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HEALTH-RELATED QUALITY OF LIFE OF PATIENTS WITH CANCER IN PALLIATIVE CARE¹

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ABSTRACT

Objective: to assess the health-related quality of life of cancer patients in palliative care and its association with sociodemographic and clinical aspects.

Method: analytical, cross-sectional study involving 127 patients. Instruments of sociodemographic characterization and assessment of quality of life were used - *European Organization for Research and Treatment for Cancer*. For the analysis of the data, the Kolmogorov-Smirnov, Mann-Whitney and Kruskal-Wallis' tests have been used.

Results: in the assessment of quality of life, the Global Health Status and Role Functioning had the worst evaluation; in the Symptoms Scale, pain, fatigue, insomnia and loss of appetite were highlighted. In the association of the domains of the data collection instrument with the sociodemographic variables, there was a significant association of age and schooling with cognitive functioning, and monthly income with general health status; with the clinical variables there was a significant association of metastasis with physical functioning; radiotherapy with social functioning, and hospitalization time with the Functional Scale. The Symptom Scale showed a significant association of fatigue with metastasis, chemotherapy and hospitalization time; pain with chemotherapy and hospitalization time; insomnia with surgical procedure; and loss of appetite with chemotherapy.

Conclusion: the impairment of the functional capacity due to cancer affects the patient's ability to perform routine activities, social relationships, and financial status. Socio-demographic and clinical aspects should be considered in the assessment of the quality of life of these patients, so as to enable humanized and integrated care to the principles of the Unified Health System in force in Brazil.

DESCRIPTORS: Cancer. Quality of life. Palliative care. Terminal patient. Nursing.

QUALIDADE DE VIDA RELACIONADA À SAÚDE DE PACIENTES COM CÂNCER EM CUIDADOS PALIATIVOS

RESUMO

Objetivo: avaliar a qualidade de vida relacionada à saúde de pacientes com câncer em cuidados paliativos e sua associação com aspectos sociodemográficos e clínicos.

Método: estudo analítico, transversal, do qual participaram 127 pacientes. Foram utilizados instrumentos de caracterização sociodemográfica e de avaliação de qualidade de vida - *European Organization for Research and Treatment for Cancer*. Para análise dos dados, aplicaram-se os testes Kolmogorov-Smirnov, Mann-Whitney e Kruskal-Wallis.

Resultados: na avaliação de qualidade de vida, o Estado de Saúde Global e Função Desempenho de Papel tiveram pior avaliação; na Escala de Sintomas, dor, fadiga, insônia e perda do apetite tiveram destaque. Na associação dos domínios do instrumento de coleta de dados com as variáveis sociodemográficas houve associação significativa da idade e escolaridade com função cognitiva, e de renda mensal com estado geral de saúde; com as variáveis clínicas houve associação significativa de metástase com função física; radioterapia com função social, e tempo de hospitalização com Escala Funcional. A Escala de Sintomas apresentou associação significativa de fadiga com metástase, quimioterapia e tempo de hospitalização; dor com quimioterapia e tempo de hospitalização; insônia com procedimento cirúrgico e perda de apetite com quimioterapia.

Conclusão: o prejuízo na capacidade funcional, decorrente do câncer, afeta a capacidade do paciente de desempenhar atividades da vida diária, as relações sociais e a situação financeira. Aspectos sociodemográficos e clínicos devem ser considerados na avaliação da qualidade de vida desses pacientes, de forma a possibilitar atenção humanizada e integralizada aos princípios do Sistema Único de Saúde vigentes no Brasil.

DESCRIPTORES: Câncer. Qualidade de vida. Cuidados paliativos. Paciente terminal. Enfermagem.

CALIDAD DE VIDA RELACIONADA CON LA SALUD DE PACIENTES CON CÁNCER EN CUIDADOS PALIATIVOS¹

RESUMEN

Objetivo: evaluar la calidad de vida relacionada con la salud de pacientes con cáncer en cuidados paliativos y su asociación con los aspectos sociodemográficos e clínicos.

Método: estudio analítico y transversal en el que participaron 127 pacientes. Fueron utilizados instrumentos de caracterización sociodemográfica y de evaluación de calidad de vida - *European Organization for Research and Treatment for Cancer*. Para el análisis de los datos se aplicaron los testes Kolmogorov-Smirnov, Mann-Whitney y Kruskal-Wallis.

Resultados: en la evaluación de la calidad de vida, el Estado de Salud Global y la Función Desempeño del Papel tuvieron la peor evaluación. En la Escala de Síntomas se destacaron dolor, fatiga, insomnio y pérdida del apetito. En la asociación de los dominios del instrumento de obtención de datos con las variables sociodemográficas hubo una asociación significativa de la edad y escolaridad con la función cognitiva y de renta mensual con el estado general de la salud. Con las variables clínicas hubo una asociación significativa de metástasis con función física, radioterapia con función social y tiempo de hospitalización con Escala Funcional. La Escala de Síntomas presentó una asociación significativa de fatiga con metástasis, quimioterapia y tiempo de hospitalización, dolor con quimioterapia y tiempo de hospitalización, insomnio con procedimiento quirúrgico y pérdida del apetito con quimioterapia.

Conclusión: el perjuicio en la capacidad funcional, derivado del cáncer, afecta la capacidad del paciente de desarrollar actividades de la vida diaria, las relaciones sociales y la situación financiera. Los aspectos sociodemográficos y clínicos deben ser considerados en la evaluación de la calidad de vida de esos pacientes, de tal forma que se posibilite una atención humanizada e integrada con los principios del Sistema Único de Salud vigentes en Brasil.

DESCRIPTORES: Cáncer. Calidad de vida. Cuidados paliativos. Paciente terminal. Enfermería.

