



The Psychological Distress of Patients with Breast Cancer at University Teaching Hospital of Brazzaville

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Abstract: Introduction the breast cancer affects all aspects of the patient's life. To assess the psychological of patients with breast cancer at University Teaching Hospital of Brazzaville. It is a transversal study carried out in the carcinology service of University Teaching Hospital of Brazzaville. The data collection took place in face-to-face mode into 2 stages; the first is a census of patients with breast cancer diagnosis showed to anatomy-pathology. The second is an individual interview on an epidemiological survey, clinical and therapeutic; then a survey on psychological distress on anxiety, depression and self-esteem. It took place from 1st January 2019 to 31st August 2019. One hundred and fifty (150) patients were requested. The Epi.info software and SPSS 25 allowed the data analysis. It was a cohort mostly formed with women (96%) The patients of middle age was 50.14 (utmost from 21 to 28 years old). The prevalence of psychological distress was 82%, depression and anxiety respectively; then 38% of patients showed a very week self-esteem. The associated factors with distress were: the developed stage of breast cancer (metastasis), side effects, aftermath related to the treatments, problems faced. It stands out that breast cancer has an aftereffect on psychological sphere of patients with breast cancer, showing an increase of psychological distress, anxiety, depression, together with the loss of self-esteem.

Keywords: Breast Cancer, Psychological Distress, Anxiety, Depression, Self-esteem

1. Introduction

Breast cancer affects all aspects of patient's life, people with cancer can feel all kind of emotion or they can have different reactions relative to the new reality [1]. The literature data reveals 30-40% of patients with breast cancer showing a significant psychological distress, therewith can contribute to an increase of physical morbidity and mental, as far as a poor quality's life [2, 3].

In our context, this aspect is often overlooked in care of delivery, which explains the non-feasibility of studies on this discipline in our countries. It is in this context that we carried out this study in order to assess the psychological distress of patients with breast cancer at University Teaching Hospital of

Brazzaville.

2. Patients and Methods

It was a transversal study, analytical to the prospective data collection which took place from 1st January to 31st August 2019 (08 months). Every patient showed with breast cancer is followed in the service (hospitalization or outpatient).

Were including in patients' study:

- aged at least of 18 years old, regardless of sex or gender;
- followed in the service for a period upper to 3 months;
- which breast cancer diagnosis was made under the basic clinical argument and anatomy pathologic;
- an effective status of WHO to 1 or 2;

- e) having their lighted consent to participate to the study. Were not included in patients' study:
- showing another cancerous pathology than breast;
 - unable to answer quiz;
 - having an altered general state WHO ≥ 3 ;
 - non-followed in the service;
 - having removed their lighted consent after initially giving it.

2.1. Data Collection

It was in face-to-face manner using a survey sheet wrote in French language, and translated into local tongue. Made in 2 stages:

- the census of patients, was carried out in the service;
- during individual interview, the patients were aware of data operation as regards.

The individual interview was carried out following:

- an epidemiological survey*: which allows, after getting the written census of patients, in order to get information on gender, birthdate, socioeconomic standard, religion, educational standard, marital status;
- a clinical survey*: by questioning, in order to get clinical variables, discovery circumstances, backgrounds. The physical examination in order to get anthropometrical parameters, tumor characteristics.
- a survey on psychological distress*: which allows the screening through a digital visual scale called "distress thermometer" from 0 to 10, the value 10 being highest. This thermometer was designed by the NCCN (National Comprehensive Cancer Network) in 2009 and allows the psychological distress assessment in graphical manner to cancerous patients. This assessment corresponds to the distress felt by the patient during the last week including the day where the detection was made.
- the French translation of this scale determines the step of 3, the presence of a psychological pathological distress, a score included between 3 and 5 is a light psychological distress, a score between 6 and 7 is a middle psychological distress, a score between 8 and 10 is a serious psychological distress [4].

The distress thermometer is used together with "the list of problems faced".

This list of problems faced formed with 25 items divided into 6 dimensions (practice, spiritual, social/family, emotional, information, physics). Then, the list helps us to get information on a wide range of problems or anxieties associated with cancer [4].

survey on self-esteem: which has been assessed through Rosenberg scale self-esteem. It is a self-assessment which has 10 items (demonstrated by Morris Rosenberg in 1965), the French adaptation made in 1992 by Chambon. And about the quiz, it is formed of 10 items which 5 assesses positive self-esteem and others negative self-esteem. The answer differs according to Likert type scale in four points from "entirely disagreement" (1) to "entirely agreement" (4). The score that we get is by addition of scores to questions 1, 2, 4,

6 and 7. As for questions 3, 5, 8, 9 and 10, the quotation is reversed. Then the score is included between 10 and 40.

