

BMJ Open 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

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ABSTRACT

Objectives Despite a high number of traditional healers (THs) who treat patients with cancer in Ethiopia, there is limited evidence that explored the lived experience of patients with breast cancer (BC) with traditional treatment and healers' understanding of the causes and manifestations of BC.

Design A phenomenological study design was employed.

Setting This study was conducted in the North Shewa zone in Ethiopia.

Participants Eight in-depth interviews were conducted; four of which were with patients with BC and four with THs. Semistructured interviewing techniques were used to collect data from the two groups of respondents. All interviews were audio-recorded. The recorded data were transcribed verbatim. Coding and marking were then performed to make the raw data sortable. The marked codes were then summarised and categorised into themes.

Results In this study, some of THs were unaware of the main risk factors or causes of BC. They did not mention the lifestyle risk factors of BC such as smoking cigarettes, consuming alcohol and eating habits. The most common clinical manifestations noted by THs were lumps at the breast, discharge from the nipples and weakness. All of the THs got their knowledge of BC treatment from their families and through experience. Regarding the lived experience of treatment, some patients with BC perceived that traditional medicines were safer and more effective than modern treatments and they eventually referred themselves to the THs.

Conclusions Although THs were unaware of the causes of BC, they were familiar with basic signs and symptoms of the disease. Patients with BC referred themselves to the THs because they preferred traditional therapies to modern ones. In order to better satisfy the unmet needs of Ethiopian women with BC, due consideration should be given to traditional treatments.

INTRODUCTION

Breast cancer (BC) is the leading cause of cancer-related morbidity and mortality among women in Ethiopia. It accounts for

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ The involvement of two groups of study participants (both patients with breast cancer (BC) and their traditional healers (THs)) is a major strength of this study, as person triangulation is the best method for generating valid data and more comprehensive findings.
- ⇒ It may be difficult to obtain genuine perceptions of patients with BC toward THs, as both THs and patients with BC were interviewed at the same time.
- ⇒ This study was only confined to a small geographical area of Ethiopia, and the generalisability of the findings to other settings may be limited.
- ⇒ Understanding the treatment experience of patients with BC is critical for integrating traditional medicine into modern cancer care to better meet the needs of women with BC.

about 33% of new cases of cancer and 23% of all cancer deaths.¹ This figure is expected to be doubled by 2030 due to the increasing prevalence rate of established risks such as cigarette smoking, being overweight and physical inactivity as well as rising urbanisation and the rapid growth of the Ethiopian population.² BC is linked to poor quality of life of women and significantly affects the quality of life of their families.^{3,4} The treatment outcome of BC depends on the stages of cancer and various patient factors; for example, treating the disease at an early stage has better results than treating it at an advanced stage.⁵

The use of traditional medicine is common among patients with cancer in Ethiopia.⁶ Available studies reported that more than 52% of patients with cancer have seen traditional healers (THs) for alternative treatments.^{6,7} Particularly, a substantial proportion

of women with BC commonly employed alternative treatments from THs before or after starting modern treatments like chemotherapy.^{8–10} Patients perceived that traditional medicines were more likely to be safe, reduce the size of tumours, alleviate their clinical symptoms and improve their quality of life.² Additionally, THs and community members gave hope to patients with cancer that if they received treatment from THs, they could be cured.^{6 11}

Ethiopian have a long history of getting treatment from THs, and THs also have an important role of meeting the healthcare needs of many rural populations and play a vital role in the treatment of cancer.^{2 12} As documented by various ethnobotanical studies carried out in various regions of Ethiopia, THs employed a variety of medicinal plants to treat all cancer-like symptoms.^{13 14} Some patients with cancer also believed that their disease is the wrath of God and should be treated with the help of spiritually oriented healers.¹⁴ They did not seek out modern therapies because they believed that spiritual solutions were more effective than modern medicine.^{5 14} The THs also believed that they got their treatment skills from supernatural being, experience and family heritage.⁵

Despite a high number of THs who treat patients with cancer in Ethiopia, there is limited evidence that explored the lived experience of patients with BC regarding traditional treatment and THs' understanding of the causes and manifestations, and the roles that THs played in the treatment of BC. There is also scant research on the therapeutic techniques employed by THs in Ethiopia. This study, therefore, aimed to explore lived experiences of patients with BC with their treatment and the THs' understanding of the causes and clinical manifestations of BC in Ethiopia, a country with high rates of patients with BC who receive treatment from THs. Understanding the experience of patients with BC in their treatment and the practice of THs have a paramount significance to integrating traditional medicine into conventional cancer care to better meet the needs of Ethiopian women with BC. On the other hand, exploring THs' level of BC knowledge is the first step in enhancing their capacity to treat patients with cancer and collaborate with THs to create novel therapeutic approaches.

