RIASE
REVISTA IBERO-AMERICANA DE SAÚDE E ENVELHECIMENTO
REVISTA IBERO-AMERICANA DE SALUD Y ENVEJECIMIENTO

ONCOLOGY AND SYMPTOM CLUSTER IN ELDERLY PATIENTS UNDERGOING CHEMOTHERAPY AT A TERTIARY HOSPITAL IN BRAZIL

ONCOLOGIA E CLUSTER DE SINTOMAS EM IDOSOS EM QUIMIOTERAPIA EM HOSPITAL TERCIÁRIO NO BRASIL

ONCOLOGÍA Y CONGLOMERADO DE SÍNTOMAS EN PACIENTES ANCIANOS EN QUIMIOTERAPIA EN UN HOSPITAL TERCIARIO EN BRASIL

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Received/Recebido: 2025-01-13 Accepted/Aceite: 2025-01-13 Published/Publicado: 2025-01-13

DOI: http://dx.doi.org/10.60468/r.riase.2024.10(2).706.28-46

ABSTRACT

Introduction: Population aging is a reality today and, with aging, the possibilities of developing diseases such as cancer and depression increase.

Objective: To analyze depressive symptoms in elderly patients undergoing chemotherapy in a hospital.

Methods: This is a cross-sectional, analytical research with a quantitative approach carried out in a hospital in Campinas-SP, in the chemotherapy outpatient clinic, using the following research instruments: *Sociodemographic and Clinical Characterization Questionnaire, the Pittsburgh Sleep Quality Index, the Beck Depression Inventory, the Herth Hope Scale and the Vulnerable Elders Survey (VES 13).*

Results: The study included 23 patients undergoing chemotherapy treatment at the hospital outpatient clinic. Most of the participants had an average age of 67 years, were predominantly white and female, with an average schooling of around 7 years, with an income of up to two minimum wages, living in a family nucleus and claiming to have some religious experience. The study showed that 56.52% of the elderly participants were at risk of vulnerability, with depressive symptoms and poor sleep quality. In addition, it was observed that the presence of depressive symptoms and poor sleep quality, linked to the clinical manifestations resulting from cancer treatment, and the physiological changes of ageing have a direct impact on the lives of the elderly in terms of their functionality and quality of life.

Conclusion: It is imperative to recognize the heterogeneity of ageing and the influence of individual, economic and social contexts on this process. Vulnerable populations, such as the elderly, face an even greater risk of suffering the negative impacts of cancer. Highlighting the need for specific interventions for this population and targeted public health policies.

Keywords: Aged; Aging; Chemotherapy; Medical Oncology; Nursing.

RESUMO

Introdução: O envelhecimento populacional é uma realidade na atualidade e, com o envelhecimento aumentam as possibilidades do desenvolvimento de doenças, como o câncer e a depressão.

Objetivo: Analisar os sintomas depressivos em idosos em quimioterapia num hospital.

Métodos: Trata-se de uma pesquisa transversal, analítica de abordagem quantitativa realizada num Hospital em Campinas-SP, no ambulatório de quimioterapia, com os instrumentos de pesquisa: *Questionário de Caracterização Sociodemográfica e Clínica, Índice de Qualidade de*

Sono de Pittsburgh, Inventário de Depressão de Beck, Escala de Esperança de Herth e Vulnerable Elders Survey (VES 13).

Resultados: Participaram neste estudo 23 pacientes em tratamento quimioterápico no ambulatório do Hospital. A maioria dos participantes possui idade média de 67 anos, cor/raça predominantemente branca e do sexo feminino, a escolaridade média é de cerca de 7 anos, com renda de até dois salários mínimos, vivem em núcleo familiar e afirmam ter alguma vivência religiosa. O estudo evidenciou que 56,52% dos idosos participantes estão em risco de vulnerabilidade, com presença de sintomas depressivos e má qualidade do sono. Observou-se que a presença de sintomas depressivos e a má qualidade do sono, vinculadas às manifestações clínicas resultantes do tratamento oncológico, e as alterações fisiológicas do envelhecimento impactam diretamente na vida dos idosos em sua funcionalidade e qualidade de vida.

