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Satisfaction survey on hospital diets served for lunch in a public hospital medical clinic in Goiania, state of Goias, Brazil

Pesquisa de satisfação com dietas hospitalares servidas no almoço da clínica médica de um hospital público de Goiânia, GO

Abstract

Purpose: To evaluate patients' satisfaction with hospital diets offered at a public hospital in Goiania-GO, identifying which ones cause the greatest dissatisfaction and which ones are satisfactory. **Methods:** Descriptive, observational and qualitative study conducted at the medical clinic. Data were collected through a questionnaire applied to patients about sensory attributes (appearance, odor / smell, taste / seasoning, temperature and quantity offered). For data analysis, the diets were separated into free, bland, pasty, liquid, salt and unsalted; Kruskal-Wallis and Mann-Whitney tests were used to compare the averages. **Results and Discussion:** A significant difference was found between the free and pasty diets for the attribute "appearance" and "odor / smell", with a value of $p = 0.033$. And between the diets with and without salt, there was a significant difference in relation to the attribute "flavor / spice", with p value = 0.035. A p value <0.05 was considered significant for both analyzes. It was observed that the liquid diet presented lower satisfaction, as

the diet without salt; the others were generally quite satisfactory in the patients' opinion. **Conclusion:** The free, bland, pasty and salt diets were evaluated as satisfactory by the patients. On the other hand, liquid and unsalted diets had lower averages for the attributes "appearance", "odor / smell" and "seasoning / flavor", respectively, showing lower satisfaction when compared to other diets.

Keywords: Diets. Patient's satisfaction. Public hospitals.

Resumo

Objetivo: Avaliar a satisfação dos pacientes com relação às dietas hospitalares oferecidas em um hospital público de Goiânia-GO, identificando quais causam maior insatisfação e quais são satisfatórias. **Métodos:** Estudo descritivo, observacional e qualitativo realizado na clínica médica. Os dados foram coletados por meio de um questionário aplicado aos pacientes sobre os atributos sensoriais (aparência, odor/cheiro, sabor/tempero, temperatura e quantidade oferecida). Para as análises de dados, as dietas foram separadas em livre, branda, pastosa, líquida, com sal e sem sal; os testes utilizados foram teste de Kruskal-Wallis e de Mann-Whitney, para comparação entre médias. **Resultados e Discussão:** Encontrou-se diferença significativa entre as dietas livre e pastosa para o atributo "aparência" e "odor/cheiro", com valor de $p=0,033$. E entre as dietas com e sem sal, houve diferença significativa em relação ao atributo "sabor/tempero", com valor de $p=0,035$. Foi considerado significante valor $p<0,05$ para as duas análises. Observou-se que a dieta líquida obteve menor satisfação, assim como a dieta sem sal; as demais de modo geral foram bem satisfatórias na opinião dos pacientes. **Conclusão:** As dietas livre, branda, pastosa e com sal foram avaliadas como satisfatórias pelos pacientes. Já as dietas líquidas e sem sal obtiveram médias menores para os atributos "aparência", "odor/cheiro" e "tempero/sabor", respectivamente, apresentando menor satisfação quando comparadas às outras dietas.

Palavras-chave: Dieta. Satisfação do paciente. Hospitais públicos.



INTRODUCTION

The hospitalized patient's diet is part of the treatment during his / her hospital stay and should be balanced, adequate in the quantity and quality of the food offered.¹

The quality of the symbolic and sensory aspects (taste, smell, temperature, appearance) should be taken into consideration in a hospital diet, because hospitalized patients consider it important, which can determine the degree of satisfaction and, consequently, greater adherence to the proposed treatment.¹⁻⁴

The patients' satisfaction with the food served in hospital is the target of their discontent and complaint, for many reasons, including the hospital environment itself, the patient's illness, absence of family environment, absence from daily activities, among others.^{1,5-7}

In recent years, there has been a still small but relevant number of evaluations of the quality of services provided by health institutions, which leads us to increasingly seek effective means of measuring the quality of services. An example of this is the satisfaction assessment.^{8,9}

