Review Article :

Health promotion interventions for nursing students: A Systematic Review

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Abstract:

Health promotion is a crucial component of nursing education, equipping future nurses with the knowledge and skills to enhance well-being and prevent illness across diverse populations. However, the effectiveness of health promotion interventions specifically tailored for nursing students remains an area of ongoing inquiry. This systematic review aims to examine health promotion interventions designed for nursing students, focusing on their efficacy in advancing public health. Moreover, the review investigates factors influencing health promotion actions. An extensive search of electronic databases (PubMed, CINAHL, and Scopus) was conducted to identify relevant studies published within the last decade. The review included 49 studies that provided information on the methodologies, results, and impact of interventions on students' knowledge, attitudes, and behaviors regarding health promotion. The analysis revealed that effective health promotion interventions for nursing students prioritize individual perspectives, foster empowerment, integrate health and social strategies, and actively involve the community. These interventions enhance students' knowledge, attitudes, and behaviors towards health promotion, leading to improved communication, critical thinking, and cultural competence. The integration of technology and innovation is crucial for advancing health education, empowering students to adopt health-promoting behaviors and cater to their unique needs. The review highlights the criticality of incorporating health promotion principles into nursing curricula and providing students with the essential competencies to advocate for their own well-being. The findings highlight the need for further research to address the challenges of implementing effective health promotion interventions in nursing practice and to explore the long-term impact of these interventions on patient outcomes.

Keywords:

Health promotion, nursing students, education, curriculum, technology

Introduction:

A health-promoting lifestyle encompasses self-directed actions aimed at preventing chronic disease and cultivating health-promoting habits[1]. The six elements of health that contribute to improving well-being include accountability, physical exercise, food, relationships, spiritual development, and handling stress. The notion of health-promoting activities is essential in the field of nursing[2]. Nursing learners are additionally responsible for becoming role models in providing customers with guidance on health promotion, but they should also comprehend the importance of their respective health-promoting actions as role models for public health[3]. Nursing learners consistently acquire expertise in promoting wellness within the nursing program. Within the context of nursing education, it is anticipated that nursing learners would enhance their comprehension and expertise in health promotion as the nursing curriculum progresses[4]. Both nurses and pre-registered nurses exhibit unhealthy habits characterized by inadequate diet, smoking, drinking alcohol, and lack of physical activity[5]. Developing and implementing treatments to promote positive attitudes amongst prospective nurses may serve as a basis for sustaining health-promoting habits after they enter the nursing profession. Nursing learners, as prospective healthcare providers, have a significant responsibility in promoting public health for both themselves and others[6]. Nurses possess extensive information of the significance of health-promoting activities, and it is believed that nursing students additionally have enough understanding of the value of such actions. Nevertheless, the translation of information into practice is a challenging endeavor[7]. Consequently, several research are being undertaken to examine the characteristics that influence the health promotion actions of nursing learners, with the aim of improving their health promotion endeavors[8]. Factors influencing health promotion activities comprised marital situation perceived impairment, reported self-efficacy, considered social assistance, professional strain, as well as familial activities and health views[9]. Nevertheless, no clear measures were found to successfully enhance the health-promoting actions of nursing students. Health perceptions involve an individual's overall assessment of their health. Self-assessed well-being serves as an important indicator, reflecting the idea that personal views of one's health may offer valuable insights into their actual health status[10].

Several investigations have shown a correlation among individuals perceived current health condition and their engagement in health-promoting actions. People ex-

