

Research Article

The Perceptions of Traditional Healers Regarding Cancers in Dire Dawa, Ethiopia: A Qualitative Study

Aminu Mohammed^{1,*}, Bezabih Amsalu², Betelhem Mengist¹, Asma Bireda¹, Mickiale Hailu¹

¹Department of Midwifery, College of Medicine and Health Sciences, Dire Dawa University, Dire Dawa, Ethiopia

²Department of Public Health, College of Medicine and Health Sciences, Dire Dawa University, Dire Dawa, Ethiopia

Abstract

Background: Many cancer patients in low-income countries seek care from traditional healers and use traditional medicines for cancer treatment. However, little is known about the perceptions and influence of traditional healers and the treatment decisions of cancer patients. Thus, we aimed to explore the perceptions of traditional healers regarding cancer, which can help in preventive interventions, thereby reducing morbidity and mortality from cancer. **Methods:** This ethnographic study was conducted between April and August 2023 in Dire Dawa, Ethiopia. Purposive, convenience, and snowball sampling techniques were used to sample participants. In-depth interviews were conducted individually at participants' homes in quiet places, and in the absence of respondents, between 45 and 55 minutes, using a semi-structured tool aided by a voice recorder and field notes. The interviews were then transcribed verbatim within a week, and thematic qualitative analysis was used to identify themes and subthemes. **Results:** Seven major themes were identified in traditional healers' perceptions of cancer: (i) respondents' perception of cancer; (ii) perceived causes of cancer; (iii) perceived signs of cancer; (iv) perceived transmission of cancer; (v) respondents' perception of cancer detection; (vi) respondents' perception of cancer treatment; and (vii) respondents' perception of 'no modern cure for cancer. **Conclusion:** Traditional healers have limitations on their perception of cancer, including what cancer it is, its causes, signs, identification, and treatments. Thus, traditional healers need to be provided training and behavioral-changing interventions about cancer in order to improve cancer interventions.

Keywords

Traditional Healers, Perception, Cancer

1. Introduction

Cancer has been poorly understood by many societies, including traditional healers (THs) in Sub-Saharan Africa [1, 2]. Some associate it with culture, and some with spiritual events [2, 3].

The use of traditional medicine by traditional healers is

common in sub-Saharan Africa, including Ethiopia, and is likely to continue alongside conventional cancer treatments [2, 4, 5]. Many people in Africa still have indeterminate perceptions of traditional healers in either treatment or cure [2, 6]. Some cancer patients prefer traditional therapies to modern

*Corresponding author: aminumhmd83@gmail.com (Aminu Mohammed)

Received: 4 January 2024; **Accepted:** 31 July 2024; **Published:** 15 August 2024



ones [7, 8].

Although many cancers are treatable if detected early, their morbidity and mortality burdens remain high [9]. This burden may be related to traditional healers' potentially delayed health-seeking and may lead to advanced-stage cancer at diagnosis [10, 11]. It has also been reported that traditional healers' perceptions (THPs) sometimes engage in practices that could lead to delays in presentation and diagnosis, raising unrealistic expectations of cures where none may be possible [10, 12]. People listen to them and take seriously what they communicate [11]. They are accepted and have remained central to health services, possibly because they provide care within the patients' cultural context and belief system [10, 11, 13, 14]. As a result, THPs have remained popular among people; they often have great credibility and esteem in their communities [11, 15, 16]. Consequently, these traditional healers could have both a positive impact (by treating cancer) and a negative impact (by delaying the early detection of cancer and, consequently, by delaying modern therapies for cancer) [13, 14]. This may help modern cancer treatment approaches along with traditional practices [11, 13, 14]. Although TH's perceptions of cancer are not yet well explored, traditional healers are common and use various traditional treatments [5, 14, 15, 17]. However, the perception of traditional medicine practitioners towards cancer and its treatment needs to be explored, which may help in interventions [5, 14, 18]. Therefore, this study aimed to explore the perceptions of traditional healers regarding cancer in Dire Dawa, Ethiopia, through a qualitative study that can help in prevention and control interventions, thereby reducing morbidity and mortality from cancer.

