

SURVEY OF PATIENTS' PERCEPTION OF HOSPITAL FOOD SERVICES AT AFIC – NIHD RAWALPINDI

Maryam Zahid, Sabeen Khushid Zaidi, Shahab Naqvi, Sana Iqbal, Bilal Maqsood, Afsheen Iqbal

Armed Forces Institute of Cardiology/National Institute of Heart Diseases Rawalpindi

ABSTRACT

Objective: To determine the satisfaction level of patients towards the food quality.

Study Design: Descriptive cross-sectional study.

Place and Duration of Study: This study was carried out at Armed Forces Institute of Cardiology in Rawalpindi Pakistan from 3rd Nov 2014 – 30th Jan 2015.

Material and Methods: A pretested questionnaire was used to determine the patients' satisfaction level and perception towards food quality at a 250 bedded tertiary cardiac care hospital. Patients were selected through non probability convenience sampling. Demographic data was also collected for all patients. Data was entered and analyzed in IBM SPSS Statistics 21 (statistical package for social sciences).

Results: Question responses were coded on a scale of 1-5, representing the Likert Scale on the survey (Excellent=5, Good=4, Satisfactory=3, ordinary=2, Unacceptable=1). The Cronbach alpha coefficient for the 13 questions was .86 (>0.7), suggesting that the items have relatively high internal consistency. The overall rating for food quality was fairly high i.e. 4.4. The rating of food's temperature that is hot food's temperature was 3.7 and cold food temperature was 3.9.

Conclusion: The results show that patients' perception towards overall food service system was above average whereas improvement should be made in maintaining food temperatures. Patients' suggestions regarding the betterment of foodservice will be helpful in making decisions for continual improvement of hospital food services.

Keywords: Hospital food service, Continual improvement, Patient satisfaction.

INTRODUCTION

Every hospital has an obligation to provide the highest level of care possible for their patients and this includes the quality and nutritional value of the food that is served and eaten¹. Nutritional status in hospital inpatients has been the objective of many studies².

The food and nutrition service is often considered as an underestimated support service³.

Quality of hospital food services has a major role in the patients' discernment of the hospitalization experience⁴.

Food safety is increasingly important in hospital foodservice operations. A Hazard Analysis Critical Control Point (HACCP) program should be in place throughout the entire foodservice system. HACCP programs includes controlling hazards in purchase,

receipt of food, storage, preparation, cooking, cooling, hot holding, reheating, chilled storage and service. Production equipment sanitation, personal hygiene; training and pest control are also monitored in HACCP program. The survey of food and nutritional care from the patients' perspective is essential for the delivery of good quality hospital services. This enables benchmarking for continual improvement by implementing necessary changes⁵. This particular survey was carried out at a tertiary cardiac care center to determine the perception of inpatients towards food quality.

PATIENTS AND METHODS

This cross-sectional study was carried out at Armed Forces Institute of Cardiology in Rawalpindi Pakistan from 3rd Nov 2014 – 30th Jan 2015. AFIC-NIHD is a 250 bedded hospital comprising of both critical and non critical wards.

The survey was one page long with 13 questions and required 4-5 minutes to complete. 80 Patients were selected through non probability convenient sampling. Demographic

Correspondence: Dr Maryam Zahid, Clinical Dietician, AFIC/NIHD Rawalpindi
Email: maryamzahid343@gmail.com

data was also collected for all patients including: age and sex.

The target population consisted of inpatients served by the foodservice department during a minimum two-day stay at AFIC-NIHD.

If patients did not wish to participate in the study, a blank survey was returned. Subjects with an NPO diet order or those receiving enteral or parenteral nutrition were

software computer program. Frequencies and percentages were calculated for qualitative variables while mean and standard deviation (SD) were calculated for numeric variables. Reliability analysis for the 13 items in the questionnaire was carried out using Cronbach alpha coefficient with a value of >0.7 as acceptable. Correlations between various determinants and over-all satisfaction towards food quality were analyzed by the Chi square

Table-1: Responses of patients on hospital food quality likert scale on the survey (Excellent=5, Good=4, Satisfactory=3, Ordinary=2, Unacceptable=1).

