Non Comunicable Diseases

Awareness of breast self-examination and understanding of breast cancer treatment options among female patients of Lahore, Pakistan: a cross-sectional study

NOSHEEN MUSTAFA[1], KANWAL ASHIQ[1], EMAAN MUSTAFA[2], SHAHERYAR ALI[2], MARYAM ZAKA[3]
[1] Faculty of Pharmacy, Superior University, Lahore, Pakistan; [2] Jinnah Hospital, Lahore, Pakistan;
[3] Faculty of Pharmacy, Lahore College of Women University, Lahore, Pakistan

Keywords

Breast cancer • Cross-sectional • Pakistan • Allopathic • Traditional medicine

Summary

Introduction. *Breast cancer is a major worldwide health concern that affects women in both developed and developing nations. The purpose of the study is to assess Pakistani women with breast cancer's present understanding of breast self-examination (BSE) as well as their choices for traditional and non-conventional breast cancer treatment options.*
Methods. *A cross-sectional study was carried out in two hospitals' cancer departments as well as homeopathic and nutritional clinics in Lahore, Pakistan. The data for the present study was collected from January to June 2023.*
Results. *A total of 296 responses were obtained. The study findings showed that most participants had little knowledge about BSE and were using multiple treatment options without informing their healthcare provider.*
Conclusions. *Breast cancer awareness is crucial for early detection, education about risk factors, and proactive fitness management. Complementary and alternative medicine (CAM) might cause problems when used with allopathic medicines, especially if healthcare professionals are not adequately informed about its concomitant use.*

Introduction

Breast cancer affects women in both developed and developing countries, making it a serious global health concern. Limited resources, inadequate nutrition, and reproductive-related factors exacerbate breast cancer disparities. Restricted healthcare access leads to delayed diagnoses and treatment and higher mortality rates in underserved populations. Inadequate nutrition compromise's immune function, and reproductive factors, like early menstruation, late menopause, or fewer pregnancies, can contribute to these disparities [1]. After overtaking lung cancer in 2020, female breast cancer accounted for 11.7% of all cancer cases and was the world's top cause of cancer incidence. Breast cancer is expected to have a substantial impact on global cancer statistics, accounting for 15.2% of all new cancer cases worldwide by 2023. It also continues to be the world's sixth most common cause of cancer death [2]. There is a significant variation in incidence rates across different countries. High-income countries report rates as high as 90 per 100,00,000 women, while low-income countries report as low as 30 per 100,00,000 women [3, 4]. The majority of incidents of breast cancer are diagnosed in women 50 years of age and older, with around 80% of cases occurring in this age group. With a five-year relative survival rate of roughly 90% for early-stage breast cancer, it drops to about 27% for metastatic cases. Early diagnosis significantly improves outcomes [5].
Based on Khan et al., by 2023, there will be 90 to 100,00 cases of breast cancer for every 100,00,000 women in Pakistan, making it the most common cancer among females. The illness adversely affects people's physical, mental, social, and existential well-being, which substantially negatively impacts their quality of life (QoL) [6]. For example, even after therapy concludes, patients frequently experience ongoing fatigue and discomfort. A study indicated that breast cancer patients report clinical levels of distress after treatment. Mentally, the diagnosis can cause high levels of worry and sadness. As seen in a study where 30% of breast cancer patients reported fewer social connections as a result of their illness, the demands of continuous treatment might socially result in isolation or damaged relationships [7]. According to a study, facing a severe disease prompts introspective thoughts about one's personal beliefs and life's purpose, which can cause existential discomfort. For instance, in the setting of their sickness, patients commonly struggle with worries related to mortality and the purpose of their existence. Common side effects of treatment that worsen physical distress include fatigue, pain and hair loss. Patients may experience emotional problems such as anxiety, depression and body image issues, which can lead to social withdrawal and strained interpersonal relationships. Changes in desire and

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fertility issues can affect one's sexual health, while existential distress is related to facing death and the meaning of life [6]. These particular instances highlight the extensive and significant effects of breast cancer on a person's general health and their QoL [8]. The National Cancer Institute (2022) states that improving the overall quality of life through holistic support catered to individual needs, supportive care, rehabilitation, and survivorship programs are critical in addressing these challenges [9].

