

The Cameroonian caregiver towards breast cancer: problem of attitudes and skills for early detection in Douala

Abstract

Introduction: Breast cancer in women is a global scourge due to its frequency and high fatality rate. In our developing countries, it remains frequent with a still high mortality due to ignorance, late and non-systematized screening.

Research question: do the caregiver profile and the hospital experience guarantee attitudes and aptitudes favorable to the early detection of breast cancer in female caregivers?

Objective: Our study aimed to find attitudes and aptitudes favorable or not to the early detection of breast cancer of nursing staff in Douala hospitals, in order to better develop strategies for optimizing mass screening.

Methodology: This was a comparative cross-sectional study with analytical purposes for a period of 07 months from January 15 to July 15, 2020 conducted by means of a structured and pre-tested questionnaire after informed consent obtained from the participants approached in the consultation units of these hospitals. The study variables were behavioral and practical. The data collected were entered and analyzed using SPSS 23.0 software (statistical package for social sciences) with a significance level established for a value of $p < 0.05$.

Results: We selected 1000 women fulfilling our inclusion criteria, including 818 users and 182 caregivers, i.e. an average ratio of 4 users for 1 caregiver. In the study population, attitudes as a whole were good but not discriminating for the two matched groups. In contrast to attitudes, the caring nature (and probably its hospitable corollary) appeared favorably protective of bad practices for early detection of cancer breast (OR=0.21 $p < 0.0001$ *)

Conclusion: At the end of our study, it appeared that the caregiver profile was protective against bad practice in early detection of breast cancer with, however, a persistent problem given the attitudes, which were certainly good, but similar to those of users whose practices used more traditional pharmacopoeia and religious beliefs.

Keywords: breast cancer, attitudes, practices, caregiver, users

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Introduction

According to the World Health Organization (WHO), breast cancer is a genetic alteration occurring within a cell of the mammary gland and giving it the power of anarchic proliferation.¹ It (breast cancer) acquires the ability to invade and destroy the original tissue from which it develops, as well as the ability to give distant metastases.¹ It is the first cancer in women in the world¹ and therefore constitutes a real major public health problem on a global scale.² Worldwide, breast cancer is the leading cause of death by cancer in women in almost all countries, except in the most economically developed countries where it ranks second after lung cancer.² Breast cancer mortality has been decreasing for thirty years in developed countries.² It is the leading gynecological cancer in terms of incidence.³

Worldwide, 2,261,419 cases of breast cancer were diagnosed in 2020; In the United States, data collected by the International Agency for Research on Cancer (IARC) note an incidence of 234,087/100,000 in 2018. In France, the number of new cases in women in 2018 was 56,162/100,000 This is the first cause of death worldwide from neoplasia in women with nearly 684,996 deaths in 2020.⁴⁻⁶

Its incidence increases by about 2% per year in all European countries.⁷ In China, it is the most frequently diagnosed cancer with

169,452 new cases of invasive breast cancer.⁸ In low-income countries, the incidence rate of breast cancer is very increasing.⁹ In Algeria, its incidence is clearly increasing, rising from 9.6 cases per 100,000 inhabitants in 2003 to 19.44 cases per 100,000 inhabitants in 2005.¹⁰ In Tunisia, it is the most common female cancer.¹¹ In South Africa, its incidence is higher than in sub-Saharan African countries.¹² In the sub-Saharan zone, there has been an increase in its incidence, which has increased from 15 to 53 new cases per 100,000 inhabitants.¹³ In Cameroon It ranked second in the study by Mbakop et al. After that of the cervix, skin and liver in 1992¹⁴ with an overall survival rate of 30% in 5 years reported by Ngowa et al in 2015 at the Yaoundé General Hospital with an overall survival rate of 30 % at 5 years and a death rate of 1780/100,000.¹⁵

Early detection remains the main means of combating the disease. It improves the chances of survival as well as the outcome of breast cancer.

The success of early screening in the population depends essentially on rigorous planning and a well-organized and sustainable program that targets the right population group and ensures the coordination, continuity and quality of interventions.

Studies have shown that the attitude and advice of health professionals are important determinants of the population's use of the

screening program.¹⁶ This is how we conducted this multicenter study to assess the level of knowledge of caregivers through the reflection of female users vis-à-vis breast cancer screening for their efficient operationalization in a mass screening team.

Methodology

Type of study: This was a comparative cross-sectional prospective study with an analytical aim.

Place of study: Our study was multicentric (04 hospitals) in the city of Douala including the health structures of the “Pink October” network, in particular the Laquintinie Hospital (HLD), and the district hospitals of Deido (HDD), Logbaba (HDL), Nylon (HDN).

