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QUALITY OF LIFE IN WOMEN WITH BREAST CANCER IN RURAL AND URBAN AREAS OF GUERRERO, MEXICO

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Abstract: The present study is observational, cross-sectional and retrospective, it was carried out in a population of 104 women with breast cancer who attend the consultation at the State Institute of Cancerology of Acapulco, and its objective was to evaluate and compare the quality of life of women. with breast cancer from urban and rural areas of the State of Guerrero. The instrument used to measure quality of life is the EORTC Questionnaire QLQ-C30, Specific Module QLQ-BR23, the sampling was non-probabilistic (for convenience). The average age of the participants is 53.95 ± 10.14 SD, with a range of 33 to 79 years. The majority are married (60.58%); more than half are housewives (66.35%). 71.5% of women live in urban areas and 28.85% in rural areas. Conclusion: Women with breast cancer who live in urban areas have a better Global Health Status and have, on average, a higher Quality of Life in relation to women who live in rural areas.
Keywords: Quality of life, Breast cancer, Cancer in Guerrero, Women with cancer.

INTRODUCTION

Breast cancer is a disease that mainly affects women, and is considered a public health problem. In Mexico until 2015, there were 6,304 deaths from breast cancer, a rate of 10.1, and in the State of Guerrero in the same year, 2,073 deaths and an annual rate of 58.2 were reported (Aldaco-Sarvide et al. 2018). Breast cancer is a serious neoplasm that originates in breast tissue and whose treatment requires chemotherapy, which has as consequences changes in the quality of life of women who suffer from it. The quality of life is mainly affected by the side effects of treatment, such as hair loss, insomnia, in addition to breast symptoms, among others (Mejía-Rojas et al. 2020). Other authors also mention that the symptoms presented by women with cancer and the treatment to which they undergo deteriorate the quality of life (Cruz-Bermudez et al. 2013; Enriquez-Reyna and Vargas-Flores, 2018).

In a meta-analysis González et al. (2021), reports that women with breast cancer in Latin America and the Caribbean, who are undergoing active treatment or with metastatic disease, had worse health-related quality of life compared to survivors during the follow-up period.

Palacio-Mejía et al. (2009), when comparing the risk of dying from breast cancer in 2000 and 2006, it was reduced from 2.33 times more for women with urban residence to 1.88, which implies that while the risk for women in urban areas decreases, in women in rural areas increases. Due to the aforementioned, it is necessary to carry out an evaluation of the quality of life of women with breast cancer who live in urban and rural areas in the State of Guerrero, to know what the situation of these patients is and they can receive comprehensive treatment for part of the institution that is caring for them and improve their quality of life. Therefore, we pose the following research question: Will women with breast cancer living in rural areas have a lower quality of life than women in urban areas?

METHOD DESCRIPTION

STUDY POPULATION

Women attending the State Cancer Institute of Acapulco, Guerrero, were invited to participate in this study. The sampling that was carried out was non-probabilistic (for convenience). The sample size was 104 patients with confirmed breast cancer. Inclusion criteria: Women with a confirmed diagnosis of breast cancer and/or who have started treatment for breast cancer and who are residents of the state of Guerrero. Exclusion criteria: women who do not have a confirmed

diagnosis. To classify women from localities as rural or urban, the cut-off point proposed by INEGI was used, which considers a locality with 2,500 or more inhabitants as urban and when it has fewer inhabitants it is classified as rural.

The women who decided to participate were given a questionnaire to measure the quality of life; The instrument used was the EORTC Questionnaire QLQ-C30, Specific Module QLQ-BR23, which contains questions that reflect multiple aspects of quality of life, and evaluates 5 functional scales (social, emotional, physical, cognitive, and role). three symptom scales (fatigue, pain, nausea and vomiting) and a global health/quality of life scale. This scale includes an item oriented to the financial area, as well as other individual items related to the symptoms of the disease and its treatment, such as sleep problems, loss of appetite, diarrhea, dyspnea, and constipation (Recalde and Samudio, 2012).