hibiting superior health status had a higher propensity for engaging in beneficial health activities[11,12]. whereas contrasting findings indicated that other people did not[7]. Health awareness denotes the degree of individual engagement in matters pertaining to health[13]. (Research on the correlation among health awareness and health-promoting activities in adults has shown that a greater degree of health awareness leads to improved perceptions of one's own medical condition and an increased degree of engagement in health-promoting behaviors[11,14]. The significance of health awareness in influencing health-promoting activities is well acknowledged. According to previous studies, it can be deduced that nursing learners' health views and concerns may be linked to their engagement in health-promoting practices[15,16]. Within the realm of nursing education, health promotion has a crucial position in the curriculum, as it equips students with the essential skills to advocate for health and avert diseases in their future professional endeavors. Comprehending the efficacy of health promotion activities among nursing students is essential to ensure that future nurses are prepared to meet the changing healthcare requirements of various populations[17]. This systematic review aims to synthesize the current evidence on health promotion interventions specifically designed for nursing students. The review will focus on evaluating the approaches used, the resulting effects on students' knowledge, attitudes, and behaviors, and the overall impact on their preparedness to promote public health.

Methodology:

Search Strategy:

To conduct this review research, an extensive search of 4274 articles was performed on electronic databases including PubMed, CINAHL, and Scopus. The aim was to discover relevant works that have been published in peer-reviewed journals. The search used a mix of restricted vocabulary (MeSH phrases) and keywords as search criteria. Some examples of search phrases include "health promotion," "nursing students," "health education," "wellness programs," and "disease prevention." The search was refined and appropriate results were ensured by using Boolean operators (AND, OR, NOT).

Inclusion Criteria:

The inclusion criteria consisted of research published within the last decade, written in the English language, and centered on health promotion strategies especially tailored for nursing students. The review included 49 studies that provided information on the methodology used, the results of the treatments, and the influence on the students' knowledge, attitudes, and be-

haviors about health promotion (Figure 1)

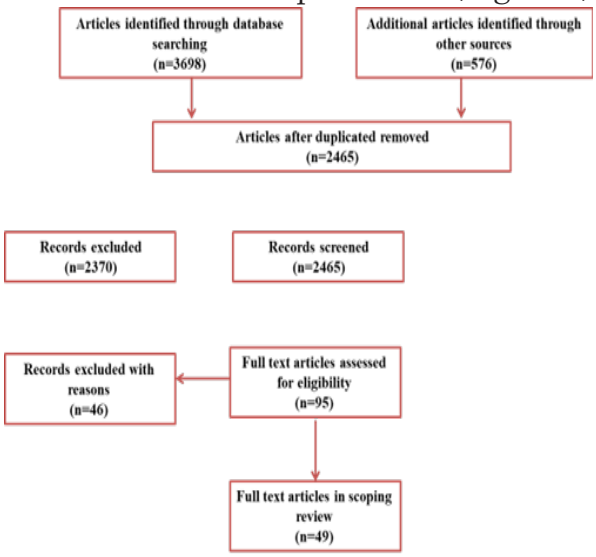


Figure 1. Flowchart of studies screened in this review.

Exclusion Criteria:

- Studies that do not specifically target nursing students, such as those focusing on general health promotion interventions or interventions aimed at other healthcare professions.
- Unpublished studies, such as dissertations, theses, and conference proceedings, that have not undergone peer review.
- Research using treatments that are not specifically aimed at promoting health, such as stress management programs that do not primarily concentrate on promoting good coping strategies.
- Studies that do not provide information on the methods used, specifics of the intervention, or the results of students in relation to their knowledge, attitudes, or actions about health promotion.

Selection Process:

Following the computerized search, any duplicate entries were eliminated. Two independent reviewers examined the titles and abstracts of the remaining publications to identify potentially relevant research, using pre-defined inclusion and exclusion criteria. Any conflicts among reviewers were handled via deliberation or by seeking input from a third reviewer. Both reviewers collected and reviewed the whole texts of the selected articles to determine their eligibility. The systematic review's ultimate selection of studies for inclusion was determined by thoroughly reviewing the methodology, intervention details, and reported results.

Data Extraction:

A standard data extraction form was created to gather pertinent information from the research that was included. The data that will be obtained will encompass:

- Key research attributes (e.g., author, year of publication, study design).
- Characteristics of participants, such as the size of the sample and the year of study in the nursing program.
- Provide a detailed account of the health promotion intervention, including the specific kind of intervention, its length, and the mode of delivery.
- The evaluated outcomes include knowledge on health promotion methods, attitudes towards healthy behaviors, and

self-reported health behaviors.