Period and Duration of the study: Our study covered the period from December 2019 to August 2020, i.e. a duration of 09 months

Study population: The study population consisted of female users of these hospitals as well as female nursing staff.

Inclusion criteria: Included in the study was any female user consulting or not in one of the health structures chosen by the study as well as any female nursing staff working in the study sites.

Any female user and nursing staff with a personal history of breast cancer was excluded, as well as any woman with breast cancer at the time of recruitment.

Refusal to participate in the study was the criterion for non-inclusion:

Sampling

We proceeded to a non-exhaustive consecutive sampling and the minimum size was estimated from the Lorenz formula:

$$N = [T^2 * p(1 - p)]/m^2$$

Or:

N = minimum sample required

T = 95% confidence interval (1.96)

p = prevalence of pathology. i.e. 35.1%⁵[4]

m = margin of error at 5% (standard value 0.05)

Numerical application: $N = 1.96 * 1.96 * 0.351(1 - 0.351)/0.05 * 0.05 = 350$ cases

Administrative procedure and data collection

Administrative process

A research protocol had been drafted and submitted to the Faculty of Medicine and Pharmaceutical Sciences of the University of Douala (FMSP-UD).

An ethical clearance authorization had been requested and obtained from the institutional ethics committee of the University of Douala, as well as a research authorization had been requested and obtained from the directors of the 4 selected hospitals in the city of Douala (HLD, HDD, HDL, HDN).

Collection of data

Data collection was done using a pre-tested technical sheet including informed consent and a questionnaire.

The interview was carried out in complete confidentiality in a room adjoining the various reception services (for users) and in all the care units (for nursing staff)

The variables studied were:

▫ Socio-demographic of the population.

- a. Age
- b. Education level
- c. Marital status
- d. Religion
- e. Region
- f. Nationality
- g. Group: (user or caregiver)

▫ Knowledge of the attitudes and practices of users and caregivers on breast cancer screening (individual screening, mass screening, medical consultation, consultation of the African pharmacopoeia, rituals and customs, religious beliefs, self-examination of the breasts).

Definition of operational terms

▫ Study quotations

▫ Rating grid for Knowledge of attitudes and skills

▫ The evaluation of attitudes and aptitude was first made by totaling the number of points obtained by each participant in the “knowledge” section of our questionnaire. Each correct answer was worth 1 point and the wrong one 0 points. Subsequently, the results were reduced to a percentage for an overall assessment as presented in the assessment grid of Essi et al.¹⁷ Secondly, for the search for associations between the different parts, we had grouped into two groups.

▫ Above 65% = good knowledge

▫ Below 65% = poor knowledge

Attitudes: attitudes are Perceptions, beliefs, representations and motivations that one can have in the face of a phenomenon

Practices: are real acts performed by the person in a situation, in their context

Nursing staff: it is a paramedical staff made up of state-certified nurses (IDE), midwives, licensed nurses.

Users: any person using a public service. The public service here being the hospital

Results

At the end of our study, we recruited a total of 1060 women and 60 were excluded. Among the 60 excluded, 02 women users were carriers of breast cancer at the time of our survey, 48 women refused to participate and 10 files were incorrectly filled out. We retained a total of 1000 women who met the inclusion criteria, including 182 caregivers (18.2%) of all the women questioned against 818 users (81.8%) (Figure 1).

Our study population was quasi-Christian (96%) (including 95.7% of users and 96.2% of caregivers) and state-certified nurses were in the majority among caregivers (Figure 2) (Figure 3).

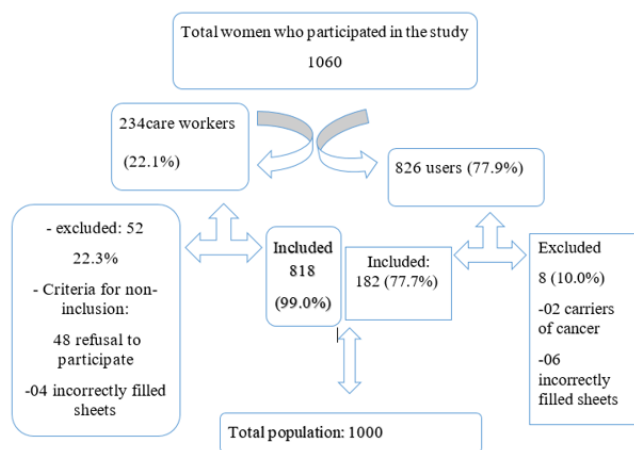


Figure 1 Flow diagram.