Conclusão: É imperativo reconhecer a heterogeneidade do envelhecimento e a influência dos contextos individuais, econômicos e sociais nesse processo. Populações vulneráveis, como os idosos, enfrentam um risco ainda maior de sofrerem os impactos negativos do câncer. Ressalta-se a necessidade de intervenções específicas para esta população e políticas de saúde pública direcionadas.

Palavras-chave: Enfermagem; Envelhecimento; Idoso; Oncologia; Quimioterapia.

RESUMEN

Introducción: El envejecimiento de la población es una realidad en nuestros días, y con el envejecimiento aumenta la probabilidad de desarrollar enfermedades como el cáncer y la depresión.

Objetivo: Analizar la sintomatología depresiva en pacientes ancianos sometidos a quimioterapia en un hospital universitario.

Métodos: Se trata de un estudio transversal, analítico, con abordaje cuantitativo, realizado en un hospital de Campinas-SP, en el ambulatorio de quimioterapia, utilizando los siguientes instrumentos de investigación: *Cuestionario de Caracterización Sociodemográfica y Clínica, Índice de Calidad del Sueño de Pittsburgh, Inventario de Depresión de Beck, Escala de Esperanza de Herth y Encuesta de Ancianos Vulnerables (VES 13).*

Resultados: Participaron en este estudio 23 pacientes sometidos a tratamiento quimioterápico en el ambulatorio del hospital. La mayoría de los participantes tenía edad media de 67 años, predominantemente blancos y de sexo femenino, escolaridad media de unos 7 años, ingresos de hasta dos salarios mínimos, vivían en un núcleo familiar y afirmaban tener alguna experiencia religiosa. El estudio mostró que el 56,52% de los ancianos participantes presentaban riesgo de vulnerabilidad, con síntomas depresivos y mala calidad del sueño.

Además, se observó que la presencia de síntomas depresivos y la mala calidad del sueño, vinculadas a las manifestaciones clínicas resultantes del tratamiento del cáncer, y los cambios fisiológicos del envejecimiento tienen un impacto directo en la vida de los ancianos en términos de su funcionalidad y calidad de vida.

Conclusión: Es imperativo reconocer la heterogeneidad del envejecimiento y la influencia de los contextos individuales, económicos y sociales en este proceso. Las poblaciones vulnerables, como los ancianos, se enfrentan a un riesgo aún mayor de sufrir los efectos negativos del cáncer. Lo que subraya la necesidad de intervenciones específicas para esta población y de políticas de salud pública dirigidas a ella.

Descriptores: Anciano; Enfermería; Envejecimiento; Oncología Médica; Quimioterapia.

INTRODUCTION

Cancer is a term that encompasses a variety of diseases, resulting from the uncontrolled growth of cells, which can invade tissues and organs, spreading through different regions of the body. This phenomenon is associated with several risk factors, including cultural and environmental aspects, life habits (such as smoking and obesity), genetic predisposition and the aging of the population[1].

On a global scale, cancer has been the leading cause of premature death (before age 70). According to estimates from 2018, 18 million new cases of cancer were registered worldwide[2]. In the Brazilian context, in its management tool in the national oncology area, the National Cancer Institute (INCA)[3] predicted for the three-year period from 2023 to 2025, about 704 thousand new annual cases of the disease in the country.

Population aging is a global phenomenon that brings with it changes in demographic and epidemiological profiles. According to the World Health Organization[4], it is estimated that by 2050, one in five people will be over 60 years old, totaling 2 billion elderly people worldwide. However, during the aging process, chronic non-communicable diseases (NCDs) predominate, and their incidence and mortality increase as the average life expectancy of the population increases[3].

Age is a risk factor for cancer and the chances of developing neoplasms in older people are 11 times higher compared to young adults[5]. There is a significant increase in the rates of chronic degenerative diseases, including cancer, due to increased life expectancy and population aging profile[6]. Thus, considering the epidemiological trend of aging, the predisposition to the predominance of cancer and other chronic diseases in this population increases every year.

Cancer has the ability to cause various changes, both psychological, emotional and physical. Among these changes, sleep-associated disorders are one of the main complaints of cancer patients[7]. In addition, the lifelong sleep presents changes in its quality and quantity, that is, with aging tends to present a decline in relation to its duration[8].

