



QUALITY OF LIFE EVALUATION WITH THE WHOQOL-BREF AND SYMPTOMS PRESENTED IN PATIENTS WITH CANCER IN PRE-CHEMOTHERAPY

AVALIAÇÃO DA QUALIDADE DE VIDA COM O WHOQOL-BREF E SINTOMAS APRESENTADOS EM PACIENTES COM CÂNCER EM PRÉ-QUIMIOTERAPIA

EVALUACIÓN DE CALIDAD DE VIDA CON EL WHOQOL-BREF Y SÍNTOMAS PRESENTADOS EN PACIENTES CON CÁNCER EN PRE-QUIMIOTERAPIA

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ABSTRACT

Cancer is a public health problem and chemotherapy treatment can lead to side effects and physical symptoms that compromise both nutritional status and quality of life. The objective of the study was to identify nutritional status, physical symptoms and measure the quality of life of individuals with neoplasms prior to chemotherapy treatment. This is a cross-sectional study with non-probabilistic convenience sampling, with descriptive statistical analysis. Patients from a reference oncology outpatient clinic in Palmas-TO were recruited on the day of the first consultation. Thirty-eight patients met the inclusion criteria. For data collection, the following questionnaires were used: socioeconomic, Whoqol-Bref and global subjective evaluation generated by the patient himself. It was observed that the most frequent physical symptoms presented before the beginning of treatment were pain (55.3%), fatigue (31.6%) and nausea (23.7%). In the WHOQOL-bref results, there was greater impairment in the physical domain and according to the global subjective evaluation generated by the patient himself, 65.8% were classified as well-nourished and 31.6% with suspected malnutrition or moderate malnutrition. This study demonstrated the importance of knowing the nutritional status, symptoms and quality of life of patients before starting chemotherapy.

Keywords: Medical oncology. Nutrition therapy. Quality of life.



RESUMO

O câncer é um problema de saúde pública e o tratamento quimioterápico pode acarretar efeitos colaterais e sintomas físicos que comprometem tanto o estado nutricional quanto a qualidade de vida. O objetivo do estudo foi identificar estado nutricional, sintomas físicos e mensurar a qualidade de vida de indivíduos com neoplasias antecedente ao tratamento quimioterápico. Trata-se de um estudo transversal com amostragem não probabilística por conveniência, com análise estatística descritiva. Pacientes de um ambulatório oncológico de referência em Palmas-To foram recrutados no dia da primeira consulta. Atenderam aos critérios de inclusão 38 pacientes. Para coleta de dados foram utilizados os questionários: socioeconômico, Whoquol-Bref e avaliação subjetiva global gerada pelo próprio paciente. Observou-se que os sintomas físicos mais frequentes apresentados antes do início do tratamento foram dor (55,3%), fadiga (31,6%) e náusea (23,7%). Nos resultados do WHOQOL-bref houve maior comprometimento no domínio físico e segundo a avaliação subjetiva global gerada pelo próprio paciente, 65,8% foram classificados como bem nutridos e 31,6% com suspeita de desnutrição ou desnutrição moderada. Este estudo demonstrou a importância de conhecer o estado nutricional, sintomas e qualidade de vida dos pacientes antes de iniciarem a quimioterapia.

Palavras-chave: Oncologia. Terapia nutricional. Qualidade de vida.

RESUMEN

El cáncer es un problema de salud pública y el tratamiento de quimioterapia puede provocar efectos secundarios y síntomas físicos que comprometen tanto el estado nutricional como la calidad de vida. El objetivo del estudio fue identificar el estado nutricional, los síntomas físicos y medir la calidad de vida de los individuos con neoplasias antes del tratamiento de quimioterapia. Se trata de un estudio transversal con muestreo de conveniencia no probabilístico, con análisis estadístico descriptivo. Se reclutaron pacientes de un ambulatorio oncológico de referencia en Palmas-TO el día de la primera consulta. Treinta y ocho pacientes cumplieron los criterios de inclusión. Para la recogida de datos se utilizaron los siguientes cuestionarios: socioeconómico, Whoquol-Bref y valoración subjetiva global generada por el propio paciente. Se observó que los síntomas físicos más frecuentes presentados antes del inicio del tratamiento fueron dolor (55,3%), fatiga (31,6%) y náuseas (23,7%). En los resultados del WHOQOL-bref se observó un mayor deterioro en el dominio físico y según la valoración global subjetiva generada por el propio paciente, el 65,8% se clasificó como bien nutrido y el 31,6% con sospecha de malnutrición o malnutrición moderada. Este estudio demostró la importancia de conocer el estado nutricional, los síntomas y la calidad de vida de los pacientes antes de iniciar la quimioterapia.

