Journal of Public Health Sciences
Vol. 4, No. 03, pp. 421-439
journal.iistr.org/index.php/JPHS
DOI: 10.56741/IISTR.jphs.001261

Analysis of Health-Seeking Behavior for Non-communicable Diseases: a Literature Review

[1]Lu'lu Luthfiatun Ulinnuha, [2]Titih Huriah*
Corresponding Author: * titih.huriah@umy.ac.id
[1] Master of Nursing Postgraduate Program, Universitas Muhammadiyah Yogyakarta, Indonesia
[2] Community Nursing Department, Universitas Muhammadiyah Yogyakarta, Indonesia

ARTICLE INFO

Article history
Received 17 July 2025
Revised 17 October 2025
Accepted 01 November 2025

ABSTRACT

People's behavior in seeking health care is an important first step in preventing and controlling non-communicable diseases (NCDs). Non-communicable diseases account for 43 million deaths globally, with 82% of these premature deaths occurring in low- and middle-income countries. Therefore, this literature review aims to explore patterns of health-seeking behavior and the factors that influence them worldwide. This research employed a literature review method, with data searches conducted through Emerald Insight, PubMed, and Scopus, following the PRISMA protocol guidelines for literature reviews. The keywords used in the search strategy were "health-seeking behavior" and "non-communicable disease" combined using Boolean operators AND and OR. Seven international articles published between 2019 and 2024 met the inclusion and exclusion criteria. The findings of this research indicate that health-seeking behavior for non-communicable diseases varies significantly across countries, with a preference for traditional medicine remaining prevalent. Social, cultural, economic, and health services access factors influence this preference. Policymakers and relevant stakeholders should encourage promoting health-seeking behavior, expanding health insurance coverage, and strengthening healthcare infrastructure.

Keywords
Behavior
Health-Seeking
Non-communicable Diseases

This is an open-access article under the CC–BY-SA license.

Introduction

Non–communicable diseases (NCDs) are illnesses that do not result from infectious agents like bacteria, viruses, or parasites. Instead, these diseases are driven by non-infectious factors, typically linked to genetics, lifestyle choices, and environmental conditions [1]. Non–communicable diseases often develop slowly and gradually over a long period, eventually becoming chronic conditions such as cardiovascular disease, cancer, and chronic obstructive pulmonary disease [1]. The global prevalence of non-communicable diseases has risen markedly over the past few decades, influenced by factors such as urbanization, poor dietary habits, physical inactivity, tobacco consumption, excessive alcohol intake, air pollution, and chemical exposure. This situation is further worsened by inadequate health–seeking behavior [1].

The World Health Organization (WHO) reported that in 2021, non-communicable diseases were the cause of death for 43 million people, accounting for 75% of total global deaths [2]. Among these cases, around 18 million individuals succumb to non-communicable diseases before the age of 70, with 82% of these early fatalities occurring in low- and middle-income nations [2]. The WHO also noted that the death rate due to non-communicable diseases in the Europe region reached approximately 90%, which is higher than in Asia (75%) and the Americas (65%)[2]. It is estimated that by 2030, the number of annual deaths due to non-communicable diseases will increase to 52 million, an increase of 9 million from the current 43 million [2].

Tackling non-communicable diseases is a significant focus of the 2030 Sustainable Development Goals, especially Goal 3, which promotes healthy and fulfilling lives [3]. Prevention and management of NCDs require prompt and effective action through early identification of symptoms, medical treatment, and ongoing care [4]. Success in managing non-communicable diseases is currently strongly influenced by health–seeking behavior. This behavior is any action taken by an individual who believes they have a health problem or are sick to see appropriate treatment [5], [6]. In society, particularly in developing countries, health–seeking behavior exhibits significant diversity [4]. In Indonesia, the government uses the POSBINDU (Pos Pembinaan Terpadu) model as a means of early detection of risk factors for communicable diseases, such as cardiovascular disease, diabetes mellitus, cancer, and chronic obstructive pulmonary disease, by providing routine examinations and community–level health education [7], [8].

The POSBINDU model supports health–seeking behavior in individuals with NCDs because it provides access to early detection within the community, helps raise awareness about the importance of managing risk factors, and encourages individuals to be more

proactive in monitoring their health independently [8]. POSBINDU's success demonstrates that this community–based model is worth emulating by other countries in addressing the challenges of managing global non-communicable diseases [9]. Various studies show that many individuals with non-communicable diseases fail to seek appropriate health services, which can lead to delays in diagnosis, treatment, and complications [10]. This behavior is influenced by various factors, including social, cultural, and economic factors and access to health services [11]. These factors can worsen the patient's condition, increase the likelihood of complications, and potentially lead to premature death [11].

There is limited research worldwide on health–seeking behavior for non-communicable diseases. Although several studies have explored this behavior, most have focused on specific populations, resulting in fragmented findings. A comprehensive literature review is needed to understand the global patterns of health–seeking behavior and the factors that influence it in patients with non-communicable diseases. Therefore, this analysis aims to review various studies on health–seeking behavior in such patients. This study highlights the global patterns of these behaviors and the factors that shape them. By compiling existing evidence, it is hoped that this research can provide strategic insights for policymakers and healthcare providers in designing evidence-based intervention programs to mitigate the impact of non-communicable diseases.