The results performance is both the same as man and woman [6]:

- a lower score of 25 is a very weak self-esteem;
- a score included between 25-31 is a weak self-esteem;
- a score included between 31-34 is a middle self-esteem;
- a score between 34-39 is a strong self-esteem;
- a score greater than or equal to 39 is a very strong self-esteem.

However, concerning the non-literate participants, the self-quiz was made in local tongue.

2.2. The Study Progress

After the selection, patients were in consultation room, we briefly explained them the study, its objectives and its progress. After the census form signature, giving their agreement, we performed the clinical examination, which allows to get sociodemographic data, the circumstances discoveries together with backgrounds. The physical examination recorded the anthropometrical parameters, the senological examination and other machines in terms of call signs.

The scale on psychological distress coupled with problems faced, together with the self-quiz on anxiety and depression (HADS), and on Rosenberg self-esteem were filled out by the patients answering to all self-quiz to all items.

2.3. The Variables of Study

- sociodemographics;
- clinics (tumoral characteristics);
- morphologies;
- therapeutics: medical treatments, surgical, radiotherapy;
- the psychological distress: a psychological distress score greater than or equal to 3 was considered, psychological pathological distress; the scores of different dimensions of the list of the associated problems – scores of sub-scale of anxiety and depression;
- self-esteem: score of different constitutive items of self-esteem scale.

2.4. Operational Definitions

1. the distress in cancerology

According to National Comprehensive Cancer Network, distress is defined as "an unpleasant emotional experience and multidimensional of psychological nature (cognitive, behavioral, emotional) social and/or spiritual which interferes with the capacity to face up to cancer, its physical symptoms and its treatments".

Manifestations in the form of sadness and fear to the invalidating problems, such as the depression, anxiety, panic, social isolation together with existential spiritual crisis [5].

2. standard/socioeconomical status

It is an assessment concept, which concerns at the same time social and economic domain with their different

relations. The measure of socioeconomical standard remains difficult, the multidimensional concept requires the use of several indicators. Here are the most useful indicators of socioeconomical status:

- a) the education (instruction level);
- b) the profession;
- c) the income.

2.5. The Judgment Criteria

The assessment of degree and severity distress was made from the following scales: the thermometer of psychological distress coupled with the list of the associated problems, the Hospital Anxiety and Depression Scale (HADS) and the Rosenberg self-esteem scale.

- a) *about the thermometer of psychological distress*, we divided the scores in the following manner: from 0 to 2 no psychological distress; from 3 to 5, light psychological distress; from 6 to 7, middle psychological distress; from 8 to 10 serious psychological distress;
- b) *about HADS*, a score less than or equal to 7 to the sub-scale of anxiety or depression: absence of anxious troubles or depressive; a score between 8 to 10; a score greater than or equal to 11: anxious trouble or similar depressive.
- c) *about Rosenberg self-esteem scale*, the division of scale is the following: a lower scale to 25 within a very weak self-esteem, a score between 25 and 31: a weak self-esteem, a score between 31 to 34: a middle self-esteem, a score between 34 and 39: a score self-esteem, a greater than or equal to 39: a very strong self-esteem.

2.6. The Statistical Analysis

The data of this study were typed on an input mask created on Epi.info 7.2 software, data treatments were performed with Excel 2013. Concerning the statistical analysis, we used two software especially Epi.info 7.2 and SPSS 25.

The Pearson coefficient helped us to make the study between the distress scale and those of anxiety with also the depression.

The test of Chi-square of Pearson was used to study the link between the distress level and other variables; the test of Fisher was used when at least an effective theory was lower to 5.

In order to identify the associated factors with distress after adjustment on other factors, a logistical regression was used. We included all factors having a p-value less than or equal to 20% in the model of logistical regression.

We indeed used odds ratio with its confidence interval to 95% as estimative parameter. The interval link was significant when the confidence interval did not include the value 1. The great significance was at 5%.

2.7. Ethical Considerations

The study was made in the anonymity respect and privacy of patients.

3. Results

- a) selection of patients and the study population;
- b) in the altogether, 150 patients answered to the selection criteria were finally included in the study.

Table 1. Socio-demographical character of the study of the population.

Socio-demographical character		
Gender	Effectives	Rate
Women	144	96%
Men	6	4%
Age group (years)		
[21-36]	14	9.3%
[37-50]	63	42%
[51-66]	62	41.23%
Upper 66	11	7.3%
Religion		
Christian	144	96%
Non-christian	6	4%
Education level		
University	47	31.3%
Secondary	64	42.67%
Primary	30	20.00%
Off school	9	5.00%
Marital status		
Single	18	12.00%
Couple	98	65.30%
Divorced	12	8.00%
Widower	22	14.67%
Total	150	

Table 2. Clinical characters of patients.