Satisfaction survey is an instrument that can be used as a source of knowledge and important information for health care workers and managers, showing the level of quality and satisfaction of patients receiving the services.⁸ Thus, the survey outcome is an important indicator for the development of present and future goals and actions, which should be planned by managers and professionals involved in care, aiming at a relationship of loyalty and trust of users with the hospital institution.^{3,6,8}

When the nutrition team has the autonomy to offer a balanced diet to meet the patients' dietary preferences, it can contribute to a better satisfaction of the patients in relation to the consumed diet.⁷ This relationship generates a greater contact between professional, companion and patient, contributing to greater adherence to treatment, and alleviating suffering through care.⁷

Therefore, this study aimed to evaluate patients' satisfaction with hospital diets offered in a public hospital in Goiania, state of Goiás, Brazil, and to identify the sensory aspects that most pleased and displeased patients, according to the answers obtained.

METHODS

This was a descriptive, observational and qualitative study, which was conducted at a public hospital medical clinic in the city of Goiania, state of Goias, Brazil. The research project was approved by the Research Ethics Committees of the institutions involved, registered under No. 2,551,201 and No. 2.612.196. It was also approved by the Health and Work Education for SUS Superintendency (SEST), under memorandum No. 320/2018.

The study included patients aged between 21 and 92 years, of both genders, with a minimum stay of 12 hours in the medical clinic, whose food prescription was exclusively oral and who had signed the Informed Consent Form (ICF).

Patients admitted to the Intensive Care Unit (ICU) were excluded from the study, as well as those who were, regardless of the hospitalization unit, unable to answer the questionnaire, under 18 years of age, mentally confused, bedridden, on hemodialysis, hospitalized in the surgical clinic, or with an enteral and / or parenteral diet, and those who did not sign the consent form.

A questionnaire prepared by the researchers was applied, based on the literature¹⁰⁻¹² (Figure 1), which used a five-point hedonic scale, containing questions about the temperature, taste, odor, quantity and appearance of the meal offered at lunch on that day.

The hedonic scale is a method used when one wants to assess the degrees of satisfaction. Because it was a survey that assessed patient satisfaction, the questionnaire was produced based on the facial hedonic scale test, which expresses the degree of liking and disliking.^{3,5,13}

Data were collected after patients signed the consent form. The questionnaire was applied for ten days in May 2018, when the patients evaluated the lunch by sensory analysis, indicating in the hedonic scale.

Data collection was performed after lunch. The researchers introduced themselves, explained the research, collected the signature in the informed consent form and advised on the completion of the questionnaire attached to a clipboard. After collecting the questionnaires, the researchers said goodbye and thanked the patients for their collaboration.

Descriptive data analysis was performed using mean and standard deviation. The average established as a satisfaction criterion was 4 (four),¹⁰⁻¹² considering the five-point hedonic scale, which corresponds to 80% satisfaction with the consumed diet.

In comparing the attributes between the types of diet (free, bland, pasty and liquid), the Kruskal-Wallis test was used. For the comparison of attributes between salt and unsalted diet, the Mann-Whitney test was used. For both analyzes, a p<0.05 value was considered significant. Data analysis was performed using Stata 12.0 software.

Figure 1. Satisfaction questionnaire answered by patients. Goiania-GO, 2018






Satisfaction survey on meals

Bed: _____ Age: _____ Gender: Male () Female ()






Type of Diet: _____ Admission date: ____/____/____

Mark an (x) in the face that corresponds to your opinion about the meal offered at today's lunch:






1 APPEARANCE

				
VERY DISSATISFIED ()	DISSATISFIED ()	INDIFFERENT ()	SATISFIED ()	VERY SATISFIED ()






2 ODOR/SMELL

				
VERY DISSATISFIED ()	DISSATISFIED ()	INDIFFERENT ()	SATISFIED ()	VERY SATISFIED ()






3 FLAVOR/SEASONING

				
VERY DISSATISFIED ()	DISSATISFIED ()	INDIFFERENT ()	SATISFIED ()	VERY SATISFIED ()

4 TEMPERATURE

				
VERY DISSATISFIED ()	DISSATISFIED ()	INDIFFERENT ()	SATISFIED ()	VERY SATISFIED ()

5 QUANTITY

				
VERY DISSATISFIED ()	DISSATISFIED ()	INDIFFERENT ()	SATISFIED ()	VERY SATISFIED ()

RESULTS

The sample consisted of 212 questionnaires, answered over the ten days of data collection, with an average of 20 questionnaires answered per day. Most were answered by males (n = 110) and the others by females (n = 102).