METHODS

Study setting

This study was conducted from February to April 2022 in the North Shewa zone, Amhara regional state, Ethiopia. The zone has 24 administrative districts with an estimated population of more than 2 million people. There are more than six THs who have been treating various types of diseases including cancer.

Study design

A phenomenological study design was employed to explore the lived experiences of patients with BC in their treatment and the THs' understanding of the causes

and clinical manifestations of BC. This study design was chosen because phenomenology is the study of an individual's lived experiences of a phenomenon, in this case, the lived experience of patients with BC in traditional medicine and the THs' perspective of BC, its cause and manifestations, and treatment modalities.^{15–17} This study was conducted as a baseline for a broader ongoing investigation of traditional BC treatment through reversed pharmacology.

Study population and recruitment

A total of eight in-depth interviews were conducted; four of which were with patients with BC and four with THs. The patients with BC are currently attending traditional medicinal treatment from THs. Similarly, THs who had been treating women with BC were included in the study. All the study participants were recruited through purposeful sampling and the sample size was determined based on information saturation.^{18 19}

Data collection procedure

A semistructured interview guide was used to collect data from the two groups of respondents: patients with BC and THs. The interview guide consisted of sociodemographic data, and open-ended and probing questions (online supplemental file 1). The study participants were interviewed in a private room. The three investigators participated in the in-depth interview. One of the investigators was assigned as the interviewer, while the other two investigators took written notes. All interviews were also audio-recorded.

Data processing and analysis

Data were collected from two groups of study participants (ie, patients with BC and THs) as person triangulation is a useful technique to generate more comprehensive data.²⁰ In this analysis, thematic analysis was applied. Initially, the recorded data were transcribed verbatim. Each transcript was read thoroughly to gain relevant concepts (respondent's lived experience) for the analysis. AGM then performed line-by-line coding and marking to make the raw data sortable. Marked codes were examined for similarity and then summarised and sorted into subcategories. The subcategories then were assembled into themes. Under each theme, quotes that best described each theme and were expressed frequently by participants were chosen and presented in italics.

Patient and public involvement

Patients with BC and THs who resided in the study area were involved in the planning and implementation of this study. Leaders from the district cultural and tourism office were part of this study and they guide the study team to ensure that the study is conducted in a culturally acceptable manner. They also helped with the recruitment of study participants and the revision of data collection tools to make them more appropriate for the local context. Besides, these local leaders will also be involved in the

Table 1 Sociodemographic characteristics of study participants, April 2022

Variables	Categories	Number of patients with BC	Number of THs
Age in years	25–34	–	–
	35–44	4	1
	45–54	–	3
Sex	Male	–	4
	Female	4	–
Place of residency	Rural	4	–
	Urban	–	–
Marital status	Married	3	4
	Unmarried	–	–
	Divorced/widowed	1	–
Religion	Orthodox	2	2
	Muslim	2	2
Educational status	No education	2	2
	Primary	1	2
	Secondary	1	–
	College and above	–	–
Occupational status	Employed	–	–
	Housewife	3	–
	Farmer	1	4
	Other	–	–
THs' treatment practice (in years)	5–9	–	–
	10–15	–	1
	16–20	–	3

BC, breast cancer; THs, traditional healers.

dissemination of study findings in order to build public trust in the findings and make them more acceptable.

RESULTS

Sociodemographic characteristics of study participants

All patients with BC were in the age group of 35–44 years, while all THs were between the ages of 45 and 54 years. Three patients with BC were married and one participant was divorced. Two THs and patients with BC had no formal education. All THs were male, married and rural residents. Two THs had no formal education and two THs had completed primary education. All THs were farmers and their years of practice ranged between 10 and 20 years (table 1).

