

Hospital Menu as a Strategy to Improve Diet Acceptance among Onco-hematological Patients

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Menu Hospitalar como Estratégia de Melhoria da Aceitação da Dieta entre Pacientes Onco-hematológicos

El Menú Hospitalario como Estrategia para Mejorar la Aceptación de la Alimentación en Pacientes Oncohematológicos

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ABSTRACT

Introduction: Malnutrition in cancer patients is still a problem, especially during hospitalization where food acceptance seems to be impaired. **Objective:** To analyze the impact of a hospital menu on diet acceptance among onco-hematological patients. **Method:** Experimental, quantitative study, developed in a university hospital in Brazil's South region. Data collection took place through the application of questionnaires. Patients with less than 75% acceptance of the diet were included. They received a menu, which allowed them to choose the preparations they would like to eat. **Results:** 22 patients participated in the research. Neither the classification of thinness in adults nor muscle depletion was identified. Of the 12 adults, one had significant weight loss and five had severe weight loss. Of the ten older individuals, three were underweight according to body mass index (BMI), three had muscle depletion based on calf circumference, three had moderate depletion and one had mild depletion, considering arm circumference. Two older individuals had significant weight loss and five had severe weight loss. There was a significant difference ($p = 0.016$) between food intake before and after applying the menu. An increase in acceptance of the diet was noted in all meals offered, except supper. Acceptance after using the menu had a significant correlation with increased appetite ($p = 0.022$), improved mood ($p < 0.001$) and improved food intake ($p = 0.027$). **Conclusion:** The menu appears to increase food acceptance in hospitalized patients and influence emotional issues.

Key words: Neoplasms/diet therapy; Hospitalization; Nutritional Status; Nutrition, Diet and Food.

RESUMO

Introdução: A desnutrição do paciente oncológico ainda é um problema, especialmente na internação hospitalar onde aceitação alimentar parece ser prejudicada. **Objetivo:** Analisar o impacto de um menu hospitalar na aceitação da dieta entre pacientes onco-hematológicos. **Método:** Estudo observacional, de caráter quantitativo, desenvolvido em um hospital universitário no Sul do Brasil. A coleta de dados se deu por meio da aplicação de questionários. Foram incluídos os pacientes com aceitação da dieta inferior a 75%. Estes receberam um menu que lhes permitiu escolher as preparações que gostariam de receber. **Resultados:** Participaram da pesquisa 22 pacientes. Não foi identificada a classificação de magreza nos adultos, nem depleção muscular. Dos 12 adultos, um apresentou perda de peso significativa e cinco perda grave. Dos dez idosos, três apresentavam baixo peso segundo o índice de massa corporal (IMC), três apresentaram depleção muscular pela circunferência da panturrilha, três apresentaram depleção moderada e um, depleção discreta, considerando a circunferência do braço. Dois idosos apresentaram perda de peso significativa e cinco tiveram perda grave. Houve diferença significativa ($p = 0,016$) entre a ingestão alimentar pré e pós a aplicação do menu. Notou-se um aumento da aceitação da dieta, em todas as refeições ofertadas, exceto na ceia. A aceitação após o uso do menu teve correlação significativa com o aumento de apetite ($p = 0,022$), a melhora do humor ($p < 0,001$) e a melhora da ingesta alimentar ($p = 0,027$). **Conclusão:** O menu parece aumentar a aceitação alimentar de pacientes hospitalizados e influenciar em questões emocionais.

Palavras-chave: Neoplasias/dietoterapia; Hospitalização; Estado Nutricional; Nutrição, Dieta e Alimentação.

RESUMEN

Introducción: La desnutrición en pacientes con cáncer sigue siendo un problema, especialmente durante la hospitalización donde la aceptación de los alimentos parece verse afectada. **Objetivo:** Analizar el impacto de un menú hospitalario en la aceptación de la dieta entre pacientes de oncohematología. **Método:** Estudio experimental, cuantitativo, desarrollado en un hospital universitario del sur del Brasil. La recolección de datos se realizó mediante la aplicación de cuestionarios. Se incluyeron pacientes con menos del 75% de aceptación de la dieta. Recibieron un menú, que les permitió elegir las preparaciones que les gustaría recibir. **Resultados:** Participaron de la investigación 22 pacientes. No se identificó la clasificación de delgadez en adultos ni el agotamiento muscular. De los doce adultos, uno tuvo una pérdida de peso significativa y cinco tuvieron una pérdida de peso severa. De los diez ancianos, tres tenían bajo peso según el índice de masa corporal (IMC), tres tenían agotamiento muscular según la circunferencia de la pantorrilla, tres tenían agotamiento moderado y uno tenía agotamiento leve, considerando la circunferencia del brazo. Dos personas mayores tuvieron una pérdida de peso significativa y cinco tuvieron una pérdida de peso severa. Hubo diferencia significativa ($p = 0,016$) entre la ingesta de alimentos antes y después de aplicar el menú. Se observó un aumento en la aceptación de la dieta en todas las comidas ofrecidas, excepto en la colación nocturna. La aceptación después de usar el menú tuvo una correlación significativa con un aumento del apetito ($p = 0,022$), una mejora del estado de ánimo ($p < 0,001$) y una mejor ingesta de alimentos ($p = 0,027$). **Conclusión:** El menú parece aumentar la aceptación de los alimentos en pacientes hospitalizados e influir en cuestiones emocionales.