Attributes	n	Minimum	Maximum	Mean	Disclosure
Meal Tray Appearance	80	2.00	5.00	4.3000	-
Taste of the food	80	2.00	5.00	4.3125	-
Quantity of the food	80	2.00	5.00	4.2625	-
Food easy to chew	80	2.00	5.00	4.2375	-
Food's smell	79	1.00	5.00	4.0759	1
Temperature maintenance of hot food's	80	1.00	5.00	3.7375	-
Temperature maintenance of cold food's	77	2.00	5.00	3.9481	3
Variety of food items	80	2.00	5.00	4.2750	-
Punctuality of food serving	80	2.00	5.00	4.5000	-
Availability of utensils	80	2.00	5.00	4.2875	-
Cleanliness of utensils	80	3.00	5.00	4.3500	-
Hygiene of delivery staff	80	3.00	5.00	4.3625	-
Overall rating of food quality	80	3.00	5.00	4.4250	-

Tabl- 2: Associations of various determinants with overall food quality rating.

Determinants		Number	p-value *
Gender	Males	62 (77.5%)	.479
	Females	18 (22.5%)	
Age	<20	8 (10%)	.116
	21-35	11(14%)	
	36-50	14 (18%)	
	51-65	32 (40%)	
	>66	15 (19%)	
Wards	Critical	33 (41%)	.175
	Non-Critical	47 (59%)	

*Chi square test

excluded and patients who were visually or physically impaired and could not complete the survey independently were offered assistance.

Question responses were coded on a scale of 1-5, representing the Likert Scale on the survey (Excellent=5, Good=4, Satisfactory=3, ordinary=2, Unacceptable=1).The data was entered and analyzed in SPSS version 21

test. $p < 0.05$ was considered statistically significant.

RESULTS

A total number 80 patients participated in the study. 78% (n=62) of our sample were males whereas 22% (n =18) were Females. Mean age of respondents was 49 years ranging from 23-80

years. 41% (n =33) of the patients were admitted in critical wards inclusive of adult ITC, adult surgical High dependency Unit (HDU) and two Coronary Care Units (CCUs). 59% (n:=47) of the patients were admitted in non- critical wards.

The Cronbach alpha coefficient for the 13 questions was 0.86 (>0.7), suggesting that the items have relatively high internal consistency. Question responses were coded on a scale of 1-5, representing the Likert Scale on the survey (Excellent=5, Good=4, Satisfactory=3, ordinary=2, Unacceptable=1)

The overall rating for food quality was fairly high i.e. 4.4. The rating of food's temperature was low, for hot food's temperature 3.7 and cold food temperature 3.9 as shown in Table-1.

There was no statistical significance between overall food service rating with age, gender and wards as shown in Table-2.

According to the response of 49% (n=39) of the patients, meal tray appearance was good. 45% (n=36) of the respondents perceived food's taste was good whereas 10% (n=8)perceived it was satisfactory. 72% (n=58)respondents perceived that the food was easy to chew whereas 8% (n=7) of the patients perceived that they had difficulty in chewing the food. 38% (n=30) of the respondents rated the temperature of hot food was good. As shown in Table-3, 49% (n=39) of the patients perceived overall rating of food service quality as excellent, 45% (n=36)rated it was good whereas 6% (n=5)rated it as satisfactory shown in Table-3.