Sleep is important in the maintenance of several metabolic processes, its dysfunction can lead to diseases such as diabetes, anxiety, hypertension and other heart diseases[9]. Compared to others, cancer patients have greater difficulty in falling asleep and staying asleep, and this process may be associated with the treatments they undergo[10]. Davidson *et al*[11], in a study, found that cancer patients with sleep disorders have difficulty coping with stress, emotions, concentration and other spheres of daily life are affected.

Sleep-associated disorders may persist even after treatment is terminated, due to physiological changes associated with cancer, use of chemotherapy, pain and fatigue[12]. Fatigue, which is also an associated symptom, is a subjective experience of tiredness that does not cease even after a period of rest, and may affect not only the quality of life, but also personal satisfaction of individuals[13], commonly present in any stage of cancer, physical and psychological factors[14].

It is observed that sleep is related to the immune defenses. During the sleep-wake process, the body undergoes several physiological changes, both in the physical and mental domains and cardiac function, as well as influencing immunological parameters related to leukocyte count, proliferative function and cytokine production[15].

In the case of elderly people with cancer, it is common to have correlated manifestations, and depressive symptoms are one of the side effects of the disease and its outcomes. This is an important difficulty faced by many elderly patients, with a high prevalence due to the size of this population[16]. Social vulnerability, in turn, results from the interaction between obtaining information, material resources, facing cultural barriers and violent impositions, as well as relations with the structural factors of society, being a concept suitable to understand the dynamics of the process of social inequality[17].

According to Jesus *et al*[17], social factors such as living in areas of greater vulnerability, low level of education, socioeconomic status and limited access to public services may contribute to increased vulnerability and its repercussions on the health of subjects. Although social vulnerability is an important factor in all phases of life, there is growing evidence that in old age, various social circumstances are associated with aging.

One crucial element in the results of cancer treatment is hope. Cancer patients often question their future perspective in the face of the disease, influencing their way of dealing with it. The hope of recovery motivates the elderly to travel long distances in search of treatment, to endure invasive procedures tirelessly, to modify their lifestyles and daily routines and to remain under treatment, even if they are weakened[18].

Therefore, it is necessary to recognize that aging is a heterogeneous phenomenon, ie occurs differently among people. Thus, there is influence of the different individual scenarios, as well as economic and social conditions in aging. People living in a precarious socioeconomic situation are more exposed to the risk of becoming physically and mentally ill and dying, a situation that is intensified in vulnerable populations such as the elderly[19].

Thus, it is urgent to measure and understand the impact of hope, vulnerability, sleep patterns and depressive symptoms in elderly cancer patients undergoing chemotherapy, and the outcome of the disease, enabling the planning of interventions to stimulate the treatment of these elderly and effectively reduce the effect of the disease in the daily lives of individuals. In this context, nursing professionals play a key role, establishing links with the elderly and providing emotional support, information about the disease and its treatment, encouraging the patient to continue fighting for life and increasing their confidence in the ongoing treatment.

The impact of the disease shows that cancer is a global public health problem and increasingly needs research support in order to obtain resources that improve quality of life and humanization in the care of patients with this disease.

This research aims to analyze the depressive symptoms in elderly people undergoing chemotherapy in a hospital.

MATERIAL AND METHODS

This is a cross-sectional analytical study with quantitative approach, conducted with elderly people in oncology treatment in a hospital in Campinas/SP. Instruments were applied to identify clusters of symptoms in elderly people undergoing chemotherapy, and participants were chosen by convenience. All stages of the research were performed in the same hospital, in chemotherapy and radiotherapy outpatient clinics and in palliative care sectors for oncological elderly.

The inclusion criteria were elderly with confirmed cancer diagnosis, TqqNqqM0 at any stage[20] and voluntary participation in the study. The exclusion criteria were a score on the Karnofsky Scale below 70[21], inadequate clinical conditions (such as mucositis, pain, nausea, dyspnea, vomiting) and emotional conditions (such as crying, apathy, aggressiveness) to respond to an interview.

The instruments for data collection were:

1. Questionnaire for Sociodemographic and Clinical Characterization;
2. Pittsburgh Sleep Quality Index;
3. Beck's Depression Inventory;
4. Herth Hope Scale;
5. Vulnerable Elders Survey (VES-13).