Palabras clave: Neoplasias/dietoterapia; Hospitalización; Estado Nutricional; Nutrición, Dieta y Alimentación.

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INTRODUCTION

Inpatient feeding is a critical part of care and may impact clinical outcomes during hospitalization, but low acceptance of the diet offered is a common reality due to the pathology, clinical symptoms, hospitalization, psychosocial aspects, characteristics and quality of the meals and individual preferences^{1,2}. The consequence is the compromise of the nutritional status, complications and longer hospital length of stay^{3,4}.

For oncologic patients, especially those needing long hospitalizations, nutritional compromise is apparently more severe and concerning, they can be at nutritional risk and manifest food aversion due to the disease and treatment⁵. Malnutrition can be the outcome of some adverse effects as dysgeusia, nausea, vomits, anorexia, mucositis and dysphagia and intensify the toxicity of drug therapies⁶.

Practices that encourage the patients to accept humanized feeding should be valued to minimize the complications of this scenario, including its subjective aspects⁷. Some hospitals are implementing menus with options which ensures patients autonomy and protagonism over its health⁸.

Other initiatives described in the literature address inpatients ability to choose their own meals or the hospital providing patient-centered nutrition^{9,10}. Further to the sensory characteristics of hospital diet, the patient's preferences and feeding habits appear to influence food acceptance^{11,12}.

The present study has the objective of analyzing the impact of the hospital menu on food acceptance of onco-hematological patients due to the relevance of the matter and scarce experiences in oncologic unit or hospitals.

METHOD

Observational, quantitative study developed with inpatients with hematological malignancies at a university hospital in the rural area of the State of Rio Grande do Sul.

The sample was obtained from admissions from January to July 2023, considering nine beds for adults with onco-hematological diseases. The study population was chosen due to longer hospital stay based on the investigators prior experiences. Oncologic patients with solid tumors were excluded because of increased rotation at the admission unit. Male and female patients, older than 18 years of age, in chemotherapy, in exclusive oral feeding who agreed to participate voluntarily were enrolled and signed the Informed Consent Form (ICF).

Patients with acceptance higher than 75% with good food intake according to the “*Sociedade Brasileira de Nutrição Oncológica*” were not included¹³, but were followed up according to the regular hospital routine.

Patients unable to express themselves verbally due to sedation, tracheostomy, orotracheal tube and/or non-invasive mechanic ventilation, expansive tumor mass or lymph node expansion, with cognitive deficit or poor understanding of the study and those in end-of-life according to the clinical history and charts were excluded. Patients with worsening of their general condition during the study were also excluded.

Data were collected with questionnaires. The questionnaire proposed by Toledo et al.¹⁴ evaluated the acceptance of the hospital diet through graphic representation of the plates with percent of acceptance (0%, 25%, 50%, 75% and 100%) of the different meals offered during the day. It included the general evaluation of the sensory characteristics of the diet (taste, temperature, appearance and aroma), with scores from 1-5, the lowest, “I didn't like” and the highest, “I liked very much”.

A specific questionnaire for patients with diet acceptance lower than 75% was applied to collect sociodemographic, anthropometric data, complaints, symptoms and patient's perceptions about feeding and a Vignola and Tussi¹⁵ questionnaire about depression, stress and anxiety. Hospital electronic charts provided diagnoses, chemotherapy protocols and medications in use.

The authors created the menu based on the existing service flows and possible adjustments of the standard diet according to the availability and routine of the hospital's nutrition and diet service. Upon the application of the questionnaires, these patients were handed a booklet of the regular menu with pictures of the preparations of the different meals (breakfast, pre-lunch snack, dinner and supper) and chosen according to their preferences and food wishes. Although pre-lunch snack of the regular diet was not offered, it was allowed if the patient accepted.

