



Research Article

Knowledge, Attitudes and Practices of the General Population Toward Breast Cancer and Its Prevention in Burkina Faso: A Cross-Sectional Study

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Abstract

Objectives: this study aimed at assessing the knowledge, attitudes and practices (KAP) of the general population of the two main cities of Burkina Faso toward breast cancer and its prevention. **Methods:** this was an analytical cross-sectional study conducted in two cities from February to August 2023. Data on randomly selected household representatives were collected through an electronic questionnaire. All variables were described and KAP score were calculated. Factors determining respondents’ knowledge and attitude-practices were identified using multivariate logistic regressions. **Results:** of 574 contacted households, 549 respondents completed the questionnaire (response rate 95.6%); 70.1% were female (n=385). The median global knowledge score was 4/5; 336 (61.2%) respondents had a good knowledge score. Among women (n=385), 279 (72.5%) had adequate prevention-related attitudes and practices. Multivariable analysis showed that higher education (adjusted Odd Ratio [a OR] 2.79; 95% confidence interval (CI) 1.59–5.00), receiving information from a health worker (a OR 2.92; 95% CI 1.76–5.01), and frequent exposure to television/radio (a OR 1.50; 95% CI 1.05–2.17) were independently associated with good knowledge. Among women, good global knowledge was associated with adequate attitudes-practices (a OR 1.97; 95% CI 1.23–3.15); higher education was also associated with adequate attitudes-practices (a OR 4.31; 95% CI 1.70–12.70). **Conclusion:** good knowledge of breast cancer and receiving information from health workers and mass media were associated with better prevention attitudes and practices. Strengthening health worker-led education and mass media campaigns may improve breast cancer prevention

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behaviors in Burkina Faso.

Keywords

Breast Cancer, Prevention, Knowledge, Attitudes and Practices, Burkina Faso

1. Introduction

Breast cancer was the second leading cause of cancer worldwide in 2022, with around 2.3 million new cancers cases, representing 11.6% of all cancers [1]. It was the fourth leading cause of cancer mortality worldwide, with 666,000 deaths (6.9% of all cancer deaths). It was the leading cause of women cancer cases and deaths [1]. The incidence of the disease is higher in high-income countries, while the mortality is higher in low- and resource-limited countries [1, 2].

In Burkina Faso, breast cancer continues to be the most diagnosed cancer, with an estimated incidence of 1,372 (9.4% of all cancers) and a mortality of 818 (7.4% of all cancers) in 2022 [3]. The high mortality rate is attributed to late diagnosis and limited access to timely effective care services. Indeed, ignorance, poverty, socio-cultural barriers and the lack of skilled cancer care workers hamper early detection and access to timely appropriate treatment [4]. Yet with the increase in the aging population mainly attributable to the reduction of the burden of infectious disease and the improvement of living condition, the number of cancer cases in Burkina Faso and in almost all African countries is projected to rise. This situation will be exacerbated without the adoption of appropriate preventive measures such as healthy lifestyles and timely cancer screening [5].

In Burkina Faso as in many African countries, disease control measures in general and cancer prevention strategies particularly are non-existent in educational curricula. Communication about cancer is limited to sporadic awareness and screening campaigns organized by civil society and non-governmental organizations during awareness months. These are not necessarily informed by adequate data on people knowledge, attitude and practice toward breast cancer and its prevention. The aim of this study was to assess the knowledge, attitudes and practices of the general population of the two main cities in Burkina Faso towards breast cancer and its prevention. The results of this study could inform the development of appropriate awareness communication and prevention strategies in Burkina Faso.

2. Method

2.1. Study Design

An analytic cross-sectional study conducted between February and August 2023. The study was reported in accordance with Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines.

2.2. Study Population and Sampling

The study covered the general population of Burkina Faso's two main cities, namely Ouagadougou and Bobo Dioulasso. A stratified random sampling strategy was used to select participants in the two cities. Cities in Burkina Faso are divided into enumeration zones (EZ) in which households are located. A household consists of at least two people living under the same roof. On the assumption that the representative's knowledge represents the knowledge of all the people in the household, only one representative was interviewed per household. We began with a simple random sampling of the EZ, followed by a census of the households within each EZ, and then a simple random sampling of the EZ households. The hypothesis was that the general population in both towns had average knowledge, attitudes and practices towards breast cancer and its prevention.

