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STUDY OF PATIENT SATISFACTION WITH HOSPITAL CATERING SERVICES IN A GOVERNMENT TERTIARY CARE TEACHING HOSPITAL, LUCKNOW, UTTAR PRADESH

Public Health

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ABSTRACT

Background: The goals of a hospital food service are to provide inpatients with nutritious meals that are beneficial for their recovery and health. Foodservice quality influences patient satisfaction with hospital stay. It is widely recognized that food and other aspects of food service delivery are important elements in patient's hospital experience and that healthcare teams have a daily commitment to deliver appropriate food to patients. Provision of a food service that meets but also exceeds the expectations of the patient is considered essential for a quality service. Accordingly, patient satisfaction with hospital foodservice is multifactorial and can be difficult to assess. **Objective:** The main aim was to "Study of patient satisfaction with hospital catering services in a Government tertiary care teaching hospital, Lucknow, Uttar Pradesh. In order to achieve this aim, the objective identified was to measure and assess patient satisfaction with the food and services in the hospital. **Method:** Face to face interview was conducted and the interview schedule was filled with data collected from Patients who were taking hospital diet. **Result:** The patient's were interviewed to assess their satisfaction with hospital service in relation to consumption of meals served in Breakfast, Lunch and Dinner and response of patients irt food served, Stewart and utensils through an interview schedule. It was also revealed by the study that most of the patients were consuming hospital meal but little improvement is needed in respect to food served.

KEYWORDS

Food service quality, Hospital catering, Logistics, Food cycle, Patient satisfaction.

INTRODUCTION

The Foodservice in hospitals is an essential part of patient care as it helps in fast recovery of patient's. Meals are often the highlight of a patient's day hence the total foodservice provision should aim to provide a healthy, safe and nutritionally balanced diet that meets patient expectations and satisfaction, fulfilling both their physiological and psychological requirements[1]. Hospital foodservice is a complicated process in the hospitality sector with many interrelated factors. The possible delays between production, service, delivery and consumption can be due to presence of hospital wards at considerable distance from kitchen which also adds an additional logistics burden. This stretched, continuous and staggered food cycle has negative effects on the safety and quality of food and presents a challenge to any hospital catering manager[1]. Also the financial constraints of hospital and close economic boundaries of hospital catering, does not always permit the provision of food or service that matches the expectations of patients [2]. Meal consumption by inpatients has direct effect on nutritional status and satisfaction with the food service, along with other factors such as health status, medical conditions, appetite, the eating environment and dentition[3]. Furthermore, foodservice quality influences patient satisfaction with hospital stay. It is widely recognized that food and other aspects of foodservice delivery are important elements in patient's hospital experience and that healthcare teams have a daily commitment to deliver appropriate food to patients. Provision of a foodservice that meets but also exceeds the expectations of the patient is considered essential for a quality service[3]. The quality for hospital foodservice depends on many different features like Hospital menus should be based primarily on clinical needs, as well as on patient's preferences. Other important characteristics such as variety, quality, and taste of food should also be taken into consideration. Moreover, the hospital environment and a positive attitude from the nursing and food service staff are considered in a quality approach to the complex problem of inadequate dietary intakes by many hospital patients. Accordingly, patient satisfaction with hospital food service is multifactorial and can be difficult to assess[3]. The hypothesis of this study is that food service plays greater role in patient's hospital experience. Moreover, by being able to see and smell the food on offer, patients will feel more encouraged to eat and together with increased patient/server interaction will therefore feel better satisfied[1].

MATERIAL AND METHODS

Study Design and Data Collection

This is a descriptive study that was conducted in Gandhi Memorial & associated hospital, King George's Medical University. The sample size for data collection was 400 and duration for data collection was 1 month. The inclusion criteria is Patients who take hospital diet are considered in the study and stayed at least two days in the ward and maximum 30 days and able to give opinion. However, patients who were Nil Orally were excluded and also all Patients admitted in ICU/CCU. The data was analysed with specific characteristics of Age group, Ward, Gender, Resident and Questionnaire on patients satisfaction towards Breakfast, Lunch, Dinner and Response of patient in respect to food served, Stewart and Utensils was also analysed.

There are 6 dimensions in questionnaire as follows: (1) Breakfast (2) Lunch (3) Dinner and (4) Response of patient in respect to food served, (5) Stewart and (6) Utensils. There were 3 questions asked in Breakfast, Lunch and Dinner and 6 questions in response of patient irt food served, 3 questions in response of patient irt Stewart and 3 questions in response of patient irt utensils.