After eating the chosen menu during three days, a questionnaire proposed by Toledo et al.¹³ to reevaluate the diet was applied, with assessment of the sensory characteristics earlier mentioned and the patient's perception about food intake. In addition to the data collection to evaluate and reevaluate, there were no additional interventions and/or follow-up and the patients continued to be assisted by the service staff.

The sample was divided in adults and older adults. The Body Mass Index (BMI) followed the parameters of the World Health Organization¹⁶ and Lipschitz¹⁷,

respectively. Based on Blackburn and Bistran¹⁸, the percent of weight loss was classified (%WL). For calf circumference (CC), Pagotto et al.¹⁹ was utilized and for adequacy of arm circumference (%AC), Blackburn and Thornton²⁰. Percentiles for adults and older adults followed the parameters of Frisancho²¹ and Nhanes III²², respectively. Weight loss was evaluated according to data prior to the admission, being utilized the current weight collected at admission and regular weight reported by the patient, considering the last weight before weight loss.

The categorical variables were described by simple and percent frequencies and means and standard deviation for numerical variables. The Shapiro-Wilk²³ test was utilized to analyze the data distribution. The paired t^{23} test was applied to compare the general acceptance pre and post intervention. According to the normality of the data, the Spearman²³ correlation among post general acceptance and depression, anxiety and stress was calculated. Cohen criteria²⁴ was followed to measure the power of the correlation: $r < 0.29$, low correlation, $0.30 \leq r \leq 0.49$, moderate correlation and $r > 0.50$, great correlation. One-way ANOVA and independent t test were utilized to compare the general pre and post overall acceptance with other variables with *post hoc* Tukey²³. All tests adopted $p < 0.05$. The software Statistical Package for the Social Sciences (SPSS)²⁵ 26.0 was utilized for the analyzes.

The Institutional Review Board of “*Universidade Federal de Santa Maria (UFSM)*”, approved the study, report number 5746168 (CAAE (submission for ethical review): 64468622.6.0000.5346) in compliance with Directive 466/2012²⁶, of the National Health Council for trials with human beings.

RESULTS

The study enrolled 27 patients, five of which were excluded due to incomplete data because of early hospital discharge or worsening of the general condition and the final sample consisted of 22 patients with mean age 53.7 ± 18.8 years. As shown in Table 1, the sample was formed evenly by men and women, most of them married, living in the urban area and registered at the fourth health coordination (CRS) of Rio Grande do Sul where the hospital site is located.

The mean time of length of hospital stay was 18.9 ± 12 days and five of them died after the study. The main diagnosis was leukemia (36.3%), 36.4% of the patients submitted to chemotherapy during the study and the main medications taken were antibiotic, anti-gastritis and antiemetic (Table 1).

Table 1. Sociodemographic profile and clinical aspects of onco-hematologic patients admitted to a university hospital in Rio Grande do Sul

Variable	n	%
Sex		
Female	11	50
Male	11	50
Marital status		
Married	14	63.6
Single	8	36.4
Municipality of origin		
4 ^a CRS	15	68.2
Others	7	31.8
Zone		
Urban	17	77.3
Rural	5	22.7
Education		
Complete/incomplete elementary school	14	63.6
Complete/incomplete high-school	6	27.3
Complete/incomplete college and post-graduation	2	9.1
Diagnosis		
Leukemia	8	36.3
Lymphoma	6	27.3
Pancytopenia	3	13.6
Others	5	22.7
Chemotherapy		
Yes	8	36.4
No	14	63.6
Medications*		
Opioid	3	13.6
Corticoid	5	22.7
Psycho	6	27.3
Antiemetic	9	40.9
Gastritis	10	45.5
Antibiotic	14	63.6
Death		
Yes	5	22.7
No	17	77.3

(*) Continuous prescription.



In Table 2, it is possible to notice the participants' perceptions about their general condition. The main complaints were: early satiety, nausea, inappetence, dysgeusia, tiredness, no motivation to eat, concerns and anxiety. In this same scenario, eight patients claimed they were not willing to eat more.

The mean weight of the sample was 69.5 ± 13.7 kg and BMI was 25.8 ± 5.3 kg/m². Table 3 shows that, among adult patients, five were eutrophic. Among older patients, 50% were eutrophic.