2. Methods

2.1. Study Area and Design

This study was conducted during the Dire Dawa administration in Ethiopia. The Dire Dawa administration is located about 515 km east of Addis Ababa, the capital city of Ethiopia, and 311 km west of Djibouti port. It has a total population of 521,000. The rural part of this region has a population of 188,000 spread across four rural kebeles (Biyo-awale, Wahil, Jeldessa, and Haselisso), and there are 38 sub-kebeles under these four kebeles (the smallest administrative unit). While the urban part (Dire Dawa City) has nine kebeles, it has two non-governmental clinics (Family Guidance and Mari Stops International Clinics) and 38 health facilities (six hospitals, 17 health centers, 10 higher clinics, and five special clinics) [19]. The study was conducted between April and August 2023. Due to the qualitative nature of the research questions and the purpose of the study, we conducted an ethnographic study involving in-depth interviews and observations of THs' practices and medicines. However, not all THs have accepted the observation of their practices and traditional medicines. The qualitative approach, often used to understand a research

problem from the respondents' own perspectives, allows for an in-depth exploration of a topic about which little is currently known, and allows themes and findings to emerge with careful analysis [20, 21].

2.2. Selection of Participants and Recruitment

Six districts, both urban and rural, were selected: three from urban areas (Gende-kore, Sabiyan, and Lege-hare) and three from rural areas (Wahil, Jeldessa, and Haselisso).

From the three urban areas, three kebeles (the lowest administrative unit in Ethiopia) were randomly selected (one from each): Gende-kore 06, Sabiyan 02, and Lege-hare 08.

To be eligible for participation, THs had to be 18 years or older, and both men and women with known traditional healing practices were included in the selected districts. Participants were recruited using a combination of purposive, convenience, and snowball sampling techniques. In addition, information was obtained from community health extension workers and leaders. Totally thirteen THs (7 from rural and 6 from urban areas, 11 men and 2 women THs) were involved. However, those who were severely ill or non-volunteers for the interview were excluded.

2.3. Data Collection Methods

Data collection tools: A semi-structured, open-ended tool was developed for the interview after reviewing the related literature [10, 11]. Audio recording was also used. The guides are available in the appendices (Appendix II).

Data collectors: Two BA-degree nurses and one BA psychology professional who had experience with qualitative data collection and were fluent in local languages were interviewed.

Data collection procedure: First, the purpose, confidentiality, and right of study participants to refuse or withdraw from interviews at any time were explained by the research teams. Eligible participants who agreed to participate were appointed for an interview based on their availability. Then, on the interview date, the purpose, confidentiality, and right of study participants to refuse or withdraw from interviews at any time were again explained by research teams, and informed, voluntary verbal consent was obtained for an interview and audio recording. Individual interviews were conducted in quiet places around their homes. Each interview lasted between 45 and 55 minutes. A total of 13 eligible THs were interviewed. After completing the interviews, participants received no incentives. The interview (data collection) continued until it was adequate and complete, and little or no new information came from the interviewees (saturation) [22]. Research teams aided the entire procedure; they supervised, facilitated the interviews, and worked on audio recordings.

2.4. Data Management and Analysis

The research teams transcribed the interview recordings

verbatim over the course of a week. Two research teams listened to two randomly selected interview recordings while reading the transcribed data to ensure the completeness and accuracy of the transcriptions. The research teams also reviewed field notes to capture the fullness of the field experiences and immerse themselves in the data before and during the analyses. The initial coding was performed by one of the researchers, and fine-tuning was performed by supporting researchers, both with experience in qualitative data analysis. To reduce projection and thematic leading, the researchers who conducted the analyses were not involved in the interviews. We then developed analysis codes based on the line-by-line reading of the four transcripts. The final set of

codes (Table 1) was agreed upon through consensus between the research teams and mentors.

The codes included descriptions of cancer, perceived causes of cancer, signs of cancer, detection of cancer, and perceived preferred treatment of traditional healers.

The transcripts were analyzed, and recurrent, dominant, and divergent narratives were identified. Transcripts were segmented into quotes containing meaningful concepts, which were then categorized and labeled. These were further organized into themes and subthemes based on similarities and differences. The iterative process of coding and fine-tuning allowed for the refinement of theoretical constructions by linking or integrating categories around core themes.

Table 1. Analyses codes and their definitions.