The Questionnaire for Sociodemographic and Clinical Characterization was developed by the researcher for a previous study with elderly people with cancer, in order to record the sociodemographic and clinical data of participants. It was adapted, improved, pre-tested and evaluated by judges for content validation[6].

The Pittsburgh Sleep Quality Index[22], validated in Brazil as PSQI-BR-BR[23], is a questionnaire that allows to evaluate the quality and sleep disorders present in the month before its application. Contains 19 self-administered or applied questions as an interview and five questions to be answered by roommates, if any. The latter are not scored and were not used in this study. The 19 questions are grouped into seven components:

a) Sleep subjective quality;
b) Sleep latency;
c) Sleep duration;
d) Habitual sleep efficiency;
e) Sleep disorders;
f) Use of sleeping medication;
g) Daytime dysfunction.

The score for each component varies from 0 to 3 points, allowing the following answers for each sleep complaint: none in the last month, less than 1 time per week, 1 or 2 times per week, 3 times or more per week. The overall score is obtained by adding the components, and can vary from 0 to 21 points. The higher the value obtained, the worse the evaluation of sleep quality, and the overall five-point score is the cut-off point that allows to distinguish between subjects with poor sleep quality and sleep disorders (above five points) and those with good quality sleep (five points or less)[22,23].

Beck's Depression Inventory (BDI) is a measure of depression evaluation widely used in research and clinical practice[24], validated in Brazil[25]. The original scale consists of 21 items, including symptoms and attitudes, whose intensity varies from 0 to 3. The items refer to sadness, pessimism, feeling of failure, lack of satisfaction, sense of guilt, feeling of punishment, self-deprecating, self-accusations, suicidal ideas, crying, irritability, social withdrawal, indecision, distortion of body image, inhibition to work, sleep disturbance, fatigue, loss of appetite, weight loss, somatic concern, decreased libido[26]. The recommen-ded cutoff points are[24]:

a) 10 points or less correspond to the absence of depression or minimal depression;

b) 10 - 18 correspond to mild to moderate depression;

c) 19 - 29 correspond to moderate to severe depression;

d) 30 - 63 correspond to severe depression.

The Herth Hope Scale (HHS) is an easy and fast application scale, validated for use in Brazil[18]. The HHS is designed to facilitate assessment at various intervals where variations in levels of hope can be identified. The instrument consists of 12 statements with Likert scale responses with scores from 1 to 4 for each one, with the following response possibilities: disagree completely, disagree, agree and agree completely. The total score varies from 12 to 48, and the higher the score, the higher the level of hope. HHS has demonstrated adequate psychometric properties and is available for use[18].

The Vulnerable Elders Survey (VES-13), developed by Saliba *et al*[27], is an instrument designed to develop a simple tool to identify elderly people at risk of health deterioration and death for the authors of this tool, vulnerability is defined as a condition that increases the risk of functional decline and death in older adults. In Brazil, its adapted and validated version in Portuguese was well understood and accepted by the study population, presenting consistent psychometric properties suitable for use[28,29]. The VES-13 is composed of 13 items that include: age, self-reported health, physical capacity and functional capacity, and its score varies between 0 and 13 points, with a score equal to or greater than 3 considered as a cut-off point for classifying an individual as vulnerable[28,29].

The interviews were conducted about 3 times a week, in the morning, with an average duration of 1 hour. The socioeconomic questionnaire was applied, together with the scales of the umbrella project. The sociodemographic and clinical data are being characterized according to age, self-reported color, sex, schooling, monthly income, source of monthly income, marital status, housing nucleus, presence of chronic diseases, use of drugs and experience of some religion, among other items present in the questionnaire used.

The collected data was typed in the spreadsheet of the program Microsoft Excel® for Windows version 2007 (Microsoft Corporation Inc.). The database was then transported to SAS 9.4 (Statistical Analysis System) for analysis, which was supported by a statistician from UNICAMP.

Quality control was performed to ensure that the study was developed according to the protocol and that the data obtained were recorded in a reliable way.

RESULTS

The participants were 23 patients interviewed at the hospital chemotherapy outpatient clinic.