The number of households in Ouagadougou and Bobo Dioulasso in 2023 was estimated at 380160 households according to the 5th general population and housing census. With an average knowledge, attitudes and practices towards breast cancer and its prevention of 50%, a risk error α of 5% and a null design effect ($Deff=1$), the sample size was estimated at 384 households using RAOSOFT software (<http://www.raosoft.com/samplesize.html>). To account for a non-response rate of 30%, we rounded up the sample size to 549 households. For each household, only people aged over 18 and living in the household for at least 6 months were interviewed. Health professionals were not interviewed.

2.3. Covariates

To address the effect of potential confounding variables, the analysis included covariates. Covariates included age, gender, marital status, religion, education level, city of origin, occupation, family history of breast cancer and information channels. Age was classified into two categories: under 40 and 40 and over. Gender was classified into the following categories: male, female. Marital status was classified into two categories: married and unmarried. Level of education was classified as unschooled, primary and secondary, and tertiary. Religion was Muslim or Christian. Hometown was Ouagadougou or Bobo Dioulasso. Profession was classified into four categories: housewives and the unemployed; shopkeepers and farmers; workers in the formal or informal sector; and pupils and students. The presence or absence of a family history of breast cancer was investigated, as were the information channels

used to search for information on breast cancer.

2.4. Data Collection and Variables

A structured electronic questionnaire was used as the data collection tool for this study. The questionnaire was developed and administered using the KoboCollect software and provided in French. It was designed to be compatible with different devices such as smartphones, tablets, and computers. It was pre-tested among interviewers and supervisors during a training session, allowing for the evaluation of its relevance and clarity. The questionnaire consisted of four sections (appendix: Table 5). The first section collected sociodemographic information from the respondents, including age, gender, marital status, profession, education level, and religion. The second section gathered personal information about the participants, such as personal and family history of breast cancer, active search for information on breast cancer, and the information channels used. The third section focused on participants' knowledge about breast cancer prevention. It included 5 questions regarding the definition of breast cancer, risk factors, the possibility of preventing and curing cancer, and prevention methods. The final section addressed attitudes and practices regarding breast cancer prevention. It comprised six questions related to the search for information on breast cancer prevention and methods of breast cancer prevention.

The data were collected by 20 trained interviewers and supervised by 4 supervisors across the two cities using the KoboCollect software. Before data collection, written consent was obtained from each participant after a detailed explanation of the study. The data for each participant were anonymous and securely stored at the Research and Action Against Cancer (ReAAC) Chair.

2.5. Statistical Analysis

After data collection, the database was extracted, cleaned and analyzed using the R Studio software (version 4.3.2). Continuous variables were presented as numbers, median and interquartile range, and categorical variables as numbers and percentage. The respondent's general knowledge and attitude-practice scores were calculated assigning a quote "1" to a correct answer and "0" if the answer was incorrect. All quotes were then summed across all categories. The global knowledge and the global attitude-practice scores were considered as follow: a global knowledge score was bad when it was below the median, and good when it was above or equal to the median. Similarly, a global attitude-practice score was inadequate when it was below the median, and adequate when it was above or equal to the median. The sociodemographic characteristics between those with good and bad knowledge as well as between those with adequate and inadequate attitudes and practices toward breast cancer and its prevention were compared using the Pearson Chi² or the Fisher exact tests.

Bivariable logistic regression models were computed to

identify sociodemographic characteristics that were associated with good knowledge or attitudes and practices breast cancer and its prevention. The associations were reported as unadjusted odds ratios (OR), with 95% confidence interval (CI). Only variables with a *p* level threshold of 0.05 were used in multivariable analysis. We then performed two multivariable logistic regression models one, with global knowledge as the dependent variable and a second model with the global attitude-practice variable as the dependent variable. The top-down stepwise regression method was used to select the final models.

2.6. Ethical Considerations

The study received approval from the Burkina Faso Scientific Ethics Committee (approval No. 2023-06-157). Written informed consent was obtained from all participants before data collection. Data confidentiality and participant anonymity were maintained throughout.

3. Results

3.1. Descriptive Analyses

3.1.1. Sociodemographic Characteristics of the Respondents

Among 574 household representatives contacted, 549 responded to the questionnaire giving a response rate of 95.64%. The mean age of the respondents was 39.5±14.0 years old. Most respondents were female (*n* = 385, 70.13%), lived as a couple (*n* = 394, 71.77%), were Muslims (*n* = 338, 61.57%) and had with primary education level (*n* = 297, 54.10%).