Questions related to Breakfast, Lunch and Dinner were whether they have taken meal and how much, if not then what are the reasons. Questions asked irt food served was related to its presentation, temperature, ingredients, quantity, availability of seasonal fruit and meal pattern. Questions asked irt Stewart were regarding their clean clothes, serving skills and required food given. Questions asked irt utensils were related to cleanliness of plates, trolley & bowls and whether plate size is sufficient and if utensils are chipped or distorted.

To measure satisfaction towards these food service dimensions, a five point Likert scale was used for Response of patient in respect to food served, Stewart and Utensils. The scale was coded as "Always", "Often", "Sometimes", "Rarely" & "Never". The lowest value was coded as "Never". A score was given based on the answer- Never was scored as 0,Rarely as 1, Sometimes as 2, Often as 3 and Always as 4 whereas in question related to if utensils are chipped or distorted the lowest value was coded as "Always" and for questions related to Breakfast , Lunch & Dinner patients answered in yes or no. The List of questions used in the study is presented in Table 1.

Table 1 The Initial Construct Dimensions And Items

Dimension	Items
Breakfast	Have you taken Breakfast
	If yes how much breakfast did you consume [Full, ¾, ½, ¼, Nil]
	What are the reasons for not consuming complete food? [Fasting for investigations, Meal Not provided on time, Constipation, Anorexia/Vomiting, Food was not palatable, I do not have desire to eat food, Not satisfied by the service of Stewart, Not satisfied with cleanliness of utensils, Preferred home food]
Lunch	Have you taken Lunch
	If yes how much lunch did you consume [Full, ¾, ½, ¼, Nil]
	What are the reasons for not consuming complete food? [Fasting for investigations, Meal Not provided on time, Constipation, Anorexia/Vomiting, Food was not palatable, I do not have desire to eat food, Not satisfied by the service of Stewart, Not satisfied with cleanliness of utensils, Preferred home food]
Dinner	Have you taken Dinner
	If yes how much Dinner did you consume [Full, ¾, ½, ¼, Nil]
	What are the reasons for not consuming complete food? [Fasting for investigations, Meal Not provided on time, Constipation, Anorexia/Vomiting, Food was not palatable, I do not have desire to eat food, Not satisfied by the service of Stewart, Not satisfied with cleanliness of utensils, Preferred home food]
Response of patient in respect to food served	Does the served food look presentable?
	Is the food warm enough to be edible?
	Does the food contain proper ingredient (salt/sugar/spicy)?
	Is the food quantity sufficient for you?
	Was the seasonal fruit available or not?
	Are different meals served daily?
Response of patient in respect to Stewart	Does the food serving attendant wear clean clothes?
	Is the food served properly?
	Is the food serving attendant give all the required food?
Response of patient in respect to utensils	Is the plate washed cleanly?
	Is the food serving trolley & bowls are clean?
	Are the plate sizes sufficient or not?
	Are utensils distorted / chipped or stained?

OBSERVATIONS

The data was analysed with specific characteristics of patients or respondents using age group, ward, gender and resident from the sample size of 400.

Table: 2 Socio Demographic Characteristics Of Respondents

Characteristics	Number of Respondents	Percentage of Respondents
1. Age Group		
Children - 8yrs to 16yrs	76	19
Young Adults - 17yrs to 30yrs	65	16.25
Middle Aged Adults - 31yrs to 45yrs	105	26.25
Old Adults - Above 45yrs	154	38.5
Total = 400		
2. Ward		
CLINICAL HAEMATOLOGY	19	4.8
ENDOCRINE	88	22
GANDHI WARD FEMALE	42	10.5
GANDHI WARD MALE	59	14.8
GASTROLOGY WARD	07	1.8
MEDICAL GASTROENTEROLOGY DEPT WARD	10	2.5
PAEDIATRIC ORTHO WARD	10	2.5
PAEDIATRIC WARD	37	9.3
RADIOTHERAPY DEPT FEMALE WARD	46	11.5
RADIOTHERAPY DEPT MALE WARD	54	13.5
SPORTS MEDICINE WARD	04	1
SURGICAL ONCOLOGY WARD	24	6
3. Gender		
Male	222	55.5
Female	178	44.5
4. Resident		
Rural	293	73.3
Urban	107	26.8

RESULTS

Breakfast

Table: 3 Have You Taken Breakfast

Have You taken Breakfast (%)			
Age Group	Yes	No	Total
Children	(90.79)69	(9.21)07	(19)76
Young Adults	(80.00)52	(20.00)13	(16.25) 65
Middle Aged Adults	(80.95)85	(19.05)20	(26.25)105
Old Adults	(91.56)141	(8.44)13	(38.5)154
Total	(86.75)347	(13.25)53	(100) 400