Data Analysis:

The results from the listed studies are analyzed and interpreted using a narrative synthesis technique. This study required condensing the main attributes of each research, the treatments carried out, and the documented results. If the available data allows, a meta-analysis was performed to statistically evaluate the efficacy of various health promotion methods for nursing students.

Quality Assessment:

The methodological quality of the studies included in the analysis was evaluated using a standardized critical appraisal technique that is suitable for the specific research type. The Cochrane Collaboration's tools for randomized controlled trials or a checklist for qualitative studies was used. This assessment facilitated the evaluation of the strengths and constraints of each research and contributes to the comprehensive interpretation of the results. The results of this comprehensive analysis were presented using the rules set by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA).

Results:

The analysis of 49 papers on health promotion strategies specifically designed for nursing students yielded some significant results (Table 1). These researches aimed to assess the methods used and consequent impacts of health promotion initiatives in nursing education. The perspective of the individual has been identified as the most influential factor in determining which health promotion approaches nursing students adopt.

Table 1. Characteristics of included studies:

Study Characteristic	Number of Studies (n=49)
Publication Year	
2006	1
2013-2017	21
2018-2022	27
Study Design	
Randomized Controlled Trial	13
Pre-Post Intervention	27
Qualitative	4
Mixed Methods	5
Country	
United States	14
Other Countries	35
Intervention Focus	
Nutrition/Physical Activity	16
Mental Health/Stress Management	12
General Health Promotion	21

Table 1 offer a comprehensive overview of the characteristics of the studies included in the systematic review, emphasizing the breadth of health promotion interventions targeted nursing students. In the past few years, there has been a rise in the focus and research interest in this topic, as the majority of the included studies (27 out of 49) were published in the more recent time period of 2018-2024, indicating that health promotion interventions for nursing students have been a topic of inquiry for

at least the past decade. Pre-post intervention, randomized controlled trials (RCTs) As well as qualitative studies were the most commonly used designs to assess the impact of health promotion interventions on nursing students. This indicates that health promotion in nursing education is a global concern as well as interest and significant subject. The interventions were categorized into three primary focal areas: nutrition/physical activity, mental health/ stress management, and general health promotion. This distribution implies that the studies included in the analysis addressed a variety of health promotion components that are pertinent to the well-being of nursing students and their future roles as health professionals. Nurses who implemented health promotion activities from an individual perspective exhibited a holistic approach by aiding families and individuals in making decisions concerning their health and encouraging their engagement in health promotion initiatives. Strategies implemented by nurses included the distribution of information to patients and the provision of health education. Nevertheless, patient engagement has largely focused on specific areas of healthcare, primarily allowing patients to make decisions about their clothing, daily routines, and dietary choices. Furthermore, in the realm of health promotion, empowerment, an essential notion, necessitates cooperation among communities, organizations, and individuals. Although empowerment has been acknowledged as a substantial theoretical foundation for health promotion initiatives, its integration into nursing practices has been observed to be deficient in effectiveness A further fundamental principle of health promotion approaches was identified as the integration of social and health strategies. It was recommended that nurses ground their health promotion endeavors in guidance provided by reputable organizations, including legislation and academic organizations, as well as the World Health Organization (WHO). Nevertheless, the research findings indicated that nurses possessed a restricted understanding of social and health policy documents and frequently neglected to integrate them into their clinical procedures. It was emphasized that community involvement is an essential component of health promotion. Nurses were motivated to implement health monitoring methodologies, foster collaborative alliances with other fields and organizations, and exhibit sensitivity and proficient communication skills when interacting with individuals of various cultural backgrounds. It appeared that the adoption of a health promotion strategy fostered greater collaboration between nurses and members