3.1.2. Knowledge, Attitude and Practices Toward Breast Cancer and Its Prevention

The median global knowledge score was 4 (out of 5 questions), with a minimum of 1 and a maximum of 5. A total of 336 (61.20%) household representatives had good global knowledge score, 513 (93%) household representatives knew that breast cancer had a multifactorial or genetic cause. A total of 385 (70%) respondents believed that cancer could be prevented. However, only 176 (32%) knew how to prevent breast cancer.

Information on breast cancer prevention attitudes and practices was collected from the 385 women who responded to the questionnaire. Of these women, 279 (72.47%) had adequate breast cancer prevention attitudes and practices. A total of 202 women (52% of the study population) reported practicing various breast cancer prevention strategies, including avoiding various risk factors and performing breast examinations. When asked to describe the method of breast self-examination, 166 (43%) did so in the correct way.

3.2. The Comparison of the Sociodemographic Characteristics of the Respondents According to the Knowledge Attitudes and Practices

Among all the respondents, the under 40 years old ($n = 206$, 66.24%) had adequate knowledge towards breast cancer and its prevention compared to those ≥ 40 years old ($p=0.006$). Those with high education level ($n = 63$, 72.41%) and student ($n = 46$, 75.41%) had adequate knowledge towards breast cancer and its prevention compared to uneducated ($n = 81$,

49.09%) ($p<0.001$). Similarly, housewives and the unemployed ($n = 107$, 55.73%) and those who received information from a health agent ($n = 81$, 77.88%) had adequate knowledge of breast cancer prevention than other professions and those who received information through other channels, with a p -value of 0.026 and <0.001 , respectively.

Female with good global knowledge score of breast cancer and its prevention had higher adequate breast cancer attitudes-practices ($n = 185$, 78.72%) compared to those with bad global knowledge score ($n = 94$, 62.67%). Tables 1 and 2 summarize the comparative analysis.

Table 1. The comparison of the sociodemographic characteristics of the respondents according to the knowledge toward breast cancer and its prevention.

Characteristics	Good n (%) N = 336	Bad n (%) N = 213	p-value
Age Groups (years)			0.006
<40	206 (66.24)	105 (33.76)	
≥ 40	130 (54.62)	108 (45.38)	
Gender			>0.09
Female	235 (61.04)	150 (38.96)	
Male	101 (61.59)	63 (38.41)	
Marital Status			0.4
Married	237 (60.15)	157 (39.85)	
Single	99 (63.87)	56 (36.13)	
Religion			0.050
Muslim	196 (57.99)	142 (42.01)	
Christian	140 (66.35)	71 (33.65)	
Education Level			<0.001
Not educated	81 (49.09)	84 (50.91)	
Primary & Secondary	192 (64.65)	105 (35.35)	
Higher Education	63 (72.41)	24 (27.59)	
City			0.06
Ouagadougou	232 (60.42)	152 (39.58)	
Bobo-Dioulasso	104 (63.03)	61 (36.97)	
Profession			0.026
Housewife & Unemployed	107 (55.73)	85 (44.27)	
Merchant & Farmer	93 (58.49)	66 (41.51)	
Informal Sector & Official	90 (65.69)	47 (34.31)	
Student	46 (75.41)	15 (24.59)	
Family History of Cancer			0.5
No	297 (61.75)	184 (38.25)	

Characteristics	Good n (%) N = 336	Bad n (%) N = 213	p-value
Yes	39 (57.35)	29 (42.65)	
Information channel: Television and Radio	181 (63.96)	102 (36.04)	0.2
Information channel: Social Networks	41 (71.93)	16 (28.07)	0.079
Information channel: Surroundings	106 (57.30)	79 (42.70)	0.2
Information channel: Courses & Scientific Journals	21 (65.63)	11 (34.38)	0.6
Information channel: Health Agent yes	81 (77.88)	23 (22.12)	<0.001

Table 2. The comparison of the sociodemographic characteristics of the respondents according to attitudes and practices toward breast cancer and its prevention.