Circumstances of discovery	Effectives	Percentage
Nodule	133	88.67
Orange skin	56	37.33%
Mammelonnaire flow	16	10.67%
Hemorrhagical ulceration	21	14.00%
Adenopathy	25	16.67%
Comorbidities		
HIV	2	
HBP	27	18%
Asthma	2	
Body Mass Index (BMI)		
< 18.5	11	13.75%
18.5 – 24.99	75	50%
25- 29.99	45	30%
≥ 30.00	19	12.67%
Tumor size (S)		
S1	4	2.7%
S2	30	20%
S3	27	18%
S4	73	48.7%
Tx	16	10.6%
Metastasis		
Lungs	12	28.57%
Liver	7	16.67%
Bones	14	13.33
Controlateral breast	2	4.7%-
Pleura	5	11.90%

3.1. Socio-demographical Character

Age: the middle age of patients was: 50, 14±10, 75 (extremes of 21- 82 years).

The division of patients according to the age group is

illustrate in table 1.

3.2. Clinical Characters

The division of patients according to the clinical characters is represented in table 2.

3.3. Therapeutical Characters

The therapeutical characters are represented in table 3.

Table 3. Division of patients depending the received treatment.

Means	Effectives	Percentage (%)
Chemotherapy	129	86%
Surgery	88	58.6%
Radiotherapy	15	10.00%
Side effects		
Nausea /vomit	77	56.20%
Anemia	25	18.25%
Liver failure	09	6.57%
Alopecia	112	81.75%
Lymphedema	12	8.56%
Post-operative chest pain	105	76.64%

3.4. Distress Assessment of Patients

The following board represents the psychological distress of patients.

Table 4. Division of patients according to the score level of psychological distress.

Distress level	Effective	Percentage (%)
0 – 2	27	18.00
3 – 5	67	44.67
6 – 7	38	25.33
8 – 10	18	12.00
Total	150	100.00

3.4.1. Preoccupations/Problems Faced with Patients

The figure 1, represent different size.

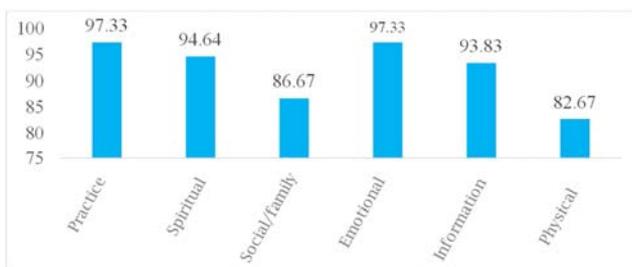


Figure 1. Distribution of patients according to the categories with problems faced.

3.4.2. Practice Dimension

The figure 2, shows different preoccupations on practice dimension.

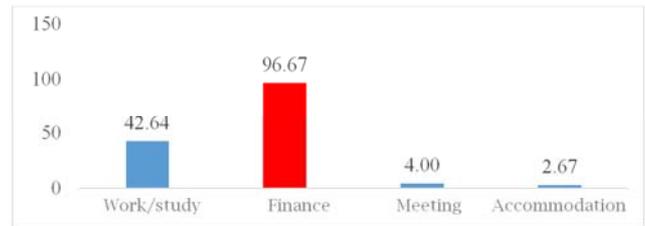


Figure 2. Distribution of patients according to the problems of practice dimension.

3.4.3. Spiritual Dimension

The figure 3, shows different preoccupations on spiritual dimension.

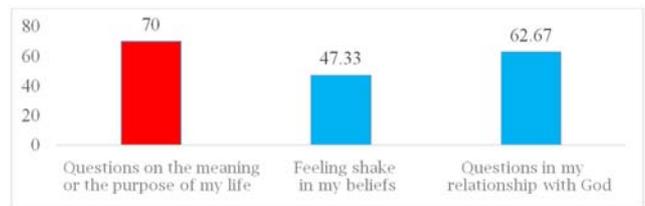


Figure 3. Distribution of patients according to the problems of spiritual dimension.

3.4.4. Social/Family Dimension

The figure 4 represents the different preoccupations on social/family dimension.

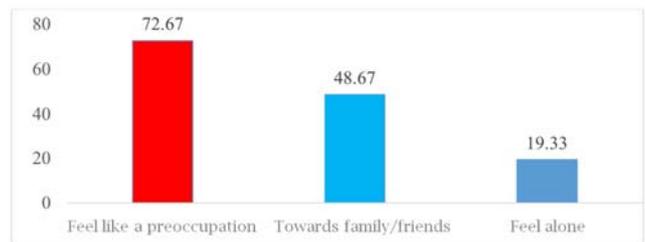


Figure 4. Distribution of patients, according to the social/family dimension.