There are two types of risk factors for breast cancer: modifiable and non-modifiable. Genetics, family history, age, gender and previous radiation exposure are non-modifiable factors. Genetic mutations like those in the BRCA1 and BRCA2 genes, as well as a family history of the disease, can further increase a person's risk of developing breast cancer. Modifiable factors give intervention opportunities. Prolonged estrogen exposure from early menstruation, late menopause or hormone replacement therapy can raise risk. Reproductive history, such as postponed childbirth or limited breastfeeding, as well as lifestyle decisions like obesity, alcoholism, physical inactivity and eating patterns, all have a significant influence. Exposure to chemicals that disrupt hormones is one example of an environmental variable that may impact risk. It is essential to address these factors through lifestyle modifications, early detection, and preventive measures to reduce the risk of breast cancer [1, 10, 11].

Breast self-examination, or BSE, is crucial for the early diagnosis, monitoring, and detection of breast cancer. During clinical breast exams, medical experts physically examine patients to check for anomalies such as lumps or changes in the size and shape of the breasts. Women without symptoms are encouraged to get screened as early as age 40 because regular screens help find small, treatable tumours early on. Furthermore, mammograms are often recommended before the onset of symptoms and are crucial for diagnosing breast cancer in its early stages. Biopsies are required to confirm and characterize cancer; extra imaging modalities such as ultrasonography and MRI may be employed for further evaluation. By regularly completing BSE, people can recognize changes like lumps or skin changes and seek timely medical intervention. BSE is an adjunct to clinical examinations and mammography, not their substitute. It empowers individuals to actively participate in their breast health by promoting the early diagnosis of potential issues [9, 12, 13].

Complementary and alternative medicine or CAM therapies include nutritional counselling and homeopathic medicine. These therapies usually aim to reduce side effects from conventional treatments, boost immunity, and treat cancer symptoms. However, CAM may occasionally clash with conventional treatments, leading to difficulties if their usage with allopathic treatment is not correctly revealed to healthcare practitioners. The fact that around two-thirds of women utilize complementary and alternative medicine without first talking to their oncologists emphasizes the need for better patient-provider communication [14-16]. In order to augment their treatment strategy, patients with breast cancer often look into several complementary and alternative medicine (CAM) therapies. The goal of nutritional counseling for breast cancer patients is to optimize diet in order to promote therapy, control side effects, and enhance general health. Individualized care lowers the chance of cancer recurrence, increases immunity, and helps patients keep their vigor. Dietary supplements such alpha-factor, high-dose vitamin C, and selenium are used to boost immunity and manage side effects. Herbal drugs such as mistletoe therapy and Chinese herbal remedies are highly sought after due to their potential to enhance both treatment outcomes and quality of life. Moreover, mind-body therapies like qigong, acupuncture, and osteopathy are utilized to reduce stress, ease pain, and enhance overall well-being. These, along with many other complementary and alternative medicine (CAM) modalities, are valued for their ability to complement conventional treatments while addressing many aspects of health and recovery [17].

This study seeks to address important gaps in the understanding and practice of breast self-examination (BSE) and available treatment choices for breast cancer among Pakistani women. The study specifically planned to assess this population's present awareness and comprehension of BSE and investigate their preferences for both conventional and non-traditional breast cancer therapies. By evaluating these factors, the study hopes to pinpoint possible areas in which resources and instruction might be deficient as well as offer insights into how treatment preferences might affect patient decisions and results. The ultimate goal of the research is to improve early identification and treatment efficacy for breast cancer in Pakistani women through focused interventions and support techniques.

Materials and methods

Study design and settings

In the current study, a cross-sectional study plan was implemented. Patients with a diagnosis of breast cancer provided data for the collection. This study assessed breast cancer treatment options and awareness of breast self-examination. The research was carried out in two hospitals' cancer departments as well as homeopathic and nutritional clinics in Lahore, Pakistan. The data was gathered from Anmol Cancer Care Hospital and Shaukat Khanam Cancer Memorial Hospital. The clinics treating women with breast cancer in the township, Dharampura, and Ischra market provided information for homeopathic herbal and nutritional therapy.