INTRODUCTION

In the last decades, cancer has stood out among the non-communicable chronic diseases. Reaching alarming levels, it has been considered a contemporary problem of global public health. The World Health Organization (WHO) estimates that, by 2030, cancer will reach approximately 27 million incident cases worldwide, 17 million deaths and 75 million people diagnosed annually. The greatest effect will be noticeable in low and middle income countries. In Brazil, statistical data directed to an occurrence equivalent to the appearance of about 580 thousand new cases of cancer, revealing, thus, the magnitude of the problem in the country.¹

When it takes an advanced form, cancer can progress to the condition of impossible of cure, with the presence of signs and symptoms not very controllable as pain, nausea, vomiting, anorexia, fatigue, depression, anxiety, constipation, among others. The manifestations may be related to a tumor invasion, as well as to the adverse effects of the treatment in some types of cancer, causing intense discomfort to the patient and a circumstantially negative impact on the quality of life.²⁻³ Therefore, the care provided to the cancer patient ceases to be curative and becomes palliative.

The palliative care aims to improve the quality of life of patients who face life-threatening illnesses with interventions aimed at pain relief and of other symptoms, such as physical, psychological, social, and spiritual.⁴

The WHO Study Group on Quality of Life,⁵⁻⁶ denominates Quality of Life (QoL) as the individual's

perception of cultural, social, political and economic influences in the context of his/her life, in order to achieve his/her goals, projects and expectations, giving him/her opportunities for choices, and for the satisfaction of the person with his/her own life.

In this context, some researchers recognize that health stands out as an important and determinant factor, adopting the terminology of Health-Related Quality of Life (HRQOL). The concept is interrelated to the subjectivity of the individual's own assessment of his/her own health, focusing on the impact that this condition may have on one's own life.⁶⁻⁷

The assessment of QoL in cancer patients has been widely used in clinical trials, cross-sectional and longitudinal studies. Studies⁸⁻⁹ that present evidence of impacts in the QoL can serve as a compass to direct public health policies, as well as guide programs and therapeutic approaches for the treatment of cancer.

The analysis of studies on the influence of racial, ethnic and cultural aspects on health and QoL of people who survived breast cancer, reveals that characteristics such as socioecological factors, health system, individual medical and psychological factors may be significant predictors of health-related QoL. In addition, social and family support and established relationships between the patient and the health professionals influence the HRQOL.¹⁰

From a research carried out with the use of the Virtual Health Library, it was possible to contact a small number of studies in the national setting, focused on QoL, aimed at the patient with advanced cancer, without possibilities of cure, in

palliative care. Therefore, assessing the HRQoL of these patients may bring relevant contributions to care and research in the healthcare setting. This is such a relevant fact that could justify the importance of further research on the subject.

In this sense, the present study aimed to assess the HRQoL of cancer patients in palliative care and its association with sociodemographic and clinical aspects.

METHOD

This is an analytical, cross-sectional study with a quantitative approach, carried out in two philanthropic hospitals, located in the city of João Pessoa (PB), Brazil.

During the period of data collection, which occurred between January and April 2013, 155 cancer patients in palliative care, corresponding to the study population, were identified in both institutions.¹¹

For the sample calculation, the formula $n_0=1/E^2$ and $n=(N.n_0)/(N+n_0)$ have been used, in which n_0 is an initial (population) approximation and n is the final sample number, with sample error (E) of 5%,¹² obtaining n of 113 (approximately 73% of the total).

The selection of the sample was made from the non-probabilistic, consecutive sampling process, characterized by being composed of consecutively enrolled individuals that were accessible in a period of time and that met the entry criteria.¹³ The inclusion criteria were: cancer patients in palliative care, who were for more than one week in hospital; being aged 18 years old or over; having a cancer diagnosis and presenting themselves clinically with no possibility of cure according to medical records; conscious, lucid and verbally capable of responding to the items of the instruments proposed for the study.

It was established as exclusion criteria: patients who, at the time of the study, had clinical (respiratory, cardiac or neurological) intercurrents at the time of data collection, did not present minimal cognitive conditions to participate, which was identified by the answers to the questions that were covered (where he/she was at that time, year of birth, origin, which month and day of the week).

Thus, considering the possibilities of loss (inclusion and exclusion criteria), the final number of this study was 127 patients, corresponding to 82% of the population and sufficient for a representative sample.

For the seizure of the empirical material, previous contact was made with the selected patient, in order to inform him/her about the study and obtain consent for participation. Then, the interview technique was used, guided by two instruments proposed for the study: the sociodemographic and clinical characterization pertinent to the oncological disease; and the HRQoL assessment.

The sociodemographic variables included: origin, gender, age, marital status, number of children, schooling, employment status, monthly income, housing, religion, physical activity and leisure. The following clinical variables were investigated: location of the primary cancer, time of diagnosis, extent of disease, treatment received, time of hospitalization, signs and symptoms.

In order to assess the HRQoL of the study participants, the European Organization for Research and Treatment for Cancer - EORTC QLQ C-30 (version 3.0) instrument was used, which is a questionnaire composed of 16 domains, 30 questions, incorporating four scales and corresponding to the state of the patient during the last week.¹⁴ The score of measurement of the items varies according to the score, from 0 to 100. Regarding the Global Health Status/QoL Scale and Functional Scale, the higher the score, corresponding to a higher level and overall health and functioning, respectively, the better the individual's QoL. In the Symptoms of Scale of and Financial Difficulty, high scores indicate greater intensity of the present symptoms and more financial difficulty, respectively, reflecting in poorer QoL of the individuals.¹⁵

For the construction of the database regarding the sociodemographic and clinical instruments variables and EORTC QLQ C-30, the Microsoft Office Excel - 2007 software was used. The sociodemographic and clinical variables were measured at the levels of the scales - nominal, ordinal and interval -, submitted to statistical analysis, with simple frequency tables and descriptive measures.

