public Health Policy

Public health policy plays a key role in promoting sustainable nutrition practices by fostering awareness of balanced dietary choices, supporting local and organic food systems, and encouraging research on the long-term health and environmental impacts of dietary patterns. In this context, Alberdi and Begiristain-Zubillaga [2] highlight the role of health policy in supporting sustainable food procurement strategies and developing policies and guidelines to facilitate sustainable food procurement practices.

The authors also [6] highlight the importance of health policy in promoting sustainable food within the health system. They emphasize the need for processes that ensure the promotion of sustainable diets within the health system, advocate for a systemic approach to the food system, and recognize the importance of governance as one of the most important areas for action.

Antasouras et al. [18] point out that health policy can play a role in implementing food waste reduction measures in hospitals, considering the positive health, economic, social, and environmental impacts.

Guillaumie et al. [3] describe the need to institutionalize professional practices related to sustainable nutrition, highlighting the support of higher health institutions in planning and implementing strategies. They suggest that health policy can play a critical role in promoting sustainable nutrition by providing guidance, information tools, and financial support to healthcare professionals and institutions. In addition, initiatives are needed to raise public awareness of environmental challenges and the indispensable contribution of sustainable diets to ecosystem protection [3].

4. Discussion

In this study, the systematic literature review aimed to explore the involvement of healthcare professionals and allied health professionals in advancing health and environmental sustainability through sustainable food advocacy. Overall, the findings provided an evidence-based understanding of the current state of knowledge on this topic and identified future research in this field.

4.1. Interplay between Healthcare and Sustainable Food Systems

Health institutions exert a significant impact on the environment due to their size, operations, and food consumption. However, by implementing sustainable food systems, these institutions can make remarkable strides in reducing their environmental footprint and im-

proving patient and employee health. Through sustainable procurement, waste reduction, and the promotion of nutrient-dense, environmentally friendly diets, healthcare facilities can positively impact both individual well-being and global ecological health [19,20]. The problem of plate waste is of key importance as it not only wastes valuable resources but also contributes to environmental pollution. To combat this problem, waste reduction strategies that include portion control, patient education on food choices, and the donation of excess food are proving effective in improving the overall sustainability of healthcare food systems [21–24]. In addition, sustainable food procurement is about supporting local farmers and using environmentally friendly production methods. Opting for locally grown and seasonal produce not only reduces greenhouse gas emissions resulting from long transportation distances, but also promotes biodiversity conservation [25]. Nevertheless, the initial adoption of sustainable food systems may involve higher costs due to procurement changes and necessary staff training. Therefore, health institutions must tactfully balance sustainability goals with budget constraints [26].

4.2. Educational and Policy Frameworks for Sustainable Healthcare

In recent years, there has been growing recognition that human health, food systems, and environmental sustainability are interconnected [26]. The current global sustainability crisis requires a paradigm shift in healthcare professional education to address the complex challenges of the 21st century. Emphasizing sustainability in health professional education is critical to creating a more resilient and sustainable healthcare system. By integrating concepts of sustainable food systems and diets into curricula, healthcare professionals and other allied health professionals can expand their impact beyond traditional patient care and address broader public health challenges related to food security and environmental sustainability [27]. This holistic approach to public health education recognizes the inextricable link between human health and the health of the planet and emphasizes the fundamental role of sustainable food systems in collective well-being [28].

Furthermore, incorporating sustainability principles into education for healthcare and allied health professions provides future professionals with the knowledge and tools to have informed conversations with patients and empower them to make healthier and environmentally conscious choices [29]. To achieve a sustainable future, it is essential to develop innovative and adaptable curricula that continually evolve in line with scientific advances and societal needs [30]. In addition, the implementation of robust evaluation tools is critical to assessing the effectiveness of sustainability education in healthcare [31]. By collecting ongoing feedback and using evaluation mechanisms, institutions can identify areas for improvement so that they can refine their educational approaches and achieve better outcomes [27,30]. Transitioning healthcare education and practice towards sustainability requires collaboration and supportive policies among universities, healthcare institutions, policymakers, and communities. Advocacy for sustainability education at the national and international levels can drive policy changes that integrate sustainability principles into healthcare curricula and promote the prioritization of sustainability in institutional practice [32,33]. Such comprehensive efforts have the potential to educate a generation of healthcare professionals capable of leading change towards a more sustainable and healthier future.

While dietitians have gained valuable insights on the path to sustainable diets, it is essential to broaden the research perspective. Emphasizing a health science approach encourages collaboration with multiple disciplines, including environmental science, public health, agriculture, and social science [34]. Interdisciplinary research collaborations are key to gaining a comprehensive understanding of sustainability challenges and promoting innovative solutions. In public health practice, advancing research from a public health science perspective is critical to the successful integration of sustainable food systems and diets. This endeavor requires a comprehensive understanding of sustainability challenges and the development of evidence-based policies and practices [35,36]. By fostering a consensus on sustainability definitions, broadening research perspectives, and addressing

integration challenges, health science research empowers healthcare professionals and allied health professionals to effect transformative change and contribute to a healthier and more sustainable future. As interdisciplinary collaboration and research-practice partnerships are strengthened, the potential for positive impacts on individual health and the environment grows, moving us closer to a sustainable world for generations to come [37,38].

