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ORIGINAL RESEARCH

Perspectives of Eye Health Professionals on Integrating Health Promotion into Optometry Education in South Africa

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Purpose: The evolution of health promotion has greatly served as an essential function for equitable health improvement aimed at addressing social determinants to improve health outcomes. This study seeks to determine the perspectives of eye health professionals on the use of health promotion interventions for the prevention and early diagnosis of eye diseases, with a specific focus on their views regarding the integration of health promotion into optometry education in South Africa.

Methods: A quantitative cross-sectional study was conducted among 68 respondents employing a convenience sample. A self-administered questionnaire was distributed electronically to all respondents. Descriptive frequencies and percentages summarized categorical data, with bivariate comparisons using the chi-square test.

Results: The findings reveal a considerable disagreement among respondents regarding the integration and emphasis of health promotion within optometry education, with minimal agreement highlighting a perceived lack of opportunities to explore health promotion as a core component of the curriculum.

Conclusion: Integrating health promotion into optometry education is not only relevant but necessary for addressing the increasing opportunity to integrate health promotion to reduce preventable vision loss in South Africa, where public health needs are pressing. The lack of early and consistent exposure to health promotion, as well as the insufficient focus on policy-related education, highlights the need for a more integrated approach.

Keywords: disease prevention, professional training, public health education, optometry practice, curriculum development

Introduction

Health promotion is a foundational point in public health as it aims to empower and improve the well-being of the population, and enable individuals to manage their health effectively. Its successful implementation requires a wide spectrum of interventions that prevent diseases and promote healthy behaviours to broaden policy advocacy while ensuring equitable access to healthcare to address diverse population needs.[1] The evolution of health promotion has greatly served as an essential function for equitable health development aimed at addressing social determinants to improve health outcomes.[2] Health promotion is emphasized in the National Health Promotion Policy and Strategy as a multi-sectoral discipline that is essential to civil society, the public and corporate sectors, and even people who are not usually engaged in health.[3] The strategy also advocates for the use of health promotion in every sector and as part of the national development and public health agenda.[3] In recent years, the integration of health promotion into optometry education is increasingly recognized as essential for addressing preventable eye diseases. Unlike countries such as Australia, South Africa lacks a standardised accreditation framework that mandates health promotion integration in optometry curricula. Optometrists, as key providers of eye health services, are uniquely positioned to treat patients and empower them about preventive care, improving overall eye health outcomes.

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Health promotion in optometry education is both timely and necessary. According to the World Health Organization (WHO), nearly one billion of the 2.2 billion people estimated to have vision impairment could have been prevented if their ocular conditions were identified early.[4] In 2022, the WHO introduced the Eye Care Competency Framework to address some of the global challenges within the eye care workforce. This framework was developed as a competency-based guide to establish standardized global benchmarks for workforce development clinical practice. This continuum of optometric care would encompass practices across primary, secondary, and tertiary care levels.[5] The World Council of Optometry (WCO) further developed the global competency-based model optometry scope, which underscores the pivotal role that health promotion can be utilized by optometrists in the prevention and management of eye diseases.[6] Comparatively, a holistic approach to eye care, which includes educational and preventative strategies, is highlighted in the WHO's Report on Vision.[4]

Health promotion education capacitates optometrists with skills to advocate for modifiable risk factors such as lack of physical activity, poor nutrition and smoking which are associated with the risk of onset and progression of eye diseases and other chronic diseases.[7,8] This is pertinent in the context of non-communicable diseases (NCDs); major contributors to the global burden of diseases; especially in low- to middle-income countries.[9] In South Africa, where NCDs are on the rise, a significant 76% of optometrists expressed the need for expanded educational programs, particularly in areas like ocular disease, which can directly relate to NCDs.[10]

The integration of health promotion in the healthcare system has enhanced competency among health professionals in addressing complex health challenges.[11] A European study conducted on educational programs of health professionals reported 81% implementation of health promotion programs in their multidisciplinary approaches.[12] This has further been evident in hospitals that adopted health promotion approaches reporting to be more adaptable to change and capable of handling challenges leading to better health outcomes.[13] It is possible to achieve similar results in optometry, where health promotion trained professionals can significantly lower the prevalence of avoidable eye conditions and enhance patients' quality of life.