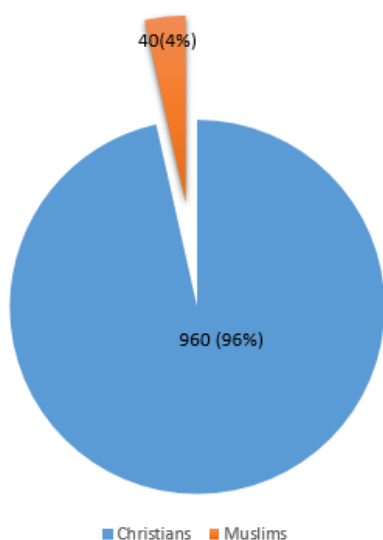


Figure 2 Distribution of the population according to religion.

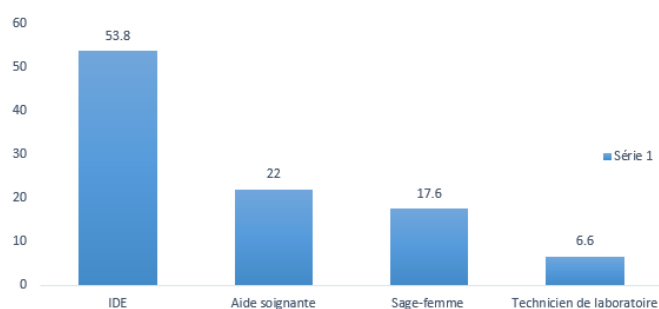


Figure 3 Paramedical personnel according to their professional category.

IDE (Infirmière Diplômée d'Etat): Registered state nurse

Aide-Soignante: Caregiver

Sage-femme: Mid-wife

Technicien de laboratoire: Laboratory technician

The caregiver profile was significantly associated with the use of medical consultation OR=2.25(1.23-3.36) $p < 0.005$ and in a non-significant way with individual and mass screening OR= 1.23(0.81-1.87) $p < 0.335$; OR=1.36(0.96-1.92) $p < 0.079$ (Table 1) (Table 2).

Table 1 Distribution of users and caregivers according to age groups and level of education

		Users		Caregivers	
		n	(%)	n	(%)
		N=818		N=182	
Age range	<20	121	14,8	4	2,2
	[20-30]	307	37,5	110	60,4
	[30-40]	202	24,7	43	23,6
	[40-50]	114	13,9	18	9,9
	[50-60]	62	7,6	6	3,3
Level of education	≥60	12	1,5	1	0,5
	Non scolarised	25	3,1	0	0,0
	Primary	134	16,4	1	0,5
	Secondary	219	26,8	43	23,6
	Higher education	439	53,7	138	75,8

Table 2 Distribution by profession and marital status

		Users		Caregivers	
		n	(%)	n	(%)
		N=818		N=182	
Occupation	Pupil/student	363	44,4	0	0,0
	Trader	199	24,3	0	0,0
	Housewife	147	18,0	0	0,0
	Farmer	14	1,7	0	0,0
	Entrepreneur	2	0,2	0	0,0
	Caregiver	0	0,0	182	100
	Others	93	11,4	0	0,0
Marital status	Single	506	61,9	122	67,0
	Married	282	34,5	56	30,8
	Widow	10	1,2	3	1,6
	Divorced	20	2,4	1	0,5

Just as it significantly protected him from practices prejudicial to early diagnosis: in particular the use of traditional pharmacopoeia and immaterial beliefs OR=1.6 (1.09-2.35) $p < 0.020$; OR= 0.69 (0.48-0.99) $p < 0.044$ (Table 3). But overall there was no significant difference in attitudes between the two matched groups (caregivers and users) ($p < 0.223$) (Table 4).

Table 3 Distribution of attitudes of users and caregivers

Variables	Users n (%)	Caregiver n (%)	OR (95%)	p value
Individual screening				
Yes	653 (79,8)	151 (83,0)	1,23(0,81-1,87)	0,335
No	165(20,2)	31(17,0)	Réf	I
Mass screening				
Yes	505 (61,7)	125 (68,7)	1,36(0,96-1,92)	0,079
No	313(38,3)	57(31,3)	Réf	I
Medical consultation				
Yes	661 (80,8)	163 (89,6)	2,25(1,23-3,36)	0,005
No	157(19,2)	19(10,4)	Réf	I
Traditional remedies				
Yes	241 (29,5)	38 (20,9)	Réf	I
No	577(70,5)	144(79,1)	1,6(1,09-2,35)	0,020
Rituals/Traditions				
Yes	151 (18,5)	36 (19,8)	Réf	I
No	667(81,5)	146(80,2)	0,92(0,61-1,30)	0,679
Religious belief				
Yes	185 (22,6)	54 (29,7)	Réf	I
No	632(77,4)	138(70,3)	0,69(0,48-0,99)	0,044