Codes	Code definitions
Definition of cancer	Any references to what cancer are, or is not
Causes of cancer	Any references to what lead to development of cancer or how cancers are perceived to come about in a person
Detection of cancers	Any references to whether there are stages that cancers develop through, what needs to be done in order to know that there is cancer when it is still in early stage, how early detection can be done.
Treatments for cancers	Any references to concepts about the types of treatments or remedies that are considered to work on cancers, including why it is thought so
Forms of healing	References to the different approaches and or things that THs do to help patients regain health, and the types of healing practices in traditional medicine practice, including giving medicines, surgery, incantations, and administration of rituals
Rituals used in treatment	All references about things that healers or elders do other than giving physical medicines, to help a person who is ill to get better or regain health
Power of healing	References to the ways in which one gets inspirations, desire to heal, and actually be able to help a sick person regain health
Types of THs	References to the different categories of healers based on types of services provided or how they treat illnesses and or how they became healers
Hindrances to progress in THs practices	Perceptions and references to what makes the field of traditional health practice not develop, grow, flourish or be practiced in the open, including the difficulties that THs experience
Self-protection during THs practice	References to precautions undertaken by THs to avoid getting infections from their patient.

2.5. Trustworthiness of the Study

To enhance trustworthiness, the pilot interview guide was tested two weeks before the actual interview with two participants. Two days of training were provided to interviewers regarding procedures, how to approach participants, interviewing sensitive issues, and using audio recordings. In addition, interviewers participated in peer debriefing and member checking to enhance trustworthiness. All interviews were transcribed verbatim and those conducted in the local dialect were translated into English for analysis.

3. Results

Participants' Profile: The study included 13 respondents aged 46–64 years. The median patient age was 55 years. Most of the respondents were male (11 out of 13) and married. All the participants attended formal education (Table 2).

Table 2. Sociodemographic profile of participants, Dire Dawa, Ethiopia, 2023.

Characteristics		Frequency (Percentage)
Age (in completed years)	<50	6 (46.2)
	50 and more	7 (53.8)
Sex	Male	11 (84.6)
	Female	2 (15.4)
Residence	Urban	8 (61.6)
	Rural	5 (38.4)
Marital status	Married	8 (61.6)
	Single	2 (15.4)
	Divorced	3 (23)
Education level	No formal education	2 (15.4)
	Primary level (1-8)	3 (23)
	Secondary level (9-12)	6 (46.2)
	Diploma	2 (15.4)
Source of income	Salary Church	6 (46.2)
	Salary Mosque	4 (30.8)
	Merchant	2 (15.4)
	Private employee	1 (7.7)
Religion	Muslim	5 (38.4)
	Orthodox	6 (46.2)
	Protestant	1 (7.7)
Media exposure	Catholic	1 (7.7)
	Only Radio	5 (38.4)
	TV and others	8 (61.6)

4. Results and Discussion

This study was conducted to explore the perceptions of traditional healers regarding cancer in Dire Dawa, eastern Ethiopia, using an ethnographic qualitative study. Consequently, seven main themes were thematically identified in traditional healers' perceptions of cancer: (i) respondents' perception of cancer, (ii) perceived causes of cancer, (iii) perceived signs of cancer, (iv) perceived transmission of cancer, (v) respondents' perception of cancer detection, (vi) respondents' perception of cancer treatment, and (vii) respondents' perception of 'no modern cure for cancer.

The thought of 'cancer'

In the present study, the respondents described cancer in different ways. There was a misconception about what cancer really is; some of them mentioned it as "the word cancer

by itself is lethal, and there is no cure for it except by God, or rarely by experienced traditional herbalists." Some have described 'cancer' as an innovative and thought-provoking sickness in which God takes measures against sinful persons. "I heard the word 'cancer from my patients, but I'm not sure what it is. Since I live in the rural part of the country, I don't have access to the majority of the world's information." (TH12). "I had heard of cancer; I believe cancer is a disease of bad doers that usually affects them, similar to HIV/AIDS." (TH5). This study gives insight into the fact that traditional healers have limitations on the description of cancer in general. This is in line with the results of a study conducted in Nigeria. I treat it, but I do not know what this disease is [10].