3.4.5. Emotional Dimension

The figure 5 presents different preoccupations on emotional dimension.

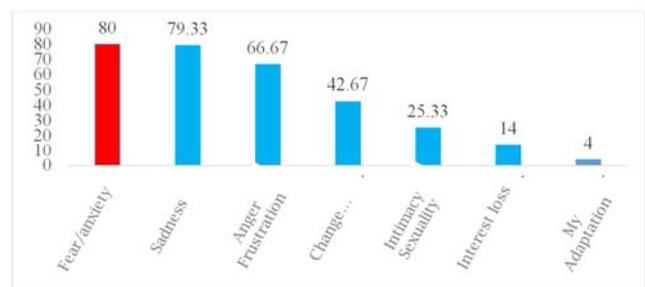


Figure 5. Distribution of patients according to the problems of emotional dimension.

3.4.6. Information/Communication Dimension

The figure 6 shows the different preoccupations on information/communication dimension.

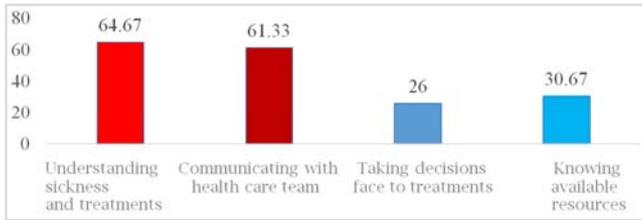


Figure 6. Distribution of patients according to the problems of information/communication dimension.

3.4.7. Physical Dimension

The figure 7 presents different preoccupations on physical dimension.



Figure 7. Distribution of patients with the problems of physical dimension.

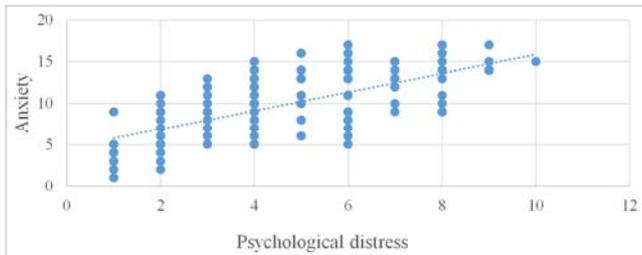


Figure 8. Positive correlation between the psychological scale and the HAD-A sub-scale.

4. Correlation Between Scales

The figure 8 shows a positive correlation between the analogical visual scale of psychological distress and the sub-scale of HAD-A with a coefficient correlation of Pearson (r) of 0.636 and a p-value (p) of 0.000.

4.1. Correlation Between the Psychological Distress Scale and the HAD-D Sub-scale

The figure 9 shows a correlation between psychological distress scale and the HAD-D sub-scale with a coefficient correlation of Pearson (r) of 0.55 and a p-value (p) of 0.000.

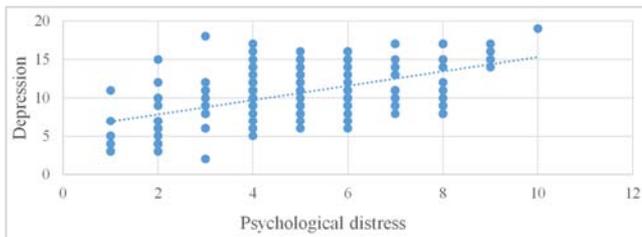


Figure 9. Positive correlation between the psychological distress scale and the HAD-D sub-scale.

4.2. Correlation Between the Psychological Distress Scale and the Rosenberg Self-esteem Scale

The figure 10 shows a positive correlation between analogical visual scale of psychological distress and the Rosenberg self-esteem scale with a coefficient correlation of Pearson (r) of - 0.359 and a p-value (p) de 0.000.

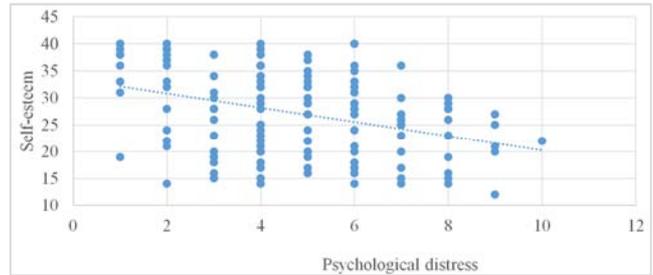


Figure 10. Negative correlation between the psychological distress scale and the Rosenberg self-esteem scale.