THEMES

Based on thematic analysis, the responses of the study participants are grouped into two categories: THs' understanding of BC and their treatment modalities and the

lived experience of patients with BC with treatments. Under the category of THs' understanding of BC and the treatment modalities, four themes have emerged from the data: THs' understanding of BC causes, clinical manifestations of BC, sources of knowledge of BC treatment and the treatment modalities that THs employed. Within the treatment modalities theme, two subthemes have emerged: drinking and skin application treatment modalities. The second category of the analysis was the lived experience of patients with BC with treatments. Under this category, two themes have been emerged: the lived experience of patients with BC with modern treatments and the lived experience of patients with BC with traditional medicine. All of the reported findings are taken inductively from participants' responses.

Category 1: THs' understanding of BC and the treatment modalities

Theme 1: THs' understanding of the causes of BC

Some of THs were unaware of the cause of BC. They did not mention the lifestyle risk factors for BC such as smoking cigarettes, consuming alcohol and eating habits. Within this theme, two subthemes have emerged: genetic predisposition and infection.

Subtheme 1: BC is familial/hereditary

Some of THs have mentioned a hereditary predisposition for the cause of BC. A healer who was between the ages of 45 and 50 years (R2) stated:

... a breast cancer patient may have the diseases when her family has a history of cancer.

Another interviewee who was between the ages of 45 and 50 years (R4) also said:

For example, if a woman has a family history of breast cancer, if any of her family members had cancer diseases previously, this may lead to breast cancer

...breast cancer can be caused by eating habits... The lifestyle of people nowadays is changed...

Subtheme 2: BC is caused by infection

THs have painted breast infection as a cause of BC. A healer who was between the ages of 45 and 50 years (R2) stated:

Breast cancer patients may have had past breast infections... hence a breast cancer can be caused by breast infection.

Theme 2: THs' understanding of clinical manifestations of BC

THs mentioned a combination of two signs and symptoms of BC. The most common clinical manifestations noted by THs were lumps at the breast and discharge from the nipples. Weakness and arm swelling were also mentioned by THs. One interviewee mentioned the four stages of breast cancer and breast pain. A healer (who was in the age range of 45–50 years (R2)) stated:

... breast cancer patients initially have a pea-sized swelling at the breast, and then it grows to the size of an egg. Breast cancer patients may have discharge from nipples.

A healer who was in the age range of 45–50 years (R3) also reported weakness and arm swelling.

Women with breast cancer may have arm swelling, feel weakness and pain around shoulder...

Another interviewee (who was greater than 50 years (R1)) said:

Firstly, breast cancer patients have a small swelling at a certain point on the breast and then it progresses to stages one, two and four. If breast cancer reaches stage four, it may be difficult to treat the disease. Some of the patients commonly contacted me when their breast cancer was in its 3rd stage.

Theme 3: sources of knowledge about BC treatment

All THs that we interviewed got their knowledge of BC treatment from their families and through experience. There were no THs who got their knowledge from formal education. A healer who was between the ages of 45 and 50 years (R2) stated:

My grandfather treated skin diseases/lesions with herbs, and I was aware of some of the herbs that he used to treat the skin lesions. After he passed away, I tried using those herbs to treat skin disease and many patients had been healed from the disease.

A second interviewee (R4) who was 45–50 years said:

I got this knowledge through experience, and I used different herbs to treat the skin lesions including breast cancer.

Theme 4: treatment modalities that the THs used

Within this theme, two subthemes have emerged: drinking and skin application treatment modalities.

Subtheme 1: drinking herbs as a treatment modality

Before initiating treatment, the healers check and confirm whether the patient had been treated and diagnosed with BC at the hospital. Once confirmation is made, the healers initiate treatment and the patient is then instructed to combine the powdered herbs with 1 L of water and drink a cup of this mixture every day for 3–6 months depending on the stage of BC. The healer advises the patient to complete the course of treatment for a quicker recovery. As quoted below, one healer (who was in the age range of 45–50 years (R3)) explained the technique by which he treated his patients with BC.

I start by checking whether women with breast cancer have received a medical diagnosis. After confirmation, I begin the treatment... some dried herbs are ground into a powder, and then I give it to the customer. They then dissolve it in a liter of water and drink a cup of this solution once a day. I did not include anything like honey or oil... I have not experienced any side effects, it is safe, and everyone can drink it.