Health promotion, which includes strategies such as education, persuasion, and creating supportive environments for healthy choices, is an organized process that can be used to encourage patients to adopt healthier behaviours.[14] In optometry, this encompasses patient education, engaging patient accessibility to eye care in underserved population and integrating the impact of lifestyle choices on eye health into routine care.[15–17] The WCO emphasizes the vital role that optometrists play in promoting health and preventing disease, especially as they are frequently the first in contact with patients reporting on vision problems.[6] This multifaceted responsibility includes clinical care, patient education, and community health initiatives.[18] The benefits of eye health promotion are evident in fostering a holistic approach to eye care, emphasizing prevention and overall health in initiatives such as the elimination of Onchocercias, and scaling up of the safe strategy for trachoma control.[19–21]

In South Africa, there is still little incorporation of health promotion into optometry education, despite its acknowledged advantages. The clinical components of eye care are the main focus of optometrists' current training programs, with little attention paid to health promotion strategies. This study seeks to determine the perspectives of eye health professionals on the use of health promotion interventions for the prevention and early diagnosis of eye diseases, with a specific focus on their views regarding the integration of health promotion into optometry education in South Africa. The significance of this study lies in its potential to transform optometry practice in South Africa by incorporating preventive care into the training of aspiring optometrists. Furthermore, by following the guidelines provided by the WCO Competency Framework and other international models of healthcare education, South Africa's optometry training programs would be globally competitive while addressing the needs of communities.

There is growing awareness that health promotion should be embedded within optometric education in the prevention of eye diseases. Our previous research has explored the implementation of eye care health promotion interventions from the perspective of key informants within the eye health sector.[22] However, limited attention has been given to how these principles are embedded within optometry education. This study builds on the work done previously and provides a novel perspective for South Africa by focusing on the role of eye health professionals in embedding health promotion principles into the training of future optometrists, addressing gaps in optometry health curriculum framework and its impact on public health outcomes.

Methods

Study Design and Respondents

A quantitative cross-sectional study was conducted in Limpopo, a rural province of South Africa, in June and July 2024. Purposive sampling was employed where all optometrists working for the Department of Health in Limpopo's district, regional, and provincial hospitals were invited to participate in the study. There were 93 optometrists in the province at the time of the study, distributed throughout the province's hospitals. Respondents worked in a variety of clinical settings, and directly delivered interventions to promote eye health. Twenty-five of the 93 optometrists were unavailable as they were on annual or sick leave. Consequently, 68 respondents made up the study's final sample size, resulting in a 73.1% response rate. Respondents were asked to respond to questions depicting how they felt about the inclusion of health promotion instruction in optometry education.

Data Collection

Through correspondence with a district eye coordinator in each district, study respondents were invited to take part. Prior to data collection, the invitation to participate was sent out together with an information letter, and on the day of data collection, informed consent forms were signed. Anonymity and confidentiality were maintained during the study, and participation was entirely voluntary. A self-administered questionnaire, written in English was used for the study. The researcher gained insight into the individuals' demographical information by collecting sociodemographic variables in the first section. This section inquired about respondents' age, gender, religion, marital status, highest level of qualification, population frequently worked with, district, and work experience in the public sector. Eight statements were included in the second section of the questionnaire to determine respondents' opinions on health promotion education. Each statement had a 5-point Likert scale, with the categories ranging from "Strongly Disagree" to "Strongly Agree".

The questionnaire was developed based on an extensive review of the existing literature related to health professions core competencies in optometry, the Ottawa Charter for health promotion and Jerome Bruner's Spiral Curriculum Theory.[6,23,24] The questionnaire was contextualized with input from experts in optometry teaching and learning, as well as health promotion education. The questionnaire was digitized and administered in an electronic format using Microsoft forms to facilitate ease of distribution. The questionnaire was originally piloted among 10 public sector optometrists in different provinces. All the feedback received from the pilot study was used to amend and finalize the survey tool for distribution to the target population. The question numbering was not altered, with minor edits made to improve clarity for respondents. Data from the pilot group did not form part of the final analysis.