Descriptores: Oncología. Terapia nutricional. Calidad de vida.

INTRODUCTION

Cancer is a public health problem worldwide and is already one of the four main causes of premature death (before the age of 70) in most countries. In Brazil, according to the National Cancer Institute (INCA), the estimate of new cases for the year 2022 was more than 700 thousand (BRASIL, 2022).



It is known that one of the cancer treatments is chemotherapy. This therapy is systemic, therefore, it affects healthy cells in addition to neoplastic cells (SILVA; BUTTOW, 2022), causing damage with several side effects and symptoms that influence ingestion, such as dry mouth, smell and taste alterations, nausea, vomiting, dental irritation, mucositis or canker sores, constipation, diarrhea, malabsorption, infections, acute and chronic pain; and psychic suffering. These effects contribute to the increased risk of malnutrition, which was described as a result of the sum of the compromised nutritional status, caused by the tumor development itself and the type of treatment instituted, contributing to increased risks and worsening of the patient's malnutrition condition (BRASPEN, 2019). In this context, assessing the patient's previous nutritional status is extremely important, as it will determine a better or worse prognosis.

The evaluation of the quality of life of cancer patients has been widely used in clinical trials, cross-sectional, and longitudinal studies. The evidence of impacts on quality of life can guide plans and behaviors. In addition, they can be used as a compass to direct public health policies and therapeutic approaches for cancer treatment (FREIRE et al., 2018).

The Quality of Life Group of the World Health Organization defined Quality of Life (QoL) as the perception of one's life reality, culture, and social values related to goals, expectations, standards, and concerns (WHOQOL GROUP, 1994). Applicable to various groups and populations, the WHOQOL-bref questionnaire tool is significant in assessing the quality of life through physical, psychological, social, and environmental conditions, intending to recognize self-satisfaction regarding health (WHOQOL GROUP, 1993).

According to Viana et al. (2021), changes in QoL can negatively influence adherence to treatment. Also, the negative impacts of chemotherapy on QoL are related to low satisfaction and therapeutic adherence. The emergence of adverse side effects can affect patients undergoing chemotherapy treatment in various ways, including their QoL, nutritional status, and clinical condition.

Therefore, this study aims to identify nutritional status, symptoms and the QoL of patients with neoplasms who will initiate chemotherapy.

MATERIALS AND METHODS

Study design and sampling

It is an observational, descriptive and cross-sectional study conducted with non-probabilistic convenience sampling in patients with neoplasms who were about to undergo their first chemotherapy session for neoplasm treatment at a public institution in the Legal Amazon region. Patient



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recruitment took place from April 2019 to March 2020 in a referral oncology outpatient clinic in Palmas – TO.

Upon agreeing to participate in the study, a nutritional consultation was conducted, which included the application of the Patient-Generated Subjective Global Assessment (PG-SGA), collection of food consumption data through a 24-hour recall (R24h), socioeconomic data, and the administration of the WHOQOL-Bref questionnaire (1993) to measure quality of life.

For the nutritional assessment and symptom evaluation, the PG-SGA was used, which consists of a questionnaire divided into two parts. In the first part, which is completed by the patient themselves, there are questions about weight loss, changes in intake, a symptom scale (with additional items related to oncology patients), and alterations in functional capacity. The second part of the questionnaire, which includes physical examination data, metabolic stress, and other factors, was administered by a biomedical professional and properly trained nutrition students.

To assess the quality of life, we administered the WHOQOL-Bref questionnaire, which comprises 26 items evaluating four dimensions of quality of life: physical, psychological, social relationships, and environment. Additionally, it includes an assessment of the individual's overall perception of their quality of life (ILIC et al., 2019)

Inclusion criteria

Patients who were attending their first medical consultation to start chemotherapy, over 18 years old, and who had never undergone chemotherapy treatment of any kind were invited to participate.