As the healer stated below (who was in the age range of 45–50 years (R2)), he had successfully treated two patients with BC who were in the early stage of the disease. As claimed by the healer, however, there are treatment failures when the patients are already in the third stage of BC.

I treat cancer using a drink made of powdered herbs. I was able to successfully treat a woman with breast cancer who was between the ages of 40 and 45. Her breast cancer was in its early stage and she is now healthy and living a regular life with her family.

Subtheme 2: skin application as a treatment modality

Skin application was also employed by THs to treat BC. A healer who was between the ages of 45 and 50 years (R4) reported:

If breast cancer patients have lesions on the skin's surface, I topically apply herbs that have been powdered and dissolved in water to the affected breast.

Category 2: the lived experience of patients with BC with treatments

Theme 1: the lived experience of patients with BC with modern treatments

This theme has emerged from participants' lived experiences of modern treatment at healthcare facilities. Patients with BC recalled the situations they faced during the diagnosis of the disease and the ongoing treatment they received from hospitals. A patient with BC who was dissatisfied with modern treatments and eventually referred herself to a TH described her personal experience of modern therapy. She (R2) said:

I tried all modern treatments at the hospital, but I did not get any improvement of pain, the symptoms are not reduced... I looked for a traditional healer took the medicine from him and followed the treatment for a month... Relatively, I have now some improvement in terms of pain and weakness.

One patient with BC, however, has a neutral perception of both modern and traditional treatments and has used a combination of those treatments. One interviewee who was between the ages of 45 and 50 years (R3) said:

I received a cancer treatment (chemo) from the Black Lion hospital and have completed two cycles of treatment. I also went to the traditional healer by hoping that my pain would be reduced because I have pain around my shoulder and neck... still I am using both treatments.

Theme 2: the lived experience of patients with BC in traditional medicine

In medical science, trust in treatments is an enabling factor in promoting treatment compliance and continuity of patient care. In this study, however, some patients with BC believe that traditional medicines are safer and more effective than modern treatments, and they trusted

traditional treatments. For example, a woman who was between the ages of 40 and 45 years old (R1) said:

I had been treated at Kemisie hospital for one year, but the pain was not reduced... there was no improvement at all. Then, I tried to search for a traditional healer because I had heard that someone from Mekoy kebele could treat persons with cancer. I met him and took treatment for 6 months. Now, there is no pain and I am healed from the disease... I also gave birth and am able to breastfeed.

Another woman aged 40–45 years old (R4) said:

I received treatment from the hospital, but I did not see any improvement. For me, the traditional healer was somewhat helpful. I am still taking traditional medicine.

DISCUSSION

To the best of our knowledge, this is the first study that offered insight into the lived experiences of patients with BC in traditional treatments and THs' understanding of the causes, clinical manifestations and treatment of BC in Ethiopia. In this study, two groups of study participants (both patients with BC and their THs) participated as person triangulation is the best method to generate valid and reliable data, and more comprehensive findings.^{15 20}

Under the THs' response, healers' understanding of BC causes, clinical manifestations of BC, sources of knowledge of BC treatment and the treatment modalities that THs used were explored. Accordingly, some of THs were unaware of the cause and risk factors of BC. For example, THs did not mention the lifestyle risk factors of BC such as smoking cigarettes, consuming alcohol and eating habits, which are the known risks for the development of cancer including BC.²¹ Two of THs mentioned genetic predisposition and infection, whereas one participant did not mention any cause of BC. The existing evidence also supported that familial breast gene mutations could cause the development of BC.²² Even though similar misconceptions had been reported by a related study,¹⁰ there was no available evidence that BC could be caused by breast infection.

Regarding THs' understanding of clinical manifestations of BC, some of THs mentioned a combination of two signs and symptoms of BC. The most common manifestations noted by THs were lumps at the breast and discharge from the nipples. One participant mentioned the four stages of BC. This indicates that THs are familiar with the basic signs and symptoms of BC, and if they are supported by scientific knowledge, they are able to treat patients professionally.^{23 24} All of the THs got their knowledge of BC treatment from their families and through experience. There were no THs who learnt treatment from formal education. The same was true in Uganda, where herbalists learnt about cancer treatment from their families and personal experiences.²⁵

In this study, THs employed either drinking or skin application modalities to treat women with BC. All THs

prepared the herbal medicine using the same methods and procedures, but they all kept the type of herbs they used a secret. They prepared the herbs for drinking and skin application by first grinding them. Once the THs confirmed the diagnosis of BC, they initiate treatment and the patient is then instructed to mix the powdered herbs with water and drink a cup of this mixture every day for the period that the healer suggests. Some of THs also used skin applications of herbs that were dissolved in water. The same therapeutic approaches were practised in Ghana, where THs placed herbs on the breast in hopes that the lump would disappear.²⁴ This suggests the necessity of setting up a forum to provide THs access to scientific knowledge and to improve their responsibility for traditional treatment.