For data analysis, the diets were separated into free, bland, pasty and liquid, with salt and without salt, in order to make the analyzes possible, respecting the standardization of the hospital diets.

According to the comparison between the averages, the free and pasty diets showed significant difference in relation to the “odor / smell” attribute, with p value = 0.033, ie, less than 0.05 (Table 1).

When analyzing the sensory attributes of all diets, it was noted that the average ranged from 3.5 to 4.4. The lowest average corresponds to the sensory attributes “appearance” and “odor / smell” found in the liquid diet; and the highest average corresponds to the item “quantity offered” found in the free diet, as described in table1.

Data analysis, which compared salt and unsalted diets using the Mann-Whitney test, showed that there was a significant difference in relation to the flavor / spice attribute, with p = 0.035, less than 0.05, as observed in table 2. The sensory aspects analyzed in all diets present averages greater than or equal to 4.0, except for the sensory attribute “taste / spice of the unsalted diet”, which averaged 3.7 (table 2).

It is observed that the attribute “quantity offered” was well evaluated in both analyses, with an average greater than 4.0 (tables 1 and 2).

DISCUSSION

Patient satisfaction with the hospital diet is known to be largely associated with the sensory quality of the meals offered. Given this, a challenge is posed for nutritionists, who must respect the proposals of dietary prescription and at the same time offer an attractive and tasty meal.^{14,15} This challenge can be met when it is combined with hospital gastronomy, which is based on offering a balanced diet, giving back the pleasure and satisfaction that eating can offer.¹⁵

Considering the standard deviation of the attributes evaluated in the analyzed diets, as shown in table 1, most reached the average 4.0, which means satisfaction with the diet offered. By analyzing each attribute separately, the appearance averaged over 4.0 for the free, bland and pasty diets, showing that patients are satisfied.

In the study by D ‘Agostini & Vieira,² the attribute “appearance” for the free and hypo-sodic diets presented 69.3% of satisfactory responses, which may be justified by the way the meal was organized in the dishes.² In the study by Colôço, Holanda & Porteiro-McIelllan,⁵ the “appearance” attribute obtained a lower degree of satisfaction for the bland diet, which was also found in Lages, Ribeiro & Soares¹⁴ for the pasty diet - dissatisfaction that may be characterized by the presence of purée, shredded meat and broth.⁵

In the study by Lages, Ribeiro & Soares,¹⁴ after making use of hospital gastronomy with purée decoration techniques, that previously were object of dissatisfaction on the part of pa-

Table 1. Mean and standard deviation of grades by type of diet assigned by patients Goiania-GO, 2018

Attributes	Diets				P value*
	Free N=100	Bland N=65	Pasty N=45	Liquid N=2	
Appearance	4.2 ± 0.7	4.2 ± 0.6	4.1 ± 0.7	3.5 ± 0.7	0.401
Odor / smell	4.2 ± 0.6	4.0 ± 0.7	3.9 ± 0.7	3.5 ± 0.7	0.033
Flavor / seasoning	3.9 ± 0.8	4.0 ± 0.7	3.7 ± 0.8	4.0 ± 0.0	0.436
Temperature	4.0 ± 0.8	4.1 ± 0.6	3.9 ± 0.8	4.0 ± 1.4	0.438
Quantity	4.4 ± 0.7	4.2 ± 0.7	4.3 ± 0.6	4.0 ± 0.0	0.404

*Kruskal-Wallis test

Table 2. Mean and standard deviation of grades of diets with and without salt assigned by patients. Goiania-GO, 2018

Attributes	Diets		p Value*
	With salt N=168	Without salt N=44	
Appearance	4.2 ± 0.7	4.1 ± 0.6	0.168
Odor/ smell	4.1 ± 0.7	4.0 ± 0.6	0.208
Flavor/ seasoning	4.0 ± 0.8	3.7 ± 0.7	0.035
Temperature	4.0 ± 0.8	4.0 ± 0.6	0.243
Quantity	4.3 ± 0.7	4.2 ± 0.6	0.098

*Mann-Whitney test

tients, the authors realized that the change was satisfactory, and positive feedback from the patients was obtained.