Characteristic	Adequate n (%) N = 279	Inadequate n (%) N = 106	p-value
Global Knowledge score			<0.001
Good	185 (78.72)	50 (21.28)	
Bad	94 (62.67)	56 (37.33)	
Age Groups (years)			0.8
<40	164 (72.89)	61 (27.11)	
≥40	115 (71.88)	45 (28.13)	
Marital Status			0.11
Yes	212 (74.65)	72 (25.35)	
No	67 (66.34)	34 (33.66)	
Religion			0.5
Muslim	171 (71.25)	69 (28.75)	
Christian	108 (74.48)	37 (25.52)	
Education Level			0.002
Not Educated	75 (61.48)	47 (38.52)	
Primary & Secondary	168 (76.02)	53 (23.98)	
Higher	36 (85.71)	6 (14.29)	
City			0.6
Ouagadougou	199 (73.16)	73 (26.84)	
Bobo-Dioulasso	80 (70.80)	33 (29.20)	
Profession			0.3
Housewife & Unemployed	129 (72.88)	48 (27.12)	
Trader & Farmer	74 (66.67)	37 (33.33)	
Informal Sector & Official	46 (80.70)	11 (19.30)	
Student	30 (75.00)	10 (25.00)	
Family History of Cancer			0.3
No	240 (71.64)	95 (28.36)	

Characteristic	Adequate n (%) N = 279	Inadequate n (%) N = 106	p-value
Yes	39 (78.00)	11 (22.00)	
Information channel Television and Radio	137 (74.05)	48 (25.95)	0.5
Information channel: social media	20 (80.00)	5 (20.00)	0.4
Information channel: Surroundings	102 (68.46)	47 (31.54)	0.2
Information channel: Courses and Scientific Journals	15 (65.22)	8 (34.78)	0.4
Information channel: Health Agent yes	69 (83.13)	14 (16.87)	0.014

3.3. Factors Associated with Breast Cancer Prevention Knowledge, Attitudes and Practices

Univariate logistic model analyses showed that age of the respondents ($p = 0.006$), level of education ($p < 0.001$), occupation ($p = 0.022$) and breast cancer information given by a health worker ($p < 0.001$) were related to adequate knowledge of breast cancer prevention. Similarly, among women, good knowledge ($p < 0.001$), age ($p < 0.001$), level of education ($p = 0.002$) and information on breast cancer given by a health agent ($p = 0.011$) were linked to adequate attitudes and practices in relation to breast cancer prevention.

Tables 3 and 4 show the results of the multivariate logistical statistical analysis. Respondents who had a higher level of education had 2.79 times higher odds of having good knowledge

of breast cancer and its prevention compared to those with no schooling (OR = 2.79 [95% CI: 1.59 - 5.00]; $p < 0.001$). Similarly, those who frequently listened to TV and radio (OR = 1.5 [95% CI: 1.05 - 2.17]; $p = 0.027$) and those who were regularly informed by health workers (OR = 2.92 [95% CI: 1.76 - 5.01]; $p < 0.001$) were more likely to have good knowledge of breast cancer and its prevention. Women with a good overall knowledge score about breast cancer were more likely to have adequate attitudes and practices regarding breast cancer prevention compared to those with a poor overall knowledge score (OR = 1.97 [95% CI: 1.23 - 3.15]; $p = 0.005$). Similarly, those with a higher education level had adequate attitudes and practices compared to those with no schooling (OR = 4.31 [95% CI: 1.70 - 12.7]; $p = 0.001$). However, married respondents were less likely to have adequate breast cancer prevention attitude-practices compared to those not married (OR = 0.49 [95% CI: 0.29 - 0.85]; $p < 0.001$). (Table 4)

Table 3. Comprehensive multivariate logistic model to determine factors affecting good knowledge regarding breast cancer prevention.

Characteristic	Adjusted OR	95% CI	p-value
Education Level			<0.001
Not educated	Ref	Ref	
Primary & secondary	1.84	1.24 - 2.73	0.002
Higher	2.79	1.59 - 5.00	<0.001
Information channel: Television and Radio	1.50	1.05 - 2.17	0.027
Information channel: Health Agent yes	2.92	1.76 - 5.01	<0.001

Table 4. Comprehensive multivariate logistic model to determine factors affecting adequate attitudes and practices regarding breast cancer prevention.

Characteristic	adjusted OR	95% CI	p-value
Global Knowledge score			0.005

Characteristic	adjusted OR	95% CI	p-value
Bad	Ref	Ref	
Good	1.97	1.23 – 3.15	0.005
Marital Status			0.011
Yes	Ref	Ref	
No	0.49	0.29 – 0.85	0.010
Education Level			0.001
Not Educated	Ref	Ref	
Primary & Secondary	2.19	1.32 – 3.65	0.003
Higher	4.31	1.70 – 12.7	0.004