Study criteria

This study enrolled all women with breast cancer receiving therapy irrespective of their age, marital status, level of education or ethnic background. Patients receiving nutritional treatment, herbal remedies, or homeopathic medicine were included in this study in addition to those

receiving chemotherapy or other allopathic treatments. To ensure that respondents understand and answer the survey questions openly, minimum criteria of Urdu fluency is necessary. This degree of competence is essential for efficient communication and preserving the accuracy and dependability of the data gathered in Pakistan, where a large number of people live in rural regions and may not know how to read or write English. The study excluded female patients who were not receiving treatment for breast cancer or who still receiving a diagnosis, as well as patients with conditions were other than breast cancer. Furthermore, the study excluded immigrants who were not proficient in Urdu and patients with co-morbidities.

Sample size

The convenience sampling was used to collect the data, and participants were chosen based on their availability and desire to participate. Although this method made data collecting more efficient, it might have introduced biases of its own, including a lack of population representation. Because of this, the results may not be entirely generalizable because the sample may not accurately represent the wide range of traits and experiences that make up the target population. The sample size was calculated using the Solvins formula, which is $n = N / (1 + N e^2)$ where, n = Sample size, N = Estimated population size, e = Margin of error (0.05).
This formula was used to determine the estimated sample size of 320. However, for convenience, a sample of 296 patients receiving breast cancer treatment was gathered.

Data collection tool (DCF)

The data for the present study was collected from January to June 2023. The data was gathered using an extensive structured DCF. The body of existing literature served as the basis for designing the questionnaire [18]. The data collection instrument was divided into four primary sections, including participant consent, demographic information, history of breast cancer, and awareness of breast self-examination and choices for treating breast cancer. In first section, respondents were asked if they gave their approval to take part in the study. In second section, data on age, marital status, educational background, socioeconomic status, menarche and menopause age, number of living kid(s) in case of married female, and occupation were collected. In third section, breast cancer history, including age at onset, family history, signs and symptoms, side effects, surgery, and treatment received, is covered in this section. In fourth section of the survey, participants were asked about their understanding of BSE. In particular, this portion examined their knowledge of potential therapies, such as CAM, their preferred methods of managing their ailment, and whether they had consulted a doctor about their alternatives. The Cronbach's alpha value was found to be 0.71, indicating that the questionnaire is reliable.

Ethical approval

Ethical approval for this study was issued by the Research Ethics Committee of Superior University under reference number 264/01/2023.

Participant's consent statement

Before taking part in the study each participant gave written informed permission. They were made aware of the objectives, methods, possible disadvantages and advantages of the study. Participants could leave at any time without incurring any penalty because participation was entirely voluntary.

Statistical analysis

Using SPSS version 21, data was analyzed. The survey parameters were calculated using frequency distributions and percentages. The association between variables, such as education, family history, awareness of breast self-examination, and therapy choices, was assessed using the Pearson Chi-square test. Using a technique known as Cronbach's alpha, we were able to assess the survey questions' reliability by determining how well they lined up. Experts carried out content assessment to ensure validity of survey tool and verified that they truly understood the questionnaire by determining whether the questions aligned well with the objectives we were investigating. These actions demonstrate the accuracy and strength of the data. The *p* values less than 0.05 were regarded as significant.

Results

Demographic information

The demographic data of the participants are summarized in Table I. A total of 296 people participated in the survey, with all categories summing to 100,00% that demonstrated accuracy and consistence of the data. The study findings revealed that most participants were 31 to 41 (28.72%) old and married (n = 215, 72.64%). The participants' socioeconomic status showed that most females belonged to the middle class (n = 169, 57.09%). Moreover, most females were illiterate (n = 131, 44.26%) and housewives (n = 244, 82.43%).

Participants' number of children

Table II provides a breakdown of the information pertaining to the participants' number of children. Of the 215 married, divorced, or widowed participants who were expecting to have children, 15 (6.98%) were infertile. Furthermore, the data showed that most females (n = 53, 25.65%) had three children.

Menarche and menopause age of the participants

An overview of the data about the menarche and menopause ages of the individuals is given in Table III. According to the statistics, the majority of females (n = 131, 44.26%) did not yet have menopause, while the majority of females (46.96%) had their menarche between the ages of 16 and 18.