Regarding CC, 100% of the adults were classified as normal and muscle depletion was detected in 30% of older adults. Only one adult and two older adults presented significant weight loss and five participants of both age ranges had severe weight loss. Given the adequacy of %AC, no depletion among adults was found, but for older adults, 30% presented moderate depletion.

There was significant difference of 56% ($p = 0.016$) between pre food intake (2.8 ± 0.6), and post menu (3.3 ± 0.8), 66%. Acceptance of the diet increased in all meals, except supper as shown in Table 4.

No significant difference among pre and post intake and the results of the depression, anxiety and stress questionnaire was found.

Table 2. Symptoms and complaints of onco-hematologic patients at admission

	Yes		No	
	n	%	n	%
Inappetence	13	59.1	9	40.9
Dysgeusia	13	59.1	9	40.9
Nausea	14	63.6	8	36.4
Odynophagia/dysphagia	3	13.6	19	86.4
Early satiety	16	72.7	6	27.3
Constipation	4	18.2	18	81.8
Diarrhea	3	13.6	19	86.4
Mucositis	7	31.8	15	68.2
Pain	5	22.7	17	77.3
No motivation to eat	10	45.5	12	54.5
Concern	10	45.5	12	54.5
Depression	5	22.7	17	77.3
Frustration	3	13.6	19	86.4
Anxiety	9	40.9	13	59.1
Tiredness	13	59.1	9	40.9
Unwilling to eat more	14	63.3	8	36.4

Table 5 shows that the pre acceptance of the diet was significantly influenced by inappetence, motivation to eat, use of antiemetic and chemotherapy. Post menu acceptance, appetite increased and mood and food intake improved.

Most of the patients (72.7%) believed that the menu reflects food usually eaten outside of the hospital and 90.9% would like to have it in future hospitalizations.

DISCUSSION

The results encourage new findings within the feeding scenario during hospitalization of onco-hematologic patients with longer length of stay (18.9 ± 12 days). Fernandez et al.²⁷ found a rising trend of hospital length of

Table 3. Anthropometric data of adult and older patients of an oncology admission unit

	Adults (n = 12)		Older (n = 10)	
	n	%	n	%
BMI Adult¹⁶ and older¹⁷				
Thinness (adult) or low weight (older)	0	0	3	30
Eutrophy	5	41.6	5	50
Overweight (adult) or weight excess (older)	4	33.3	2	20
Obesity	3	25	-	-
Classification of calf circumference¹⁹				
Muscle depletion	0	0	3	30
Normal	12	100	7	70
Classification of weight loss¹⁸				
No loss	6	50	2	20
No significant loss	0	0	1	10
Significant loss	1	8.3	2	20
Severe loss	5	41.6	5	50
Adequacy of arm circumference²⁰				
Severe depletion	0	0	0	0
Moderate depletion	0	0	3	30
Mild depletion	0	0	1	10
Eutrophy	9	75	5	50
Overweight	2	16.6	1	10
Obesity	1	8.3	0	0

Table 4. Acceptance of the diet before and after the menu ($p < 0.05$)

	Pre		Post	
	n	%	n	%
Breakfast				
0%	2	9.1	0	0
25%	2	9.1	1	4.5
50%	3	13.6	3	13.6
75%	3	13.6	2	9.1
100%	12	54.5	16	72.7
Pre-lunch snack*				
0%			17	77.3
25%			0	0
50%			2	9.1
75%			0	0
100%			3	13.6
Lunch				
0%	2	9.1	0	0
25%	7	31.8	7	31.8
50%	9	40.9	5	22.7
75%	4	18.2	5	22.7
100%	0	0	5	22.7
Afternoon snack				
0%	4	18.2	0	0
25%	3	13.6	2	9.1
50%	2	9.1	3	13.6
75%	4	18.2	2	9.1
100%	9	40.9	15	68.2
Dinner				
0%	6	27.3	1	4.5
25%	8	36.4	6	27.3
50%	7	31.8	4	18.2
75%	1	4.5	5	22.7
100%	0	0	6	27.3
Supper				
0%	5	22.7	2	9.1
25%	2	9.1	4	18.2
50%	3	13.6	2	9.1
75%	1	4.5	6	27.3
100%	11	50	8	36.4
Overall acceptance (mean 1-5)	2.8±0.6		3.3±0.8	

(*) Meal not offered in the standard menu (pre-intervention).

stay associated with decreased food intake in their analysis of a similar population.