Under the lived experience of patients with BC with treatments, the lived experience of patients with BC with traditional and modern treatments was explored. As a result, some patients with BC believed that traditional medicines were safer and more effective than modern treatments. They claimed that they were dissatisfied with modern treatments and eventually referred themselves to THs. However, one patient with BC had a neutral perception in relation to modern and traditional medicine and currently uses a combination of those treatments. In agreement with our study, previous studies reported that patients with BC sought out THs because traditional medicine gave them temporary symptomatic pain relief from the disease.^{5 25 26} The available studies also explained the reasons that led patients with BC to seek out traditional treatments.^{27 28} Although patients with BC in our study perceived that traditional medicines were safe and effective, the available ethnobotanical studies conducted in Ethiopia revealed few side effects.^{13 29} Consequently, further toxicological research should be taken into consideration to protect the community from the adverse side effects of traditional medicine.

Despite its strengths, this study has some methodological limitations. This study may have certain limitations in gaining the genuine perceptions of patients with BC towards THs as both THs and patients with BC were interviewed at the same time. This study was only confined to a small geographical area of Ethiopia, and the generalisability of the findings to other settings may be limited.

CONCLUSIONS

Although THs were unaware of the causes of BC, they were familiar with basic signs and symptoms of the disease. Patients with BC referred themselves to the THs because they preferred traditional therapies to modern ones. In order to better satisfy the unmet needs of Ethiopian women with BC, due consideration should be given to traditional treatments.

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Patient consent for publication Obtained.

Ethics approval Ethical approval was obtained from the research and ethical review committee of Debre Berhan University (ref. no: RCSVP/266/7-43174). Written informed consent was obtained from both groups of participants: patients with BC and THs. All the information obtained from participants was kept confidential throughout the process of study, and the name of the participant was replaced by a code. Withdrawal from the study at any point if they wished was assured.