The elderly patients, with respect to age group, have an average age of 67 years (minimum 60 years and maximum 85 years). Regarding color, 72.73% (16) self-declared themselves as white, 22.73% (5) as brown and 4.55% (1) as black. Regarding the sex, there is a predominance of females, which corresponds to 52.63% (10) of the sample, men represent 47.37% (9) (disregarding 4 individuals without information).

The average schooling of the sample is about 7 years (minimum 1 year and maximum 15 years). As for the monthly income (considering minimum wage of 2024 in the amount of R $ 1,412), 82.61% (19) declare to receive up to two minimum wages, 13.4% (3) receive from 6 to 10 minimum wages and 4.35% (1) has no income. The sample presents data on marital status, being 86.96% (20) married (das), and predominance in the family unit dwelling, being these 95.65% (22). In the question religion, 91.3% (21) said they had some religious experience. Data can be observed in tables 1↗ and 2↗.

According to the data of the 23 interviews conducted (Table 3↗), it was observed that 13 of the 23 elderly interviewed had a score higher than 3 on the VES-13 scale. Thus, 56.52% of the participants were classified as vulnerable. The prevalence of vulnerability observed in this study was high, reaching more than half of the population interviewed.

Table 4↗ shows the scores of hope according to age group and schooling, which can be considered high.

Given the context of depressive symptoms in elderly people undergoing chemotherapy treatment (Table 5↗), it is clear that the depression present in these individuals can negatively impact daily life activities. On the other hand, depression itself is multicausal, thus establishing a joint relationship between one fact and another[30].

Regarding the sleep quality index (Table 6↗), a predominance of poor quality is observed in the data collected. The results show that individuals with cancer may have changes in their sleep pattern, which can occur due to the treatments they are subjected to, the physiological changes they undergo, and the presence of pain and fatigue[6].

DISCUSSION

In a quantitative, descriptive and cross-sectional study, conducted at a Chemotherapy Center (CC) of a hospital in the state of São Paulo, with a sample of 23 elderly people undergoing chemotherapy treatment for any type of cancer, it was observed that sleep disturbance is high in elderly patients with cancer, corroborating with data from previous research[12], demonstrating that one of the consequences of cancer is poor sleep quality, and may be associated with a poor quality of life. The change in sleep pattern in cancer patients and in oncological treatment is associated with several factors, from the presence of the cancer itself to the use of chemotherapy, pain and fatigue[12].

Regarding sleep, 65.22% of the elderly with cancer and in oncological treatment, analyzed in this study, have poor quality of sleep. It is observed that cancer patients have greater difficulty in falling asleep and staying asleep, when compared to non-cancer patients[10]. Studies show that the lack of good quality sleep contributes to the development of various disorders such as depression, anxiety, fear, irritability, fatigue, suicidal ideation, etc.[8]. They may become more pronounced when associated with the diagnosis of cancer, since it is a process of intense transformation in several areas of life. It is observed in the results that a significant number of patients interviewed have mild to moderate depression. This information helps to understand the relationship between depression and sleep and how they influence each other, acting as both cause and effect of each other.

Sleep can not only trigger all the aforementioned symptoms, but also suffer from them. The elderly who had poor sleep quality have a physiological influence (decreased quality and quantity of sleep). Although it is an extremely important topic, research on the quality of sleep in elderly oncologists is still scarce[12]. Many of the patients have no information that sleep-related problems are also a clinical condition that can be treated. This lack of information contributes to the patient not reporting his condition to the health professional, making it impossible for them to be able not only to identify them, but also to draw up strategies for improvement together with the patient[8].