Data Analysis

All raw data were exported from the Microsoft Forms application to MS Excel. Data were cleaned, coded and stored in a password protected file on the research and main supervisor's computers. All data were analyzed using SPSS (version 29). Descriptive frequencies and percentages were used to summarize categorical data. Bivariate comparisons between overall perspectives and age were performed using the chi-square test for the categorical variables (gender and level of education). The level of significance was set at ($p = 0.05$).

Ethics Approval

The Declaration of Helsinki was followed in the conduct of this investigation. Both the Limpopo Province Department of Health Ethics Committee (LP_2024-03-010) and the University of KwaZulu-Natal Biomedical Research Ethics Committee (BREC/00006067/2023) provided their ethical approval. Permissions were granted by facility heads overseeing public optometry services. In order to participate in the study, respondents provided their informed consent. Data confidentiality and response privacy were rigorously upheld throughout the study.

Results

Sixty-eight optometrists participated in the study, recruited from the five (5) districts of Limpopo Province in South Africa. Respondents were predominantly females (61.8%; n = 42) aged 31–40 years of age (64.7%; n = 44). Most respondents (98.5%,

n = 67) obtained their undergraduate optometry degree from the University of Limpopo, and 83.8%, n = 57 held a Bachelor of Optometry degree as their highest qualification. Of the 11 Optometrists who completed additional qualifications beyond a Bachelor of optometry 7.4%; n = 5) had a master's degree. In terms of professional experience, 35.3%, n = 24 had practiced for 9–12 years, and 41.2%, n = 28 had worked in the public sector for 11–15 years. The majority (69.1%, n = 47) of the respondents have worked in the public sector for over 10 years. Table 1 presents the demographic distribution of the study respondents.

Perspectives on HP Education

Figure 1 shows the responses on perspectives on HP education among the respondents. Data showed mixed perspectives on how HP education had been integrated into their optometry training. While only 1.5%, n = 1 of respondents strongly agreed that their training offered numerous opportunities to explore HP, 47.1%, n = 32 disagreed, indicating that opportunities occurred but were not collectively recognized. Conversely, 25.0%, n = 17 strongly disagreed, highlighting

Table 1 Socio-Demographic Distribution of the Study Respondents

Characteristics		**n (%)**
Gender	Male	26 (38.2)
	Female	42 (61.8)
Age	31-40	44 (64.7)
	41-50	22 (32.4)
	51-60	2 (2.9)
Marital Status	Common law partner	1 (1.5)
	Divorced	6 (8.8)
	Married	30 (44.1)
	Single	31 (45.6)
Undergraduate Optometry Degree	University of Johannesburg	1 (1.5)
	University of Limpop	67 (98.5)
Highest Qualification	Bachelor of Optometry	57 (83.8)
	Post-Graduate Diploma	5 (7.4)
	Master's Degree	5 (7.4)
	Doctorate/PhD	1 (1.5)
Years of Practice in the Profession	5-8 years	5 (7.4)
	9-12 years	24 (35.3)
	13-16 years	21 (30.9)
	17-20 years	9 (13.2)
	21 years and above	9 (13.2)
Duration in Public Sector	6-10 years	21 (30.9)
	11-15 years	28 (41.2)
	15-20 years	17 (25.0)
	21 years and above	2 (2.9)