4.3. Socio-demographical Characters

The table 5 illustrates the socio-demographical analysis associated with the psychological distress of patients with breast cancer.

Table 5. Analysis by logistical regression of socio-demographical characters associated with the psychological distress.

	Psychological distress		p-value
	Yes N 123 (82%)	No N=27 (18%)	
Gender			0.592
Female	117	27	
Male	6	0	
Age group			0.584
20-39	19	4	
40-59	83	17	
60-79	20	5	
≥80	1	1	
Profession			0.834
With	61	14	
Retired	15	4	
Without	47	9	
Socioeconomical level			0.463
Down	39	10	
Medium	82	16	
High	2	1	
Education			0.32
Off school	8	1	
Primary	22	8	
Secondary	56	8	
University	37	10	

4.4. Clinical and Therapeutical Characters

The table 6 presents the clinical and therapeutical characters associated with the psychological distress of patients with breast cancer.

Table 6. Analysis logistical regression of clinical and therapeutical characters associated with the psychological distress.

	Pathological distress		OR gross (CI95%)	p-value	OR adjusted (CI95%)	p-value
	Yes	No				
Antecedent						
Yes	43	10	0.91 (0.382.17)	0.83*		
No	80	17	1			
Metastasis						
Yes	31	1				
No	92	26	0.11 (0.010.88)			0.01**
Chemotherapy						
Yes	105	23	1.01 (0.393.28)	0.98*		
No	18	4	1			
Surgery						
Yes	15	3	1.11 (0.304.14)	0.59*		
No	108	24	1			
Complication						
Yes	0	104		0.01**		
No	27	19				

** significant to 5% in gross analysis, * not significant to 5% in gross analysis; †† significant to 5% in adjusted analysis, † not significant to 5% in adjusted analysis; (Confidence Interval) CI 95%.

4.4.1. Correlation, Medical Treatment Period and Psychological Distress

The figure 11 illustrates a negative correlation between the psychological distress and the medical treatment period.

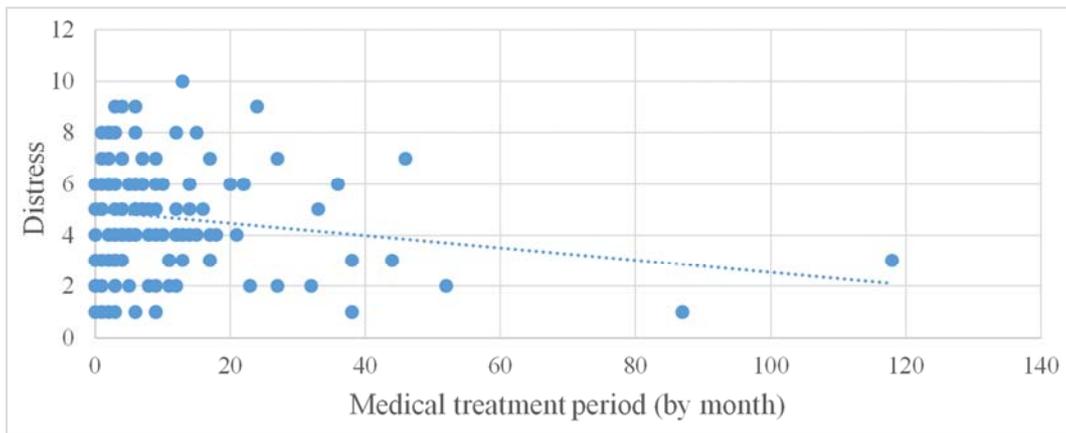


Figure 11. Cloud of points of distress in accordance with the medical treatment period.

4.4.2. Correlation, Surgical Treatment Period and the Psychological Distress

The figure 12 illustrates a negative correlation between the psychological distress and the post-surgical period.

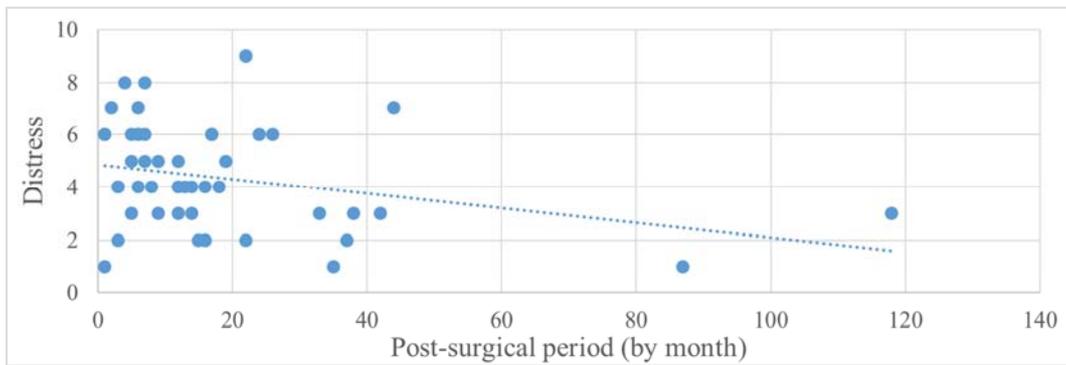


Figure 12. Cloud of points of distress in accordance with the post-surgical period.

