

A Descriptive Cross – Sectional Study on Patient Satisfaction regarding Dietary Services at one of the tertiary care centers in Nepal

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Abstract

Background: The quality and service of the food has a significant impact on the health and happiness of the patient and the patient's family because of the importance of food in our daily lives. Nutritional intake is one of the critical elements in the recovery of the patient making the study of healthcare food service of great value. **Objectives:** To identify the level of satisfaction of patients regarding dietary services and to identify the components of dietary services which require improvement. **Methods:** A total of five hundred (500) in-patients were included in the study. A descriptive cross-sectional approach was adopted, including collection of information from patients through a pre-tested structured questionnaire. Based on the objectives the data was analyzed using simple statistical tools such as frequency, mode and percentage. **Results:** A good satisfaction level regarding dietary services was found among 312 (62.4%) respondents, 188 (37.6%) respondents had an average satisfaction level and none of the respondents had a poor satisfaction level. The parameters of Dietary Services which were identified as requiring improvement were: 'Covering of food while being served', 'Provision of snacks between meals', 'Consideration about likes and dislikes about food' and 'Being spoken to about dietary needs'. **Conclusion:** This study concluded that the training of food service employees and improvement in certain parameters of dietary services is needed to further improve satisfaction of patients.

Key words: Patient Satisfaction, Dietary Services, Food service employees.

Introduction

Satisfaction can be defined as the extent of an individual's experience compared to their expectations. The concept of patient satisfaction is an emerging one and has developed over the years as an important variable in medical care. Patient satisfaction assessments are required by accrediting agencies and are used by hospitals for internal and external benchmarking. Overall patient satisfaction within an inpatient hospital experience is influenced by several domains which includes satisfaction with the foodservice.² The goals of hospital foodservice are to provide inpatients with nutritious meals to support their recovery in addition to presenting them with a nutritional model tailored to their specific health conditions.³ Additionally, the organization of food provision in hospital could harm patients' food intake and nutritional status due to patients' dissatisfaction with hospital meals, missed diagnoses due to inaccurate nutritional screenings and assessments, and the lack of training and hospital staff awareness.⁹

In healthcare settings, foodservice encompasses both tangible and intangible aspects; quality improvement for foodservice should involve various components including menu items, quantities of food, tray presentation, sanitation, and service. It has been reported that in-patients evaluate foodservice quality based on various factors including taste, nutrition, sanitation, temperature, portion size, mealtime, and servers' attitudes.³ A good quality food improves the medical conditions by providing nutrition, besides, could also uplift the patient's frame of mind which again positively boost the impacts of therapeutics. Contrarily, under-nutritious food could increase the severity of disease and prolong the healing course of the patient.⁴ Numerous studies have spotlighted the significance of food quality as an influential factor in shaping patient foodservice satisfaction. Researchers have consistently underscored the pivotal role played by the quality of food in determining how satisfied patients are with the overall foodservice experience.¹

Patient satisfaction is vital to health care systems. Patient perception about healthcare system seems to have been largely ignored by the healthcare managers in developing countries.⁶ Determining patients' satisfaction is one way of measuring hospital service quality with the food service delivered in the hospital; one of the important items perceived by patients regarding health care services.¹⁰ Hence, the aim of this study was to identify the level of satisfaction of patients regarding the dietary services and identifying the components of dietary services which require improvement.

The objectives of the current study were:

1. To identify the level of satisfaction of patients regarding dietary services.
2. To identify components of dietary services which require improvement.

Methods

The study was conducted in one of the tertiary care center in Nepal, over a period of three months (September to November 2019). The hospital is a teaching hospital and has been a

pioneer in the field of medical education and healthcare. The dietary service of the hospital was started on 9th September 2017 with the objectives of serving appetizing & nourishing meals to the patients by planning and executing suitable, therapeutic, and economical diets.

Procedure

A descriptive cross-sectional with random sampling approach was used and a sample of 500 in-patients admitted in various wards of the hospital was selected for the study. A formal permission was obtained from the institutional review committee of the hospital. Consent was taken from the study participants and a pre-designed, close-ended questionnaire was used to collect collection.