Material And Methods

A. Search Strategies

This study employed a literature review. The review process was conducted through four key stages: (a) designing the study, which involved identifying the research topic and defining the objectives, scope, and research questions; (b) conducting the review, which included systematically searching for relevant studies using predefined keywords and inclusion criteria. The selection process began with screening the titles and abstracts, followed by a complete–text assessment to determine the final eligible studies; (c) analyzing and synthesizing the data in line with the research objectives; and (d) writing and reporting the findings in accordance with the preferred reporting items for PRISMA guidelines [12].

Researchers conducted the data collection process in December 2024. The data search was systematically carried out using databases and search engines such as Emerald Insight, PubMed, and Scopus, following the PRISMA protocol guidelines for systematic reviews. The keywords used in the search strategy were "health–seeking behavior" and "non-communicable diseases", combined with Boolean operators AND and OR. Additionally, a

manual search of relevant literature was performed to ensure that important studies not indexed in the aforementioned databases were included. See Table 1 for a complete list of search terms used.

B. Quality Appraisal and risk of bias assessment

All selected studies underwent a quality appraisal using appropriate critical appraisal tools according to study design, such as the Joanna Briggs Institute (JBI) critical appraisal checklist. Two independent reviewers assessed the methodological rigor and potential risk of bias, including sampling strategy, data collection methods, and analytical accuracy. Any reviewer discrepancies were resolved through discussion and consensus to ensure objectivity and reliability.

C. Data synthesis strategy

Data extracted from the included studies were organized and analyzed using a narrative synthesis approach, which allowed for thematic comparison and integration of findings across different studies. Key outcomes were summarized to identify patterns, similarities, and research gaps related to health–seeking behavior for non-communicable diseases.

Table 1. Literature search.

Data Base	Keyword	Filters	Results
Emerald Insight	Non-communicable Diseases OR Communicable Diseases OR Non-communicable Disease OR Disease, Communicable OR Communicable Disease OR Non-communicable Disease AND Health Seeking Behavior OR Health Care Seeking Behavior	From 2019 to 2024 Article	45
Pubmed	"Noncommunicable Diseases"[Mesh Terms] OR Non-Communicable Diseases [Text Word] AND Health Seeking Behavior [Mesh Terms]	5 Years	27
Scopus	(TITLE-ABS-KEY ("Non-communicable Diseases") OR TITLE-ABS-KEY ("Non-communicable Diseases") OR TITLE-ABS-KEY ("Non-communicable Disease") OR TITLE-ABS-KEY ("Disease, Non-communicable") OR TITLE-ABS-KEY ("Non-communicable Disease") OR TITLE-ABS-KEY ("Non-communicable Disease") AND TITLE-ABS-KEY ("Health Seeking Behavior") OR TITLE-ABS-KEY ("Health Care Seeking Behavior") AND PUBYEAR > 2018 AND PUBYEAR < 2025	2019 – 2024	62

D. Figures and Tables: Inclusion and Exclusion Criteria

Titles and abstracts were screened independently to determine their relevance to this literature review. Subsequently, the remaining articles were reviewed in full text based on the inclusion and exclusion criteria. The inclusion criteria used to select studies for this literature review were as follows:

1. Population: Individuals with non-communicable diseases, aged >18 years (young adults, adults, and elderly).
2. Research Design: Quantitative and qualitative studies.
3. Results: Factors influencing health-seeking behavior for non-communicable diseases.
4. Publication Criteria: Articles published in English between 2019 and 2024.

The exclusion criteria were as follows:

1. Duplicate articles.
2. Review articles.

E. Data Extraction

Data will be extracted from the previously selected articles. The information gathered will include the following:

1. The population studied was research subject.
2. The type of intervention implemented.
3. The control variables utilized.
4. The research design employed.
5. The conclusions are drawn from the research findings.

Results and Discussions

The search yielded 134 articles from three databases: Emerald Insight (45 articles), PubMed (27 articles), and Scopus (62 articles). The initial stage involved identifying and removing duplicate entries, excluding 10 articles, leaving 124. Subsequently, articles were screened for relevance to the research objectives by reviewing their titles and abstracts. During this process, 101 articles were excluded for not meeting the inclusion criteria, leaving 23 articles for further evaluation. The next step involved full-text screening of the remaining articles, which led to excluding 16 articles that did not meet the eligibility criteria. Consequently, seven articles met all the requirements. A critical assessment was conducted to ensure their quality, and these seven articles were included in the review. For more details, refer to Figure 1.