In this research, the liquid diet had significant difference, with an average of less than 4.0 for the sensory attributes “odor / smell” and “appearance”; however, no data were found in the literature that showed this difference. Garcia’s research¹⁶ described that the doctor reported the opinions given by patients about the soup, summarized as “weak”, “mild” and “sick people’s food”.

The attribute “temperature” presented average above 4.0, suggesting that the patients are satisfied. This understanding was also seen in the studies by D’Agostini & Vieira,² which obtained a positive response percentage of 82.7%, and in the study by Quintaes & Alves,⁴ according to which, after changing the packaging material in which the meals were placed (formerly aluminum and replaced with polypropylene), the bean temperature was maintained, which shows that material changes contribute to patient satisfaction.

In the present study, the appropriate temperature in meal distribution can be explained by the mixed-type distribution system, whereby meals are produced and portioned in thermal trays within the unit, packaged in trolleys and then distributed to patients. In the study by Bopsin, Bassani, Riella & Antunes,³ it was observed that temperature caused a decrease in satisfaction, even after the acquisition of thermal trolleys.

For the “quantity offered” item, the study by D’Agostini & Vieira² showed a percentage between 71.4% to 80% for satisfactory and sufficient, as well as in the studies by Coloço, Holanda & Portero-McLellan,⁵ which corroborated the findings of the present research.

In the study by Lages, Ribeiro & Soares,¹⁴ the item “quantity” had a negative influence on satisfaction, as it was found that the portion size was inadequate. With the help of hospital gastronomy, the quantity was revised and proposals for applications of culinary techniques were made.

And last but not least, the “flavor / seasoning” attribute was analyzed separately in salt and unsalted (hyposodic) diets. According to table 2, the unsalted diet obtained an average of less than 4.0, ie, did not reach the satisfaction criterion. These findings were also seen in the studies by D’Agostini & Vieira,² Coloço, Holanda & Portero-McLellan,⁵ Demário, Sousa & Salles,⁷ Lages, Ribeiro & Soares,¹⁴ Cruz & Melleiro,¹⁷ this being a factor responsible for the low satisfaction with the meal offered.

In the study unit, of the preparations that make up the hyposodic diets, only the protein dish is seasoned with salt, and the garnishes are seasoned with aromatic herbs; the others do not carry any kind of seasoning. To increase the consumption of salt-restricted diets, some strategies may be used, such as dietary personalization to bring the hospital diet closer to the patient’s eating habits. Another strategy that can be incorporated is the correct use of condiments and herbs, and combinations of various ingredients to make the food more palatable.^{14,18,19}

However, different results were found in the study by Verreguia & Sousa,¹⁸ in which the hyposodic diet was well evaluated and had a pleasant taste. These findings explain that the unsalted diet is being incorporated into patients’ eating habits and that the use of herbs is being introduced; or that there may be an awareness that too much salt is harmful to health.¹⁸

CONCLUSION

This research work showed that patients’ satisfaction regarding the hospital diets offered in the study hospital was positive, and that there is a concern that goes beyond offering a safe food.

It is worth remembering, however, that the liquid diet and those with salt restriction need to be improved, and that hospital gastronomy is a great ally of nutritionists to achieve this satisfaction. Another strategy is to perform individual adaptations, so that the patient is seen as a “person”, who has participation and autonomy in food choices, whenever possible.^{19,20}

It is known that professionals involved in hospital nutrition usually have a reduced number of collaborators, which ends up overloading and making some necessary actions unfeasible, such as tasting tests on small samples, improvement of culinary techniques, implementation of hospital gastronomy itself and monthly meetings of production nutritionists with those of the clinic.^{20,21} In this sense, research aimed at evaluating patients’ satisfaction with diets should be stimulated.

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Contributors

Mendes MSA worked at all stages from study design to revision of the final version of the article. Machado CCB worked at all stages from study design to revision of the final version of the article. Abreu VS worked at all stages from study design to revision of the final version of the article.

Conflict of Interest: The authors declare no conflict of interest.

Received: December 21, 2018

Revised: March 30, 2019

Accepted: April 24, 2019