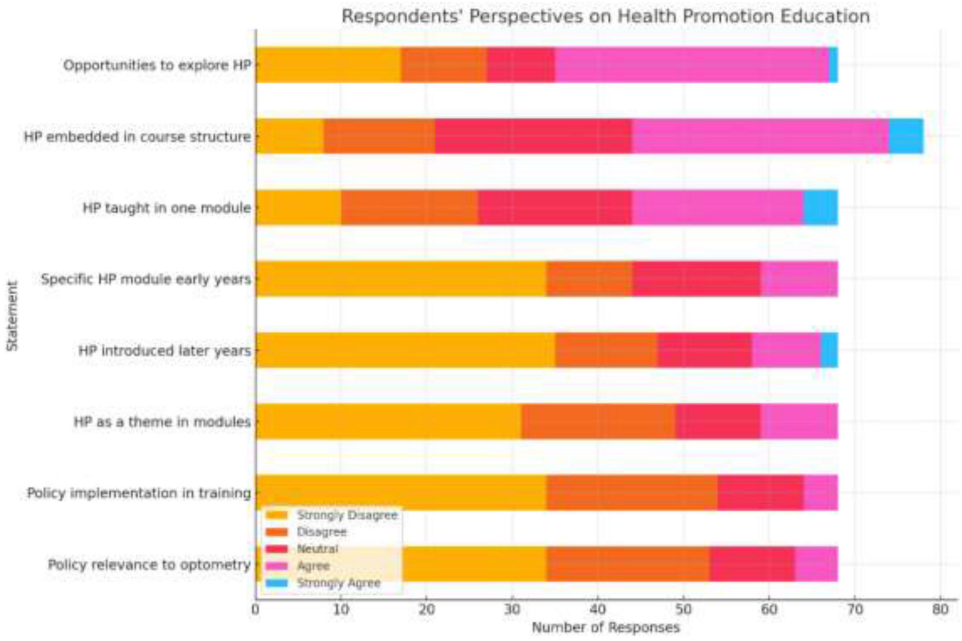

Figure 1 Responses on perspectives on health promotion education among the respondents.

gaps in perceived opportunities. About 44.1%, n = 30 of respondents disagreed that HP was well embedded within the course structure, though a considerable portion (33.8%, n = 23) remained neutral. About 11.8%, n = 8 strongly disagreed, suggesting inconsistent integration across programs. Nearly 5.9%, n = 4 strongly agreed that HP was primarily taught in one module, while 29.4%, n = 20 disagreed. A notable proportion (23.5%, n = 16) agreed, suggesting variation in the structure of HP education across the curriculum. None of the respondents strongly agreed, and 50.0%, n = 34 strongly disagreed that there was a specific HP module in the first or second year. This response reflects a lack of early emphasis on HP education in training. In this study, the term "module" refers to a distinct unit of study within the optometry curriculum that focuses on specific health promotion themes or competencies.

A similar pattern was observed in the later years, with 51.5%, n = 35 strongly disagreeing that HP was introduced as a distinct module in the third or fourth year, and only 33.8%, n = 23 agreeing. Only 42.6%, n = 30 of respondents disagreed that HP was a clearly defined theme within key modules, while a significant 45.6%, n = 31 strongly agreed, further underscoring the fragmented approach to HP education. In consideration of policy implementation in optometry, 50.0%, n = 34 of respondents strongly disagreed that there was careful consideration of policy implementation/guidelines within their training, and 45.6%, n = 31 disagreed. None of the respondents strongly agreed or disagreed, showing broad dissatisfaction. Similarly, 50.0%, n = 34 strongly disagreed, and 42.6%, n = 30 disagreed that their training explored how policy relates to optometry practice. This reflects a substantial gap in policy-related education.

The overall perspectives on health promotion education among respondents highlights that most expressed disagreement or strong disagreement with the integration of HP in their training, as seen in the dominance of the "disagree" and "strongly disagree" responses across most statements. (Figure 2) Furthermore, the majority strongly disagreed that specific HP modules were introduced in the first or later years of study or that HP was offered as a clearly defined theme. Similarly, there was significant disagreement regarding the careful consideration of policy implementation or its relevance to optometry practice. Conversely, agreement and strong agreement were minimal, indicating limited satisfaction with the opportunities to explore HP or its embedding within the course structure. The pattern reveals a consistent perception of insufficient emphasis on HP education in the optometry curriculum.