Perceived causes of cancer

Most respondents found it difficult to articulate the causes of cancer. Most traditional healers associate the causes of cancer with cultural or spiritual thoughts. One participant shared his thoughts as follows: "Cancer is caused by inborn causes and affected by environmental conditions like dirty contamination, chemicals from unclean water, and sunburn." (TH6).

"I don't know exactly about the causes of cancer, but I think cancer is somehow a unique case, although it is a sinful disease." (TH3)

Some respondents associate the cause of cancer with chemical agents, such as fertilizers and heavy metals.

"I heard it once on the radio, but I'm not sure how it happens or what causes it; I heard that cancer is caused by inhalation of bad chemicals like farm fertilizer." (TH7)

"Cancer is thought to be caused by mercury or other chemicals in water. But mostly cancer is caused by secret sins or devils hitting when someone is going out at night; so, devils are believed to cause cancer". (TH2)

The present study explored the limitations of THs in terms of both the definition and cause of cancer, which is in contrast to a study in Malaysia. Despite good knowledge about the causes of cancer, THs have insufficient knowledge regarding the definition of cancer. In this study, the majority of participants mentioned that food and unhealthy lifestyles were the primary causes of cancer.

Respondents' perceptions of cancer detection

Most respondents admitted that they had limited information regarding cancer detection. They revealed that their families had never encountered such diseases (cancer), and they hidden whether they had some experiences that initiated them into traditional health practices.

"I don't know what brings cancer and how cancers are checked; I started treating cancers after they had already become visible." (TH4)

"Everything about cancer—how it starts, what it brings, and what to do to check—is really a secret, but you only get to realize swelling or red mass in your body. After observing these signs, I tried to treat it as cancer." (TH 5, TH 8, TH 11)

"Some traditional experts know it clearly through experi-

ence and knowledge they got from their ancestors.” (TH1) “Modern laboratories may detect it, but as a traditional healer, I only treat it after it becomes visible, swollen, and reddened.” (TH8, TH11)

Similarly, this finding was revealed in studies conducted in Kenya, and Nigeria [10, 11]. THs’ cancer management practices of THs involve a mix of patient examination, conventional medical tests, herbal medicine administration, follow-up, or referral [11]. Traditional healers can play a crucial role in the early detection of cancer and in the health-seeking decision-making process of patients [10].

Perceived signs of cancer

Most of the respondents were aware of some signs of cancer. “If someone has such diseases, like women, their breasts become large, swollen, and may bleed a red or black color on affected parts, and they have greater chances of weight gain.” (TH7). “I am not sure, but they may have headaches, indigestion, bloody urination, rashes in their body, or cancer.” (TH8). A similar idea was explored in a study in Nigeria [10].

Respondents’ perceptions of cancer treatment

Most THs have a better perception of traditional treatment, and they recommend THs medicine as the first choice for their patients. They also revealed why traditional treatments are recommended, as traditional medicines are natural products, low-cost, and have limited side effects with a greater curing ability.

“I personally prefer traditional treatments because their benefits are many. One is that the treatments don’t have serious side effects or curing effects, unlike modern medicines. Besides, you can take them with food or without food.” (TH8)

“It is obvious that every modern medicine cannot cure cancer, but ours can with low cost and less danger. So, which one do you prefer? I prefer the traditional one.” (TH7, TH12)

Few others perceive that cancer has no treatment, except for mercy from God. “As for me, some diseases like cancer and HIV—unless God avoids them—still have no treatment except by God.” Therefore, let us pray to him (God or Allah). You know, humans know nothing; the problem arises when we claim to know and act intelligently.” (TH1, TH12)

The present finding is congruent with other studies in that most THs have a traditional treatment preference or intention for cancer treatment rather than modern medicine or therapy [10, 11]. Thus, intervention programs should include training and referral partnerships with traditional healers. This collaboration could improve early detection of cancer and reduce the severity of cancer complications.

The present study also identified traditional healers as contributing factors to delays in cancer diagnosis. Traditional healers recommend that patients attend some sort of follow-up during their traditional treatment, which delays the medical detection of their cancer. Therefore, traditional treatments should be considered to better satisfy the unmet needs of patients with cancer. In addition, organizing tradi-

tional healers, documenting their indigenous knowledge, and scientifically validating it for the development of better cancer therapeutic agents may be their positive contributions [4, 15]. Furthermore, the present study identified two new traditional healers’ perceptions of factors related to cancer. These are the respondents’ perceptions of ‘no modern cure for cancer’ and their perceived transmission of cancer.