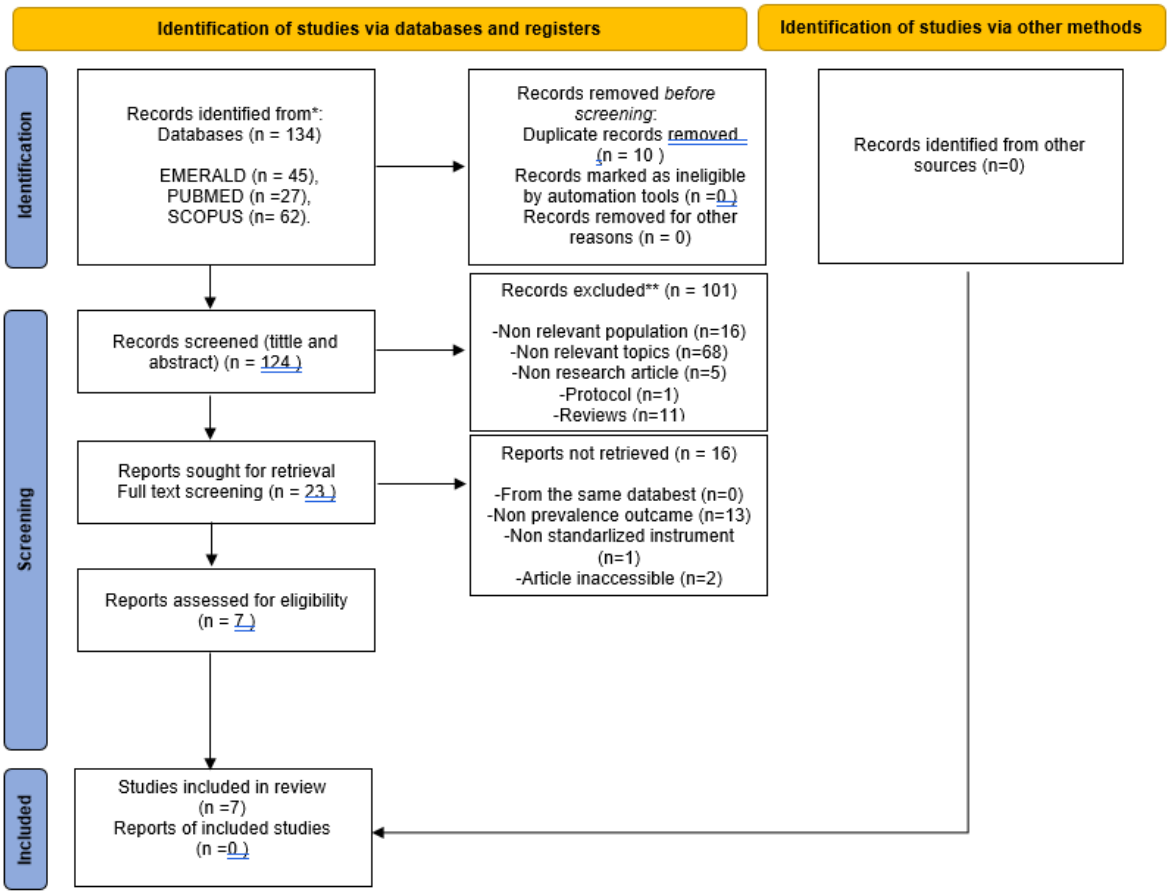


Fig.1. PRISMA flowchart for study selection process

A. Characteristics of Studies Included in the Literature Review

The selected articles were analyzed based on their content, which includes details such as the Author's name, publication year, research title, objectives, research design, population, instruments, location/country, and research findings. A detailed explanation is provided in Table 2. This literature review includes seven journal articles, with studies conducted in various developing and low- to middle-income countries, specifically:

1. KwaZulu–Natal (Southern Africa, Africa)
2. Sierra Leone (Western Africa, Africa)
3. Albania (Southeastern Europe)
4. Thua Thien Hue (Vietnam, Southeast Asia)
5. Delhi (India, South Asia)
6. Rangpur (Bangladesh, South Asia)

Among the seven included articles, four employed a quantitative approach with a cross–sectional design, while the remaining three utilized a qualitative approach. The primary

aim of these studies was to explore health-seeking behavior among individuals with non-communicable diseases. The findings provide insights into the patterns of health–seeking behavior and the factors influencing such behavior. A mind map is provided in Figure 2.

Table 2. Characteristics of studies

No.	Author/Year	Title	Purpose	Research Design, Population, and Instrument	Setting	Outcome
1.	Herbert Chikufu, Innocent Thinashe Mutero, And Moses John Chimbari (2022)	"If I were to suffer a stroke right now, the first place that I should be taken to is the traditional healer": community beliefs and health-seeking practices for non-communicable diseases in rural KwaZulu-Natal, South Africa.	To explore awareness, beliefs, and health-seeking behavior related to chronic non-communicable diseases, especially hypertension, diabetes, and cardiovascular disease.	Research design: Qualitative study, ethnography, and Focus Group Discussion (FGD) method. Population: 76 respondents divided into eight FGDs, categorized by gender (men and women) and age groups (young adults, adults, and the elderly), from the rural community of Ingwavuma, Umkhanyakude District, KwaZulu-Natal, South Africa. Instrument: The FGD guide was pretested.	In the rural community of Ingwavuma, Umkhanyakude District, KwaZulu-Natal, South Africa.	Limited awareness of non-communicable diseases: The public has a limited understanding of non-communicable diseases. Traditional healing practices predating modern medicine: Consultations with traditional healers are often sought before formal medical care for acute illnesses such as metabolic syndrome and cardiovascular disease. Men's preference for self-medication and herbal remedies: Men tend to prefer self-care and herbal remedies, likely due to cultural expectations and notions of masculinity. Barriers to accessing modern health services: Distant health facilities and transportation costs hinder using formal medical care.