The EORTC QLQ-BR23 Specific Module for breast cancer assesses what is related to treatment and other aspects of quality of life more specifically affected by breast cancer, such as body image and sexuality. The functional scale, composed of the subscales of body image, sexual functioning, sexual pleasure and future prospects. The symptomatic scale composed of the subscales effects of chemotherapy, symptoms of the breast, arm, and concern about hair loss (Recalde and Samudio, 2012).

Based on the classification of Recalde and Samudio (2012), quality of life was classified into six categories: from 0 to 49,999 points, it was considered very bad, from 50 to 59,999 bad, from 60 to 69,999 regular, from 70 to 79,999 good from 80 to 89,999 very good, from 90 points onwards, excellent quality of life.

The "average quality of life" index was obtained by adding the Global Health State, the Average symptoms, the Average functioning and dividing the sum by 3. Each question in the questionnaire has four options to which values between 1 and 1 are assigned. 4 (1=no, 2= a little, 3= quite a bit, and 4= a lot). Only items 29 and 30 are evaluated with a score from 1 to 7 (1=poor, 7=excellent). The scores obtained are standardized and a score between 0 and 100 is obtained, which determines the level of impact of cancer on the patient for each of the scales.

High values on the global health and functional status scales indicate a good quality of life, while on the symptoms scale it indicates a decrease in quality of life, since it indicates the presence of symptoms associated with cancer.

Data analysis: the data were captured in Epi-data and analyzed in the statistical packages SPSS 21. For the quantitative variables, the univariate analysis was carried out with the calculation of measures of central tendency as mean and median, measures of dispersion as the range, standard deviation and variance and histograms; the bivariate analysis was carried out by comparing the means of the groups, first the Levene test was used to determine if the variances were equal or not and according to the result obtained, the student's t test was used for unknown but equal variances or the case of unknown but different variances.

For the qualitative variables, the univariate analysis was performed with the calculation of percentages, frequencies; the bivariate analysis was carried out using contingency tables, with the purpose of analyzing the distribution of frequencies in two dimensions expressed through a double entry matrix, for example, quality of life and area where they live; and the Chi-square statistic was calculated to describe and analyze the dependence between two variables.

RESULTS

The women who participated in this research (n=104) come from 54 towns in the state of Guerrero. 71.5% of women live in urban areas and 28.85% in rural areas. The average age of the participants is 53.95 ± 10.14 SD, with a range of 33 to 79 years. 60.58% are married, 8.65% divorced, 6.73% widows, 21.15% live in free union and 3% are single. The level of education of the participants: 14% are illiterate, 24% have finished primary school, 9.8% did not finish primary school, 21.6% secondary school, 15% high school, 14.7% have a bachelor's degree, and 0.9% have a master's degree.

Regarding occupation, 66.35% (69/104) are housewives and 33.65% (35/104) have jobs or occupations such as: nurses, teachers, employees in commercial stores, hotels, agrochemical stores, merchants, domestic employee, silverware workshop, accounting technician, stylist, state government employee.

DESCRIPTION OF THE RESULTS OF THE QUALITY OF LIFE QUESTIONNAIRE (EORTC QLC-C30 AND EORTC QLQ-BR23)

36.54% of women with breast cancer have a very good quality of life and 9.62% have an excellent quality of life, despite having a serious disease (Table 1).

Clasification	Frequency	Percentage
Very poor quality of life	4	3.85
Bad	5	4.81
Regular	13	12.50
Good	34	32.69
Very good	38	36.54
Excellent	10	9.62

Table 1. Quality of life of women with breast cancer (n=104)

With the QLQ-BR23 Questionnaire, it was identified that the highest percentage of women due to their illness have lost interest in sex (72.1%). Less than half of the women felt worried about hair loss (48.4%) (Table 2).

EVALUATION AND COMPARISON OF THE HEALTH-RELATED QUALITY OF LIFE OF WOMEN WITH BREAST CANCER LIVING IN URBAN AND RURAL AREAS

The Global Health Status (QL2) construct, made up of the questions Q29, how would you assess your health status and Q30, how would you assess your quality of life?