Eligibility criteria included: individuals aged 18 years or older, with a diagnosis of cancer in the esophagus, stomach, colorectum, gynecological region, head and neck, breast and prostate.

Exclusion criteria

Patients who had previously undergone chemotherapy and radiotherapy treatments or had received other types of cancer treatment, except surgery, were excluded. Additionally, individuals with physical disabilities that prevented anthropometric evaluation or those with cognitive impairments, unable to respond to the questions in the research instruments, were also excluded.

Ethical aspects

The project was submitted to the Ethics Committee for Research with Human Beings of the Federal University of Tocantins and was approved on February 14, 2019 under CAAE: 04187618.9.0000.5519 with opinion No. 3.146.772. All procedures followed in accordance with the Guidelines and Regulatory Standards for Research involving human beings contained in CNS



Resolution 466/12 and CNS Operational Standard 001/2013, measures that guarantee freedom and participation, the integrity of the research participant and the preservation of data that may identify him, guaranteeing privacy, secrecy and confidentiality. All patients included signed the Informed Consent Form (TCLE) and received a copy of the document.

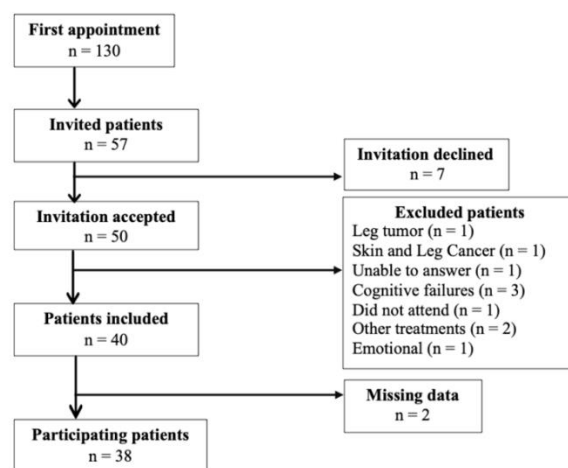
Statistical analysis

Regarding the QoL analysis procedures, the calculation of domain and facet scores followed the parameters suggested by the WHOQOL-bref Group (1994). The Microsoft Excel tool proposed by Pedroso et al. (2010) was used for this purpose. Descriptive analysis and calculations of mean, median, and standard deviation were performed using the Statistical Package for the Social Sciences (SPSS) software, version 21.

RESULTS AND DISCUSSION

The diagram below (Figure 1) represents the total number of patients recruited during the study execution. We identified 130 patients attending their first consultation at the oncology outpatient clinic of the General Hospital of Palmas-TO from April 2019 to April 2020. Of these, 50 accepted the invitation to participate in the study and signed the Informed Consent Form. Ten patients were excluded for not meeting the inclusion criteria, and two due to missing data. The final sample was composed by 38 participants.

Figure 1. Flowchart of the number of patients recruited during the study.



Source: Elaborated by the authors.



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In the present study, of the 38 patients evaluated, 21 (55.3%) were female and 17 (44.7%) male, as found by Carvalho et al. (2018) where the female sex was also predominant, and breast cancer was the most prevalent in this population, confirming the data reported by INCA (2023). As Silva et al. 2020 found in their work, the average age in this study was close to 60 years (58.8 ± 11.4) and the median was 57.5.

Among the participants surveyed, a significant majority (60.5%) reported having a partner. The role of the spouse or family members' support is of paramount importance for individuals facing life-threatening diseases. This support plays a collaborative role in assisting the affected person in dealing with the challenges of the disease, its treatments, and the ensuing consequences. It serves as the primary source of psychological, emotional, and social support. Consequently, cancer can be viewed as a family disease, where the diagnosis of one member fundamentally alters the life experiences of others (NERIS et al., 2018). Table 1 describes the socioeconomic characterization of the study population.

Regarding education level, it was observed that 9 (23.7%) were illiterate, and 20 (52.6%) had up to eight years of education, meaning more than half of them had only completed elementary school. This information highlights the importance of the attention of the multi professional health team in how instructions are being conveyed to patients and whether they have adhered to them correctly.