No.	Author/Year	Title	Purpose	Research Design, Population, and Instrument	Setting	Outcome
2.	Ho Minh Duy, Jakyoung Lee, Whiejong Han, Vasuki Rajaguru and Suk-Yong Jang (2023)	The Health-Seeking Behavior of the Elderly with Non-communicable Diseases in Coastal Areas of Vietnam	To analyze the utilization of health facilities and health-seeking behavior among elderly individuals with non-communicable diseases, and to identify the factors influencing this behavior.	Research Design: Quantitative study using a cross-sectional design. Population: 370 elderly individuals aged over 60, each with at least one non-communicable disease, residing in seven coastal areas of Phu Vang district, Thua Thien Hue province, Vietnam. Instrument: A structured questionnaire.	In seven coastal areas of Phu Vang district, Thua Thien Hue province, Vietnam.	Prevalence of Health-Seeking Behavior: 69.8% of elderly individuals with non-communicable diseases demonstrated health-seeking behavior. Factors That Increase the Use of Health Services: Elderly individuals who live alone, have average or above-average income, suffer from more than one non-communicable disease, possess health insurance, or require health counseling are more likely to use health services. Factors That Do Not Influence the Use of Health Services: Gender, age, marital status, education level, employment status, per capita income, and duration of residence in coastal areas do not significantly affect the use of health services.
3.	Jonila Gabrani, Christian Schindler, and Kaspar Wyss (2021)	Health-seeking Behavior Among Adults and the Elderly With Chronic Health Condition (s) in Albania	To analyze health-seeking behavior among adults and older adults with chronic health conditions.	Research design: Quantitative research, cross-sectional design Population: In December 2018, 3,799 respondents aged 18 years	Various districts of Albania, Southeastern Europe	Prevalence of non-communicable diseases: Of the 3,799 respondents, 1,116 (29.4%) suffered from non-communicable diseases. Healthcare-seeking behavior: 95% of

No.	Author/Year	Title	Purpose	Research Design, Population, and Instrument	Setting	Outcome
				and older from the Diber and Fier districts of Albania who suffered from at least one non-communicable disease Instrument: Structured questionnaire		individuals with non-communicable diseases utilize public healthcare services. Age differences in use of health services: Older adults are more likely to use Community Health Centers to initiate treatment (56%) than individuals aged 18-59 years (49%). Frequency of seeking treatment: During the last 8 weeks before the survey, 82% of respondents with non-communicable diseases reported seeking treatment. Factors influencing the use of health services: Older adults are more likely to choose Puskesmas services. Hypertension sufferers are more likely to use Puskesmas services than hospitals. There is a positive relationship between living in urban areas and treating non-communicable diseases in polyclinics. No significant gender differences were observed regarding the type of service provider consulted.

No.	Author/Year	Title	Purpose	Research Design, Population, and Instrument	Setting	Outcome
4.	Ayesha Idriss, Diaconu, Guanyang Zou, Reynold GB Senesi, Haja Wurie, Sophie Witter (2020)	Rural–urban health-seeking behaviours for non-communicable diseases in Sierra Leone	To understand people's knowledge and perceptions regarding non-communicable diseases, patterns of seeking treatment for non-communicable diseases, and the factors that influence treatment-seeking behavior.	Research design: Qualitative study, Phenomenology, Participatory-based model building Population: 116 respondents consisting of local leaders and community members from three locations: two urban areas in the western region and one rural area in Bombali district, Sierra Leone. Instrument: Participatory-based model-building techniques	In rural and urban areas of Sierra Leone, West Africa.	Basic knowledge about non-communicable diseases: People in rural and urban areas have adequate basic knowledge but tend to seek treatment only when symptoms become severe. The dynamics of causal narratives and health-seeking behavior are intricate, shaped by supply-related aspects, disease-specific characteristics, and socio-cultural influences. Care-seeking strategies include formal and informal treatment methods, such as traditional, biomedical, spiritual, and secular service providers.
5.	Tushar Prabhakar, Manish Kumar Goel, Anita Shankar Acharya (2023)	Health Seeking Behavior and its Determinants for Different Non-communicable Diseases in the Elderly	To analyze the health-seeking behavior of elderly individuals suffering from various non-communicable diseases.	Research design: Quantitative research, cross-sectional design Population: 350 elderly individuals over 60 reside in an urbanized village in Delhi. Instrument: Semi-structured questionnaire	Villages undergoing urbanization in the Mehrauli region, Delhi, India	87.4% of the study population had at least one non-communicable disease, with the majority (72.66%) being diagnosed while receiving treatment. Additionally, 52.94% exhibited inappropriate health-seeking behavior. Health-seeking behavior was significantly associated with gender, age, disease