Tab. I. Demographic information of the participants (n = 296).

Variables	Frequency (n)	Percentage (%)
Age distribution (years)		
21-30	25	8.45
31-40	85	28.72
41-50	78	26.35
51-60	73	24.66
61-70	33	11.15
Above 70	2	0.67
Total	296	100.00
Marital status		
Married	215	72.64
Unmarried	19	6.42
Widow	18	6.08
Divorced	44	14.86
Total	296	100.00
Socioeconomic status		
Low	100.00	33.78
Middle	169	57.09
High	27	9.12
Total	296	100.00
Education		
Illiterate	131	44.26
Primary education	39	13.18
Secondary education	73	24.66
Under graduation	29	9.80
Graduation	14	4.73
Post graduation	10	3.37
Total	296	100.00
Occupation		
Working women	40	13.51
Student	12	4.05
Housewife	244	82.43
Total	296	100.00

Tab. II. Information on the participants' living children (n = 215).

Category	Frequency (n)	Percentage (%)
Infertility	15	6.98
1	14	6.51
2	25	11.63
3	53	24.65
4	41	19.07
5	36	16.74
More than 5	31	14.42
Total	215	100.00

The history of breast cancer among participants

Table IV provides the patients' breast cancer history. The results of the study showed that the majority of the symptoms that the patients encountered were painful lumps; however, some also reported painless lumps, changes in breast size and shape, thickening of the skin, and nipple retraction with secretory discharge. The majority of females (28.04%) diagnosed with breast cancer between the ages of 31 and 40 and had

Tab. III. The participants' information on menarche and menopause age (n = 296).

Category	Frequency (n)	Percentage (%)
Menarche age (years)		
Under 12	15	5.07
12-15	134	45.27
16-18	139	46.96
18-20	8	2.70
Total	296	100.00
Menopause age (years)		
Under 40	35	11.82
40-45	30	10.14
46-50	69	23.31
Above 50	31	10.47
Menopause is not present yet	131	44.26
Total	296	100.00

a right-side breast tumor (n = 156, 52.70%). Most of them had stage 3 breast cancer (n = 124, 41.89%), had undergone breast surgery (n = 160, 54.05%) and had been receiving therapy for more than a year (n = 108, 36.49%). According to the study findings, patients with breast cancer had a family history of the disease in their relatives (n = 147, 40.30%), parents (n = 74, 25%), or siblings (n = 60, 20.27%), while few participants had no family history (n = 22, 7.43%).

Awareness of breast cancer self-examination (BSE) among participants

Table V provides information on participants' awareness of BSE. In contrast to (n = 53,17.91%), the majority of participants (n = 243, 82.09%) were unaware of BSE and had not received any education about it. Furthermore, very few females claimed to have conducted BSE (n = 50, 16.89%), to be aware of its process (n = 53, 17.91%), and to have benefited from an early diagnosis of breast cancer (n = 48, 16.22%). Table VI provides information about patients 'counseling. A total of 53 participants out of 296 had received counseling. The patients received counseling from doctors (n = 18, 33.96%), pharmacist (n = 17, 32.08%), friends (n = 4, 7.55%), family members (n = 12, 22.64%) and others (n = 2, 3.775%).

Details about the treatment received by patients

The Table VII provides information on the therapeutic decisions made by participants. In the current study, a variety of treatment modalities were examined that influenced participants therapeutic decisions. While some participants chose to use homeopathic remedies or dietary interventions others only used allopathic treatments. Furthermore a subset of subjects integrated homeopathic, allopathic and nutritional approaches in their therapy. The goal of this combined reporting is to give a thorough picture of the participants' treatment preferences. Participants employed allopathic (n = 152, 51.35%), homeopathic (n = 72, 24.32%), herbal (n = 52,

Tab. IV. Participants' breast cancer history (n = 296).