Table 4 General distribution of attitudes of users and caregivers

	Users n(%)	Caregiver n(%)	p.Value
Attitudes			
Good	575(70,3)	136(74,7)	
Bad	243(29,7)	46(25,3)	0,223

The different breast inspection times were sources of incorrect responses in the two matched groups.

Concerning the practices, the nursing character was significantly associated with the ideal posture for self-palpation of the breast during the bath, leaning forward and lying on the side OR= 3.04 (2.07-4.4) p < 0.001; OR= 1.82(1.31-2.52) p<0.001; OR=1.67(1.19-2.34) p<0.003 (Table 5).

The same was true for palpation with the palms of the hands in a linear manner as well as the lymph node areas OR= 2.14 (1.54-2.96) p < 0.001; OR=1.41(1.08-1.84) p<0.001; OR=1.66(1.19-2.31) p < 0.003 (Table 6).

Table 5 Distribution on the posture indicated for the practice of breast self-examination in the two groups

Variables	Users n (%)	caregiver n (%)	OR (95%)	p value
Naked inspection in front of a mirror				
Yes	559 (68,3)	129 (70,9)	1,13(0,79-1,61)	0,503
No	259(31,7)	53(29,1)	Réf	I
During the bath				
Yes	454 (55,5)	144 (79,1)	3,04(2,07-4,4)	< 0,001
No	364(64,5)	38(20,9)		
Arms along the body				
Yes	365 (44,6)	69 (37,9)	0,76(0,55-1,05)	0,099
No	453(55,4)	113(62,1)	Réf	I
Hands on hips				
Yes	250 (30,6)	50 (27,5)	0,86(0,60-1,23)	0,411
No	568(69,4)	132(72,5)	Réf	I
Arms raised				
Yes	519 (63,4)	125 (68,7)	1,26(0,89-1,78)	0,182
No	299(36,6)	57(31,3)	Réf	I
Leaning forward				
Yes	250 (30,6)	81 (44,5)	1,82(1,31-2,52)	< 0,001
No	568(69,4)	101(55,5)	Réf	I
Lying sideways				
Yes	204 (24,9)	65 (35,7)	1,67(1,19-2,34)	0,003
no	614(75,1)	117(64,3)	Réf	I

Table 6 Distribution on the practice of palpation of the breast and lymph node areas in the two groups

Variables	Users n (%)	Caregiver n (%)	OR (IC=95%)	p value
Palpation with warm hands				
Yes	340 (41,6)	66 (36,3)	0,80(0,57-1,12)	0,188
No	478(58,4)	116(63,7)	Réf	I
Palpation with the palm of the hand				
Yes	345 (42,2)	111 (61,0)	2,14(1,54-2,96)	< 0,001
No	473(57,8)	71(39,0)	Réf	I
Tips of fingers				
Yes	579 (70,9)	128 (70,3)	Réf	I
No	238(39,1)	54(29,7)	0,98(0,69-1,39)	0,885
Circular palpation				
Yes	614 (75,1)	133 (73,1)	0,92(0,64-1,32)	0,578
No	204(24,9)	49(26,9)	Réf	I
Linear palpation				
Yes	366 (44,7)	117 (64,3)	1,41(1,08-1,84)	< 0,001
no	452(55,3)	65(35,7)		
Palpation of lymph node areas				
Yes	425 (52,0)	117 (64,3)	1,66(1,19-2,31)	0,003
No	393(48,0)	65(35,7)	Réf	I

The palpatory period was significantly known to caregivers OR= 4.74(3.36-6.69) OR= p < 0.001 (Table 7). Ultimately, the user character appeared to favorably protect against bad practices for early detection of breast cancer (OR=0.21 p<0.0001*) (Table 8).