No.	Author/Year	Title	Purpose	Research Design, Population, and Instrument	Setting	Outcome
						duration, and modifiable variables.
6.	Fatema Binte Rasul, Olivier Kalmus, Malabika Sarker, Hossain Ishrath Adib, Md Shahadath Hossain, Md Zabir Hasan, Stephan Brenner, Shaila Nazneen, Muhammed Nazmul Islam, and Manuela De Allegri (2019)	Determinants of health-seeking behavior for chronic non-communicable diseases and related out-of-pocket expenditure: results from a cross-sectional survey in northern Bangladesh.	To identify health-seeking behavior in individuals with non-communicable diseases, analyze the factors influencing their decisions, and measure the cost burden they must incur.	Research Design: Quantitative research with a cross-sectional design. Population: 866 adults (aged >18 years) living in the northern region of Bangladesh, diagnosed with or reporting at least one non-communicable disease. Instrument: A structured questionnaire	Rangpur District in the Northern Region of Bangladesh	Health-Seeking Behavior: Of the 866 individuals who reported, 16% did not seek treatment or opted for self-treatment, 42% sought care from semi-skilled professionals, and another 42% sought care from skilled professionals. Factors that enhance the probability of seeking medical treatment include higher educational attainment, significant chronic non-communicable diseases, elevated socioeconomic status, a lower prevalence of chronic illness within households, and proximity to sub-district public referral healthcare facilities. Personal Spending: 87% of individuals reported personal spending on healthcare, with medicines accounting for 85% of total spending. On average, those seeking skilled health professionals incurred higher costs.
7.	Fatema Binte Rasul,	Exploring health-seeking	To explore the health-	Research Design:	Mithapukur Upazila in	Delay in Seeking Treatment:

No.	Author/Year	Title	Purpose	Research Design, Population, and Instrument	Setting	Outcome
	Malabika Sarker, Farzana Yasmin, Manuela De Allegri (2022)	behavior for non-communicable chronic conditions in northern Bangladesh.	seeking behavior of individuals suffering from non-communicable diseases.	Qualitative study using a case study approach. Population: A total of 52 respondents, including 25 adult individuals living in Mithapukur, Rangpur, Northern Bangladesh, who suffer from chronic diseases, and 21 healthcare professionals operating in the region. Instruments: Comprehensive interviews and group discussions (FGDs).	Rangpur District, Northern Bangladesh	Individuals seek treatment only when disease symptoms interfere with their daily activities. Choice of Healthcare Provider: Semi-skilled care providers are often the first choice for individuals in rural areas. The impact of socio-cultural aspects: Perceptions of public health, religious convictions, and connections with local healthcare providers significantly shape treatment-seeking decisions. Gender Roles in Seeking Treatment: Women often need permission from their guardians before seeking treatment.

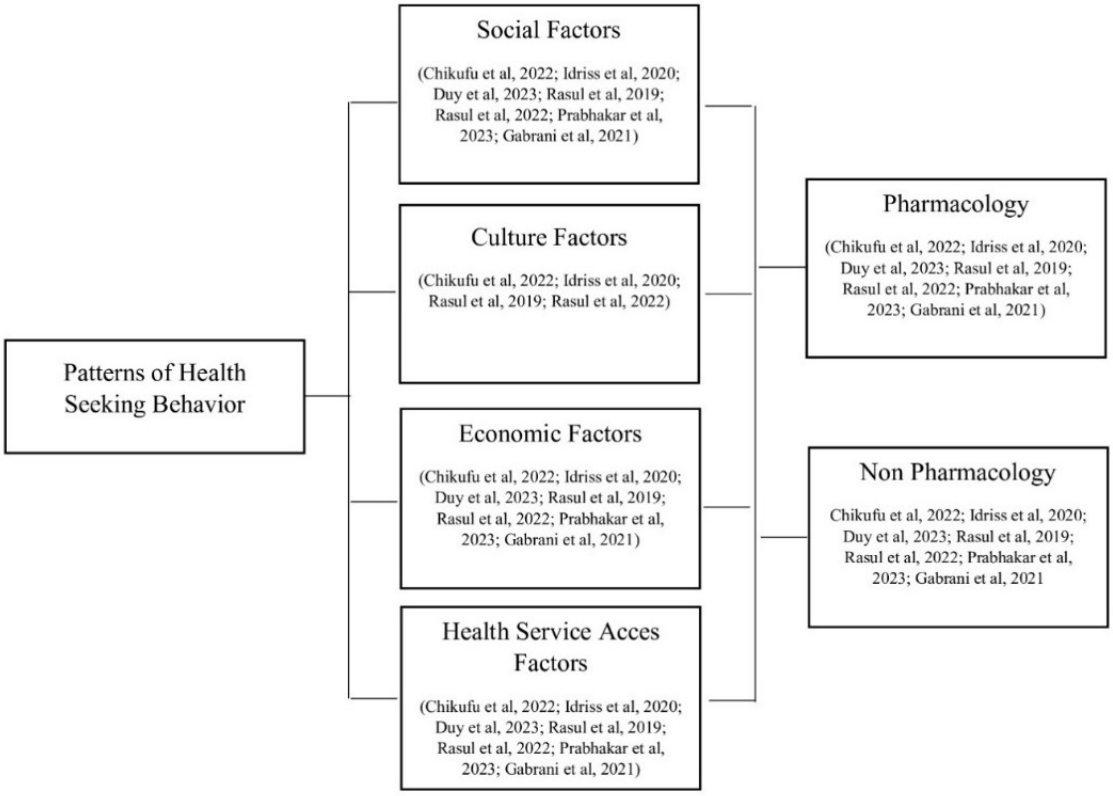


Fig. 2. Mind map

B. Patterns of Health–Seeking Behavior

Health–seeking behavior for non-communicable diseases vary significantly across regions, with traditional medicine remaining a dominant preference, particularly in rural communities. Research in Vietnam revealed that 18.7% of the study population relied on traditional treatment methods [13]. In KwaZulu–Natal, South African communities embrace medical plurality [14]. Individuals seek treatment for conditions such as diabetes, hypertension, and symptoms related to cardiovascular disease from a range of practitioners, including religious healers, shamans, and traditional healers in biomedical centers [14].