Instrument

The questionnaire contained 15 items (Table 2) assessing the patient's satisfaction with the hospital's dietary services. Specifically, the items evaluated food service, satisfaction with dietary practices, and quality of food. A five-point Likert scale was used ranging from 1 to 5 (*Never to Always*). Therefore, scores could range from 15 to 75 with higher scores representing greater satisfaction with the dietary services.

For the assessment of satisfaction of patients regarding dietary services, a five-point scale was used. Scoring of the responses was done to analyze the satisfaction level of the patients. A score of one, two, three, four and five was given for the response of Never, Rarely, Sometimes, Often and always respectively. The minimum score for each respondent was calculated as fifteen (15) and the maximum score was calculated as seventy-five (75). The satisfaction level was identified by using descriptive statistical methods according to the scores obtained by the respondents.

- A score of fifteen to thirty-five (15 – 35) indicated a poor level of satisfaction.
- A score of thirty-six to fifty-five (36 – 55) indicated an average level of satisfaction.
- A score of fifty-six to seventy-five (56 – 75) indicated a good level of satisfaction.

Inclusion Criteria

All patients admitted during the study period and those who were willing to participate in the study.

Exclusion Criteria

1. Patients who were on nothing per oral were excluded from the study, which could impact the generalizability of the findings to this population.
2. Critical care patients were also excluded, potentially omitting a significant segment of the hospital population that might have different dietary needs and satisfaction levels.
3. Patients who were unwilling to participate, which may introduce selection bias and affect the representativeness of the sample and
4. Patients with mental abnormalities were excluded, meaning the study's findings might not apply to individuals with mental health conditions who could have unique dietary requirements and perceptions.

Statistical Analyses

The data collected was analyzed by using descriptive statistical method to describe sample characteristics in terms of frequency, mode, and percentage.

Results

Assessment of the data revealed that, of the total 500 (100%) respondents, 255 (51%) were male and 245 (49%) were female. Most of the respondents, 186 (37.2%) were aged between 26 – 35 years. The education level of 411 (82.2%) respondents was School Leaving Certificate (SLC) and below and only 1 (0.2%) respondent was a graduate. Most of the patients, 269 (53.8%) had stayed in the hospital for 4 – 7 days. From the various types of diets that were provided to the patients, a normal diet was provided to 209 (41.8%), followed by other diets provided to 108 (21.6%) respondents. (Table 1)

Food Service

As shown in Table 2, 476 (95.2%) respondents stated the meals were always provided on time, while 24 (4.8%) said never; 339 (67.8%) respondents said the food service employees were always polite and 134 (26.8%), 24 (4.8%) and 2(0.4%) responded to often, sometimes and rarely respectively, while only 1 (0.2%) responded they were never polite. Regarding the covering of food while being served, 499 (99.8%) respondents said that the food was never covered whereas only 1 (0.2%) responded to rarely; 341 (68.2%) respondents said that the food service staff always wore gloves and a cap while serving food while 153 (30.6%), 4 (0.8%), 2 (0.4%) responded to often, sometimes and never respectively. In relation to the cleanliness of the trolley and plates, 332 (66.4%) respondents said that they were always clean, 156 (31.2%) said they were often clean, 11 (2.2%) said they were clean sometimes while only 1 (0.2%) said they were never clean.

Table 1: Distribution of Patients According to their Profile (n=500)

Sl. No.	Variables	Frequency (f)	Percentage (%)
1.	Gender		
	Male	255	51%
	Female	245	49%
2.	Age (Years)		
	16-25	100	20%
	26-35	186	37.2%
	36-45	131	26.2%
	More than 45	83	16.6%
3.	Education Level		
	S.L.C. and below	411	82.2%
	Diploma	45	9%
	Pre-University College	43	8.6%
	Graduate	1	0.2%
4.	Length of stay		
	3 days	111	22.2%
	4- 7 days	269	53.8%
	More than a week	120	24%
5.	Type of diet provided		
	Normal diet	209	41.8%
	Diabetic diet	71	14.2%
	Low salt diet	87	17.4%
	Low fat diet	25	5%
	Other diet	108	21.6%