Regarding the items of the QoL measurement instrument, the domain scores were calculated according to guidelines and formulas contained in the EORTC group manual.¹⁴ In order to test the internal consistency of this instrument, Cronbach's alpha measure (α), which can range from 0 to 1.0, was used, so that the closer you get to one, the stronger and more consistent the correlation between your items, that is, the more precise the measurement.¹²⁻¹³

The EORTC QLQ-C30 domain scores were tabulated, with the average and standard deviation. To verify the normality of the distribution of the quantita-

tive variables, the Kolmogorov-Smirnov's test, and the non-parametric tests of Mann-Whitney and Kruskal-Wallis were used. The techniques of bivariate and multivariate inferential statistics were used, using the statistical package SPSS - version 13.0, and statistical tests were applied, at a 5% level of significance.

In compliance with the ethical observances contained in Resolution No. 466 of 2012, of the National Health Council, the research protocol was ap-

proved by the Research Ethics Committee, under the protocol 0327/12, CAEE n° 05593412.2.0000.5188.

RESULTS

The final sample of the study was composed of 127 participants. In this universe, 46.5% lived in the city of João Pessoa (PB) and 53.5% were from other cities in Paraíba. The sociodemographic descriptions of the participants are described in table 1.

Table 1 - Distribution of the frequency and percentage of sociodemographic characteristics of cancer patients in palliative care. João Pessoa, Paraíba, Brazil, 2013. (n=127)

Variable	Category	Cancer patients	
		n	%
Gender	Male	52	40.9
	Female	75	59.1
Age group*	Up to 49 years old	22	17.3
	From 50 to 59 years old	28	22.0
	From 60 to 69 years old	38	29.9
	From 70 to 79 years old	15	11.9
	80 years old or over	24	18.9
Marital status	Single	21	16.5
	Married	40	31.5
	Consensus union	15	11.8
	Widow(er)	34	26.8
	Separated	14	11.0
	Divorced	3	2.4
Schooling (years of education)	Not educated	48	37.8
	Elementary school	52	40.9
	High school	24	18.9
	Higher Education	3	2.4
Work situation	Retired	67	52.8

Variable	Category	Cancer patients	
		n	%
	Unemployed	29	22.8
	Health leave	14	11.0
	Self-employed/Informal	16	12.6
	Employed	1	0.8
Family income (MW□)	Less than 1 minimum wage	11	8.7
	From 1 to 3 minimum wages	109	85.8
	From 4 to 5 minimum wages	7	5.5
Religion	Catholic	92	72.4
	Evangelical	31	24.4
	Spiritist	2	1.6
	Other	2	1.6
Total		127	100

* Average age 63 years old \pm 13.6 years old (standard deviation) and average of 63 years old; □(MW): The minimum salary in force in the country during the study period was R\$622.00

Regarding the clinical characterization of cancer patients in palliative care, the diagnosis time of cancer was less than six months (48.0%), from six to 12 months (24.4%) and more of 12 months (27.6%). It was observed that 52.8% of the patients had metastasis, confirmed by imaging.

Regarding the clinical treatment, it was observed that 57.5% of the patients had not undergone radiotherapy, and 48.8% had undergone chemotherapy; the predominant hospitalization time was from less than one month to 78.8% and from more than one month to 22.0% of the participants in this study.

Regarding the clinical manifestations, according to the participants' own reports, the most frequent signs and symptoms were: pain (89.8%), fatigue (70.9%), loss of appetite (53.5%), vomiting

(42.5%), constipation (33.9%), pallor (33.1%), cachexia (23.6%), dyspnea (20.5%), weight loss (16.5%).

Regarding the quality of life assessment instrument - EORTC QLQ-C30, it was verified that for the 30 items of the scale, the reliability coefficient was 0.878. In addition, the Global Health Status/QoL Scale (two items) presented a coefficient of 0.721; the Functional Scale (15 items) of 0.871; the Symptoms Scale (13 items) of 0.812, being classified as having good internal consistency.

Thus, the psychometric characteristics of the EORTC QLQ-C30 instrument, for the study sample (n=127), present reliability for what is proposed.

The items of the HRQOL assessment of cancer patients in palliative care, according to the EORTC QLQ-C30 dimensions, are shown in table 2.

Table 2 - Average distribution and standard deviation of the EORTC QLQ-C30 instrument scales of cancer patients in palliative care. João Pessoa, Paraíba, Brazil, 2013. (n=127)

Scales	Average	Standard Deviation
Global health status(GHS/QoL)	28.8	20.2
Functional scales		
Physical functioning	11.6	18.0

Scales	Average	Standard Deviation
Role functioning	7.2	14.6
Cognitive functioning	38.7	27.2
Social functioning	12.7	18.8
Emotional functioning	38.7	27.1
Symptoms scale		
Fatigue	86.3	17.1
Pain	89.5	15.4
Nausea/vomiting	49.2	38.1
Dyspnea	32.0	38.5
Appetite loss	81.1	27.0
Insomnia	83.7	20.9
Constipation	58.7	42.9
Diarrhea	12.0	28.0
Financial difficulties	75.8	26.1

Regarding the association of average scores of the EORTC QLQ-C30 quality of life domains, according to the sociodemographic variables of cancer patients in palliative care, there were statistically significant differences regarding the Cognitive functioning domain, when associated to the age range ($p=0.002$) and schooling ($p=0.005$); and in the GHS/QoL domain, when associated with monthly income.

The data also point out, even without statistical significance, that the elderly had lower average scores for Global Health Status/QoL, Role functioning and Cognitive functioning as the age group increased. It was also observed that the monthly income variable, although it does not present a statistically significant difference in relation to the Role functioning, indicates an improvement of the scores as the monthly income increases.

The assessment of the association between the EORTC QLQ-C30 Financial difficulties domain and the sociodemographic variables presented a statistically significant ($p<0.05$) monthly income, with lower financial difficulties for those with income from four to five minimum wages (Total Md: 85.7x55.1x18.2).