For acute illnesses like metabolic syndrome and cardiovascular disease, consultation with a traditional healer is often sought before seeking formal medical care [14]. Public clinics and traditional practitioners are considered the leading healthcare providers, whereas shamans and spiritual healers function as alternative treatment sources [14].

A comparable pattern can be seen in Sierra Leone, West Africa, where both rural and urban populations utilize an intricate system of formal and informal, traditional and biomedical, and spiritual and non-religious healthcare providers [15]. Despite this, individuals often seek care from spiritual and traditional providers first [15]. While people in both rural and urban areas possess basic knowledge about chronic conditions and their symptoms, they tend to delay seeking treatment until symptoms are severe, with formal

health services being considered as a last resort after other options have been exhausted [15]. This result is consistent with the study conducted in Bangladesh, which found that people in Bangladesh typically do not consider chronic conditions severe enough to warrant treatment unless the condition significantly impacts their daily life [11].

In India, some individuals suffering from non-communicable diseases opt not to undergo treatment, engage in self-medication without consulting qualified healthcare practitioners, or resort to traditional treatments that are considered inappropriate treatment-seeking behaviors [16]. These behavioral patterns in health–seeking across various countries indicate that people's preferences are strongly influenced by social, cultural, and economic factors and their access to health services.

C. Factors Influencing Health-Seeking Behavior: Social Factors

The pursuit of healthcare for non-communicable diseases within a social framework is shaped by various factors, including age, gender, educational background, and prevailing social norms. Gender, in particular, plays a significant role in treatment-seeking behavior, with women being more likely to seek care and utilize formal health services compared to men. This relationship is supported by the research of Prabhakar et al. (2023), which found a statistically significant association between gender and treatment-seeking behavior, with a higher proportion of women seeking treatment [17]. Similarly, Rasul et al. (2019) identified gender as one of the most prominent factors influencing an individual's choice of service provider [11]. In KwaZulu-Natal, South Africa, men often prefer self-care and herbal remedies, frequently ignoring minor health symptoms due to gender norms [14]. However, in some regions such as Bangladesh, gender roles play a dominant role in health–seeking behavior, with women often facing obstacles in seeking treatment, as they require their guardian's permission to access healthcare [18].

Age also plays a role in health–seeking behavior, particularly among the elderly, who often face difficulties accessing care. Research by Rasul et al. (2019) identified age as one of the most prominent factors influencing an individual's choice of service provider [11]. In line with this, Prabhakar et al. (2023) found a statistically significant relationship between age and treatment-seeking behavior, noting that older individuals were less likely to seek timely treatment [17]. Their findings suggest that older individuals often rely more on family and friends for assistance in seeking appropriate treatment, highlighting the importance of social support and financial independence in facilitating timely healthcare access. In contrast, younger individuals (adults) are more likely to seek formal medical

treatment (e.g., at hospitals) compared to the elderly, who tend to prefer primary healthcare centers (PHC) or engage in self-medication, as observed in Albania [16].

Education level is another key factor influencing health–seeking behavior. Research by Rasul et al. (2019) found that lower education levels limit access to quality healthcare [11]. In line with this, Idris et al. (2020) mentioned that people with higher educational attainment tend to utilize formal healthcare services more frequently, as they possess better health literacy and have wider access to relevant information [15].

Additionally, social norms play a significant role in shaping treatment-seeking behavior, particularly in communities with strong cultural traditions. In KwaZulu-Natal, for example, family and community support are critical factors in deciding whether to seek traditional treatments. Research by Chikafu et al. (2022) found community beliefs and collective decision-making significantly influence health–seeking behavior, with shamans often being the first choice for many residents [14]. Similarly, in Sierra Leone, the influence of social norms and community leaders strengthens the tendency to choose traditional medicine over formal healthcare services [15]. Research by Duy et al. (2023) found that family type influences health services utilization among the elderly [13]. In Albania, a similar trend was observed, where elderly individuals tend to rely more on family advice when selecting health facilities [16].

1. Cultural factors

Cultural factors play a significant role in shaping people's views on health and medicine. Research by Duy et al. (2023) found that traditional medicine is still commonly used because it aligns with cultural values and is considered safer by the elderly population [13]. In Sierra Leone, spiritual beliefs are deeply ingrained, with communities attributing the emergence of diseases to spiritual causes, such as witchcraft and sorcery. This cultural perspective encourages rural communities to prioritize spirituality–based treatments over formal medicine [15]. In Bangladesh, cultural values regarding women's societal roles influence their ability to make autonomous decisions about seeking health care. These cultural norms often hinder women's independent access to healthcare [18]. Furthermore, public health beliefs, religious beliefs, and relationships with local service providers influence people's decisions when seeking health care [18].