of the community, as evidenced by their participation in volunteer efforts and implementation of preventative and protective measures. Health promotion programs made a substantial scholarly contribution to the education of nursing students by enhancing their understanding of diverse domains including public health, disease prevention, health behavior theories, and evidence-based health promotion strategies. These programs furnished students with the knowledge required to advocate for health and disease prevention and increased their awareness of the significance of health promotion. The studies that were examined demonstrated that health promotion interventions had a beneficial impact on the attitudes and behaviors of nursing students. The students exhibited enhanced dispositions towards health promotion and their efforts to advocate for public health. In addition, they demonstrated improvements in their personal health through the adoption of healthier lifestyles and increased physical activity. Health promotion initiatives supported the growth of critical competencies in the nursing student body. Cultural competence, critical thinking, and communication proficiencies were all improved through these programs in the realm of health education and promotion. Nursing students acquired enhanced capabilities to interact with people of various cultural backgrounds, impart health education information, and arrive at well-informed choices concerning their personal well-being. In general, the results indicate that health promotion interventions specifically designed for nursing students yield favorable outcomes.

Table 2: Health Promotion Strategies and Interventions in Nursing Education:

Theme	Key Findings	References
Individualized Approach	Studies by Samarasinghe et al. (2010) and Povlsen & Borup (2011) highlight individual perspective as the main factor influencing health promotion approaches. Nurses using an individual approach demonstrated a holistic focus, aiding individuals/families in health decisions and promoting participation in health initiatives. - Strategies involved information dissemination and health education for patients, but patient engagement often focused on specific aspects of care (e.g., meal choice, daily routines, and clothing).	(Samarasinghe et al. 2010; Povlsen & Borup 2011; Hou 2014; Halse et al. 2014; Hildingh et al. 2015)
Empowerment	Empowerment, a core concept in health promotion, focuses on collaboration between nurses, patients, communities, and organizations. - Research suggests limited integration of empowerment principles into daily nursing practices.	(Baum & Fisher, 2014; McCormack & McCance, 2016)
Social and Health Integration	Integrating social and health strategies is fundamental. Nurses should base practices on guidance from reputable organizations. However, studies indicate limited understanding and application of social and health policy documents by nurses.	(Whitehead, 2011; WHO, legislation, academia; Dawkes, 2018)

Community Involvement	Community involvement is crucial for health promotion. Nurses should utilize health monitoring methods, collaborate interprofessionally, and demonstrate cultural sensitivity and communication skills. Health promotion strategies were found to foster collaboration between nurses and communities (e.g., volunteer efforts, preventative measures).	(Stanhope & Lancaster, 2015; AlSaleh, 2016)
Impact on Nursing Education	Research by Kemppainen et al. (2013) and Phillips (2019) suggests nursing education significantly influences health promotion behaviors of nursing students. - Integrating health promotion into nursing curricula is essential to equip students with the knowledge and skills to promote health and prevent disease.	(Kemppainen et al. 2013; Phillips 2019)

Nursing education may use effective health promotion techniques and interventions by delivering health education and information to patients, while participating in patient-specific health promotion activities, as they possess the necessary tools and knowledge to effectively advocate for health promotion and preventing illness[18,19]. Research indicates that nursing education may have a substantial influence on the health promotion behaviors of nursing students. Hence, it is essential to integrate health promotion into nursing education curriculum[20]. The primary determinant of health promotion approach was the individual's viewpoint, as shown by many studies[6,21]. Nurses who followed an individual perspective when guiding their health promotion activities demonstrated a comprehensive approach in their practice. They focused on assisting individuals or families in making health-related decisions and supporting people in their participation in health promotion actions using different tactics[22.23].