4.5. Problems/Preoccupations

The table 7 illustrates the analysis of problems/preoccupations, associated with the psychological distress of patients with breast cancer.

Table 7. Analysis by logistical regression of problems/preoccupations associated with the psychological distress.

	Pathological distress		OR gross (CI95%)	p-value	OR adjusted (CI95%)	p-value
	Yes	No				
Problems/preoccupations						
Practice						
Yes	123	23		0.0008**		
No	0	4				
Spiritual						
Yes	118	24	2.95 (0,66-13.18)	0.15*		
No	5	3	1			
Social/family						
Yes	120	10	68 (16.99-272.08)	0.000**		
No	3	17	1			
Emotional						
Yes	123	4		0.0008**		
No	0	23				
Information						
Yes	120	20	14.0 (3,34-58.68)	0.0002**	13.99 (3,34 – 58.66)	0.0003††
No	3	7	1			
Physical						
Yes	108	16	4.95 (1.93-12.65)	0.0011*	4.95 (1,94 – 12.65)	0.0008††
No	15	11	1			

** significant to 5% in gross analysis, * not significant to 5% in gross analysis; †† significant to 5% in adjusted analysis, † not significant to 5% in adjusted analysis; (Confidence Interval) CI 95%.

4.6. Practice Dimension

The table 8 illustrates the analysis of problems of practical dimension, associated with the psychological distress of patients with cancer.

Table 8. Analysis by logistical regression of problems of practice dimension associated with the psychological distress.

	Pathological distress		OR gross (CI95%)	p-value	OR adjusted (CI95%)	p-value
	Yes	No				
Practice problems						
Work/studies						
Yes	59	5	4.06 (1,44-11.40)	0.005**	1.02 (0,13-7.69)	0.9870†
No	64	22	1		1	
Finances						
Yes	123	22		0.0001**		
No	0	5				
Joining the Meeting						
Yes	6	0		0.59*		
No	117	27				
Accommodation						
Yes	4	0		1.00*		
No	119	27				

** Significant to 5% in gross analysis, * not significant to 5% in gross analysis; †† significant to 5% in adjusted analysis, † not significant to 5% in adjusted analysis; (Confidence Interval) CI95%

4.7. Physical Dimension

The table 9 illustrates the analysis of preoccupations of the physical dimension, associated with the psychological distress of patients with breast cancer.

Table 9. Analysis by logistical regression of problems of physical dimension associated with the psychological distress.

	Pathological distress		OR gross (CI95%)	p-value	OR adjusted (CI95%)	p-value
	Yes	No				
Physical problems						
Concentration/memory						
Yes	7	1	1.57 (0,19-13.31)	1.000*		
No	116	26	1			
Sleep						
Yes	95	14	3.15 (1.33-7.48)	0.0074**	0.42 (0.06-3.17)	0.4011†
No	28	13	1		1	
Weight						
Yes	74	9	3.02 (1.26-7.27)	0.0111**	2.07 (0,27-15.87)	0.4848†
No	49	18	1		1	
Constipation/diarrhea						
Yes	1	1	0.21 (0.01-3.52)	0.3285*		
No	122	26	1			

** significant to 5% in gross analysis, * not significant to 5% in gross analysis; †† significant to 5% in adjusted analysis, † not significant to 5% in adjusted analysis; (Confidence Interval) CI95%

5. Methodology Analysis

We performed a transversal analytical hospital study with the aim to assess the psychological distress of patients with breast cancer.

This methodological choice justified the necessity to know how the breast cancer, the frequent pathology, chronic, and difficult to live by its therapeutical heaviness which affects the psychological dimension of patients.

In our environment, this study is difficult with population, our choice was based on hospital study allowing to recruit patients followed in the service.

Among all the quiz on distress in carcinology, our choice was on the psychological distress scale, the list of the associated problems, the HAD, together with the Rosenberg self-esteem scale.

In addition, this choice justified the fact that its scales are specific to the assessment of the psychological sphere to the cancerous patients, and were translated in national languages.