Research by Chikafu et al. (2022) further emphasizes the impact of religious and cultural beliefs on health–seeking behaviors, showing how these beliefs often lead to traditional medicine over formal healthcare options [14].

2. Economic factors

Economic factors, particularly financial barriers, represent one of the primary challenges in seeking treatment for non-communicable diseases. In Bangladesh, respondents reported that the cost of treatment is a crucial factor influencing health–seeking behavior, often leading individuals to delay, discontinue, or switch treatment providers or programs [18]. Research by Rasul et al. (2019) found that personal expenses, such as transportation, medication, and health services, contributed significantly to delays in seeking or avoiding formal medical treatment [11]. This challenge is also prevalent in Sierra Leone, where formal health services are often viewed as a last resort and are typically accessed only after non–formal treatments have been exhausted, primarily due to financial constraints [15]. In Albania, older individuals tend to choose primary healthcare (PHC) services over hospitals when seeking treatment, whereas younger adults often opt for hospitals directly, despite the higher associated costs [16].

In line with the findings of Duy et al. (2023), it was observed that elderly individuals from low-income groups who consume below-average diets have a health service utilization rate that is 2.8 times lower than those with better sleeping habits and higher economic conditions [13]. The state of the economy significantly influences individuals' willingness to cover expenses related to health–seeking behavior, including enrolling in health insurance programs and paying for healthcare services [13]. Similarly, research by Chikafu et al. (2022) highlighted that financial constraints are a significant barrier to accessing health services [14]. In particular, transportation costs for healthcare are the primary obstacle, especially for low-income families who rely on monthly social security payments to meet basic needs [14].

3. Health Service Access Factors

Access to health services significantly influences health–seeking behavior for non-communicable diseases. In Sierra Leone, rural communities often face geographic barriers, such as long distances to formal health facilities, leading many to rely on traditional medicine [15]. Research by Idriss et al. (2020) reported that limited access to health facilities in rural areas forces residents to seek alternatives, such as traditional healers [15]. Similarly, some individuals cannot continue treatment or visit

clinics in KwaZulu-Natal due to the long distances involved [14]. In Vietnam, research shows that coastal communities experience limited access to formal health facilities due to the area's low number of healthcare providers [13]. Research by Duy et al. (2023) observed very few health facilities in coastal areas, resulting in an increasing reliance on local treatments and traditional medicines [13].

Research by Gabrani et al. (2021) found that 87% of the 985 respondents preferred using primary health care (PHC) services over hospitals because they were more accessible [16]. Mention this finding aligns with Prabhakar et al. (2023), who noted that participants who traveled more than 5 kilometers to reach the nearest health facility displayed inappropriate health–seeking behavior [17]. The lack of service providers for non-communicable diseases in remote areas prevents individuals from seeking care from qualified professionals [18]. In rural Bangladesh, access to formal health services is minimal in terms of facility numbers and medical personnel [18]. Research by Rasul et al. (2022) reported inadequate health service infrastructure in rural areas, so many residents depend on informal health service providers [18]. Additionally, they found that the greater the distance to the nearest sub-district referral facility, the more likely individuals were to seek semi-qualified care. Geographic location, inadequate health infrastructure, and a lack of medical personnel often lead people to prefer informal or traditional treatment.

Conclusion

This review demonstrates that an interplay of social, cultural, economic, and health services access shapes health-seeking behavior for non-communicable diseases (NCDs). Across the seven studies analyzed, consistent evidence shows that traditional medicine remains the first line of care in many low – and middle–income settings due to social influence, cultural beliefs, financial barriers, and limited access to formal health services. Gender and age differences also play a substantial role – women and younger adults are more likely to seek formal healthcare compared to men and elderly individuals, who often rely on self–treatment or traditional healers. Economic hardship and out – of – pocket expenditures further discourage timely medical consultation, while geographical distance and poor infrastructure exacerbate delays in seeking care. These findings emphasize that strengthening health systems alone is insufficient: behavioral, educational, and cultural interventions are equally crucial. Therefore, effective interventions must be strategically designed to address the multifaceted barriers to healthcare access. Interventions should focus on four key areas to effectively improve healthcare access. First, boost health literacy to help communities rely less on

informal or traditional care. Second, community–based programs like POSBINDU should be expanded to combine early detection with culturally sensitive education. Third, tailor initiatives to overcome gender and age disparities, empowering marginalized groups to seek formal care. Finally, minimize financial and geographic barriers by providing localized, affordable primary healthcare services, ensuring equitable access. By aligning interventions with these evidence–based determinants, policymakers and health practitioners can foster more equitable and effective health–seeking behaviors among populations affected by non-communicable diseases.

Limitation and Suggestions

This review has several limitations. Most included studies used cross–sectional designs with self–reported data, which are susceptible to recall and social desirability bias. Several qualitative studies also had limited transferability due to small, context–specific samples. Future studies should apply longitudinal or mixed–methods approach and involve broader populations to enhance generalizability.

Acknowledgment

We sincerely thank Almighty God for His blessings and guidance throughout this research. Special thanks to our family for their unwavering support, love, and prayers. May this research be beneficial to the field of education.

Conflict of Interest

The authors declare no conflict of interest.