Table: 4 How Much Breakfast Did You Consume

How Much Breakfast Did You Consume (%)					
Age Group	Full	(1/2)	(3/4)	(1/4)	Total
Children	(76.81)53	(13.04)09	(1.45)01	(8.70)06	(19.88)69
Young Adults	(73.08)38	(13.46)07	(3.85)02	(9.62)05	(14.98)52
Middle Aged Adults	(61.18)52	(20.00)17	(10.59)09	(8.24)07	(24.49)85
Old Adults	(58.87)83	(17.02)24	(2.84)04	(21.28)30	(40.63)141
Total	(65.12)226	(16.42)57	(4.61)16	(13.83)48	(100)347

Table: 5 Reason For Not Consuming Breakfast

Reason for not Consuming Breakfast (%)		
Reason for not Consuming Breakfast	YES	NO
Fasting for Investigations	(5.74) 10	(94.25)164
Meal Not Provided on Time	(0.57) 1	(99.42) 173
Constipation	(3.44) 6	(96.55)168
Anorexia/ Vomiting	(17.81)31	(82.18)143
Food was not palatable	(10.91)19	(89.08)155
I do not have desire to eat food	(60.34)105	(39.65) 69
Not satisfied by the service of Stewart	(0) 0	(100)174
Not satisfied with cleanliness of utensils	(0) 0	(100)174
Preferred home food	(16.66) 29	(83.33)145
Total no. of patients who did not consume complete/no Breakfast	400 - 226 = 174 (100%) Total no. of patients – Total no. of Patients having full meal consumption	

Lunch

Table: 6 Have You Taken Lunch

Have you taken Lunch (%)			
Age Group	Yes	No	Total
Children	(86.84)66	(13.16)10	(19)76
Young Adults	(89.23)58	(10.77)07	(16.25)65
Middle Aged Adults	(77.14)81	(22.86)24	(26.25)105
Old Adults	(90.91)140	(9.09)14	(38.5)154
Total	(86.25)345	(13.75)55	(100)400

Table: 7 How Much Lunch Did You Consume

How Much Lunch Did You Consume (%)					
Age Group	Full	(1/2)	(3/4)	(1/4)	Total
Children	(72.72)48	(21.21)14	(1.51)01	(4.54)03	(19.13)66
Young Adults	(68.96)40	(18.96)11	(3.44)02	(8.62)05	(16.81)58
Middle Aged Adults	(64.19)52	(22.22)18	(8.64)07	(4.93)04	(23.47)81
Old Adults	(55)77	(20)28	(3.57)05	(21.42)30	(40.57)140

Total	(62.89)217	(20.57)71	(4.34)15	(12.17)42	(100)345

Table: 8 Reason For Not Consuming Lunch

Reason for not Consuming Lunch (%)		
Reason for not Consuming Lunch	YES	NO
Fasting for Investigations	(6.55)12	(93.44)171
Meal Not Provided on Time	(0.54)1	(99.45)182
Constipation	(2.73) 5	(97.26)178
Anorexia/ Vomiting	(14.75) 27	(85.24)156
Food was not palatable	(12.56) 23	(87.43)160
I do not have desire to eat food	(55.73)102	(44.26) 81
Not satisfied by the service of Stewart	(1.09) 2	(98.90)181
Not satisfied with cleanliness of utensils	(0) 0	(100)183
Preferred home food	(22.40) 41	(77.59)142
Total no. of patients who did not consume complete/no Lunch	400 - 217 = 183 (100%) Total no. of patients – Total no. of Patients having full meal consumption	

Dinner

Table: 9 Have You Taken Dinner

Have you taken Dinner (%)			
Age Group	Yes	No	Total
Children	(86.84)66	(13.16)10	(19)76
Young Adults	(86.15)56	(13.85)09	(16.25)65
Middle Aged Adults	(79.05)83	(20.95)22	(26.25)105
Old Adults	(92.21)142	(7.79)12	(38.5)154
Total	(86.75)347	(13.25)53	(100)400

Table: 10 How Much Dinner Did You Consume

How Much Dinner Did You Consume (%)					
Age Group	Full	(1/2)	(3/4)	(1/4)	Total
Children	(75.75)50	(19.69)13	(1.51)01	(3.03)02	(19.02)66
Young Adults	(71.42)40	(17.85)10	(3.57)02	(7.14)04	(16.13)56
Middle Aged Adults	(61.44)51	(18.07)15	(13.25)11	(7.22)06	(23.91)83
Old Adults	(53.52)76	(22.53)32	(4.22)06	(19.71)28	(40.92)142
Total	(62.53)217	(20.17)70	(5.76)20	(11.52)40	(100)347