According to Costa et al. (2022), low education level is a risk factor for poor treatment adherence, as studies indicate that individuals with less than 8 years of education have a higher rate of non-adherence compared to those with higher levels of education.

Table 1. Sociodemographic characterization of the study population.

Variables	n=38	%
Sex		
Male	17	44.7
Female	21	55.3
Marital status		
No partner	15	39.5
With partner	23	60.5
Education		
Illiterate	9	23.7
Studied up to 8 years	20	52.6
More than 8 years	9	23.7
Race		
Black	12	31.6
Brown	16	42.1
White	7	18.4
Others	3	7.9

Source: Elaborated by the authors. Palmas, Tocantins, Brazil, 2023.



In this regard, a study examining the association of sociodemographic variables (age, level of education, and economic status) concluded that the level of education is positively associated with early diagnosis and greater independence, thus facilitating better self-care and improved life expectancy among the population (LIMA & SILVA, 2020). Regarding racial aspects, most of the sample (42.1%) identified themselves as brown.

Concerning the symptom scale, a higher prevalence of pain (55.3%), fatigue (35.6%), feeding problems, and nausea (23.7%) was observed, as depicted in Table 2. These findings are consistent with the report by Freire et al. (2018), which ranks Brazil as the second country in Latin America where individuals with cancer report experiencing a higher number of pain symptoms. According to the WHO report (2019), it was evidenced that the prevalence of pain is one of the most feared aspects of cancer, affecting 55% of patients undergoing anticancer treatment and 66% of patients with advanced metastasis or terminal illness.

In a systematic review and meta-analysis conducted by Snijders et al. (2023), the pooled prevalence rates of pain resulted in an overall prevalence of 44.5%. The treatment group with the lowest prevalence of pain was the post-curative treatment group, with a rate of 35.8%.

Table 2: Most frequent symptoms in cancer patients in an oncology outpatient clinic.

Variables	n=38	%
Pain	21	55.3
Fatigue	12	31.6
Nausea	9	23.7
Feeds normally	9	23.7
Intestinal constipation	8	21.1
No appetite	8	21.1
Smells bother	8	21.1
Quickly satisfied	7	18.4
Dry mouth	7	18.4
Vomit	5	13.2
Dysphagia	4	10.5
Dysgeusia	4	10.5
Diarrhea	3	7.9
Mucositis	1	2.6

Source: Elaborated by the authors. Palmas, Tocantins, Brazil, 2023.

Fatigue levels fluctuate throughout the course of chemotherapy treatment and are often underreported in clinical practice. Hence, it should be assessed at the outset, during, and after the treatment (SILVA et al., 2022). The second most prevalent symptom observed in our sample was



fatigue, which has been described in the literature as a frequent cause of distress and suffering, leading to impairments in the quality of life among cancer patients (DURAES et al., 2018).

Nausea and feeding problems were the third most frequent symptoms. Yee et al. (2018) conducted a study comparing the effects of nausea and vomiting on the quality of life in cancer patients. The results showed that individuals experiencing higher levels of nausea tended to have more significant impairments, as evidenced by higher scores on all quality-of-life scales related to this symptom.

Corroborating this data, Soares, Gonçalves, and Rocha (2020) found nausea to be the most frequent symptom (86%) in the cancer patients they evaluated and observed that they presented gastrointestinal symptoms after chemotherapy. Consequently, they had low food intake, which could lead to severe weight loss and malnutrition due to protein-calorie deficit.

In Brazil, according to the Brazilian Oncology Nutrition Survey (2013), which evaluated 4,822 cancer patients in 45 Brazilian institutions using PG-SGA, 54.9% of the patients were classified as well-nourished (A) and 45.1% had some degree of malnutrition (B = 33.3% and C = 11.8%). In this study 65.8% of patients were classified as well-nourished and 31.6% had suspected malnutrition or moderate malnutrition (Table 3).

On the other hand, in a prospective study involving 41 patients who underwent surgical resection of tumors, the assessment of nutritional status using PG-SGA revealed that nearly half of the patients were malnourished (49%) or at risk of malnutrition (27%) (classified in subgroups C and B, respectively) (FRUCHTENICHT et al., 2018).

Table 3: Nutritional profile of patients according to PG-SGA data.