Table 7 Distribution of the practice of palpation of the breasts according to the appropriate time in the two groups

	Users n(%)	Nursing staff n(%)	p. value
Practices			
Good	135(16,5)	88(48,4)	<0,0001
Bad	683(83,5)	94(51,6)	
Practices			
Good	135(16,5)	88(48,4)	<0,0001
Bad	683(83,5)	94(51,6)	

Variables	Users n (%)	Caregiver n (%)	OR (IC=95%)	p value
During menses				
Yes	91 (11,1)	24 (13,2)	Réf	1
No	727(88,9)	158(86,8)	1,21(0,75-1,96)	0,430
Immediately after menses				
Yes	168 (20,6)	72 (39,6)	Réf	1
No	649(79,4)	110(60,4)	0,40(0,28-0,56)	< 0,001
10th day of the cycle				
Yes	180 (22,0)	101 (55,5)	4,42(3,21-6,18)	< 0,001
No	638(78,0)	81(44,5)	Réf	1
One week before next menses				
Yes	197 (24,1)	68 (37,4)	Réf	1
No	621(75,9)	114(62,6)	0,53(0,38-0,78)	< 0,001
Anytime				
Yes	306 (37,4)	46 (25,3)	Réf	1
No	512(62,6)	136(74,7)	0,57(0,4-0,81)	0,002
Momentarily				
Yes	112 (13,7)	74 (40,7)	Réf	1
No	105(86,3)	108(59,3)	4,74(3,36-6,69)	< 0,001

Table 8 Overall distribution on the practices of users and caregivers

	Users n(%)	Caregivers n(%)	p. Value
Practices			
Good	135(16,5)	88(48,4)	<0,0001
Bad	683(83,5)	94(51,6)	

Ultimately, the user character appeared favorably exposing to good practices for early detection of breast cancer (OR=0.21 p<0.0001*)

Discussion

Our study aimed to assess the impact of the caregiver profile on behaviors and practices in the face of early detection of breast cancer.

Our caregiver target group was heterogeneous and inclusive and did not seek to discriminate the impact of a service on these variables (in particular caregivers in the oncology department).

1) Attitudes

In the study population, overall attitudes were good but not statistically significant. This leads us to think that there is no passive formatting of good attitudes simply because one is a caregiver. In substance healing is not necessarily akin to good attitudes above the female sex.

Better still, the predominantly young age group of users and their higher education level are all assets that explain this similarity of results.

To better discriminate, it will be useful to carry out a study of the cases relating to this cancer in this professional entity (caregiver) and to draw insights, particularly at the different stages of screening.

Descriptively, the nursing staff had 74.7% of good attitudes and 25.3% of bad attitudes against 70.3% of good attitudes and 29.7% of bad attitudes among users. Our findings corroborate those of Nguéfack¹⁸ and unlike Alqabshawi et al in 2019 in Saudi Arabia¹⁹ and Toan in 2019²⁰ where the attitudes of the health professional were classified as “discouraging”.

2) Practices

The user character appeared to favorably protect against bad practices in the early detection of breast cancer.

Beyond the thesis - anti thesis approach of this section, this combination of care and practices favorable to early detection of breast cancer partly explains the delay in diagnosis of the non-caregiver popular female mass more inclined to the traditional pharmacopoeia and immaterial beliefs.

This behavioral aspect is questionable for more than one reason; if users had so many good attitudes, we would expect so many good practices.

This leads to more educational and communication ingenuity, such as advice for behavior change.

Our findings are contradictory and heterogeneous to those of other authors including Nguefack and al in Cameroon¹⁸; Foteda et al in Saudi Arabia²¹ Akpinar in Turkey²²; Ngowa in Yaoundé.¹⁵

This inhomogeneous and disparate aspect of the results finds its explanation in the type of study, the size of the samples and the profile of the respondents reported by these different authors.

Our study, in addition to the size of its sample and the statistical power that goes with it, took place in sites with periodic mass screening activity for breast cancer and with necessarily significant added value for the nursing staff.^{23,24}

Conclusion

At the end of our study, it appeared that the caregiver profile was protective against poor practice in early detection of breast cancer with however a problem persistent given the attitudes that are certainly good, but similar to those of the users whose practices relied more on traditional pharmacopoeia and religious beliefs.

Acknowledgments

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Contribution of the study to science

Subject to studies of the prevalence of breast cancer in caregivers, our findings challenge our educational and communication content of the popular masses on the breast cancer in general.

Authors' contribution

Essome: coordinated the study and wrote the manuscript

Enama: collected the data

Tocki: ensured the English translation as well as the formatting of the manuscript

Moukouri, Ndom, Ndolo, Ofakem, Ngaha, Mouchikpou, Ngono, Mangala, Ekono, Engbang, Nana, Tchente read and corrected the manuscript.

Foumane supervised the study and corrected the manuscript.

All authors have read and approved the manuscript.

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Conflicts of interest

The authors declare that they have no conflict of interest; concerns were essentially scientific.

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