4. Discussion

This study measured the general population of the two main cities of Burkina Faso knowledge, attitudes and practices toward breast cancer and its prevention using a face-to-face homebased electronic questionnaire. The study revealed that the majority of the respondents (61.20%) had a good knowledge of breast cancer, and 70% believed that the breast cancer could be prevented. These results are similar to those reported in other studies carried out in other contexts. For example, a systemic review conducted in India found that 62.99% of women had good knowledge of breast cancer and 78.67% had good knowledge of breast cancer prevention [6]. Similarly, a study in Nigeria showed that 70.8% of women knew how to do breast self-examination, and 61.7% knew that it was a method of prevention [7]. However, in Malaysia, a study revealed lower rates, with only 38.4% of women having good knowledge [8]. These differences could be attributed to variations in educational programs and awareness campaigns in each country. Indeed, in Burkina Faso, since cervical cancer screening was made free of charge in 2016, women systematically receive breast cancer awareness and a breast examination when they come for cervical cancer screening at health centers. Moreover, breast cancer is the most incident cancer in the country. Indeed, estimated data on cancer burden showed that 1372 breast cancer cases occurred in Burkina Faso in 2022 [3]. As a result, many families know at least one breast cancer patient and are actively seeking information. This explains why the knowledge score is so high in our context.

In addition, during the month dedicated to cancer, such as pink October, several breast and cervical cancer awareness and screening campaigns are organized for women, helping to inform them about cancer [9, 10]. This can explain the high percentage of knowledge related to the disease. Regarding attitudes and practices towards breast cancer prevention, our results indicate that 72.47% of women have adequate attitudes

and practices towards breast cancer prevention, and 43% practice breast self-examination correctly, although only 12% do so at the right time during their menstrual cycle. A study in Iran showed that 63% of women had a positive attitude towards breast cancer screening and 41% practiced self-cleansing regularly [11]. Opoku and colleagues [12] reported that 53% of women had a favorable attitude towards screening, but only 32% practiced breast self-examination in Ghana. Similarly, a study conducted in India found that almost three-quarters of women had a positive attitude towards breast cancer prevention, and 58% of them practiced monthly breast self-examination [13]. The results of our study are therefore relatively better, which could be due to better awareness and education of women toward breast cancer prevention in Burkina Faso.

However, there was a discrepancy between favorable attitudes and the actual practice of breast self-examination. Indeed, only 43% practice breast self-examination correctly, although only 12% do so at the right time. Although mammography is the recommended examination for breast cancer screening today, and there is controversy about the effectiveness of breast self-examination, it should be noted that in a country with limited resources like Burkina Faso, breast self-examination enables early detection and rapid diagnosis of the disease. Although mammography is the recommended examination for breast cancer screening today, and there is controversy about the effectiveness of breast self-examination, it should be noted that in a country with limited resources such as Burkina Faso, breast self-examination enables early detection and rapid diagnosis of the disease. “Self-examination”, according to the WHO, “is of definite interest, particularly in regions where mammography and regular physical examination of the breasts are not applicable as public health measures” [14]. It is therefore important to reinforce educational messages to improve the correct practice of self-examination and encourage regular screening.

Results from our multivariable logistic analysis revealed that good knowledge of breast cancer was significantly associated with level of education, receipt of information from a

health worker and from the media. This corroborates the results of the study by Dinegde et al (2021) in Ethiopia and Abdul Hadi et al in the state of Penang, who also found that knowledge about breast cancer was influenced by level of education and access to information [15, 16]. In addition, good attitudes and practices were also linked to a good global Knowledge score of the disease, level of education and information received from a health worker [17]. These results underline the importance of education and access to information in improving breast cancer prevention. Through education, we are able to seek out some information ourselves, and use social networks as sources of information. All this gives one a better health literacy and the ability to make health decisions not only for herself, but also for those around her.

5. Strengths and Limitations

Our study presents several strengths, notably that it was conducted among the general population in the two main cities in Burkina Faso. It takes into account the knowledge of both men and women. This is important in our African context, where the male head of the household makes most decisions. As a result, a man with good knowledge can positively influence his family's health. Moreover, the large sample size increased the statistical power of the study. However, some limitations should be noted. This is a cross-sectional study, which means that causal relationships between the knowledge or attitudes of household representatives and sociodemographic variables are not always clear. Furthermore, the results may not be generalizable to other regions with different sociocultural contexts beyond the two cities studied. Response biases may also have occurred due to the way in which the questions in the questionnaire are formulated, and the order of the questions and the response in the questionnaire. But these limitations don't undermine the findings of this study which is - in our knowledge- the first largest knowledge attitude and practice on cancer prevention ever conducted in Burkina Faso.