Regarding depression, in the elderly with cancer, symptoms are common and present as one of the side effects of the disease and its treatment. This is a significant problem, with high prevalence, given the size of the elderly population and the contrast with the hope expressed by the oncologic elderly during the research[16]. Depression has impacts in various areas of life, leading to problems in interpersonal relationships, lower quality of life and increased pain, both in oncological elderly patients, as well as non-oncologic. In addition, it has influence on the way the individual faces problems[16]. Relevant information indicates that the time of cancer diagnosis and all subsequent processes (chemotherapy, fear, feelings of uncertainty) require not only the physical part of the patient, but also psychological. It can influence the way the individual perceives his condition at that moment and the coping strategies that will be used. Depression in elderly people with cancer can be aggravated by several factors, such as physical pain, concern about the prognosis, prolonged hospitalization, fear of death and loss of autonomy[16]. Among the elderly interviewed, 56.76% had mild to moderate depression, according to the Beck's Depression Inventory score. Depression is multicausal, that is, it presents several factors, so the elderly patients with cancer depression are surrounded not only by the disease and all the feelings that it entails, but also economic, social (change in social role, less family/social living), until an existing depression, but not identified, aggravated by the diagnosis of cancer. When compared to other age groups, the elderly population presents a greater difficulty in diagnosing depression because they present non-classic symptoms. The identification of depression in elderly people with cancer may be impaired, since the disease and the side effects of treatments can trigger symptoms such as those experienced by patients with depression, pain and fatigue, thus being able to mix[16].

Regarding vulnerability, the results of this study revealed a high prevalence of it among elderly oncologists undergoing chemotherapy, with 43.24% classified as vulnerable by the VES-13 scale, which is higher than the rates observed in studies conducted in the United States (32.3%) and Ireland (32.1%)[31].

This discrepancy can be explained in part by the socioeconomic inequalities between developed and developing countries, since, in Brazil, life histories are marked by economic difficulties and limitations in access to health services, contributing significantly to a greater vulnerability in the elderly[32]. In addition, it is observed that most of the elderly interviewed in this study have monthly income of up to two minimum wages, a factor that intensifies the challenges associated with adherence to treatment and maintenance of adequate health conditions.

Social vulnerability is also related to other aspects, such as low level of education, barriers to access to health services and social isolation, factors that according to Jesus *et al* (2017)[17], are determinants for the increased risk of illness in elderly populations. In the present study, with the exception of 1 of the elderly interviewed, all reported living with relatives, which can be considered a protective factor against social isolation, but also indicates the dependence on a support network that, in contexts of economic vulnerability, may be insufficient to meet the growing needs for care.

The data of this study also show the importance of considering the heterogeneity of the aging process, because although senescence is a natural process, lifestyle, economic conditions and social contexts play a crucial role in determining vulnerability[19].

Thus, the results obtained reinforce the need to develop public policies adapted to the specificities of the Brazilian population, in which strategies that consider the physical aspects, emotional and social of the elderly cancer patients are crucial for humanization of care and for the reduction of health inequalities, In addition, the implementation of evidence-based interventions can contribute to the construction of a more inclusive and effective care model.

Although the above-mentioned throughout this discussion, it is observed that the level of hope in the elderly, measured by the Herth Hope Scale (HHS) was characterized as high, it was found that hope is a resource being important in the construction of acceptance and coping with the treatment of the disease, characterizing itself as a powerful indicator of better well-being of these individuals[33]. In the present study, the level of hope among the elderly evaluated by SHE presented a high average (36.09 points), as well as other studies conducted in cancer patients[18,34]. In a survey conducted in China with elderly people dealing with terminal cancer, hope has become a strategy of psychological adaptation and coping with cancer, stimulated and supported by the interpersonal connection established with health professionals, friends and family of these elderly people. This connection increased life expectancy in many patients who were dealing with severe pain and underwent several treatments every day[35].

Thus, it is essential that health professionals, especially nursing, help to enhance hope in patients, due to their ability to generate strength, positive thoughts, help in coping with cancer and provide the elderly with a better quality of life. It is suggested an instrumentalization to perform a complete assessment of the individual, while being integral, considering its biopsychosocial characteristics, in order to plan health care actions aimed at these elderly individuals, in an individualized manner[6].

CONCLUSION

This study allowed the identification of the social, emotional and quality of sleep conditions of participants and also the identification of the impacts caused by cancer in elderly people. It is imperative to recognize the heterogeneity of aging and the influence of individual, economic and social contexts in this process. Vulnerable populations, such as the elderly in a precarious socio-economic situation, face an even greater risk of suffering the negative impacts of cancer, highlighting the need for specific interventions and public health policies, directed to this problem and for this population.

The importance of studies whose results may contribute to improving quality of life and humanization in the care of elderly patients with cancer is emphasized. Cancer persists as a global public health challenge, requiring multidisciplinary efforts and an approach that takes into account not only the physical dimension of the disease but also a more holistic view of the elderly population.