Variables	Frequency (n)	Percentage (%)
Main symptoms		
Painless lump	81	27.36
Painful lump or pain when touched	101	34.12
Change of shape and size of breast	22	7.43
Discharge of secretion with pain	57	19.26
Skin thickening and nipple retraction	35	11.82
Total	296	100.00
Side of breast tumor		
Right side	156	52.70
Left side	140	47.30
Total	296	100.00
Stage of breast cancer		
Stage 1	5	1.69
Stage 2	113	38.18
Stage 3	124	41.89
Stage 4	54	18.24
Total	296	100.00
Age at which breast cancer was diagnosed		
21-30	29	9.80
31-40	83	28.04
41-50	78	26.35
51-60	75	25.34
61-70	31	10.47
Total	296	100.00
Family history of breast cancer		
Parents	74	25.00
Siblings	60	20.27
Relatives	140	47.30
No family history	22	7.43
Total	296	100.00
Had any surgery for breast cancer?		
Yes	160	54.05
No	136	45.95
Total	296	100.00
Duration of the present therapy		
8 months	22	7.43
9 months	30	10.14
10 months	25	8.45
11 months	47	15.88
12 months	64	21.62
More than a year	108	36.49
Total	296	100.00

Tab. V. Participants' awareness about breast cancer self-examination (BSE) (n = 296).

Questions	Response	
	Yes n (%)	No n (%)
Have you heard of BSE?	53 (17.91)	243 (82.09)
Has anyone educated you about BSE?	53 (17.91)	243 (82.09)
Have you done BSE?	50 (16.89)	246 (83.11)
Has BSE helped you in early diagnosis of the disease?	48 (16.22)	248 (83.78)
Do you know how to perform BSE?	53 (17.91)	243 (82.09)

Tab. VI. Participants' counseling about breast cancer self-examination (BSE) (n = 53).

Who educates the patient about BSE?	Frequency (n)	Percentage (%)
Doctor	18	33.96
Pharmacist	17	32.08
Friends	4	7.55
Family	12	22.64
Any other	2	3.77
Total	53	100.00

Tab. VII. Participants' therapeutic choices (n = 296).

Category	Frequency (n)	Percentage (%)
Therapy used at the early diagnosis		
Allopathic	152	51.35
Homeopathic	72	24.32
Herbal medicines	52	17.57
Food	20	6.76
Total	296	100.00
Are you taking any nutrition supplements?		
Yes	191	64.53
No	105	35.47
Total	296	100.00
Are you using more than one therapy?		
Yes	82	27.70
No	214	72.30
Total	296	100.00
If use CAM or used more than one therapy; then are you informing their therapist or physician?		
Yes	61	20.61
No	164	55.41
NA	71	23.99
Total	296	100.00

17.57%), and nutritional treatment (n = 191, 64.53%) in addition to food (n = 20, 6.76%) after an early diagnosis. The majority of participants (n = 164, 55.41%) did not tell their healthcare practitioner that they were relying on multiple therapeutic choices (n = 214, 72.30%).

The Table VIII provides information on the degree of satisfaction that accompanies them. Out of the 152 participants who had allopathic treatment, the majority expressed satisfaction with it (n = 110, 72.37%) when compared to other groups. Out of the 72 subjects who were receiving homeopathic treatment, 28 (38.89%) found homeopathic medicine satisfactory while 44 (61.11%) did not. Out of 52 participants who were relaying on herbal medicines, 37% (71.15%) people expressed dissatisfaction with their herbal treatment while 15 people (28.85%) said they were satisfied. Of the 20 patients receiving food-based therapies, 5 (25.00%) reported being satisfied and 15 (75.00%) reporting being dissatisfied.

Tab. VIII. Participants' satisfaction level with the current therapeutic choices.

Category	Frequency (n)	Percentage (%)
Overall level of satisfaction with present therapy (n = 296)		
Yes	141	47.64
No	155	52.36
Total	296	100.00
Patient satisfaction among those receiving allopathic medicine treatment (n = 152)		
Yes	110	72.37
No	42	27.63
Total	152	100.00
Patient satisfaction among those receiving homeopathic medicine treatment (n = 72)		
Yes	28	38.89
No	44	61.11
Total	72	100.00
Patient satisfaction among those receiving herbal treatment (n = 52)		
Yes	15	28.85
No	37	71.15
Total	52	100.00
Satisfaction with food (n = 20)		
Yes	5	25
No	15	75
Total	20	100.00

Current allopathic treatment and related adverse effects

Tables IX and X provide information about allopathic treatment and associated adverse effects. 110 (37.16%) respondents out of 296 provides information on their drug (s) used in chemotherapy. Out of 110, when compared to docetaxel (n = 20, 18.18%), trastuzumab (n = 22, 20.00%), doxorubicin (n = 14, 12.73%), and 5FU + docetaxel (n = 14, 12.73%), the therapy with cyclophosphamide + 5FU + doxorubicin was found to be more common (n = 28, 25.45%). Participants (n = 296) listed severe GIT problems (n = 149, 50.34%), joint issues (n = 5 9, 19.93%), nausea and vomiting (n = 34, 11.49%), and liver concerns (n = 8, 2.70%) as adverse effects.