6. Conclusion

Our study assessed the general population knowledge, attitudes and practices in Burkina Faso. The results show a discordance between knowledge and practice, suggesting a gap in the implementation of prevention practices. This highlights the need to improve awareness and education campaigns, particularly through interactions with health workers and training programs. In addition, efforts need to be focused on improving correct self-care and screening practices to fill this gap.

7. State of Knowledge on the Subject

- 1) Breast cancer is the leading cancer cause and cancer related death in women in Burkina Faso
- 2) The high burden of breast cancer in Burkina Faso is due

to lack of prevention and late diagnosis

- 3) Breast cancer prevention depends largely on the population's level of knowledge, attitude and practices

8. Contribution of Our Study

- 1) This project is the first large-scale study on the general population's knowledge, attitude and practice related to breast cancer prevention in Burkina Faso.
- 2) This study provides information related to the general population perception about breast cancer and its prevention especially men's knowledge about the disease in a patriarchal context where the whole family access to prevention and care sometimes relies on their hands.
- 3) This study results highlights poor population's knowledge, attitudes and practices related to breast cancer and its prevention in Burkina Faso, providing information needed for the development of breast cancer awareness strategies in the country.

Abbreviations

a OR	Adjusted Odd Ratio
CI	Confidence Interval
Deff	Design Effect
KAP	Knowledge, Attitudes and Practices
ReAAC	Research and Action Against Cancer
STROBE	Strengthening the Reporting of Observational Studies in Epidemiology
ZE	Enumeration Zones

Author Contributions

Diane Eleonore Bance: Conceptualization, Formal analysis, Supervision, Writing – original draft

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Bertrand Fatogoma Sanon: Conceptualization, Formal analysis, Supervision

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Benjamin Seydou Sombie: Data curation, Project administration

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Andrew Donkor: Writing – review & editing

Olga Melanie Lompo: Project administration, Validation

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Data Availability Statement

Data are available in the data collection database at the Re-AAC Chair data center.

Conflicts of Interest

The authors declare that they have no conflicts of interest to report regarding this study.

Appendix

Table 5. Questionnaire.

No.	Questions	Response Options
1	ID Number	
Sociodemographic Data		
2	Age (in years)	
3	Sex	Female Male
4	Marital status	In a relationship Not in a relationship
5	Religion	Muslim Christian / Animist
6	Level of education	No formal education Primary and secondary Higher education
7	Occupation	Homemaker / Unemployed Trader / Farmer Civil servant / Informal sector worker Pupil / Student
8	Have you ever participated in at least one cancer awareness campaign?	Yes No
9	History of cancer in the family	Yes No
10	If yes, specify degree of relationship	Open-ended response
11	If yes, specify the type and location of cancer	Open-ended response
12	City	Bobo-Dioulasso Ouagadougou
Sources of Information		
13	Have you ever heard of breast cancer?	Yes No
14	If yes, through which sources did you hear about breast cancer?	Radio Television Social media Courses Scientific journals Family / friends / colleagues / neighbors Awareness campaigns Other (specify)
15	Through which sources would you like to receive information?	Radio Television Social media

No.	Questions	Response Options
		Courses Scientific journals Family / friends / colleagues / neighbors Awareness campaigns Other (specify)
Knowledge About Breast Cancer Prevention		
16	What is breast cancer?	Open-ended response
17	What are the risk factors for breast cancer?	Open-ended response
18	Do you think breast cancer can be prevented?	Yes No
19	If yes, what are the methods of prevention?	Open-ended response
20	Do you think breast cancer can be cured?	Yes No
21	If no, why?	Open-ended response
Attitudes and Practices toward breast cancer		
22	What do you think breast cancer represents?	Open-ended response
23	Do you actively seek information about cancer?	Yes No
24	If yes, through which sources do you obtain information about cancer?	Radio Television social media Courses Scientific journals Family / friends / colleagues / neighbors Awareness campaigns Other (specify)
25	What would be your attitude if a health professional proposed to examine your breast (or that of a woman close to you)?	Open-ended response
26	If refusal, why?	Open-ended response
27	What do you do to prevent breast cancer?	Open-ended response
28	Do you practice breast self-examination?	Yes No
29	If yes, how do you perform breast self-examination?	Open-ended response
30	When do you perform breast self-examination?	After menstruation Other
31	Have you ever been examined by a health professional?	Yes No
32	Have you ever had a screening ultrasound and/or mammography?	Yes No

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