Regarding the socio-demographic variables, gender and religion, no statistically significant differences were found for the Global Health Status/QoL and EORTC QLQ-C30 Functional Scales.

The associations of the average scores of the EORTC QLQ-C30 quality of life domains according to the clinical variables of cancer patients are demonstrated in table 3.

It was observed that the variable metastasis presented difference in the domain Physical functioning ($p=0.037$). In the variable radiotherapy, a significant variation was observed in the Social-functioning domain ($p=0.019$). Regarding the variable time of hospitalization, statistically significant differences were found in the domains of the Functional Scale: Physical functioning ($p=0.016$); Role functioning ($p=0.001$); Cognitive functioning ($p=0.017$); Social functioning ($p=0.029$) and Emotional functioning ($p=0.026$).

In the association of the clinical variables time of diagnosis and chemotherapy, with the domains of Global Health Status/QoL and Functional Scales, no significant results were found.

Table 3 - Functional scale scores of the second clinical data of cancer patients in palliative care. João Pessoa, Paraíba, Brazil, 2013. (n=127)

Variables	Average score, standard deviation and p-value of the EORTC QLQ-C30 Functional Scales					
	N	Physical F.	Role F.	Cognitive F.	Social F.	Emotional F.
Diagnosis time(a)						
< 6 months	61	9.6 (17.5)	4.6 (11.0)	36.1 (26.6)	11.5 (17.9)	39.3 (27.4)
6 to 12 months	31	12.3 (15.9)	8.1 (16.0)	41.4 (26.5)	15.6 (20.2)	35.5 (29.4)
+ 12 months	35	14.5 (20.5)	11.0 (18.1)	41.0 (29.2)	12.4 (19.5)	40.7 (24.8)
		0.118	0.096	0.598	0.476	0.574
Metastasis(b)						
No	60	15.6 (21.4)	10.0 (17.7)	36.1 (26.4)	9.7 (15.4)	37.6 (28.1)
Yes	67	8.1 (13.5)	4.7 (10.8)	41.0 (27.9)	15.4 (21.2)	39.8 (26.3)
		0.037*	0.084	0.270	0.131	0.650
Radiotherapy						
Did not perform	73	13.0 (20.4)	7.5 (16.0)	36.3 (27.7)	10.7 (18.7)a	40.1 (28.4)
Up to 10 sessions	21	11.7 (14.1)	10.3 (16.2)	53.2 (23.9)	21.4 (17.6)b	38.9 (27.7)
11 to 20 sessions	10	11.3 (16.3)	6.7 (14.1)	48.3 (18.3)	18.3 (21.4)ab	37.5 (24.3)
21 to 30 sessions	11	7.9 (16.6)	4.5 (7.8)	33.3 (27.9)	12.1 (21.2)ab	27.3 (25.0)
31 or + sessions	18	3.3 (6.2)	0.0 (0.0)	29.2 (31.8)	8.3 (15.4)ab	42.7 (22.5)
		0.383	0.454	0.072	0.019*	0.657
Chemotherapy(b)						
Yes	62	10.0 (15.4)	6.5 (13.6)	37.6 (28.8)	13.7 (20.8)	37.9 (27.1)
No	65	13.1 (20.2)	7.9 (15.6)	39.7 (25.8)	11.8 (16.9)	39.6 (27.3)
		0.793	0.542	0.559	0.861	0.676
Hospitalization time(b)						
Less than 1 month	99	10.2 (17.3)	5.1 (13.1)	35.5 (26.8)	11.3 (18.6)	35.9 (28.0)
More than 1 month	28	16.4 (19.8)	14.9 (17.2)	50.0 (26.1)	17.9 (19.2)	48.8 (21.4)
		0.016*	0.001**	0.017*	0.029*	0.026*

Significant results: (**) Value of $p < 0.01$ and (*) Value of $p < 0.05$;^(a)Kruskal-Wallis's test (comparison of three or more independent groups) EORTC QLQ-C30^(b)Mann-Whitney's test (comparison of two independent samples).

The assessment of the association between the clinical variable metastasis and the HRQoL measured by the EORTC QLQ-C30, for the Symptom Scale domains and their items, presented a statistically significant difference for the fatigue ($p=0.040$) and constipation ($p=0.046$), being observed that patients without metastasis presented less these symp-

toms by the Median test ($>$ Total Md: 53.3% \times 35.8%). The symptoms pain, nausea and vomiting, dyspnea, loss of appetite, insomnia and diarrhea did not present statistically significant results.

The assessment of the association between the clinical chemotherapy variable and the HRQoL measured by the EORTC QLQ-C30 for the domains

of the Symptom Scale and its items presented a statistically significant difference for the domains of fatigue ($p=0.012$), pain ($p=0.009$), dyspnea ($p=0.032$) and loss of appetite ($p=0.001$), showing that patients who presented higher scores of these symptoms were those who underwent chemotherapy.

The assessment of the association between the clinical variable time of hospitalization and HRQoL measured by the EORTC QLQ-C30, for the domains of the Symptom Scale and its items, presented a significant result for fatigue ($p=0.001$), pain ($p=0.012$), nausea and vomiting ($p=0.001$), loss of appetite ($p=0.001$) and insomnia ($p=0.002$), with patients presenting more presence of symptoms in those with less than one (1) month of hospitalization.

The association between the EORTC QLQ-C30 Financial Difficulties domain and the clinical variables, revealed a significant ($p<0.05$) outcome for hospitalization time, with a better assessment of the Financial difficulties for hospitalization time exceeding one month, according to the median test (\leq Total Md: 71.4% \times 47.5%).