Tab. IX. Allopathic drugs used in chemotherapy (n = 110).

Drug(s)	Frequency (n)	Percentage (%)
Cyclophosphamide+5FU+doxorubicin	28	25.4
Docetaxel	20	18.18
Trastuzumab	22	20.00
Docetaxel+trastuzumab	12	10.91
Doxorubicin	14	12.73
5FU+docetaxel	14	12.73
Total	110	100.00

Tab. X. Treatment side effects reported by participants (n = 296).

Side effects	Frequency (n)	Percentage (%)
Joint problem	59	19.93
Severe GIT issues	149	50.34
Nausea and vomiting	34	11.49
Liver problem	8	2.70
No side effects	16	5.41
More than one above mentioned side effects	30	10.13
Total	296	100.00

Decisions on breast self-examination and treatment are influenced by education and family history

Education and family history are related to breast self-examination and treatment decisions, and results are presented in Table XI. The results of the study indicated that BSE and treatment decisions were significantly influenced by education and family history of breast cancer ($p < 0.05$).

Discussion

In this current study, different stages and symptoms of breast cancer are discussed. It showed that most of the women (42%) considered in this study had stage 3, and 38.3% had stage 2. According to the Nadem Bilani et al. stated that 42% females were diagnosed at the stage 1 and 25% at stage 2 [19]. In the context of symptoms, this study suggested that 34.12% of patients had a painful lump or pain when touched, and 27% had a painless lump. In contrast, others showed different symptoms like nipple retraction, skin thickening, change of shape or size of breast, discharge of secretion, *etc*. Caroline Burgess et al. (2001) found out that the majority of the patients had breast lump and felt pain when touched. According to the WE Barlow et al., women with a diagnosed breast cancer were more likely to report a breast lump (72.2%) than those without (47.4%) [20].

A recent study found that 38.3% of patients acquired breast

Tab. XI. Association of education and family history with breast self-examination and therapeutic choices (n = 296).

Variables	Education	Family history
Have you heard of BSE?	0.001	0.031
Have you done BSE?	0.020	0.009
BSE helps you in the early diagnosis of cancer.	0.013	0.028
Do you know how to perform BSE?	0.040	0.036
Which type of treatment was used?	0.020	0.032
Which type of therapy is used at the early diagnosis of breast cancer?	0.006	0.011
Are you using more than one therapy?	0.023	0.002
If you use CAM, then are you informing their physician?	0.04	0.034

$p > 0.05$ = non-significant and $p < 0.05$ = significant.

cancer from their parents, siblings, or other relatives. 9.3% of breast cancer cases were passed down from parents and 9.3% from siblings. However, the medical reports of 61.7% of patients revealed no family history of breast cancer, because even when they experience symptoms, patients without a family history may not consider themselves as being at high risk and may be less likely to seek early medical assistance. But, according to Richard W. Sattin et al., most breast cancer is inherited from first-degree relatives like mother and siblings [21].

Breast self-examination is an essential technique for the early detection of breast cancer. However, it will be beneficial to patients if it is done appropriately. Compared to uneducated or rural areas, the females at the higher learning institution were well aware of self-breast inspection and practiced it [22]. According to the current study, the majority of patients (82.3%) had not heard about breast self-examination, while just 17.91% of women had. Only 16% of female patients had performed this, and BSE helped her in the early diagnosis. In Turkey, 68% of females had heard about breast self-examination, but only 34% of female patients had performed this before their diagnosis. Our research, however, revealed considerably lower awareness and practice rates. These variations could be ascribed to regional variations in healthcare resources available, cultural perspectives on preventive health, or differing degrees of public health education. The primary sources of this information and knowledge were television and different programs on TV channels [23, 24].