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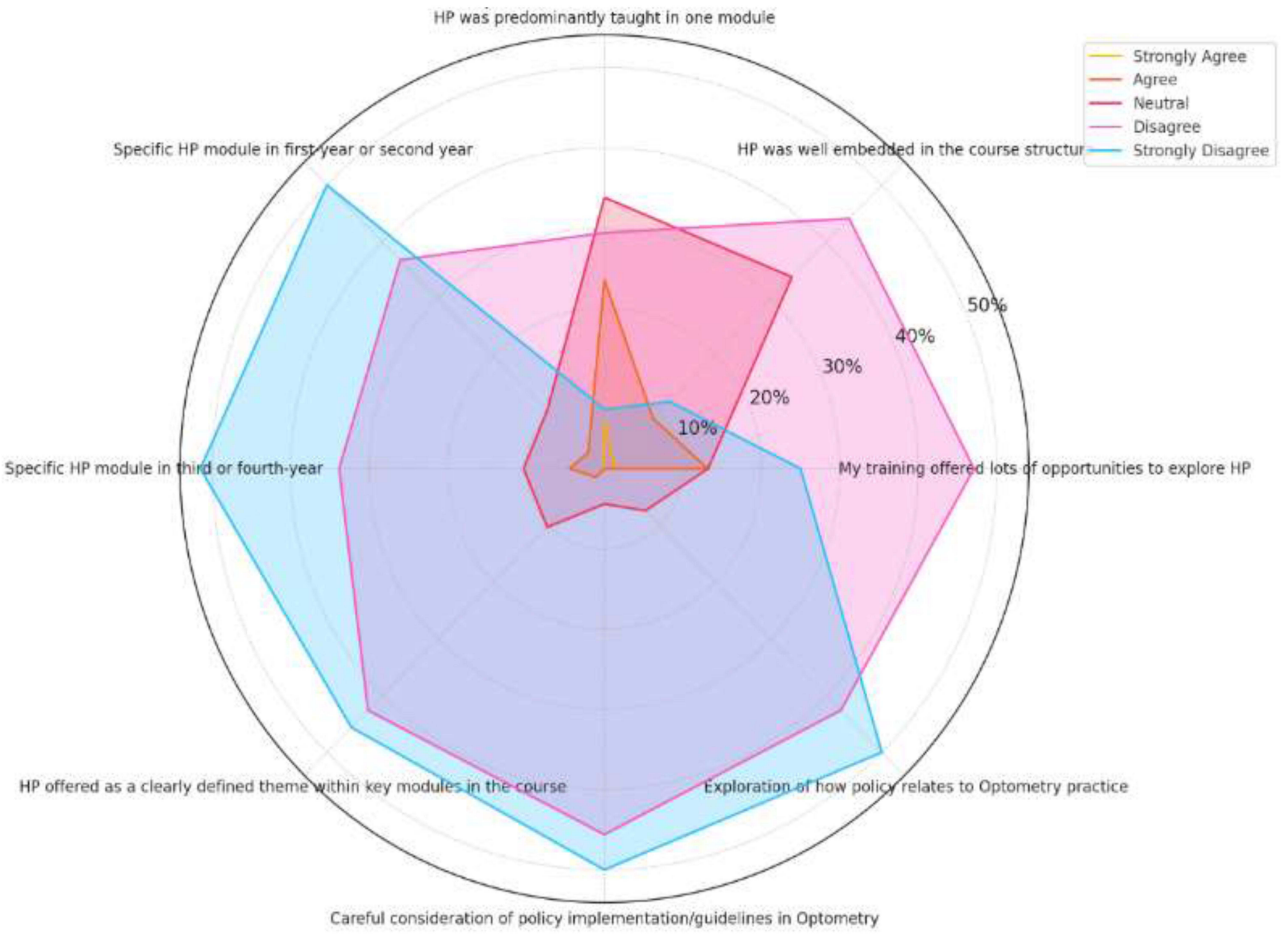

Figure 2 Overall perspectives on health promotion education among respondents.

Discussion

The study explored the perspectives of eye health professionals on the clinical relevance of integrating health promotion into optometry training. The results of this study revealed mixed perspectives on the integration of health promotion education within optometry training which provide valuable insight on the strengths and gaps in the current curriculum. The results further highlighted the overall positive views held by respondents on the integration of health promotion education in the training of optometrists in South Africa. The data showed a notable association between certain sociodemographic characteristics and perception of health promotion training.