Empowerment, an often-cited idea in health promotion oriented, involves collaborating with individuals, organizations, and neighborhoods[24]. Despite the recognition of empowerment as a crucial theoretical basis for health promotion actions conducted by nurses, it was not effectively integrated into their actual health promotion practices[25]. The other prevalent characterizing principle of wellness approach was the integration of health and social strategy[26]. This research indicated that nurses should center their health promotion efforts on suggestions provided by authoritative sources such as the World Health Organization›s (WHO) agreements, statements, instructions, and guidelines from academic and legislative associations. Nevertheless, the research analyzed revealed that nurses lacked familiarity with social and health policy papers and failed to incorporate them into their nursing practices[27]. The final fundamental principle of health promotion approach was community engagement[28,29]. The studies revealed

that nurses have information about community-oriented health promotion. They were required to use health monitoring strategies, cooperative engagement with other professions and organizations, and demonstrate respect and effective communication with other cultures. Furthermore, adopting health promotion approach seems to foster closer collaboration between nurses and community members, such as engaging in volunteer activities and implementing steps to safeguard and avoid health issues.

Table 3: Impact of Health Promotion on Nursing Students:

Theme	Key Findings	References
Knowledge Acquisition	Health promotion programs enhance nursing students' knowledge in public health, disease prevention, health behavior theories, and evidence-based promotion strategies. Instructional methods like lectures, workshops, and hands-on experiences equip students with the knowledge to address diverse health needs.	(Nies & McEwen, 2014; Arnold, 2019; Van Horn et al., 2019)
Attitudes and Beliefs	Health promotion interventions positively influence student attitudes towards health promotion and disease prevention. Community outreach, service-learning, and clinical experiences foster social responsibility, cultural competency, and empathy for those facing health inequities. These experiences cultivate a commitment to health promotion and advocating for health equity in their future practice.	(Mahmoud et al., 2018; Hubner, 2021)
Competency Development	Health promotion programs enhance communication skills, critical thinking, and cultural competency in health education and promotion. Interactive teaching methods like role-playing and simulations equip students to effectively interact with diverse populations, deliver health information, and support informed health decisions. These skills are crucial for conveying health information, assessing health behaviors, and implementing personalized health promotion interventions.	(Zanchetta et al., 2013; Liu et al., 2018; Netto & Silva, 2018)
Preparation for Practice	Integrating health promotion principles into the curriculum and providing practical experiences prepares students to address the health promotion needs of patients and communities. Students develop skills to identify risk factors, advocate for healthy behaviors, and collaborate with teams to design comprehensive health promotion strategies. These skills allow graduates to integrate health promotion into their practice, ultimately improving patient outcomes and community health.	(Pender et al., 2006; Zanchetta et al., 2013; Chamberlain et al., 2016)
Personal Development	Health promotion programs contribute to student empowerment, self-efficacy, and confidence in promoting health and preventing illness. Participation in health promotion activities fosters a deeper understanding of social determinants of health, the impact of lifestyle choices, and the nursing profession's role in health advocacy. This personal growth strengthens a professional identity focused on promoting well-being and preventing illness.	(Clark & Kenaley, 2011; Wiggins, 2012)

The impact of health promotion initiatives on nursing students is an important topic of research since it directly impacts their future practice as healthcare providers. Health promotion interventions aim to provide nursing students with the required information, skills, and attitudes to promote wellness, avoid illnesses, and meet the varied health needs of people, families, and communities[30]. Nursing students› knowledge acquisition in a variety of areas pertaining to public health, illness prevention, health behavior theories, and evidence-based health promotion tactics is greatly influenced by health promotion programs[31]. Students get a thorough comprehension of the factors that influence health, the effects of lifestyle decisions on well-being, and the concepts of promoting health throughout one›s life via instructional lectures, interactive workshops, and hands-on learning experiences[32]. This knowledge provides nursing students with the comprehension required to meet the health requirements of various groups and give patient-centered care that emphasizes health promotion[33].The development of nursing students› attitudes and ideas toward health promotion and illness prevention is largely influenced by interventions related to health promotion[34]. Through participation in community outreach programs, service-learning projects, and clinical practice, students develop a strong sense of social responsibility, cultural competency, and empathy towards persons and communities that encounter health inequities.[35]. as well as improve their communication skills, critical thinking, and cultural competency in the framework of health education and promotion.[36]. By using interactive pedagogical approaches including role-playing, case studies, and simulations, students acquire proficient techniques for effectively interacting with various demographics, disseminating health education information, and enabling people to make well-informed choices about their well-being[37,38]. Through the incorporation of health promotion ideas into the nursing curriculum and provision of practical learning opportunities, these efforts provide students with the necessary skills to effectively meet the health promotion requirements of their future patients and communities[39]. Consequently, upon graduation, nursing students possess the essential skills and knowledge to include health promotion into their professional work, thereby enhancing patient outcomes and the general welfare of the community[40,41]. Health promotion programs significantly influence the personal development of nursing students, cultivating a strong feeling of empowerment, self-efficacy, and confidence in their capacity to promote health and avoid illnesses[42].