Respondents’ perception of ‘no modern cure for cancer’

Unlike traditional treatments, most THs reported that cancer has no modern medicine or therapy to cure it. Moreover, most of them recommend that patients stop taking modern therapies simultaneously. Although traditional healers assume that the case is of cancer, they do not refer patients to modern hospitals. If traditional healers assume that traditional medicine is not in their hands, they refer patients with cancer to their colleagues (other traditional healers) rather than biomedical facilities such as modern hospitals or oncology centers.

“You see, there is no modern cure for cancer wherever you go; you simply pay costs for modern medicines for symptom management and energy loss. Why do you suffer even though traditional healers heal it easily?” (TH10)

“If traditional medicines are not in hand, we know each other and suggest going to another traditional healer who is an expert.” (TH7)

“We do not allow patients to use both traditional and modern medicine together.” (TH4)

Thus, a cooperative practice framework could be an inclusive health system in which THs work in parallel and use scientific regulation principles for cancer therapy [12, 15].

Perceived transmission of cancers

Approximately half of the respondents had limited perceptions of cancer transmission. They reacted differently, and a few clearly stated that cancer is like HIV, a sexually transmitted disease. “To my understanding, it can be transmitted via unhygienic food, breast feeding, etc., generally in dirty environments.” (TH13). “It may be through the common use of blades, like during female genital cuts, and I also heard that “evil eye” may transmit to others when they face barely during showering and taking in rivers.” (TH12)

Few other respondents stated that cancer was hereditary. “Cancers are transmitted from cancerous families. I know of a patient with cancer. Her mother had cervical cancer and her daughter had cervical cancer. They both attended my traditional treatment’.” (TH12)

5. Study Strengths

This study focused on neglected populations, which is an important topic for overcoming sociocultural factors in cancer. To our knowledge, this study is the first to explore the perceptions of THs in cancers using a qualitative approach in the study region. The study design enabled in-depth inquiry into the sociocultural factors contributing to cancer prevention and treatment among THs in a diverse sample (the study included

participants from rural and urban areas and included both male and female traditional healers). The study's information, generated from actual human perception where people interact directly with the topic under study, was engaging and significant. The data collectors were experts, experienced, and knew the study participants' local language and norms; this was very helpful in probing the actual information and reducing the non-response rate. The findings of this study have practical, societal, and research implications. The findings of this study may guide research, education, and public health policy to advance traditional medicine by THs in Ethiopia and sub-Saharan Africa.

Implications for practice: The need to consider THs and sociocultural factors of cancer in healthcare services, including addressing misperceptions and traditional healers. Traditional and complementary medicine may be integrated into the healthcare system and require sustained cooperation for the benefit of patients, as patients use traditional medicines. This implies the need for immediate action by the Ministry of Health of Ethiopia and the study region to set up strict regulations and regular national monitoring of traditional healers.

Implications for society: The need to address community awareness, including traditional healers, to clarify misperceptions about cancer, including their causes and treatments, and social support.

Implications for research: There is a need for future research on a large study area and from different perspectives (traditional treatment users, religious leaders, traditional leaders, and witch doctors) to provide further evidence. It also suggests which specific traditional treatment (herbs and others) for a specific cancer is a future research clue for this study.

6. Study Limitation

Due to resource limitation traditional healers from all areas of the study region did not include so Therefore, these findings may not be applicable in other settings or populations.

7. Conclusion

Traditional healers have limitations on their perception of cancer, including what cancer it is, its causes, signs, identification, and treatments. Thus, traditional healers need to be provided training and behavioral-changing interventions about cancer in order to improve cancer interventions.

Abbreviations

THs Traditional Healers
HIV Human Immunodeficiency Virus

Acknowledgments

The authors are grateful to the data collectors, the Dire Dawa

Administration Health Bureau, community leaders in the study area, and study participants. Last but not least, we thank those individuals who directly or indirectly contributed their skills and knowledge toward the accomplishment of this study.