The mean of the Global Health Status of the 104 women was 64.90 ± 17.75 with a range of 16.66 to 100 points. When analyzing women from urban and rural areas separately, it was found that women from rural areas perceive a lower state of health and lower quality of life in relation to those from urban areas, this difference being significant (Table 3).

When comparing the two groups (urban and rural) it was found that women in urban areas have a higher average quality of life than women in rural areas, although there was no statistical difference, when comparing the means of urban 77.87± 11.99 (95% CI 75.09-80.64) and the rural means 74.79 ± 11.26 (95% CI 70.59-79.00) (Table 4).

Women from rural areas had a higher Social Functioning average (95.55±8.68), in relation to those from urban areas (89.19±20.35), this difference being statistically significant (p=0.028).

YEARS OF SURVIVAL OF WOMEN WITH BREAST CANCER

The average age at which women were diagnosed with breast cancer was 49.59±9.83 years with a minimum of 28 and a maximum of 76 years. It must be noted that a woman who has lived with breast cancer for 5 years (during detection and treatment and after it) is considered a survivor. The 32 surviving

Side effects	Level of affectation For nothing	A little	A lot	Much
	n (%)	n (%)	n (%)	n (%)
Her hair fell out	21 (20.2)	4 (3.9)	5 (4.8)	74 (71.2)
Worried about hair loss	31 (33.3)	17 (18.3)	11 (11.8)	34 (36.6)
The person had headaches	53 (50.9)	41 (39.4)	3 (2.9)	7 (6.7)
BODY IMAGE				
The person felt less physically attractive	57 (55.3)	22 (21.4)	6 (5.8)	18 (17.5)
The person felt less feminine	66 (64.1)	13 (12.6)	7 (6.8)	17 (16.5)
The person ENJOYS SEX				
The person was interested in sex	75 (72.1)	27 (25.9)	1 (0.9)	1 (0.9)
The person had an active sexual life	73 (70.2)	26 (25.0)	3 (2.9)	2 (1.9)
ARM SYMPTOMS				
The person Felt any pain in the arm/shoulder	48 (46.2)	43 (41.4)	5 (4.8)	8 (7.7)
Difficulty raising the arm or moving it to the sides	58 (55.8)	39 (37.5)	4 (3.9)	3 (2.9)
CHEST SYMPTOMS				
The person has had pain in the affected chest area	57 (54.8)	44 (42.3)	1 (0.9)	2 (1.9)
Swelling of the affected chest	82 (78.9)	21 (20.2)	1 (0.9)	-

Table 2. Side effects of chemotherapy treatment, physical and emotional function in women with breast cancer (n=104)

Area	n	Average	Standard deviation	95% CI	Value of p*
City	74	67.90	17.59	63.83 -71.98	0.006
Countryside	30	57.50	16.13	51.47- 63.52	

Table 3. Global Health Status in women with breast cancer living in urban and rural areas

* Difference of means using the T Student test with equal variances (Levene's test: F=0.47, p=0.49).

Area	n	Average	Standard deviation	95% CI	Value of p*
City	74	77.87	11.99	75.09 -80.64	0.23
Countryside	30	74.79	11.26	70.59-79.00	

Table 4. Average Quality of Life in women with breast cancer in urban and rural areas

* Mean difference using the T Student with equal variances (Levene test: F=0.77, p=0.38; T Student: t=1.21, p=0.23).

women have an average survival of 10,125 ± 4,995 SD, with a minimum of 5 and a maximum of 20 years. Women from rural areas had greater survival than women from urban areas, the sample mean survival of women from rural areas was 10.00 ± 5.58 (95% CI 6.19 - 13.81) and from urban areas it was 9.19 ± 4.73 (95%CI 7.28-11.10). Although there was no statistically significant difference (Levene test equal variances: F=0.50, p=0.49; T Student: t=-0.45, p=0.66).