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REFERENCES

- Hassen AM, Hussien FM, Asfaw ZA, *et al*. Factors associated with delay in breast cancer presentation at the only oncology center in North East Ethiopia: a cross-sectional study. *J Multidiscip Healthc* 2021;14:681–94.
- Tuasha N, Petros B, Asfaw Z. Plants used as anticancer agents in the Ethiopian traditional medical practices: a systematic review. *Evid Based Complement Alternat Med* 2018;2018:1–28.
- Matowa PR, Gundidza M, Gwanzura L, *et al*. A survey of ethnomedicinal plants used to treat cancer by traditional medicine practitioners in Zimbabwe. *BMC Complementary Medicine and Therapies* 2020;20:1–3 <https://doi.org/10.1186/s12906-020-03046-8>
- Ben-Arye E, Schiff E, Silbermann M, *et al*. Perceptions of complementary medicine integration in supportive cancer care of Arabs and Jews in Israel: a cross-cultural study. *J Pain Symptom Manage* 2015;49:871–7.
- Haileselassie W, Mulugeta T, Tigeneh W, *et al*. The situation of cancer treatment in Ethiopia: challenges and opportunities. *J Cancer Prev* 2019;24:33–42.
- Birhanu Z, Abdissa A, Belachew T, *et al*. Health seeking behavior for cervical cancer in Ethiopia: a qualitative study. *Int J Equity Health* 2012;11:1–8.
- Birhan W, Giday M, Teklehaymanot T. The contribution of traditional healers' clinics to public health care system in Addis Ababa, Ethiopia: a cross-sectional study. *J Ethnobiol Ethnomed* 2011;7:1–7.
- Mwaka AD, Abbo C, Kinengyere AA. Traditional and complementary medicine use among adult cancer patients undergoing conventional treatment in Sub-Saharan Africa: a scoping review on the use, safety and risks. *Cancer Manag Res* 2020;12:3699–712.
- Asobayire A, Barley R. Women's cultural perceptions and attitudes towards breast cancer: Northern Ghana. *Health Promot Int* 2015;30:647–57 <https://www.jstor.org/stable/48518752>
- Asuzu CC, Akin-Odanye EO, Asuzu MC, *et al*. A socio-cultural study of traditional healers role in African health care. *Infect Agent Cancer* 2019;14:1–5.
- Muhamad M, Merriam S, Suhani N. Why breast cancer patients seek traditional healers. *Int J Breast Cancer* 2012;2012:1–9.
- Tuasha N, Seifu D, Gadisa E, *et al*. Solvent fractions of selected Ethiopian medicinal plants used in traditional breast cancer treatment inhibit cancer stem cells in a breast cancer cell line. *BMC Complementary Medicine and Therapies* 2020;20:1–9.
- Tesfaye S, Belete A, Engidawork E, *et al*. Ethnobotanical study of medicinal plants used by traditional healers to treat cancer-like symptoms in eleven districts, Ethiopia. *Evid Based Complement Alternat Med* 2020;2020:1–23.
- Mwaka AD, Mangi SP, Okuku FM. Use of traditional and complementary medicines by cancer patients at a national cancer referral facility in a low-income country. *Eur J Cancer Care* 2019;28:e13158.
- Gebremariam A, Addissie A, Worku A, *et al*. Breast and cervical cancer patients' experience in Addis Ababa City, Ethiopia: a follow-up study protocol. *BMJ Open* 2019;9:e027034.
- Groenewald T. A phenomenological research design illustrated. *Int J Qual Methods* 2004;3:42–55.
- Laverty SM. Hermeneutic phenomenology and phenomenology: a comparison of historical and methodological considerations. *Int J Qual Methods* 2003;2:21–35.
- Kuper A, Lingard L, Levinson W. Critically appraising qualitative research. *BMJ* 2008;337:a1035–692.
- Busetto L, Wick W, Gumbinger C. How to use and assess qualitative research methods. *Neurol Res Pract* 2020;2:1–5.
- Gebremariam A, Addissie A, Worku A, *et al*. Perspectives of patients, family members, and health care providers on late diagnosis of breast cancer in Ethiopia: a qualitative study. *PLoS One* 2019;14:e0220769.
- Al-Naggar RA, Bobryshev YV, Abdulghani MA-MM, *et al*. Knowledge and perceptions of cancer and cancer prevention among Malaysian traditional healers: a qualitative study. *Asian Pac J Cancer Prev* 2012;13:3841–50.
- Kurian AW, Sigal BM, Plevritis SK. Survival analysis of cancer risk reduction strategies for *BRCA1/2* mutation carriers. *J Clin Oncol* 2010;28:222–31.
- Habtom GK. Perceptions and attitudes of modern and traditional medical practitioners about traditional medical practice in Eritrea. *Int J Complement Altern Med* 2018;11:00340.
- Mburu W, Boamah Mensah AB, Virnig B, *et al*. Pathways to breast cancer diagnosis and treatment among women in Ghana: a qualitative study. *Womens Health Rep* 2021;2:234–44.
- Mwaka AD, Okello ES, Orach CG. Barriers to biomedical care and use of traditional medicines for treatment of cervical cancer: an exploratory qualitative study in northern Uganda. *Eur J Cancer Care* 2015;24:503–13.
- Akhtar K, Akhtar K, Rahman MM. Use of alternative medicine is delaying Health-Seeking behavior by Bangladeshi breast cancer patients. *Eur J Breast Health* 2018;14:166.
- Sayed S, Ngugi AK, Mahoney MR, *et al*. Breast cancer knowledge, perceptions and practices in a rural community in coastal Kenya. *BMC Public Health* 2019;19:1–3.
- Shah NM, Nan BLT, Hui NY, *et al*. Knowledge and perception of breast cancer and its treatment among Malaysian women: role of religion. *Tropical Journal of Pharmaceutical Research* 2017;16:955–62.
- Mwaka AD, Walter FM, Scott S, *et al*. Symptom appraisal, help-seeking and perceived barriers to healthcare seeking in Uganda: an exploratory study among women with potential symptoms of breast and cervical cancer. *BMJ Open* 2021;11:e041365.