Through participation in health promotion activities, students acquire a more profound comprehension of the social determinants of health, the influence of lifestyle choices on well-being, and the nursing profession›s role in advocating for health justice[43]. Individual›s personal growth fosters the formation of a professional identity that revolves on advocating for comprehensive well-being and the avoidance of sickness, ultimately becoming an essential aspect of their nursing career[44].

Table4: Role of technology and innovation in health promotion education:

Theme	Key Findings	References
Importance of Technology	Technology and innovation are crucial for promoting health education among nursing students. Nurses need to stay updated on advancements in digital technologies and their impact on healthcare delivery.	(Booth et al., 2021)
Benefits of Digital Technology	Digital technologies offer various benefits for health promotion and education: Telehealth programs can effectively reduce hospital admissions by enabling remote monitoring and support for patients with chronic illnesses. Mobile health applications empower nurses to provide remote guidance on health management. Mobile devices and applications enhance nursing education by facilitating creative teaching methods and remote learning opportunities.	(Groom et al., 2021; Woods-Giscombe, 2021)
Personalized Learning	Nursing education should incorporate strategies that cater to individual needs and promote healthy behaviors among students. This includes considering factors like gender, health beliefs, and existing health conditions. Studies suggest that experiential learning approaches rooted in the nursing process can improve student health outcomes, especially for those with risk factors for chronic diseases.	(Kappes et al., 2023; Pérez-Rivas et al., 2023)
Theme	Key Findings	References
Knowledge Acquisition	Health promotion programs enhance nursing students' knowledge in public health, disease prevention, health behavior theories, and evidence-based promotion strategies. Instructional methods like lectures, workshops, and hands-on experiences equip students with the knowledge to address diverse health needs.	(Nies & McEwen, 2014; Arnold, 2019; Van Horn et al., 2019)
Attitudes and Beliefs	Health promotion interventions positively influence student attitudes towards health promotion and disease prevention. Community outreach, service-learning, and clinical experiences foster social responsibility, cultural competency, and empathy for those facing health inequities. These experiences cultivate a commitment to health promotion and advocating for health equity in their future practice.	(Mahmoud et al., 2018; Hubner, 2021)

Competency Development	Health promotion programs enhance communication skills, critical thinking, and cultural competency in health education and promotion. Interactive teaching methods like role-playing and simulations equip students to effectively interact with diverse populations, deliver health information, and support informed health decisions. These skills are crucial for conveying health information, assessing health behaviors, and implementing personalized health promotion interventions.	(Zanchetta et al., 2013; Liu et al., 2018; Netto & Silva, 2018)
Preparation for Practice	Integrating health promotion principles into the curriculum and providing practical experiences prepares students to address the health promotion needs of patients and communities. Students develop skills to identify risk factors, advocate for healthy behaviors, and collaborate with teams to design comprehensive health promotion strategies. These skills allow graduates to integrate health promotion into their practice, ultimately improving patient outcomes and community health.	(Pender et al., 2006; Zanchetta et al., 2013; Chamberlain et al., 2016)
Personal Development	Health promotion programs contribute to student empowerment, self-efficacy, and confidence in promoting health and preventing illness. Participation in health promotion activities fosters a deeper understanding of social determinants of health, the impact of lifestyle choices, and the nursing profession's role in health advocacy. This personal growth strengthens a professional identity focused on promoting well-being and preventing illness.	(Clark & Kenaley, 2011; Wiggins, 2012)