Study Limit

- the sample size and the mono-centric character making difficult all exploitation of results to the general population;
- the patients recruitment in hospital milieu, or all cases of breast cancer are not listed, since all sick persons do not consult due to the high price of therapeutical management;
- all the scales were used without validation and adaptation to the Congolese population. The translation into national languages made easily the administration to off school patients.

Despite these limits, we got the results which can be debated with the literature data in order to valorize this work.

6. Discussion

6.1. Socio-demographical Aspects

The middle age of our study was 50.14±10.75 years with the extremes from 21 to 82 years. The most represented age group of patient was from 36 to 51 years (42.00%). Our

results were similar to those reported in the literature by *Toure and al* [6], *Mimouni and al* [7] reported a middle age near of our study, respectively: 50 years, 50.7 years.

In the industrialized countries, the middle age seems to be tardy, according to *Méry and al* [2] study, the middle age was 61 years for the patients with breast cancer. The breast cancer is the most common to the woman in the world according to the WHO, and with the minimal percentage in the male population estimated at 1% in the word [2, 8].

6.2. Clinical and Therapeutical Characters

The most of our patients (88.6%) were presented in consultation for "breast nodule". Our results were corroborated with those of *Sando and al* [9] which reported 92.4% of patients in consultation for "breast nodule; with *Komboigo et al* [10] who noted that "breast nodule" is the first rank about the consultation with a frequency of 27.6%.

More of the half of patients (54%) were diagnosed at an enough advanced stage of sickness (T3 and T4). This could be explained by the therapeutical itinerary took by the patients before the first consultation at the hospital.

These results are comparable to those of *Komboigo and al* [10] who reported that 46.6 of patients were diagnosed at a very advanced stage (T3); with *Sando et al* [9] reported in their study 54.2% of patients were diagnosed at stage T4. In contrast B, *Méry and al* [2], on a cohort of 277 patients, 68% of patients were diagnosed at an early stage (T1). This difference could be explained in fact that the patients come in consultation at an early stage of the sickness in the industrialized countries contrary in our country.

6.3. Distress in Oncology

With the diagnosed persons of cancer and their neighbors is common and this distress is variable all along cares trajectories [4]. Near of the half diagnosed persons and their neighbors feel such distress with significant manner. The distress is a health indicator which has been for longtime ignored by the patricians. Thanks to scientific progress and medical progress, more of 60% persons with cancer survive to their sickness. It is

frequent to meet people with a metastatic cancer who live many years with their sickness. Now, cancer is a chronic sickness [4, 11]. Because many people live with harmful effect of treatments or of their sickness [4].

According to *Rivest and all* [4], the distress is the sixth vital sign of persons affected by the cancer, after the beating, the blood pressure, the temperature, rate of respiration and the pain. The systematical detection of the distress, now known as a practical standard in cancerology, constitute probably the most used means to detect the non-filled needs of patients affected by cancer [4, 11].

The recent searches revealed that an important proportion of people with cancer presenting a significant distress are neither yet oriented toward services nor treated for their distress or their mental trouble health [13, 14]. In the literature, the prevalence of the distress is variable in the studies regarding different reasons, which the tumoral seat, the sickness stage, the gender, the socioeconomical status [15]; this variation also depends on the type of version of the used scale.

In our study, more of 80% of patients presented a psychological distress, this could be explained in fact that the majority of our patients (90.67%) did not benefit a management in psycho-oncology during the ongoingly cares, then the half of our patients were diagnosed at an advanced stage of sickness.

However, the prevalence in our study was upper in comparison to other studies of some authors just like Tremblay and *al* [12], Méry and *al* [2] with Dolbeault [5] who reported prevalence respectively in order of: 33.9%; 41% and 51.3%. Furthermore, our results were close from those of Howell and *al* [1] who reported a prevalence of 70%.

The problems expressed by the patients were regrouped in six dimensions: practice, socials, emotional, spirituals, informational and physical. All the categories of problems in our study were of an upper prevalence of 80%.

In the same way, the affected women by breast cancer constitute another vulnerable group to the distress all along of ongoingly cares [4, 11].

The recent studies assess that 40% of patients with cancer will do the experience of an important distress because of the cancerous sickness [1].

Our results are close from those of Tremblay and *al* [12] who reported the emotional categories at the first rank, after the physical category with the respective prevalence of 74.6% and 64%. About the spiritual category, this one was in the last position contrarily in our study where it was in the 3rd rank; this could be explained in fact that all our patients had religious belief (96%).

a) Anxiety and depression

All most three quarters (74%) of patients had an upper score at 7; and almost of the half of patients (74%) of patients presented anxious trouble. This could be explained in fact that the most patients were seen at an advanced stage of sickness (T3, T4), with a bad prognosis (SBR II) then, the majority of patients had not management in psycho-oncologic all along the cares trajectories due to the lack of a device of the management of supportive cares.