Source: Primary Survey

Dietary Practices

The assessment questions regarding satisfaction with dietary practices revealed 326 (65.2%) respondents always received enough food while 119 (23.8%), 43 (8.6%), 11 (2.2%) and 1 (0.2%) responded to often, sometimes, rarely and never respectively; 464 (92.8%) respondents never received snacks between meals whereas 36 (7.2%) received snacks rarely; 436 (87.2%) respondents were never given consideration for their likes and dislikes about food while 36 (12.2%) were rarely given consideration and 1 (0.2%) each responded to sometimes, often and always; regarding serving of a variety of food, 412 (82.4%) respondents they were always served a variety while 83 (16.6%), 4 (0.8%) and 1(0.2%) responded to often, sometimes and rarely respectively; and 368 (73.6%) respondents were never spoken to about their dietary needs whereas 124 (24.8%) were spoken to rarely, 7 (1.4%) were spoken to sometimes while only 1 (0.2%) was spoken to often about their dietary needs.

Quality of Food

The assessment questions regarding quality of food indicated 455 (91%) respondents felt the temperature of food when served was always appropriate, 41 (8.2%) said it was often appropriate, 3 (0.6%) said it was appropriate sometimes and 1 (0.2%) said it was never served at appropriate temperature; regarding the food being cooked, 368 (73.6%) respondents said it was always well cooked, 123 (24.6%) said it was often well cooked, 7 (1.4%) said it was well cooked sometimes and 1 (0.2%) each said it was rarely and never well cooked; 315 (63%) respondents said that the food always tasted nice while 134 (26.8%), 49 (9.8%) responded often and sometimes respectively whereas only 1 (0.2%) each responded to rarely and never; 322 (64.4%) respondents said that the food was always appealing, 159 (31.8%) said it was often appealing, 14 (2.8%) said it was appealing sometimes and 5 (1%) said it was rarely appealing; regarding the smell of the food, 379 (75.8%) respondents said that the food always had a nice smell, 113 (22.6%) said it often had a nice smell, 7 (1.4%) responded sometimes and only 1 (0.2%) responded that the food rarely had a nice smell.

Table 2: Patient Responses regarding Dietary Services (n = 500)

Responses Questions	Never N (%)	Rarely N (%)	Sometimes N (%)	Often N (%)	Always N (%)	Total N (%)
Assessment questions on Food service						
Are the meals provided on time?	0 (0%)	0 (0%)	0 (0%)	24 (4.8%)	476 (95.2%)	500 (100%)
Are the food service employees polite?	1 (0.2%)	2 (0.4%)	24 (4.8%)	134 (26.8%)	339 (67.8%)	500 (100%)
Is the food covered while being served?	499 (99.8%)	1 (0.2%)	0 (0%)	0 (0%)	0 (0%)	500 (100%)
Does the food service staff wear gloves and cap during serving of food?	2 (0.4%)	0 (0%)	4 (0.8%)	153 (30.6%)	341 (68.2%)	500 (100%)
Are the food service trolley and plates clean?	1 (0.2%)	0 (0%)	11 (2.2%)	156 (31.2%)	332 (66.4%)	500 (100%)
Assessment questions on Satisfaction with the Dietary Practices						
Do you receive enough food?	1 (0.2%)	11 (2.2%)	43 (8.6%)	119 (23.8%)	326 (65.2%)	500 (100%)
Are snacks available between meal times?	464 (92.8%)	36 (7.2%)	0 (0%)	0 (0%)	0 (0%)	500 (100%)
Are your likes and dislikes about food given consideration?	436 (87.2%)	36 (12.2%)	1 (0.2%)	1 (0.2%)	1 (0.2%)	500 (100%)
Is there enough variety of food served?	0 (0%)	1 (0.2%)	4 (0.8%)	83 (16.6%)	412 (82.4%)	500 (100%)
Have you been spoken to about your dietary needs?	368 (73.6%)	124 (24.8%)	7 (1.4%)	1 (0.2%)	0 (0%)	500 (100%)
Assessment questions on Quality of Food						
Is the food served at appropriate temperature?	1 (0.2%)	0 (0%)	3 (0.6%)	41 (8.2%)	455 (91%)	500 (100%)
Is the food well cooked?	1 (0.2%)	1 (0.2%)	7 (1.4%)	123 (24.6%)	368 (73.6%)	500 (100%)
Does the food taste nice?	1 (0.2%)	1 (0.2%)	49 (9.8%)	134 (26.8%)	315 (63%)	500 (100%)
Is the food appealing?	0 (0%)	5 (1%)	14 (2.8%)	159 (31.8%)	322 (64.4%)	500 (100%)
Does the food smell nice?	0 (0%)	1 (0.2%)	7 (1.4%)	113 (22.6%)	379 (75.8%)	500 (100%)