This study has some important limitations. The results presented here are only from a portion of participants, since the data collection has not yet ended. In addition, the selection of participants by convenience among those who are on chemotherapy treatment, with the female elderly as a bias. It is also important to note that the interview duration is long and can vary from 30 to 50 minutes, and may be affected by additional conversations that arise during the process, which makes it difficult to focus on the main issues.

Acknowledgments

Funding for students from FEnf/UNICAMP in scientific initiation through PIBIC.

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TS: Conceptualization, methodology, data analysis, writing of the original manuscript.
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Ethical Considerations
This article is an excerpt from a larger project entitled "Oncology and Aging: Cluster of Symptoms and Construction of Protocols and Manuals", approved by the Ethics Committee of FCM-UNICAMP under CAAE 63986222.3.0000.5404.

Considerações Éticas
Este artigo é um recorte de um projeto maior intitulado de "Oncologia e Envelhecimento: Cluster de Sintomas e Construção de Protocolos e Manuais", aprovado no Comitê de Ética da FCM-UNICAMP sob CAAE 63986222.3.0000.5404.

Ethical Disclosures
Conflicts of Interest: The authors have no conflicts of interest to declare.
Financial Support: This work has not received any contribution, grant or scholarship.
Provenance and Peer Review: Not commissioned; externally peer reviewed.

Responsabilidades Éticas
Conflitos de Interesse: Os autores declararam não possuir conflitos de interesse.
Suporte Financeiro: O presente trabalho não foi suportado por nenhum subsídio ou bolsa.
Proveniência e Revisão por Pares: Não comissionado; revisão externa por pares.

Table 1 – Data on years of study and age obtained with the Questionnaire for Sociodemographic and Clinical Characterization, Campinas-SP.[↖]

Variable	n	Mean	Minimum	Maximum
Years of schooling	23	7.70	1,00	15.00
Age	23	67.33	60.42	85.78

Table 2 – Sociodemographic and Clinical Characterization, Campinas-SP.[↖]

Variable	n	%
Color		
White	16	72.73
Black	1	4.55
Brown	5	22.73
Not informed	1	
Marital status		
Single	20	86.96
Married	1	4.35
Divorced	1	4.35
Widowed	1	4.35
Lives with		
Alone	1	4.35
Family members	22	95.65
Religion		
No	2	8.70
Yes	21	91.30
Income		
None	1	4.35
Up to 2 MW	19	82.61
6-10 MW	3	13.04
Gender		
F	10	52.63
M	9	47.37
Not informed	4	

Table 3 – Functional activities in elderly people undergoing chemotherapy, Campinas-SP.

On average, how much difficulty do you have doing the following physical activities?	n	%
Bending, crouching or kneeling		
No/Little difficulty	16	69.57
A lot of difficulty/Unable to do	7	30.43
Lifting or carrying objects weighing close to 5 kilos		
No/Little difficulty	17	73.91
A lot of difficulty/Unable to do	6	26.09
Raising or extending your arms above shoulder level		
No/Little difficulty	20	86.96
A lot of difficulty/Unable to do	3	13.04
Writing or handling and holding small objects		
No/Little difficulty	21	91.3
A lot of difficulty/Unable to do	2	8.7
Walk 400 meters (approximately four blocks)		
No/Little difficulty	19	82.61
A lot of difficulty/Unable to do	4	17.39
Doing heavy housework like scrubbing floors or cleaning windows		
No/Little difficulty	13	56.52
A lot of difficulty/Unable to do	10	43.48

Table 4 – Age group, Education and Herth Score, Campinas-SP.

Variable	n	Mean	Minimum	Maximum
Age	23	67.33	60.42	85.78
Years of schooling	23	7.70	1.00	15.00
Herth Score	23	36.09	32.00	41.00

Table 5 – Beck's Depression Inventory Score, Campinas-SP.

Variable	n	%
Beck's score cat.		
0 - 9	6	26.09
10 - 18	15	65.22
19 - 29	1	4.35
30 or more	1	4.35

Table 6 – Pittsburgh Sleep Quality Index Score, Campinas–SP .

Variable	n	%
PSQI class.		
Good quality	8	34.78
Bad quality	15	65.22