This study examined allopathic (chemotherapy), homeopathic, herbal, and diet treatments. When it came to the early diagnosis of breast cancer, 51.35% of patients underwent allopathic therapy, 24.32% used homeopathic therapy, 17.57% used herbal treatment, and 6.7% used dietary treatment. The data indicate that 48% of women have used complementary and alternative therapies, such as herbal, homeopathic, and nutritional. However, according to this, the majority of the women, 66% of patients, had at least one CAM therapy after the completion of allopathic treatment of disease, and most of them felt that their physician did not authorize their use of complementary and alternative medicine [25]. According to Grayson A. et al., 84% of female patients who used CAM as side therapy for their disease did not disclose this to their respective allopathic practitioner [26], and the same way in this current study also, 55.41% of female patients did not inform the usage of alternative therapies to their oncologist.

Recent research revealed that 47.7% of them were satisfied with the therapy they were receiving at the time, while 52.3% were not. It also demonstrated the level of patient satisfaction with various treatment approaches. While 27.63% of patients were dissatisfied with the existing chemotherapy, 72% of patients were satisfied with allopathic therapy. Merely 38.89% of patients expressed satisfaction with homeopathic treatment, whilst 53% of women expressed dissatisfaction. Of the patients, 71.15% were unsatisfied with herbal or dietary therapy, whereas just 28.85% of women were satisfied. The results of this study are nearly comparable to those of a different study carried out by A research by H. Boon et al. (2000) found that 24.4% of patients were satisfied with alternative therapies, while 62.6% were content with conventional treatments or believed that conventional treatments would cure their illness. These findings are fairly similar to our study, which found that allopathic therapy had the highest satisfaction rating when compared to alternative therapies. However, the use of CAM is expanding significantly [27]. In a related vein, H. Boon et al. stated in a 2007 article that these alternative therapies will no longer be referred to as "alternative and complementary therapies", owing to the growing prevalence of complementary and alternative medicine (CAM), the label "alternative" is losing use as these treatments are more thoroughly incorporated into traditional healthcare [28].

The current study discovered that the patient's education and family history had a statistically positive relationship with the knowledge of breast self-examination, the type of therapy used in the early diagnosis of disease and their compliance or relation with their allopathic practitioner. The present investigation discovered a statistically significant positive link between patients' educational attainment. More specifically, people with more educational attainment were more likely to identify symptoms and seek medical attention as soon as possible. The Pearson correlation coefficient revealed a correlation coefficient of 0.45 ($p < 0.01$). The study also found that patients were more likely to undergo screening and diagnostic treatments if there was a family history of breast cancer. Analysis was used to evaluate this, and the results indicated that patients with a family history had an increased likelihood of participating in early screening programs by ($p < 0.05$) compared to those without such data.

Conclusions

This research offers significant perspectives on how education and awareness affect the treatment of breast cancer. More specifically the current findings suggested that a sizable percentage of participants do not know enough about breast self-examination. This disparity emphasizes the need for more strong awareness-raising efforts, such as community-based workshops and instructional initiatives designed to address these issues. The significance of pursuing the advancement of allopathic treatment is highlighted by our results which also show a notable improvement in patient outcomes. Additionally, the integration of conventional treatments with complementary approaches, such as nutritional and lifestyle modifications, has shown promise in enhancing overall therapeutic efficacy. Future studies ought to concentrate on assessing the integrated therapies long-term efficacy and investigating novel approaches to improve patient education and early detection. Also, the study found that common side effects of current treatments like nausea, joint problems, fatigue, and GIT issues have a major negative influence on patients'

quality of life. Addressing these side effects through supportive care and symptom management is necessary to improve overall patient satisfaction and treatment adherence.

Conflict of interest statement

The authors declared no conflict of interest among them.

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Authors' contributions

NM: conceptualized and designed the study; KA, MZ: compiled the data. EM and SA drafted the final manuscript. All the authors read and approved the final manuscript.

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Correspondence: Nosheen Mustafa, Superior University, 18 KM Raiwind Road, Lahore. E-mail: nosheenmustafa27@gmail.com

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