Technology and innovation are essential in promoting health education among nursing student[45]. Digital technologies are having a growing influence on nursing worldwide, and it is the job of nurses to stay updated with the fast-paced advancements in digital technologies and their effects on society. Utilizing digital technology enables the promotion of health and delivery of health education to patients. Telehealth programs, in which nurses provide daily monitoring, coaching, and triage to individuals with multiple chronic illnesses, have effectively decreased emergency department admissions[46]. Mobile devices, specifically smartphones and health applications, are empowering nurses to provide remote guidance on pain management to adolescent cancer patients. Additionally, they are enhancing nursing education by offering creative teaching methods for delivering content and facilitating remote learning opportunities[47]. Furthermore, nursing education should include initiatives that enable nursing students to engage in health-enhancing actions and cater to their distinct requirements, taking into account factors such as gender, health views, and health-related issues[48]. A research conducted in Spain discovered that implementing a learning approach centered on experiential learning and rooted in the use of the nurs-

ing process resulted in enhanced lifestyle outcomes for nursing students who exhibited risk factors for chronic ailments, such as tobacco use, obesity, or hypertension[49].

Studies revealed that technology and innovation have the potential to greatly enhance health promotion teaching in nursing. Telehealth programs and mobile health apps have the potential to improve patient care and provide chances for remote learning. In addition, integrating customized learning methodologies that specifically target the unique requirements of each student might enhance the efficacy of health promotion education.

Discussion:

Review research's findings regarding health promotion among nursing students offer significant contributions to the understanding of the present condition of health promotion education and its effects on students. The research underscores the significance of integrating health promotion strategies into the curriculum and training of nurses, in addition to highlighting the potential of technology to health education. Nursing students have a substantial obligation to advance public health, and their own health-promoting behaviors can serve as models for others. Nevertheless, the application of acquired knowledge in practical settings presents an obstacle, and nursing students must strive to enhance the efficacy of health promotion interventions. The results presented in this study align with the assertions made by Phillips in 2019, which suggest that health promotion initiatives improve students' cultural sensitivity, social responsibility, and empathy in order to better equip them for health education and interactions with patients. Additionally, these initiatives enhance students' critical thinking, communication, and cultural competency and significantly facilitating the distribution of health-related knowledge and advancing health education[20,45]. It was recommended that technological advancements be incorporated into nursing education in order to enhance student engagement and facilitate individualized learning experiences. Among the variables identified as having an impact on health promotion activities among nursing students are self-efficacy, social support, health perspectives, perceived impairment, and professional distress. However, there is a paucity of explicit strategies to improve health-promoting behaviors among this demographic. This indicates that additional research and interventions targeting these factors and enhancing nursing students' participation in health promotion behaviors are required. Furthermore, the review research emphasizes the importance of health consciousness in shaping behaviors that promote health. The results indicate

that by integrating health promotion into nursing curricula and equipping students with the necessary skills and knowledge to promote their own well-being and others, significant changes can be observed in their attitudes and behaviors. Multiple studies have emphasized the advantages of health promotion in nursing education, including reduced health disparities, enhanced professional competence, and improved health outcomes[19, 20]. These results are consistent with the current body of knowledge in the field.The implications for nursing education and practice are substantial in light of these findings. This emphasizes the necessity of all-encompassing health promotion initiatives that involve students in practical interventions in addition to imparting theoretical knowledge. Furthermore, the research underscores the significance of technology in the dissemination of health education and in advancing novel pedagogical methodologies. Nonetheless, there are some limitations to the review research. The investigation was confined to particular electronic databases, and solely scholarly articles that were published in English within the past decade were incorporated. This could have potentially led to the omission of pertinent research and data. Furthermore, the primary objective of the review was to assess the efficacy of health promotion intervention strategies in influencing the knowledge, attitudes, and behaviors of students. Additional investigation is required to evaluate the overall efficacy of health promotion education in nursing and the long-term effects of these interventions on patient outcomes. Subsequent investigations should additionally examine approaches to overcomes the complexities that arise when nursing students attempt to apply knowledge of health promotion in practice. It is crucial to establish interventions that are grounded in empirical evidence and successfully increase individuals' adherence to health-promoting behaviors. Furthermore, additional research can be conducted to explore the potential impact of technology and novel methodologies on the provision of health education and training for nursing students.