Author Contributions

Aminu Mohammed: participated in conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Software, Resources, Supervision, Validation, Visualization, Writing original draft, Writing review and editing

Bezabih Amsalu: Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Software, Resources, Supervision, Validation, Visualization, Writing original draft, Writing review and editing

Betelhem Mengist: Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Supervision, Validation, Visualization, Writing original draft, Writing review and editing

Asma Bireda: Formal analysis, Funding acquisition, Investigation, Methodology, Project Administration, Software, Resources, Supervision, Validation, Visualization, Writing original draft, Writing review and editing

Mickiale Hailu: Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Software, Resources, Validation, Writing original draft, Writing review and editing

Ethics Approval and Consent to Participate

Ethical approval was obtained from the Ethical Committee of the Dire Dawa Administration Health Bureau (DDAHB) (File-DDAHB-012/March/2023). Written informed consent was obtained from study participants. All protocols were carried out in accordance with relevant guidelines and regulations of Helsinki.

Declaration

We confirm that the manuscript has been read and approved by all named authors and that there are no other persons who satisfied the criteria for authorship but are not listed. We further confirm that the order of authors listed in the manuscript has been approved by all of us.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Data Availability Statement

The datasets collected and analyzed for this study are available from the corresponding author and can be obtained upon reasonable request.

Conflicts of Interest

The authors declare no conflicts of interest.

Appendix

Appendix I: Preamble

Thank you so much for meeting with me today and agreeing to participate in this interview. I want to remind you that what you say here is confidential and will not be linked back to you or your family or identify you in any way. I am recording this interview so that I can transcribe it. This means I will type out the words said in this interview into a secure document for analysis. There will be no identifiers on the transcripts. The de-identified transcripts will be accessed by other members of the research team to perform the analysis. The purpose of this interview is to explore your opinions and perceptions about our study topic. We are here to learn from you, so anything you have to share is welcome. Nothing you say here will affect me or you in any way. There are no right or wrong answers.

Appendix II: Semi-Structured Question Guide for Assessing THs' Perception of Cancer

Interviewer:... I have heard people say they had cancer before. Have you ever heard? From whom/where?

"What do they mean when they say cancer?" -----

Interviewer:... I heard in this area also that cancer is caused/transmitted by different things, they say different things. What's your opinion, please? -----

Is it curable or does it have some treatment? -----

We really appreciate your time and insight. Thank you once again.

Before we wind up, is there anything that you think is important for us?

If I missed anything when I reviewed our conversation, -----

Really, to the last, anything you want to say... -----

Thank you very much!