The integration of health promotion education within curricula varies significantly across institutions, as evidenced by the 44.1% agreement on its embedding and the notable 33.8% neutrality among respondents. Comparing these findings to previous studies, there is a recurrent theme in the disparities in health promotion training among health professionals. A study by Bodner et al (2013) found significant disparities in the inclusion and teaching methods of health promotion in 258 programs in six countries, indicating a lack of uniformity in training.[25] Although earlier studies have highlighted disparities in health promotion training across institutions, the current study primarily reflects the experiences of graduates from a single university. As such, while respondents reported inconsistencies in training, the findings should be interpreted within the context of this limited institutional representation. A notable proportion of respondents felt that their undergraduate training did not provide sufficient opportunities to explore health promotion. The perception that health promotion is not sufficiently prioritized in optometry training is supported by various studies. While 88% of optometrists in a related study expressed the need for expanded educational qualifications, this was not specifically in relation to health promotion. However, this trend suggests a broader recognition of gaps in current optometry training

programs and highlights the opportunity to strengthen areas such as health promotion.[10] Moreover, the gap between theoretical understanding and real-world application implies that health promotion concepts are not given enough attention in the curriculum, which will leave future practitioners ill-prepared.[26]

This study showed that many respondents felt that health promotion in optometry was not adequately emphasized in their training, with 45.6% believing it to be a poorly defined key module and 50% strongly disagreeing that it was presented as a separate module. This is also evident in a study conducted in South African physiotherapy programs where weighting of health promotion content varied significantly with only 12% to 40% integration across universities.[27] While this refers to the credit allocation given to health promotion rather than its integration per se, it nonetheless highlights inconsistencies in how health promotion is prioritized in health sciences education. The complexity of health behaviours and demographics is highlighted by significant association perspectives on health promotion and variables such as marital status, undergraduate institution and highest qualification. While the influence of marital status on health behaviors has been documented in previous research, its connection to perceptions of health promotion education may be more nuanced. Similar studies that suggest marital status significantly affects health promoting behaviours, with married individuals often exhibiting different health responsibilities and nutrition practices compared to single individuals.[28]

The association between highest qualifications and health promotion perspectives is significant, particularly among health professionals. These associations, while not establishing causation, suggest that both personal and educational experiences shape how health promotion is valued in professional practice and underscore the importance of considering diverse educational and experiential backgrounds when evaluating curriculum effectiveness. Research indicates that those with advanced degrees are more likely to identify gaps in their training and advocate for improvements in health promotion curricula which concurred with our findings.[29] Our data partially supported the hypothesis that the perspectives on health promotion education would be influenced by demographic characteristics such as age, gender, and educational background. Despite no significant association being found with gender or age, marital status, highest qualification, and undergraduate institution played a significant role in shaping perspectives.

While this study provides valuable insights into optometrists' perspectives on health promotion education from various districts, several limitations should be noted. Firstly, the study sample predominantly consisted of graduates from a single institution, limiting the generalizability of findings across the broader optometry education landscape in South Africa. Secondly, the perspectives captured were those of practicing professionals and did not include the views of educators or curriculum experts, whose input would offer a more objective evaluation of curriculum content and mapping. Thirdly, the year of graduation was not captured, which may have affected the accuracy of participants' recall, as curricula are subject to change over time. It is probable that more recent graduates may have had greater exposure to health promotion content than those who trained earlier. Fourthly, It is also important to consider that the over 35% of respondents had more than a 12 years of experience in the profession. This may influence their perspectives, as their reflections on undergraduate training are likely filtered through years of clinical exposure and evolving public health expectations. Finally, the questionnaire did not provide examples or definitions of what constitutes health promotion in the context of optometry education. This may have led to varied interpretations among respondents, especially those without formal academic training in public health or health promotion, and should be considered when interpreting the results.

Recommendations for Future Research

Future research should investigate the effectiveness of different educational approaches in delivering health promotion training and explore ways to incorporate policy related education into curricula. Strengthening health promotion education in optometry should actively involve curriculum developers and educators. Additionally, expanding the sample size and including optometry students currently in training could provide more comprehensive insights into the evolving nature of health promotion education in optometry.

Conclusion

Integrating health promotion into optometry education is relevant and necessary for addressing the growing burden of preventable eye diseases in South Africa, where public health needs are pressing. Among the population under study, optometrists felt underprepared in areas critical to promoting public health and engaging with broader health systems through

health promotion. The lack of early and consistent exposure to health promotion, as well as the insufficient focus on policy-related education, highlights the need for an integrated approach. Addressing these gaps could help improve the preparedness of optometrists to promote public health and align with global health priorities.

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Disclosure

The authors report no conflicts of interest in this work.

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