DISCUSSION

The sociodemographic characterization of cancer patients in palliative care, who composed the sample of this study, shows that the majority (53.5%) of the participants were receiving hospital care in João Pessoa (PB). However, it was also verified that many of them came from several cities in Paraíba. The fact shows the lack of care to cancer patients in the interior of the State, concentrating the specialized care in oncology in João Pessoa (capital) and Campina Grande. Only these municipalities have the Secretary of Health Care, of the Ministry of Health, as members of the Units of High Complexity Care in Oncology.¹⁶

In the present study, a higher percentage of women with cancer was observed, corresponding to 59.1% of the participants. The data demonstrates a demographic behavior presented in other studies, in which the number of cancer in women is greater in relation to men.^{6,17-19} In the United States, a study carried out with the participation of 45,541 people, also highlighted the highest occurrence in women, represented by a quantitative of 29,822.²⁰

Regarding the participants' age, it was found that 60.7% were elderly, with a higher percentage of patients in the 60-69 age group. The 2010 Census corroborates this result, pointing out that, in Paraíba, 51.5% of the elderly population was in the mentioned age group.²¹

The data related to the gender and age of the cancer patients in this study are in agreement with the numbers presented by the Brazilian Institute of Geography and Statistics (IBGE - Instituto Brasileiro de Geografia e Estatística), according to a national household sample survey conducted in 2011. It points out that the majority of the elderly population aged 60 years old or more is composed of women (55.7%), due to the effects of differential mortality by gender.²² It is significant to observe that even more recent research, carried out in developed countries with cancer patients, also highlighted the average age between 60 and 69 years old,²³⁻²⁴ which only corroborates the data found in this study.

The survey on the schooling emphasizes percentages that are very close to those who are not educated (37.8%) and in elementary school (40.9%). And according to a study carried out in the city of João Pessoa (PB) in 2010 with 401 elderly people, a predominance of 50.1% of the participants did not know how to read or write.²⁵ The low level of schooling associated with an increasing age is of concern when it comes to their ability to properly understand health information, guidance and recommendations in general. This part of the population is more vulnerable to risk factors for comorbidities, mortality, and low standards of healthcare, increasing the demand for care. Regarding this aspect, it is emphasized that the level of schooling has a positive association with a better quality of life, because it provides greater self-care and a better life expectancy of the population.²⁶⁻²⁷

Regarding the living conditions of the population, this study highlights that the majority (85.8%) live with family income of one to three minimum wages, considering the current value in the country during the period of the survey: the equivalent to R\$ 622.00. According to the perception of the majority of the interviewees (41.8%), the financial situation was perceived as regular.

Regarding the clinical aspects of cancer patients in palliative care, the data presented in table 3 are highlighted. The majority (48.0%) of the patients had a diagnosis of cancer declared less than six months previously. And this reflects the aggressiveness of the cancer, as well as the occurrence of a late diagnoses, in which the cellular alterations are intense, with no possibility of therapeutic response.²⁸

The cancer control involves specialized health actions and services, including health promotion, rehabilitation, and palliative care, provided for the National Policy on Cancer Care for Cancer Prevention and Control in the Health Care Network of Peo-

ple with Chronic Diseases under the Unified Health System, as regulated by the Ordinance No. 874 of May 16, 2013.²⁹ Among cancers, 1/3 of them can be prevented, 1/3 can be cured or controlled, and 1/3 of the cases are only palliated. It demonstrates that the cancer control in Brazil is still supported in the hospital care, with high complexity care and disintegration of more effective control actions to reduce mortality, prevention by pre-clinical (by screening) or early detection (by early diagnosis) of prevalent cancers, which could have a better resolution with these strategies.¹⁶

The development and advancement of the neoplastic disease impose on the patient a diversity of signs and symptoms that significantly affect the HRQoL of cancer survivors. Regarding that, the majority (60.6%) of the participants in this study reported about six to eight clinical manifestations. Among the signs and symptoms reported, the most prevalent was pain, mentioned by 89.8% of the patients.

Brazil has become the second country in Latin America in which people with cancer report feeling more the pain symptom. Oncology affects 25-30% of the patients in the early stage of the disease, 50% in varying stages of cancer and 70% to 90% of those in an advanced stage.³⁰⁻³¹ The percentages are congruent with those found among the participants of this study.

The understanding that the pain raises intense physical and psychological discomfort imposes on the team of professionals who take care of cancer patients and especially at an advanced stage of the disease, an immediate promotion of the symptom relief, which for many may become unbearable, in addition to adversely affecting their QoL.

In this study, according to the results obtained by the EORTC QLQ-C30, the HRQoL of the patients involved was considered poor. It is justified by the low Global Health Status/QoL and the Functional Scales, highlighting the Role functioning as the worst evaluation, followed by the physical and social functioning, and demonstrating the physical and functional impairment of the patient suffering from advanced cancer and by the high scores in the Symptom Scale. In the clinical characterization of the study participants, it was identified that the most mentioned symptoms were: pain, fatigue and anorexia (appetite loss), being congruent with the results obtained by the Symptom Scale.

The Financial Difficulties Scale also presented a high score, which is directly related to the socioeconomic condition of the majority of the participants.

They, for the most part, survive from their retirement along with the dependents of a monthly income, and have assessed their financial status as regular.

In fact, the results of the study were similar to those found in a Tanzania survey, with patients hospitalized with advanced cancer (n=101), whose objective was to investigate patients' HRQOL and their care needs. The African results indicated low scores in the Social functioning, Role performance and Physical functioning, as well as in the assessment of the General Health and Quality of Life. However, the Africans presented better performance in the assessment of the Emotional functioning. In the Symptom Scale, the results showed high scores, mainly regarding pain, fatigue and insomnia, whereas, with regard to the Financial Difficulties Scale, the results confirmed the information that had already been presented by our study, that is, translated as the worst assessment of all scales.³²

The EORTC QLQ-C30 Symptom Rating Scale of cancer patients in palliative care showed that pain, fatigue, insomnia, and appetite loss were the items with the highest scores, meaning a greater intensity. Recognized as more common in these patients, they can be attributed to the disease itself or to the treatment, with influence on their HRQoL in varying degrees. Scores of pain, fatigue, insomnia, and appetite loss from the Symptom Scale were also statistically significant in the Tanzanian study: a total of 111 advanced cancer patients were referred due to poor quality of life.³²

Another study, involving 276 patients with advanced cancer and indication for palliative radiotherapy, performed at a Cancer Center in Canada, also presented high scores of the same symptoms in the initial assessment.³³

The results presented here corroborate, totally or partially, those found in national and international studies, making it evident that the advanced stage of cancer is probably the factor that causes the greatest impact on the HRQoL of the individuals, highlighted by the drop in the functional capacity and the presence of symptoms caused by the disease or treatment.