DISCUSSION OF RESULTS

The mean of the Global Health Status of the 104 women who participated in the study was 64.90 ± 17.75 with a range of 16.66 to 100 points. Other researchers have reported a higher average, such as Sat-Muñoz et al. (2011), in a study carried out in women with breast cancer at the IMSS of Guadalajara, Jalisco, report the General State of Health of 73.47±20.81 and Matsuda et al. (2014) in a systematic review and meta-analysis found two studies in which they reported the Global Health Status 72.2 ± 13.6 and 69.4 ± 17.6.

When analyzing by zones; women from the rural area of the State of Guerrero perceive a lower state of health and lower quality of life (57.50±16.13) in relation to women from the urban area (67.90±17.59), this difference being significant (p=0.006). When analyzing the Average Quality of Life variable, which includes the Global Health Status + Average Symptoms + Average Functioning; it was found that women in urban areas have a higher average quality of life than women in rural areas, although this difference is not statistically significant. This may be due to the fact that women in urban areas have better living conditions in relation to those in rural areas.

In relation to financial difficulties, when analyzing the variables by area and comparing the means, women in rural areas present more financial difficulties (67.77±30.93) than women in urban areas (55.40±37.12), although there was no difference statistically significant, (Levene unequal variances test: F=4.77, p=0.03; T Student: t=-1.74, p=0.087). Other authors report less financial difficulty in relation to our study, such as Cortés-Flores et al. (2014), (17.28±23.11) and Sat-Muñoz et al. (2011) report an average of 40.57±37.26 of financial difficulty. Some authors mention that breast cancer impacts the patient's economy and reduces the quality of life (González-Ramírez et al. 2017; Enriquez-Reyna and Vargas-Flores, 2018; Mejía-Rojas et al. 2020).

During the application of the survey, women from rural areas stated that they had low economic resources, so they need to get money to travel from their place of origin to the State Institute of Cancerology of the City of Acapulco, where they receive medical attention. If it is taken into account that the State of Guerrero is located in the highest marginalization index in relation to the other states of the Mexican Republic (Ventura-Alfaro et al. 2016), it is understandable that women in rural areas live in the marginalization, since 87% do not have a job and are economically dependent on their husband or children, and therefore have more economic problems.

FINAL COMMENTS

SUMMARY OF RESULTS

In this investigative work, the quality of life in women with breast cancer living in rural and urban areas of the State of Guerrero was studied. The objective was to evaluate the quality of life in women with breast cancer living in rural and urban areas. The research is observational, cross-sectional and retrospective; A non-probabilistic sampling (for convenience) was carried out. A total of 104 women attending the consultation at the State Institute of Cancerology of Acapulco

participated. Questionnaires to measure quality of life EORTC QLQ-C30, and QLQ-BR23 were applied to those who agreed to participate.

Results: The average age of the participants is 53.95 ± 10.14 SD, with a range of 33 to 79 years. 71.15% live in urban areas and 28.85% in rural areas. The average quality of life of women in urban areas was 77.87 ± 11.99 and those in rural areas was 74.79 ± 11.26. The global health status for those living in urban areas was 67.90 ± 17.59 95% CI 63.83 -71.98 and for rural areas it was 57.50 ± 16.13 95% CI 51.47-63.52, p = 0.006. Conclusion: The global health status is better in women with breast cancer who live in urban areas compared to rural ones.

CONCLUSIONS

1. The Global Health Status is better in women with breast cancer who live in urban areas compared to rural ones.
2. Women from the state of Guerrero who live in urban areas have, on average, a higher Quality of Life in relation to women in rural areas, although this difference was not statistically significant.
3. Women from rural areas had better Social Functioning, in relation to those from urban areas.
4. The survival time is similar in women from urban and rural areas.

RECOMMENDATIONS

To improve the quality of life of women with breast cancer, it is necessary for the patient to receive comprehensive treatment, this means that she has more family and financial support, more psychological and medical support, mainly for women in the area. rural. The implementation of a support program for women (Social Work Department) who suffer from this disease is suggested for a speedy recovery, which will have an impact on a better quality of life.

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