DISCUSSION

The quality of hospital foodservices is an essential component of health care quality perceived by patients. Most studies on the quality of hospital foodservice have been carried out in North America and Europe where patient satisfaction scores were usually high with some differences among hospitals related to different methods of food delivery⁶. The satisfaction scores in our pilot survey were fairly high with a mean score of over all food quality rating of 4.4. Surveys are a beneficial method for evaluating the ways in which patients view the food services provided by

hospitals. They provide a feedback mechanism for continuing the quality assurance process allowing the hospital administration and clinical services to delineate areas that require modification. Dietitians in the hospital setting need to emphasize on specific aspects related to the choice of food for a specific cohort of patients and how food is presented. In a study by O Hara et al, most geriatric patients had a

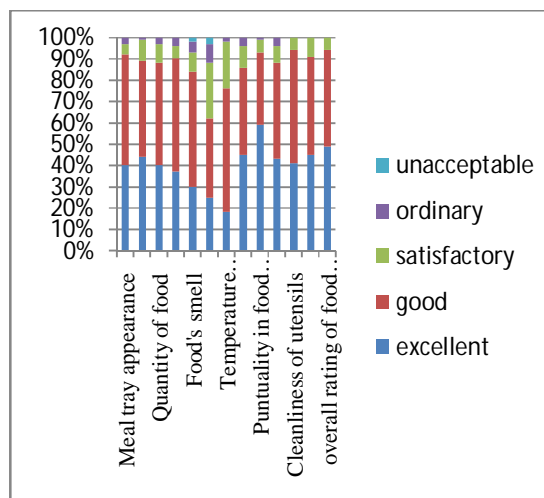


Figure-1: Distribution of patient responses towards hospital food quality.

positive perception of the quality and quantity of food and foodservices at a rehabilitation hospital and satisfaction with presentation of meal was the key predictor of overall satisfaction. Taste and temperature of food predicted whether patients had high levels of satisfaction towards food quality⁷. In our survey the temperature of food was one of the main areas requiring improvement having relatively lower mean scores for satisfaction on the Likert scale of Less than 4 as compared to other areas.

Most studies have utilized quantitative tools such as questionnaires and some were validated with Cronbach's α for internal consistency like our survey⁶. In another survey carried out in an acute care hospital by Wright et al foodservice satisfaction was strongly associated with taste, temperature and food variety. Older patients rated their overall satisfaction significantly lower than younger patients⁸. In contrast, age was not a significant determinant of satisfaction towards overall

quality of food (p value=0.116) in our study. In a cross-sectional study conducted in a Public Hospital in Spain, the meal's taste and temperature were significant determinants of patients' satisfaction with food quality⁹. Comparatively in Iranian hospitals, the problem areas requiring improvement included food quality and quantity, staff attitudes and meal presentation¹⁰. The minimal rating for two very important aspects of food quality; cleanliness of utensils, an essential of meal presentation and hygiene of delivery staff was satisfactory with no unacceptable responses.

In a study carried out in a military hospital providing tertiary health care service, the results showed that patient-specific demographic characteristics were insignificant in explaining satisfaction level with food services, but the variables of taste and appearance of the food were statistically significant and important determinants of patient satisfaction with the foods served at the hospital¹¹. A study identified themes in patient-written comments about meals served in a hospital and determined the relationship of those themes to patient food-quality satisfaction ratings retrospectively. Results indicated that patient satisfaction with food quality was not affected by age or gender but did differ based on length of stay and overall food quality rating was determined by food-related comments¹². Gender was not a significant determinant of satisfaction with over-all food quality in our survey.

In two London teaching hospitals most patients were satisfied with the quality of the meals, which met their expectations with almost 50% of the patients reporting feeling hungry and identifying difficulties in accessing food with menus not enabling informed decisions and having physical barriers like uncomfortable position to eat and staff interrupting during mealtimes¹³. This aspect was not determined in our survey.

Although a limitation of our survey was the small convenience sample however, our findings are important and as far as the literature review showed, no previously

published study has been conducted on patient preferences across food service features or their relationship to overall foodservice satisfaction in the tertiary cardiac set-up in Pakistan.

CONCLUSION

The results show that patients' perception about the overall food service system was above average whereas improvement should be made in temperature maintenance of hospital food. This foodservice instrument provides detailed patient feedback on food quality. Patients' suggestions regarding the betterment of foodservice will be helpful in making decisions for continual improvement of hospital food services. The results can also be used in benchmarking the hospital's food services quality with other hospitals.

Conflict of Interest

This study has no conflict of interest to declare by any author.

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