The association of average scores of the GHS/QoL domains and EORTC QLQ-C30 Functional Scales, with sociodemographic variables, pointed out that age and schooling presented a statistically significant difference in the Cognitive functioning domain, while the family income variable presented a difference in the domain of Global Health Status/QoL.

Regarding the age variable, participants in the age group up to 49 years old have showed a better

assessment in the Cognitive Function and Role Performance, while participants who were 80 years old or older had low average scores in the Global Health Status/QoL and Physical functioning, Role performance and Cognitive functioning.

The advancement of age causes many changes in the body, such as the decline in the functional and cognitive capacity, especially when associated with chronic and debilitating comorbidities such as cancer, which causes important changes: disruption of the body functions and detour of food and blood supply of normal cells, with intense changes in the metabolism of the patient's body. The changes, associated with the reactions imposed by the various forms of cancer treatment, cause a sensation of increasing fatigue, weight loss and reduction of muscle strength, which compromise the individual's functional capacity and, consequently, their HRQoL.³⁴

Regarding the HRQoL assessment, there are studies that demonstrate that elderly cancer patients have equal, or even better HRQoL, when compared to younger patients.³⁵ It is possible that socioeconomic factors and aspects related to the increase of the disease can promote HRQoL modifiers, according to the access to the health service, the therapeutic modalities, the organism's response to the disease and the treatment, in addition to the support received by the patient.

Participants in the study under discussion, in addition to advanced cancer, were mostly elderly, not practicing any physical activity and who had systemic arterial hypertension. These factors contribute to the limitation of the cognitive ability. The loss of the functional capacity and cognitive deficit help in the systematic alteration of the role functioning, affecting the HRQoL of these individuals.

In the study participants' assessment, in relation to the monthly income, it was verified that those who perceived from one to three minimum wages had a better average score in the Global Health Status/QoL, with a statistically significant result. The results are consistent with a study of 397 patients with advanced cancer in seven other countries, in which the participants who had a higher schooling level also had a better assessment in the cognitive and social Functions and Global Health Status/QoL, presenting statistically significant results.³⁶

A study carried out in Minas Gerais (Brazil) aimed to characterize patients with hematologic cancer in chemotherapy regarding sociodemographic and clinical aspects and to associate them with the HRQoL domains. Thirty-two participants

were involved and statistically significant results were also found for the schooling variable in relation to the Social function, with a better assessment for those with a higher schooling level.¹⁸

Recognized as socioeconomic factors, education and income promote interactions and influences health, as an individual's purchasing power has a direct effect on this person's education and, consequently, on this person's health. The person with a higher schooling level is likely to get a better salary and thus can better meet the health demands: access to health services, medical appointments, medications, health insurance, good living conditions, among others.³⁷

Thus, cancer patients in palliative care who participated in this study, presented, mostly, low schooling level and low monthly income, which can contribute to difficulties in maintaining a good health, mainly due to the occurrence of a chronic disease, which increases the health demands, possibly affecting their HRQoL.

Despite the empirical evidence and the existence of numerous international studies involving the assessment of the quality of life of cancer patients, in Brazil, more comprehensive data on the HRQoL of advanced cancer patients without therapeutic possibilities of cure in palliative care are not yet available. This is a difficulty that limits the role of the researcher, regarding the confrontation of the results and the reflection on the cultural and regional influence, as well as of the health system offered in the assessment of the HRQoL in the segment.

CONCLUSION

This study, in particular, has proved that sociodemographic and clinical factors identified in the study population significantly affected their HRQoL, when assessed by the EORTC QLQ-C30 instrument. Especially with regards to the domains Physical functioning and Cognitive functioning. The results showed that the impairment in a person's functional capacity, through the impact of a disease such as cancer, affects their ability to perform everyday activities, social relationships, and, above all, their financial situation. The lifestyle, access to information resources, level of schooling, socioeconomic condition and other factors exert influence on everyday practices for a healthy life: access to health services, healthy eating, practice of physical activities, and the use of preventive measures of diseases.

It should be highlighted that the findings of the present study may contribute to the development

of strategies for the promotion of HRQoL programs for people who survive with advanced cancer, considering their physical, social, emotional, cognitive, and spiritual dimensions. It also enables sociodemographic and clinical conditions, with an emphasis on those most affected, to implement a more humanized and comprehensive care within the principles of the Brazilian Unified Health System.

It is expected that this study will elicit new investigation and research. And that, in fact, it can contribute to reflections and discussions between managers and health professionals, in order to make possible the creation of palliative care units for the care of advanced cancer patients and their relatives/caregivers. A public health problem that is still incipient in Brazil, especially in the Northeast region.