Other factors may impact the feeding of onco-hematologic patients, as chemotherapy prescribed for eight patients during the study and adverse effects that apparently can cause decrease of food intake. In the study of Andrade et al.²⁸ in the same setting, food preferences for all types of food offered decreased after chemotherapy began. The continuous use of gastritis and antiemetic medications reinforces side effects as potential causes, in addition to complaints and symptoms.

Silva et al.²⁹ evaluated the reason why meals were not accepted and found hyporexia, nausea and vomits as main complications. Another study conducted in The Netherlands with oncologic patients in chemotherapy identified symptoms associated with reduction of food intake as eating less, problems to eat, taste changes, vomits, mouth pain, early satiety and feeling nauseous³⁰.

Emotional and psychological aspects involving the act of eating deserve attention, 45.5% (n=10) of the participants referred low motivation to eat. Not all of them were willing to eat more. Feeling devastated by the disease and the treatment, unhappy with food changes, coping with adverse effects and sensory modifications are patients' perceptions described by Rodrigues et al.³¹. Poor psychological status can cause reduction of food intake and compromise the patients' nutritional status³².

Mean BMI of the sample was 25.8±5.3 kg/m², similar result described by Rodrigues et al.³³, who evaluated 127 hematologic inpatients and revealed mean BMI of 26.2±5.5 kg/m². Thinness according to BMI has not been detected or muscle depletion measured by %AC in adults, however, 30% (n = 3) of older patients had low weight according to BMI, 10% (n = 1) presented mild depletion and 30% (n = 3), moderate depletion measured by %AC. Dell'Osbel and Zanotti³⁴, in a study with outpatient hematologic patients did not identify nutritional compromise as well according to BMI in adults, only in older adults.

According to the study of Rodrigues et al.³³ earlier mentioned, 8.7% (n = 11) of the participants were malnourished according to BMI and 33.9% according to %AC. The authors have also found significant correlation between BMI and age as well as between BMI and AC, but emphasized that higher prevalence of malnourishment are found when AC is utilized compared to BMI, a theory also noticed by Soares et al.³⁵.

While evaluating %WL (0 to 12 months), 8.3% (n = 1) of the patients presented significant weight loss



Table 5. Relation of acceptance of the diet before and after the menu with clinical aspects, symptoms, medications and patients' perception

Variable	Pre acceptance			Post acceptance		
	Mean	Standard deviation	p	Mean	Standard deviation	p
Without appetite and desire to eat[¥]						
Yes	2.5	0.6	0.022*	3.2	1.0	0.285
No	3.2	0.6		3.5	0.5	
Without motivation to eat[¥]						
Yes	2.5	0.6	0.049*	3.3	0.8	0.807
No	3.0	0.6		3.4	0.8	
Antiemetic^{¥¥}						
Yes, continuous ^{¥¥¥}	3.1	0.5	0.046*	3.1	0.8	0.472
Yes, if necessary ^{¥¥¥}	2.3	0.7		3.6	1.0	
No	2.8	0.5		3.4	0.7	
Chemotherapy[¥]						
Yes	3.2	0.6	0.020*	3.1	0.7	0.394
No	2.5	0.6		3.5	0.9	
Increase of appetite^{¥¥}						
Yes ^{¥¥¥}	2.8	0.7	0.757	3.8	0.6	0.022*
No ^{¥¥¥}	2.9	0.7		2.8	0.6	
Perhaps	2.6	0.7		3.2	0.9	
Mood improvement^{¥¥&}						
No improvement	0	0	0.322	2.8	0	< 0.001*
Poor improvement	2.5	0.7		3.2	0.6	
Indifferent	2.6	0.4		2.5	0.5	
Significant improvement	3.0	0.7		4.1	0.4	
Acceptance improvement^{¥¥}						
No improvement	2.7	0.9	0.606	2.3	0.5	0.027*
Poor improvement	2.6	0.3		3.3	0.9	
Significant improvement	2.9	0.8		3.6	0.5	

(¥) independent t test; (¥¥) one-way ANOVA; (¥¥¥) comparison of categories with *post hoc* Tukey; (&) *post hoc* not performed because one category had less than two cases; (*) $p < 0.05$.

and 41.6%, severe weight loss. Weight loss in older adults was 20% (n = 2) and 50% (n = 5), respectively. Ferigollo, Bazzan, Ceni and Teixeira³⁶, in a study conducted in the same university hospital with 31 adults and 29 older adults, identified 9.7% of significant weight loss and 35.5% of severe weight loss in adults, being 6.9% and 37.9% in older adults, respectively. These findings corroborate Dell'Osbel and Zanotti's³⁴, when they identified that, despite the majority of the

sample was classified as well nourished, weight loss was detected in 75% of the adults and 70% of the older adults evaluated.