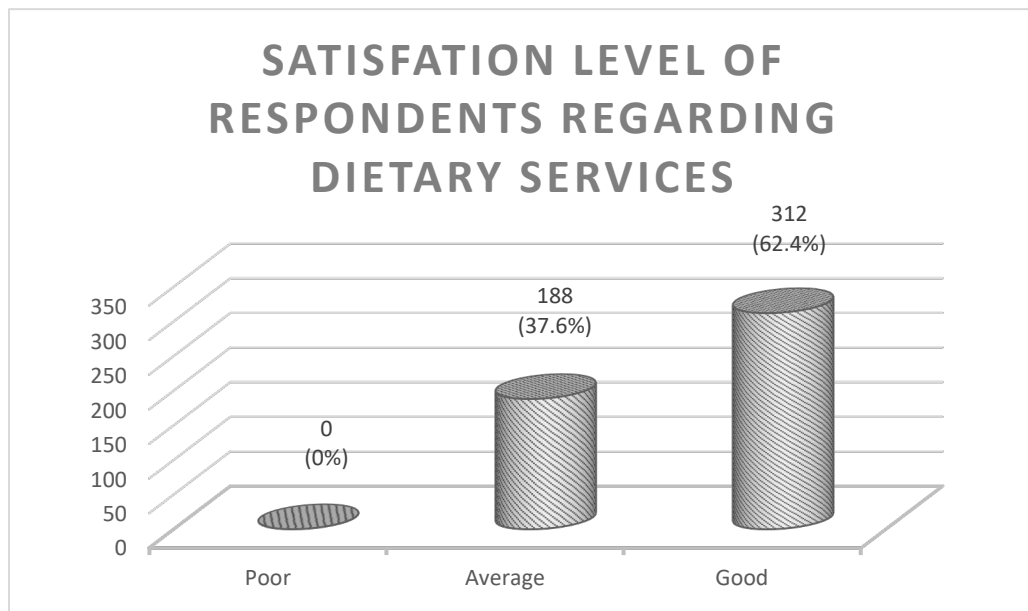
Source: Primary Survey

On calculating the mode value for each assessment question, the items which received the lowest value (i.e., 1) were: covering of food while being served, provision of snacks between mealtimes, consideration given to likes and dislikes about food, and being spoken to about dietary needs.

The items that received the highest mode value (i.e., 5) were: timely provision of meals, politeness of food service employees, wearing of gloves and caps by food service employees, cleanliness of food service trolley and plates, receiving enough food, serving of variety of food, temperature of food, well cooked food, taste of food, appeal of food and the smell of food.

Figure 1 depicts the satisfaction level of patients regarding dietary services, and it is noticed that, out of five hundred (500) respondents, 312 (62.4%) respondents had a good satisfaction level and 188 (37.6%) respondents had an average satisfaction level regarding the dietary services.