However, some authors like C. Perdrizet-Chevalier and *al* [16], Dolbeault [17], and Tremblay and *al* [12] reported

prevalence respectively from 30%; 26.7% and 26.6%. In the same way in our sample (79.43%) had a greater than or equal to 7 of patients presented a depression. Other series, [12, 16, 17] were reported prevalence of 32%; 11.4% and 9.4%.

The self-esteem or the body image is an important element to take with consideration in the management of the woman with breast cancer, a major interest is at the search of the body image in mammary oncology these last years [18-20].

The trouble prevalence of the body image is variable in the literature according to the moment chosen for the screening. This variability can be explained with the use of different measure tools, the divergence of populations studied and by type of studied treatment [18].

In our study, 38% of patients had very weak self-esteem, needing a psycho-oncologic intervention.

Our results are comparable to those found by Falk Dahl [18] who found a prevalence 30.6%. Besides, some authors like [19-21], found respectively the prevalences: 45%; 47,6% et 58%.

b) Associated factors with the psychological distress.

The association between the age and the psychological distress during the breast cancer seems to be controversial. In our series, there was not association between the age and the arisen of pathological distress.

This could be explained by the small size of ours ample. Many authors like Härtl and *al* [22] and Turner and *al* [23]; Bardwell and *al* [24] have mentioned that the young patients with breast cancer showed more psychological distress than the eldest patients.

c) The stage of disease

According to Vachon and *al* [25] the progression of the disease leads first to the appearance then to the interview of the psychological distress. Also, the distress is variable according to the type of cancer, the elapsed time from the diagnosis and the stage of disease.

In fact, several studies showed that the cancerous patients having metastasis from a distance had a deep psychological distress than those who were in localized stage or loco-regional [26]. In 2016 Jacob and *al* [27] lead a study with the objective a significant association between the metastatic stage of breast cancer and the arisen of the psychological distress.

Thus, we found a significant association between the lack of metastasis and the psychological distress. We can affirm in fact that the lack of metastasis was a protector factor of the arisen of the psychological distress.

d) Factor within treatments

Concerning the chemotherapy in the long term, it can cause an alteration of life quality with the arisen of the psychological distress. In fact, in our series Hopwood and *al* [28]. Noticed an increase of the prevalence and the severity of psychological distress to the women following a chemotherapy. In this context, the lack of the radiotherapy would be also an aggravating factor of distress.

Feelings of "ghost breast" often being painful, were described to the mastectomized women [27, 28]. In our series, although we did not find a significant association between the surgical treatment and the arisen of the psychological distress, we nevertheless found a negative correlation between the post-

surgical period and the arisen the psychological distress.

e) Factor within problems faced

The social backing is known to play an important role in the psychological and physical adjustment to the disease [29]. The company quality is crucial factor in the arisen of the psychological distress. In fact, the more the patient will not be able to communicate his/her anxieties, the more he/she will feel isolated and the more he/she will be affected by the psychological distress [30]. The neighbors assure an important psychological back-up, they imply in the management and they go along with the patient all along of his/her medical course $p < 0.001$; $OR = 5.49$ $p < 0.001$; $OR = 0.85$ $p < 0.001$).

Furthermore, Berhili. S and al [30] reported that the lack of social back-up was the second factor associated to psychological distress $OR = 5.33$ [2.62-10.82]; $p < 0.001$. In our study, we found a significant link between the problems of social order and the arisen psychological distress.

f) Communication/information and physical dimension

In our study, a statistically link was found between the problems of communication or information on the sickness and arisen psychological distress. The somatical manifestations of breast cancer can have the aftereffects on the psychological state of patient. Thus, some authors, Perdrizet-Chevalier and al [16] were reported that the problems of physical order were predictive of the psychological distress. In our study, a significant association was found between the physical order and the arisen psychological distress.

In the other hand, the studies of Burgess and al [29] did not have a significant association between the physical order of breast cancer and the arisen psychological distress.

7. Conclusion

As all other chronical sickness, the breast cancer has aftereffects on all dimensions (physics, spiritual, psychologic, social, economic) of the one with this affectation. A prevalence to 82% was associated with many factors, as: the metastatic stage of breast cancer; the appearance of secondary effects (therapeutical complication); the problems of social order, physics, spiritual, emotional and communicational. A psychological back-up of patients with breast cancer in the service of medical oncology is useful to decrease the prevalence of this distress.

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