CC appears to be a marker that supports the diagnosis of malnutrition together with other markers. In the current study, patients with muscle depletion utilizing this anthropometric measure have also presented low weight according to BMI, severe weight loss and some level of depletion measured by %AC.

Given the difficulties involved for a satisfactory food intake – length of hospital stay, treatment and symptoms, medications and psychological aspects – and the impact on the nutritional status of the oncologic patient, interventions should be weighed by the managing team of the individual with cancer. Furthermore, when the context involves hospitalization, on its own, an aggravating aspect of malnourishment and psychosocial disorders, attention should be focused for this period of human fragility^{37,38}.

No similar interventions were described in the literature, however, there are studies involving hospital gastronomy and addressing diet acceptance and sensory factors as taste, odor, texture and appearance. Therefore, nutrition services should consider these aspects that cause impact on food acceptance³⁹⁻⁴¹.

Acceptance of hospital diet improved after the patients selected their meals from a menu as revealed by the results ($p = 0.016$), consistent with Demário, Sousa and Salles⁴², when they concluded that customized adjustments increase satisfaction and potentialize acceptance. Meeting expectations and wishes to allow better eating appears to influence feeding during hospitalization⁴³.

More participants fully accepted (100%) the meals offered, possibly because of humanized approach. The nutrition professionals involved should discuss initiatives within the guidelines of the National Humanization Policy (PNH) as a transformative tool of care⁴⁴.

The policy addresses the importance of initiative and strategies that respect the patients' rights, autonomy, subjectivity and culture⁴⁴. The study of Sousa et al.⁴⁵ with nutritionists described the possibility of choosing the meals as part of humanized and patient-centered care, in addition to meeting specific orders, change of meal time to the individual preference and offering a snack in place of dinner, for instance .

These aspects are strengthened by the review of Wilandh et al.², when analyzing the influence of patient-centered and flexible care on the quality of the service and patient satisfaction. Apparently, best food intake depends on free choice (what, when and how much to eat), shared care, strong human contact, receive guidance and motivational approaches and nutritional awareness.

Given the complex scenario where the oncologic patient is immersed, good nutrition involves the offer of quality food and nutritional therapy mainly with the participation of food professionals and clinical nutrition for improved care⁴⁶. However, the articulation among the players is not a common reality and should be improved to provide patient-centered nutrition with potential increase of food intake and lower hospital costs¹⁰.

Some important aspects involving the scenario of onco-hematologic hospitalization are reinforced by the correlation of the menu with other study variables. Poor acceptance of standard diet – prior to the intervention – was associated with inappetence ($p = 0.022$), not willing to eat ($p = 0.049$), antiemetics ($p = 0.046$) and chemotherapy ($p = 0.020$). Clinical and emotional aspects appear to interfere on food intake.

The acceptance of the diet post menu was associated with increased appetite ($p = 0.022$), mood ($p = < 0.001$) and food intake improvement based on the patient perception ($p = 0.027$). Clinical conditions, symptoms, medications and emotional aspects appear to have interfered on the diet acceptance⁴⁶. These findings reinforce previous discussions on the concept of food beyond the offer of nutrients and meeting biological demands.

The sample size is a potential limitation of the study. Future studies should consider the impact of corticoids on the appetite some patients have used and its association with increased food intake.

CONCLUSION

The findings support the adoption of a wider perspective for the patient with cancer due to the complexity of the disease. Eating is possibly influenced by multifactorial aspects as clinical symptoms, medications and emotional condition which strengthens the benefit of multiprofessional care for this population.

The power of choice from a menu, respecting wishes and food preferences appears to improve inpatients food acceptance, in addition to positive secondary outcomes and emotional aspects perceived by the patients.

New studies involving humanization within hospital nutrition which evaluate the efficacy of the menu even for children and adolescents are suggested. It is relevant to evaluate the sensory characteristics of a meal because of subjective changes the oncologic patient faces along a single day and its different perceptions according to the type of food.

CONTRIBUTIONS

Bruna Steffler contributed to the study design, acquisition, analysis and interpretation of the data. Eduarda Pompeu do Nascimento and Katiane Schmitt Dalmonte contributed to the study design. Giovana Cristina Ceni contributed to the study design, acquisition, analysis and interpretation of the data, wording and critical review. All the authors approved the final version to be published.



DECLARATION OF CONFLICT OF INTERESTS

There is no conflict of interests to declare.

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