Integrating sustainability principles into food procurement is a critical step in ensuring that healthcare institutions actively promote sustainable food systems. Public health policies that support and facilitate sustainable food procurement practices empower facilities to procure ethically and environmentally responsible food [39]. By leveraging their purchasing power, healthcare institutions can drive the demand for sustainable agricultural practices, positively impacting the entire food supply chain. Undoubtedly, health policy plays a central role in driving change and promoting sustainable food practices [40]. Through strategic action, health policy can drive the integration of sustainability principles into all aspects of healthcare, from food procurement to patient care to education campaigns. Emphasizing sustainability in public health policy not only benefits human health, but also contributes to the preservation of our planet's ecosystems [26,41]. As researchers, healthcare professionals and other allied health professionals, NGOs, and other key stakeholders continue to advocate for policy-driven solutions and interdisciplinary collaboration, public health policy becomes a powerful tool to create a healthier and more sustainable future for generations to come.

In the context of food sustainability, the adoption of a plant-based diet in health facilities presents both opportunities and challenges [42]. While advocating for a plant-based diet can help to reduce the environmental footprint associated with animal agriculture [43], careful consideration is required to ensure that patients receive a balanced diet. Patients aiming for a plant-based diet should be guided to eat a variety of nutrient-rich plant-based foods while minimizing animal products and processed foods [44]. Collaboration with dietitians is important to personalize dietary recommendations and monitor patients' nutritional status. A patient-centered approach, tailored to the patient's individual preferences and health status, is essential for successful implementation. Promoting education, monitoring, and measurable outcomes can help to integrate plant-based diets into healthcare settings as part of a broader commitment to sustainable nutrition [45].

4.3. Interdisciplinary Collaboration and Future Directions

As the world's population continues to grow, the increasing demand for food will put even more strain on already limited resources. Adding to the complexity is the impact of climate change, characterized by extreme weather events, changing cropping conditions, and disruptions in food supply chains, all of which pose challenges to food security [46,47]. In response, interprofessional collaboration and partnerships among healthcare professionals and allied health professionals, policy makers, and environmental experts are essential. By pooling their expertise, these professionals from different disciplines can work together to develop and implement effective strategies to improve food security, minimize food waste, and promote sustainable agricultural practices [48]. Such concerted efforts are essential to ensure a more resilient and sustainable food system in the face of growing global challenges.

The studies highlight the multidimensional nature of sustainable practices in health, ranging from procurement to nutrition promotion, waste reduction, and integration into institutional frameworks. This synthesis highlights the importance of interdisciplinary collaboration, stakeholder engagement, and context-specific strategies in promoting sustainable paradigms in healthcare. The findings from the studies discussed point to several promising directions for future research. Exploring the practical implementation of the Alberdi and Begiristain-Zubillaga [2] framework in different healthcare contexts could provide insights into the effective implementation of sustainable nutrition strategies. In addition, exploring the impact of interventions that equip healthcare professionals with the skills to guide patients towards sustainable diets, as well as assessing the feasibility and

impact of innovative strategies to reduce food waste in healthcare, offers opportunities for deeper exploration. Cross-cultural comparisons of sustainable nutrition practices, targeted training programs for professionals, understanding the patient perspective, and assessing the economic and environmental impact of sustainable nutrition strategies are all valuable ways to advance our knowledge in this area.

4.4. Limitations

Despite the rigorous methodology and credible sources used in this study, some limitations should be noted. A major limitation is the limited amount of research addressing the involvement of health professionals in promoting environmental and health sustainability through sustainable food systems. This is likely due to the fact that this research topic is still in its infancy, which highlights the importance of our study and its approach in identifying key areas for further exploration. Although the study encompasses different countries and does not reveal a linguistic bias, it may be beneficial for future research to include literature in languages other than English. This could bring alternative perspectives and unique challenges to enrich the understanding of the topic.

5. Conclusions

This systematic literature review highlights the central role that health professionals play in promoting sustainable food systems, thereby improving both health outcomes and environmental sustainability. It outlines actionable strategies for healthcare facilities, such as waste minimization and sustainable procurement, that could have a lasting impact on individual well-being and environmental health. The study calls for an overhaul of healthcare education to incorporate sustainability principles, supported by policy changes and interdisciplinary collaboration. It underscores the need for evidence-based research to guide these changes. Overall, the findings argue for a multifaceted approach to healthcare that integrates sustainability to meet the complex challenges of the 21st century.

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