In summary, the results obtained from this comprehensive analysis make a valuable contribution to the current body of knowledge regarding health promotion for nursing students. This highlights the significance of integrating health promotion principles into nursing curricula, addressing determinants of health-promoting behavior, and employing technological advancements to facilitate effective training. The findings highlight the criticality of ongoing enhancements in health promotion education in order to equip nursing students with the abilities required to health

and well-being in their forthcoming vocational positions.

Future Directions and Recommendations:

It is vital to identify shortcomings in nursing student health promotion education in order to equip them with the knowledge and skills necessary to prevent and promote health and illness. Subsequent investigations should prioritize the identification of deficiencies in health promotion education for nursing students and the formulation of measures to rectify these deficiencies. This may include integrating inventive teaching methods for delivering educational material and providing remote learning options.

To guarantee that nursing students are adequately prepared to promote health and prevent illness, it is crucial to address the obstacles and difficulties that hinder successful health promotion. Subsequent investigations should prioritize the identification of obstacles and impediments to successful health promotion among nursing students, as well as the formulation of tactics to overcome these obstacles and impediments. This may include equipping nursing students with the essential information and abilities to advance health and avert illness, while also enabling them to engage in health-promoting actions. The implications of health promotion among nursing students have substantial consequences for policy, practice, and more study. Policymakers should contemplate integrating health promotion into nursing school curriculum and equipping nursing students with the requisite information and abilities to advocate for health and avert diseases. Nursing educators should contemplate integrating inventive teaching methods for conveying information and providing distant learning possibilities. Additional investigation is required to establish the deficiencies in health promotion education for nursing students and formulate tactics to rectify these deficiencies. Moreover, additional investigation is required to ascertain the obstacles and hindrances to successful health promotion among nursing students and devise tactics to overcome these obstacles and hindrances.

Conclusion:

In conclusion, this study offered unique perspectives on the field of health promotion in nursing education. The review emphasized the need of integrating health promotion techniques into nursing curriculum, with a focus on theoretical frameworks, practical applications, and the effects of health promotion activities on nursing students. The study has determined the efficacy of several health promotion initiatives aimed at nursing students, demonstrating their capacity to impact knowledge, attitudes, and behavioral modifications in

future nurses. Furthermore, the research highlighted the changing significance of technology and innovation in influencing health promotion education, providing novel opportunities for improved learning and training techniques. The review research has emphasized the crucial significance of health promotion in nursing education. Health promotion education plays a crucial role in training future nurses to handle the intricate health requirements of varied populations by providing nursing students with the necessary information and skills to promote wellness and avoid illness. Incorporating health promotion practices into nursing curriculum not only improves the skills and abilities of nursing students, but also supports the overall objective of promoting public health and well-being. Furthermore, the research has shown the wider significance of health promotion education, emphasizing its capacity to encourage a proactive stance towards healthcare, nurture a culture of well-being, and ultimately enhance health outcomes in communities. Ultimately, this evaluation research emphasizes the need for continuous and focused endeavors to prioritize and promote health initiatives within nursing education. The recognition of the profound influence of health promotion on nursing students, as well as its subsequent effects on patient care and community health, necessitates a strong need to integrate and improve health promotion tactics in nursing curriculum. Moreover, with the ongoing advancement of technology, it is essential to use inventive strategies in health promotion education. This involves using digital platforms, simulation tools, and interactive learning techniques to enhance the educational experience for nursing students. This research advocates for the allocation of resources and encouragement from educational institutions, legislators, and healthcare stakeholders to sustain health promotion activities. This will enable the next generation of nurses to actively promote and prioritize health and well-being in their professional endeavors.

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