References

- [1] A. D. Mwaka, "Sociocultural Influences on Cancer Care in Sub-Saharan Africa," *Global Perspectives in Cancer Care: Religion, Spirituality, and Cultural Diversity in Health and Healing*, p. 249, 2022.
- [2] M. E. Michael, "AFRICAN GODS AS POTENT FORCES IN THE EFFICACY OF TRADITIONAL MEDICINE," *African Traditional Religion and Philosophy:: Essays on an Ancestral Religious Heritage*, 2022.
- [3] O. O. Goodman, S. O. Adejoh, A. Adeniran, A. C. Emechebe, and Y. A. Kuyinu, "We love orthodox medicine but still use our 'Elewe omo': Utilization of traditional healers among women in an urban community in Nigeria," *Journal of Family Medicine and Primary Care*, vol. 11, p. 215, 2022.
- [4] S. Tesfaye, A. Belete, E. Engidawork, T. Gedif, and K. Asres, "Ethnobotanical study of medicinal plants used by traditional healers to treat cancer-like symptoms in eleven districts, Ethiopia," *Evidence-Based Complementary and Alternative Medicine*, vol. 2020, 2020.
- [5] P. R. Matowa, M. Gundidza, L. Gwanzura, and C. F. Nhachi, "A survey of ethnomedicinal plants used to treat cancer by traditional medicine practitioners in Zimbabwe," *BMC Complementary Medicine and Therapies*, vol. 20, pp. 1-13, 2020.
- [6] J. Hill, R. Seguin, A. Manda, M. Chikasema, O. Vaz, Q. Li, et al., "Prevalence of traditional, complementary, and alternative medicine (TCAM) among adult cancer patients in Malawi," *Cancer Causes & Control*, vol. 33, pp. 1047-1057, 2022.
- [7] L. Brinton, J. Figueroa, E. Adjei, D. Ansong, R. Biritwum, L. Edusei, et al., "Factors contributing to delays in diagnosis of breast cancers in Ghana, West Africa," *Breast cancer research and treatment*, vol. 162, pp. 105-114, 2017.
- [8] A. G. Mekonnen, B. T. Gebeyehu, and M. Woldearegay, "Experience of patients with breast cancer with traditional treatment and healers' understanding of causes and manifestations of breast cancer in North Shewa zone, Ethiopia: a phenomenological study," *BMJ open*, vol. 12, p. e063726, 2022.
- [9] H. Sung, J. Ferlay, R. L. Siegel, M. Laversanne, I. Soerjomataram, A. Jemal, et al., "Global cancer statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries," *CA: a cancer journal for clinicians*, vol. 71, pp. 209-249, 2021.
- [10] E. Farley, H. M. Bala, A. Lenglet, U. Mehta, N. Abubakar, J. Samuel, et al., "'I treat it but I don't know what this disease is': a qualitative study on noma (cancrum oris) and traditional healing in northwest Nigeria," *International health*, vol. 12, pp. 28-35, 2020.
- [11] S. K. Cheboi, W. S. Ng'ang'a, P. Nyamanga, and S. Kibet, "Providers' Competencies and Management Practices for Traditional Palliative Cancer Care Service Delivery in Kenya," *Health Services Insights*, vol. 16, p. 11786329231211780, 2023.
- [12] J. B. Asiimwe, P. B. Nagendrappa, E. C. Atukunda, G. Nambozi, C. U. Tolo, P. E. Ogwang, et al., "The meaning of caring for patients with cancer among traditional medicine practitioners in Uganda: A grounded theory approach," *PLOS Global Public Health*, vol. 3, p. e0001764, 2023.
- [13] N. Lumlerdkij, J. Tantiwongse, S. Booranasubkajorn, R. Boonrak, P. Akarasereenont, T. Laohapand, et al., "Understanding cancer and its treatment in Thai traditional medicine: An ethnopharmacological-anthropological investigation," *Journal of ethnopharmacology*, vol. 216, pp. 259-273, 2018.

- [14] A. D. Mwaka, J. Achan, and C. G. Orach, "Traditional health practices: A qualitative inquiry among traditional health practitioners in northern Uganda on becoming a healer, perceived causes of illnesses, and diagnostic approaches," *Plos one*, vol. 18, p. e0282491, 2023.
- [15] P. B. Nkosi and M. N. Sibiya, "A practice framework for the cooperative treatment of cancer between traditional health practitioners and radiation oncologists in KwaZulu-Natal province, South Africa," *Health SA Gesondheid*, vol. 26, 2021.
- [16] J. B. Asiimwe, P. B. Nagendrappa, E. C. Atukunda, G. Nambozi, C. U. Tolo, P. E. Ogwang, et al., "The Traditional Medicine Practitioner's Concept of Cancer, Herbal medicine use and the Patients Perceived benefits (Clinical outcomes) in Selected Districts of Central Uganda: An Exploratory Study Protocol," 2021.
- [17] S. J. Choi, S. K. Kunwor, H. B. Im, J. H. Hwang, D. Choi, and D. Han, "Traditional and complementary medicine use among cancer patients in Nepal: a cross-sectional survey," *BMC Complementary Medicine and Therapies*, vol. 22, p. 70, 2022.
- [18] V. E. Ikolo, "Perception of traditional medicine practitioners towards formal information sources in Delta State," *Ghana Library Journal*, vol. 27, pp. 60-69, 2022.
- [19] DDHB, "Dire Dawa Health Bureau Health Demographic Statistics," 2022.
- [20] U. Flick, *An introduction to qualitative research: sage*, 2022.
- [21] T. Muzari, G. Shava, and S. Shonhiwa, "Qualitative research paradigm, a key research design for educational researchers, processes and procedures: A theoretical overview," *Indiana Journal of Humanities and Social Sciences*, vol. 3, pp. 14-20, 2022.
- [22] G. Guest, E. Namey, and M. Chen, "A simple method to assess and report thematic saturation in qualitative research," *PloS one*, vol. 15, p. e0232076, 2020.