REFERENCES

1. Instituto Nacional do Câncer José Alencar Gomes da Silva (BR). Estimativa 2014: Incidência de câncer no Brasil. Coordenação de Prevenção e Vigilância. Rio de Janeiro (RJ): INCA; 2014.
2. Leite MAC, Nogueira DA, Terra FDS. Social and clinical aspects of oncological patients of a chemotherapy service. *Rev Rene* [Internet]. 2015 Jan-Feb [cited 2016 Oct 13]; 16(1):38-45. Available from: http://www.revistarene.ufc.br/revista/index.php/revista/article/view/1833/pdf_1
3. Piacentini AB, Menezes H. Recentes aspectos sobre a biologia do câncer e das metástases. *Rev Saúde e Pesquisa* [Internet]. 2013 May-Aug [cited 2013 Dec 05]; 5(3):593-604. Available from: <http://periodicos.unicesumar.edu.br/index.php/saudpesq/article/view/5055/2832>
4. World Health Organization. Definição da OMS de cuidados paliativos [Internet]. 2017 [cited 2017 May 19]. Available from: <http://www.who.int/cancer/palliative/definition/en>
5. The WHOQOL Group. The World Health Organization quality of life assessment (The WHOQOL): position paper from the World Health Organization. *Soc Sci Med* [Internet]. 1995 Nov [cited 2013 Aug 05]; 41(10):1403-9. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/8560308>
6. Nicolussi AC, Sawada NO, Cardozo FMC, Andrade V, de Paula JM. Qualidade de vida relacionada à saúde de pacientes com câncer em quimioterapia. *Rev Rene* [Internet]. 2014 Jan-Fev [cited 2016 Aug 10]; 15(1):132-40. Available from: https://www.researchgate.net/profile/Adriana_Nicolussi2/publication/282978806_qualidade_de_vida_relacionada_a_saude_de_pacientes_com_cancer_em_quimioterapia/links/5625251108aeedae57dae334.pdf
7. Romero M, Vivas-Consuelo D, Alves-Guzman N. Is health related quality of life (HRQoL) a valid indicator for health systems evaluation? *Springerplus* [Internet]. 2013 Dec [cited 2014 Jan 10]; (2):664-70. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/24353981>
8. Ferreira MLL, de Souza A, Ferreira LOC, Moura JFP, Junior José IC. Qualidade de vida relacionada à saúde de idosos em tratamento quimioterápico. *Rev Bras Geriatr Gerontol* [Internet]. 2015 Mar [cited 2016 Oct 30]; 18(1):165-77. Available from: <http://dx.doi.org/10.1590/1809-9823.2015.14008>.
9. Freire MEM, Sawada NO, de França ISX, da Costa SFG, Oliveira CDB. Qualidade de vida relacionada à saúde de pacientes com câncer avançado: uma revisão integrativa. *Rev Esc Enferm USP* [Internet]. 2014 Apr [cited 2016 Oct 27]; 48(2):357-67. Available from: http://www.scielo.br/pdf/reeusp/v48n2/pt_0080-6234-reeusp-48-02-357.pdf
10. Kagawa-Singer M, Padilla GV, Ashing-Giwa K. Health-related quality of life and culture. *Semin Oncol Nurs* [Internet]. 2010 Feb [cited 2013 Oct 27]; 26(1):59-67. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/20152579>
11. Sampieri RH, Collado CF, Lucio MPB. Metodologia da pesquisa. 5ª ed. Porto Alegre (RS): Penso; 2013.
12. Callegari-Jacques SM. Bioestatística: princípios e aplicações. 2ª ed. Porto Alegre (RS): Artmed; 2007.
13. Hulley SB, Cummings SR, Browner WS, Grady D, Newman TB. Delineando a pesquisa clínica. Porto Alegre (RS): Artmed; 2015.
14. Fayers P, Bottomley A. EORTC Quality of Life Group, Quality of Life Unit. Quality of life research within the EORTC-the EORTC QLQ-C30. European Organisation for Research and Treatment of Cancer. *Eur J Cancer* [Internet]. 2002 Mar [cited 2013 Oct 27]; 38(Suppl4):S125-33. Available from: [http://www.ejancer.com/article/S0959-8049\(01\)00448-8/pdf](http://www.ejancer.com/article/S0959-8049(01)00448-8/pdf)
15. Fayers PM, Aaronson NK, Bjordal K, Groenvold M, Curran D, Bottomley A, et al. The EORTC QLQ-C30 scoring manual (3rd edition). Brussels: EORTC [Internet]. 2001 [cited 2013 Oct 27]. Available from: <http://www.eortc.be/qol/files/SCManualQLQ-C30.pdf>
16. Ministério da Saúde (BR). Secretaria de Atenção à Saúde. Portaria SAS/MS nº102 de 3 de fevereiro de 2012 [Internet]. Brasília (DF): Ministério da Saúde [cited 2016 Nov 17]. Available from: http://bvsms.saude.gov.br/bvs/saudelegis/sas/2012/prt0102_03_02_2012.html
17. Souza RS, Simão DAS, Lima, EDRP. Perfil sociodemográfico e clínico de pacientes atendidos em um serviço ambulatorial de quimioterapia paliativa em Belo Horizonte. *Rev Min Enferm* [Internet]. 2012 Jan-Mar [cited 2013 Nov 25]; 16(1):38-47. Available from: <http://www.reme.org.br/artigo/detalhes/498>