References

[1] R. D. Monica *et al.*, *Pengantar Ilmu Kesehatan Masyarakat*. Sumatera Barata: CV Gita Lentera, 2024.
[2] WHO, "Non-communicable diseases," 2024.
[3] WHO, “World health statistics 2023: monitoring health for the SDGs, sustainable development goals,” 2023.
[4] L. Y. K. Agung, K. N. Berawi, and W. Warsono, “Hubungan Pengetahuan dengan Pemanfaatan Pos Pembinaan Terpadu Penyakit Tidak Menular (Posbindu PTM),” *Jurnal Ilmiah Permas: Jurnal Ilmiah STIKES Kendal*, vol. 15, no. 1, 2025.
[5] F. Ferdaus, R. Zahan, M. A. Rahman, and S. Chowdhury, "A study on health-related risk factors and health-seeking behavior among the elderly population in rural Bangladesh," *Mediscope*, vol. 7, no. 2, pp. 75–81, 2020, doi: https://doi.org/10.3329/mediscope.v7i2.49445.

[6] C. I. Fernandez-Lazaro *et al.*, "Adherence to treatment and related factors among patients with chronic conditions in primary care: a cross-sectional study," *BMC Fam Pract*, vol. 20, no. 132, 2019, doi: https://doi.org/10.1186/s12875-019-1019-3.
[7] Kementerian Kesehetan RI, "Pedoman Umum Pos Pembinaan Terpadu Penyakit Tidak Menular," 2014, *Kementerian Kesehatan RI, Jakarta Pusat*.
[8] Khairunissa and R. I. Syamsiah, "Edukasi Berbasis Booklet Untuk Meningkatkan Pengetahuan Kader Posbindu PTM (Pos Pembinaan Terpadu Penyakit Tidak Menular)," *Jurnal Pengabdian Masyarakat AL Irsyad (JPMA)*, vol. 6, no. 1, 2024, doi: https://doi.org/10.36760/jpma.v6i1.77.
[9] Hamzah *et al.*, *Teori Epidemiologi Penyakit Tidak Menular*. Aceh: Yayasan Penerbit Muhammad Zaini, 2022.
[10] S. M. S. Islam *et al.*, "Healthcare seeking behavior and glycemic control in patients with type 2 diabetes attending a tertiary hospital," *Int J Diabetes Dev Ctries*, vol. 41, pp. 280–287, 2021.
[11] F. B. Rasul *et al.*, "Determinants of health-seeking behavior for chronic non-communicable diseases and related out-of-pocket expenditure: results from a cross-sectional survey in northern Bangladesh," *J Health Popul Nutr*, vol. 38, no. 1, 2019, doi: https://doi.org/10.1186/s41043-019-0195-z.
[12] H. Snyder, "Literature review as a research methodology: An overview and guidelines," *J Bus Res*, vol. 104, pp. 333–339, 2019, doi: https://doi.org/10.1016/j.jbusres.2019.07.039.
[13] H. M. Duy, J. Lee, W. Han, V. Rajaguru, and S.-Y. Jang, "The Health-Seeking Behavior of the Elderly with Non-communicable Diseases in Coastal Areas of Vietnam," *Healthcare (Switzerland)*, vol. 11, no. 4, 2023, doi: 10.3390/healthcare11040465.
[14] H. Chikafu, I. T. Mutero, and M. J. Chimbari, "' If I Were to Suffer a Stroke Right Now, the First Place That I Should Be Taken to Is the Traditional Healer': Community Beliefs and Health-Seeking Practices for Non-communicable Diseases in Rural KwaZulu-Natal, South Africa," *Qualitative Report*, vol. 27, no. 1, 2022, doi: https://doi.org/10.46743/2160-3715/2022.5229.
[15] A. Idriss, K. Diaconu, G. Zou, R. G. Senesi, H. Wurie, and S. Witter, "Rural-urban health-seeking behaviors for non-communicable diseases in Sierra Leone," *BMJ Glob Health*, vol. 5, no. 2, 2020, doi: https://doi.org/10.1136/bmjgh-2019-002024.
[16] J. Gabrani, C. Schindler, and K. Wyss, "Health Seeking Behavior Among Adults and Elderly With Chronic Health Condition(s) in Albania," *Front Public Health*, vol. 9, 2021, doi: https://doi.org/10.3389/fpubh.2021.616014.
[17] T. Prabhakar, M. Goel, and A. Acharya, "Health-Seeking behavior and its determinants for different non-communicable diseases in the elderly," *Indian Journal of Community Medicine*, vol. 48, no. 1, pp. 161–166, 2023, doi: 10.4103/ijcm.ijcm_106_22.
[18] F. B. Rasul, M. Sarker, F. Yasmin, and M. De Allegri, "Exploring health-seeking behavior for non-communicable chronic conditions in northern Bangladesh," *PLOS Global Public Health*, 2022, doi: https://doi.org/10.1371/journal.pgph.0000497.

Authors



Lu'lu Luthfiatun Ulinnuha is a student at Master of Nursing Postgraduate Program, Universitas Muhammadiyah Yogyakarta, Yogyakarta, Indonesia. (email: luluklutfiatun01@gmail.com).



2nd Titih Huriah is a faculty member of Community nursing department, Universitas Muhammadiyah Yogyakarta, Yogyakarta, Indonesia. (email: titih.huriah@umy.ac.id).