Fig 1: Satisfaction Level of Patients regarding Dietary Services



Discussion

Food delivery equipment and products can help improve patient satisfaction and contribute to hospital food service best practices. Thus, our study aimed to assess the in-patient hospital meals related to the satisfaction rate perceived by participants on different aspects of hospital food and food services in Nepal Mediciti Hospital, Bhaishepati, Lalitpur, Nepal. We found that the higher percentage of patient satisfaction was with food quantity, timing, temperature of food and presentation. Our results were in line with the findings reported by Malikah Al Shemmery a, Abdullah Hakami et al., 2024. Also, The parameters of dietary services viz. ‘Covering of food while being served’, ‘Provision of snacks between meals’, ‘Consideration about likes and dislikes about food’ and ‘Being spoken to about dietary needs’ were identified as requiring improvement.¹¹ Also, our finding is in contrast to those of a study in Zambia by Nixon Miyoba

and Irene Ogada, 2019, reported that most of the patients were pleased with the variety of hospital meals.³

Our findings indicated according to 499 (99.8%) respondents, the food was never covered because the Hospital followed a bulk trolley system of catering food. Bulk trolleys are used to ensure the food is kept warm and plates remain hygienic. Food service dimensions such as food quality, meal service quality, staff service issues, and physical environment were found to be significantly correlated with patients' overall satisfaction with a bulk trolley system in a government hospital in Malaysia as 91% respondents received warm food during their stay in Hospital.⁸

The satisfaction level of patients with the dietary services was good for 312 (62.4%) respondents and average for 188 (37.6%) respondents. Similar results were observed by Ajaz Mustafa, Haroon Rashid et al., 2008 in their study conducted at Sheri Kashmir Institute of Medical Sciences, Srinagar, Jammu and Kashmir where the study revealed that overall satisfaction with all the aspects of the food served was satisfactory (69.85% rated food services "Good".⁶ In another study conducted by Abdel Hafez M. Amany, Lina Al Qurashi et al., 2012, it was observed that 78.8% of patients were satisfied overall with quality of food services in hospitals and the three variables that had the strongest correlation with overall satisfaction were the taste of foods, being served with the favorite food and food appearance.⁷ Which is similar to our study findings where food temperature, varieties of food served and smell of food served were highly correlated with overall satisfaction.

In another study by Arora, M., Thakur, S., & Gupta, R., 2022, mentioned that because of varying life style, expectation, food preferences, patients of different age group have disparity in choices of food type and taste that might be major factor in the observed variation in satisfaction with food. Though, there are studies showing no association of age with dietary satisfaction, age of patients must be considered while providing the dietary services since it could greatly and positively impact their satisfaction with food.⁴

Recommendations

To improve patient satisfaction in a hospital, several administrative measures are recommended. Firstly, develop and regularly review comprehensive policies and standard operating procedures for dietary services to ensure consistency and quality. Provide in-service training to staff to foster courteous behavior, empathy, and effective communication skills, enhancing both extrinsic and intrinsic motivation. Consider patients' likes and dislikes regarding food, counseling them when preferences cannot be met. Counsel patients on their dietary needs upon discharge to promote continued adherence to health guidelines. Implement a plate system using food-grade plastic or disposable plates to maintain hygiene. Schedule meal delivery to meet caloric needs without causing hunger between meals, using a frequent meal delivery system. Maintain strict hygiene during food preparation, handling, and serving, especially for vulnerable groups. Regularly re-evaluate the program using questionnaires to ensure it remains aligned with patient needs and expectations, ultimately enhancing patient satisfaction and care quality.

Conclusion

Based on the findings of the study it is concluded that, Patients' overall satisfaction level is good viz. out of 500 respondents 312 (62.4%) patients are satisfied with the services and 188 (37.6%) patients were having average satisfaction level. Further the study reveals that, the Dietary Service parameters such as 'Covering of food while being served', 'Provision of snacks between meals', Likes and dislikes about food' and 'Diet Counseling' require immediate improvement, since they are an significant integral part of the dietary services.

Limitations

There is a probability of biased responses from the patients, as personal preferences and subjective experiences can influence their feedback. These limitations should be considered when interpreting the study's results and applying them to broader contexts. Further, the data has been analyzed using descriptive statistical analysis, using inferential statistics (e.g., chi-square tests of independence, independent t-tests, one-way ANOVAs, etc.) could have been used to better examine the data for wider impact of this study.

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