18. Andrade V, Sawada NO, Barichello E. Qualidade de vida de pacientes com câncer hematológico em tratamento quimioterápico. *Rev Esc Enferm USP* [Internet]. 2013 Apr [cited 2013 Oct 15]; 47(2):355-61. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0080-62342013000200012
19. Turhal NS, Demirhan S, Satici C, Kinar A. Personality traits in cancer patients. *Asian Pac J Cancer Prev* [Internet]. 2013 Aug [cited 2013 Dec 18]; 14(8):4515-8. Available from: http://journal.waocp.org/article_27981_5cc9ebcbdcc40a5eb6ca718e06e661c4.pdf
20. Underwood JM, Townsend JS, Stewart SL, Buchanan N, Ekwueme D, Hawkins NA, et al. Surveillance of demographic characteristics and health behaviors among adult cancer survivors. Behavioral risk factor surveillance system, United States, 2009. *Surveillance Summaries MMWR* [Internet]. 2012 [cited 2013 Oct 27]; 61(SS01):1-23. Available from: <http://www.cdc.gov/mmwr/preview/mmwrhtml/ss6101a1.htm>
21. Instituto Brasileiro de Geografia e Estatística (BR). Censo Demográfico de 2010: Pirâmide etária. Rio de Janeiro (RJ): Instituto Brasileiro de Geografia e Estatística; 2010.
22. Instituto Brasileiro de Geografia e Estatística (BR). Síntese de indicadores sociais: uma análise das condições de vida da população brasileira. Rio de Janeiro (RJ): Instituto Brasileiro de Geografia e Estatística; 2012.
23. Caissie A, Culleton S, Nguyen J, Zhang L, Zeng L, Holden L, et al. EORTC QLQ-C15-PAL quality of life scores in patients with advanced cancer referred for palliative radiotherapy. *Support Care Cancer* [Internet]. 2012 Apr [cited 2013 Nov 14]; 20(4):841-8. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/21538099>
24. Liu Y, Zhang PY, Na J, Ma C, Huo WL, Han L et al. Prevalence, intensity, and prognostic significance of common symptoms in terminally ill cancer patients. *J Palliat Med* [Internet]. 2013 Jul [cited 2013 Oct 09]; 16(7):752-7. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/23697815>.
25. Dias LD, Guedes de Brito GE, Forte FDS, Brindeiro de Araújo KM, Lucena EMF. Perfil sociodemográfico e de saúde de idosos do município de João Pessoa-PB. *Rev Bras Promoção Saúde* [Internet]. 2012 Jan-Mar [cited 2013 Oct 20]; 25(1):86-96. Available from: <http://ojs.unifor.br/index.php/RBPS/article/view/2215/2436>.
26. Vagetti GC, Barbosa Filho VC, Moreira NB, de Oliveira V, de Mazzardo OCV. Condições de saúde e variáveis sociodemográficas associadas à qualidade de vida em idosos de um programa de atividade física de Curitiba, Paraná, Sul do Brasil. *Cad Saúde Pública* [Internet]. 2013 May [cited 2013 Oct 27]; 29(5):955-69. Available from: <http://www.scielo.br/pdf/csp/v29n5/13.pdf>
27. Andrade JMO, Rios LR, Teixeira LS, Vieira FS, Mendes DC, Vieira MA, et al. Influência de fatores socioeconômicos na qualidade de vida de idosos hipertensos. *Ciênc Saúde Coletiva* [Internet]. 2014 Aug [cited 2016 Oct 22]; 19(8):3497-504. Available from: <http://www.scielo.br/pdf/csc/v19n8/1413-8123-csc-19-08-03497.pdf>
28. Batista DRR, Mattos M de, Silva SF. Convivendo com o câncer: do diagnóstico ao tratamento. *Rev Enferm UFSM* [Internet]. 2015 Jul-Sep [cited 2016 Nov 02]; 5(3):499-510. Available from: <https://periodicos.ufsm.br/reufsm/article/view/15709.pdf>
29. Ministério da Saúde (BR). Gabinete do Ministro. Portaria GM/MS nº 874 de 16 de maio de 2013 [Internet]. Brasília (DF): Ministério da Saúde [cited 2016 Nov 28]. Available from: http://bvsms.saude.gov.br/bvs/saudelegis/gm/2013/prt0874_16_05_2013.html
30. Cunha FF, Rego L, Paiva. Enfermagem diante da dor oncológica. *Rev dor* [Internet]. 2015 Jun [cited 2016 Nov 17]; 16(2):142-5. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1806-00132015000200142&lng=en&nrm=iso
31. Oliveira AL, da Palma SN, Cunha BAS. Manuseio da dor crônica em pacientes oncológicos pela equipe de enfermagem. *Rev dor* [Internet]. 2016 Sep [cited 2016 Nov 20]; 17(3):219-22. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1806-00132016000300219&lng=en
32. Masika GM, Wettergren L, Kohi TW, von Essen L. Health-related quality of life and needs of care and support of adult tanzanians with cancer: a mixed-methods study. *Health and Quality of Life Outcomes* [Internet]. 2012 Nov [cited 2013 Oct 27]; 10(133):1-10. Available from: <http://hqlq.biomedcentral.com/articles/10.1186/1477-7525-10-133>
33. Bedard G, Zeng L, Zhang L, Lauzon N, Holden L, Tsao M, et al. Minimal important differences in the EORTC QLQ-C30 in patients with advanced cancer. *Asia Pac J Clin Oncol* [Internet]. 2014 Jun [cited 2016 Oct 28]; 10(2):109-17. Available from: <http://onlinelibrary.wiley.com/doi/10.1111/ajco.12070/full>
34. Minosso JSM, de Souza, LJ, Oliveira MAC. Reabilitação em cuidados paliativos. *Texto Contexto Enferm* [Internet]. 2016 Aug [cited 2016 Nov 3]; 25(3):e1470015. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0104-07072016000300501&lng=en
35. Zimmermann C, Burman D, Swami N, Krzyzanowska MK, Leighl N, Moore M, et al. Determinants of quality of life in patients with advanced cancer. *Support Care Cancer* [Internet]. 2011 May [cited 2013 Oct 27]; 19(5):621-9. Available from: <http://link.springer.com/article/10.1007/s00520-010-0866-1>
36. Lam K, Chow E, Zhang L, Wong E, Bedard G, Fairchild A, et al. Determinants of quality of life in advanced cancer patients with bone metastases

undergoing palliative radiation treatment. Support Care Cancer [Internet]. 2013 Nov [cited 2013 Oct 29]; 21(11):3021-30. Available from: <http://link.springer.com/article/10.1007/s00520-013-1876-6>

37. Santos AMA, Jacinto PA, Tejada CAO. Causalidade entre renda e saúde: uma análise através da

abordagem de dados em painel com os estados do Brasil. Estud Econ [Internet]. 2012 Apr-Jun [cited 2013 Nov 08]; 42(2):229-61. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0101-41612012000200001

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