Rating by PG-SGA	n = 38	%
A-Well Nourished	25	65.8
B-Suspected malnutrition or moderate malnutrition	12	31.6
C- Severely malnourished	1	2.6

Source: Elaborated by the authors. Palmas, Tocantins, Brazil, 2023.

The results of the WHOQOL-Bref by domains and quality of life are described in Table 4. It is important to note that in interpreting the WHOQOL-Bref data, the higher the score, the better the perception of quality of life. In the WHOQOL-bref results regarding patients' quality of life perspective, there was a greater impairment in the physical domain. Analyzing the most frequent facets of this domain, pain and discomfort stand out with the lowest percentage.



Jordão and Lima (2020) conducted a similar study to this one, in which they evaluated the quality of life of cancer patients assisted by a non-governmental organization. In the WHOQOL-Bref results, they also obtained the lowest mean score in the physical domain, with 12.8 ± 2.9 , demonstrating a greater compromise compared to the other domains. The study highlights the relationship between the facet of assessment of pain and discomfort, highlighting the influence of the disease process on the daily activities of people with cancer, with dependence on medications and treatment, especially regarding analgesia.

It is crucial to emphasize that invasive and prolonged treatment involving the use of drugs can significantly interfere with the body's functioning, leading to issues like nausea, loss of appetite, and digestive difficulties, all of which can have a negative impact on the individual's nutritional status. Moreover, the presence of pain further hinders food intake, as it can trigger or worsen this symptom (GAMA et al., 2022). Notably, our study's results revealed pain as the most prevalent symptom among the participants.

Table 4. Characteristics of the domains and facets according to the WHOQOL-bref.

Feature	%	Mean
Physical Domain	58.30	13.33
Pain and discomfort	35.81	
Energy and fatigue	69.59	
Sleep and rest	59.46	
Mobility	80.41	
Daily life activities	64.86	
Medication need	73.65	
Treatment capacity	43.24	
Psychological Domain	73.20	15.71
Positive feelings	59.46	
Think, learn	67.57	
Self esteem	87.16	
Body image	75.20	
Negative feelings	22.97	
Personal beliefs	73.20	
Social Relations Domain	71.17	15.39
Personal relationships	87.50	
support and backing	87.16	
Sexual Activity	38.51	
Environment domain	61.88	14.42
Physical security and protection	74.32	
Home environment	77.03	
Financial resources	35.14	



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Health care	79.73	
New information	70.27	
Recreation and leisure	41.89	
Physical environment	68.24	
Transport	74.32	
Self-assessment of quality of life	59.80	13.57

Source: Elaborated by the authors. Palmas, Tocantins, Brazil, 2023.

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The psychological domain had the highest mean compared to the others. However, the facet of negative feelings still obtained the lowest percentage. This exposes the conflicts and fears faced by these individuals, as they are faced with a life-threatening condition that expresses great anxiety, sadness, and depression (JORDÃO; LIMA, 2020).

The social relationships domain had the second highest mean, indicating satisfaction with the support received from family, friends, and society. However, the facet related to sexual activity within this domain had a low percentage. In a study by Santos, Santos, and Oliveira (2020), a reduction in sexual practices was highlighted, attributed to feelings of distress, stress, and physical discomfort. The absence or decrease in libido caused by the treatment also had a negative impact on romantic relationships.

The study has certain limitations, including the presence of various types of neoplasms and the limited sample size, mainly due to the interruption of data collection in the oncologic outpatient clinic caused by the Covid-19 pandemic. It is acknowledged that a small sample size can restrict the statistical power of a study; hence, it is recommended to replicate the study with a larger number of patients to yield more conclusive results.

CONCLUSION

According to the patient-generated subjective global assessment most of the patients were classified as well-nourished. Pain, fatigue and nausea were the most prevalent symptoms and had a negative impact on food intake. Also, it was verified that the oncological diagnosis affected the quality of life, demonstrated by the low scores in the items that assess the patient's general perception of their QoL and in the physical domain, which was the most compromised in the studied population.

In this sense, assessing the nutritional status, symptoms presented and the QoL of patients before starting chemotherapy treatment is relevant, as these data contribute to the development of future health promotion strategies, to improve nutritional support and assistance.



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All authors declare that there is no potential conflict of interest concerning this article.

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