Table: 11 Reason For Not Consuming Dinner

Reason for not Consuming Dinner (%)		
Reason for not Consuming Dinner	YES	NO
Fasting for Investigations	(3.27) 6	(96.72) 177
Meal Not Provided on Time	(0) 0	(100) 183
Constipation	(2.7) 5	(97.26) 178
Anorexia/ Vomiting	(12.56) 23	(87.43) 160
Food was not palatable	(18.57) 34	(81.42) 149
I do not have desire to eat food	(51.36) 94	(48.63) 89
Not satisfied by the service of Stewart	(0) 0	(100) 183
Not satisfied with cleanliness of utensils	(0) 0	(100) 183
Preferred home food	(26.77) 49	(73.22) 134
Total no. of patients who did not consume complete/no Dinner	400 - 217 = 183 (100%) Total no. of patients – Total no. of Patients having full meal consumption	

Response Of Patient In Respect To Food Served

Table: 12 Response Of Patient In Respect To Food Served

	Never (Weightage 0)		Rarely (weightage1)		Sometimes (weightage 2)		Often (Weightage 3)		Always (weightage 4)		Overall satisfaction	
A	B	C = B*0	D	E=D*1	F	G=F*2	H	I=H*3	J	K=J*4	L=C+E+G+I+K	M=L*100/1600
Food Served	n	score	n	score	n	score	n	score	n	score	n	% satisfaction
Does the served food look presentable?	1	0	10	10	20	40	64	192	305	1220	1462	91.375
Is the food warm enough to be edible?	2	0	19	19	35	70	59	177	285	1140	1406	87.875
Does the food contain proper ingredient?	6	0	10	10	31	62	61	183	292	1168	1423	88.9375
Is the food quantity sufficient for you?	2	0	03	3	14	28	56	168	325	1300	1499	93.6875
Was the seasonal fruit available or not?	2	0	0	0	10	20	51	153	337	1348	1521	95.0625
Are different meals served daily?	0	0	03	3	13	26	55	165	329	1316	1510	94.375

Response Of Patient In Respect To Stewart

Table: 13 Response Of Patient In Respect To Stewart

	Never (Weightage=0)		Rarely (Weightage=1)		Sometimes (Weightage=2)		Often (Weightage=3)		Always (Weightage=4)		Overall Satisfaction	
A	B	C=B*0	D	E=D*1	F	G=F*2	H	I=H*3	J	K=J*4	L=C+E+G+I+K	M=L*100/1600
Stewart	n	Score	n	Score	n	Score	n	Score	n	Score	n	% Satisfaction
Does the food serving attendant wear clean clothes?	1	0	0	0	6	12	66	198	327	1308	1518	94.875
Is the food served properly?	3	0	0	0	9	18	65	195	323	1292	1505	94.0625
Is the food serving attendant give all the required food?	0	0	0	0	9	18	66	198	325	1300	1516	94.75

Response Of Patient In Respect To Utensils

Table: 14 Response Of Patient In Respect To Utensils

	Never (Weightage=0)		Rarely (Weightage=1)		Sometimes (Weightage = 2)		Often (Weightage= 3)		Always (Weightage=4)		Overall Satisfaction	
A	B	C=B*0	D	E=D*1	F	G=F*2	H	I=H*3	J	K=J*4	L=C+E+G+I+K	M=L*100/1600
Utensils	n	Score	n	Score	n	Score	n	Score	n	Score	n	% Satisfaction
Is the plate washed cleanly?	2	0	0	0	9	18	60	180	329	1316	1514	94.625
Is the food serving trolley & bowl are clean?	2	0	1	1	7	14	60	180	330	1320	1515	94.6875
Are the plate size sufficient or not?	2	0	0	0	8	16	57	171	333	1332	1519	94.9375

Response Of Patient In Respect To Utensils: [are Utensils Distorted / Chipped Or Stained?]

Table: 15 Response Of Patient In Respect To Utensils

Response of patient in respect to utensils: [Are utensils distorted / chipped or stained?]			
Age Group	No	Yes	Total
Children	(100)76	0	(19)76
Young Adults	(98.46)64	(1.53)1	(16.25)65
Middle Aged Adults	(100)105	0	(26.25)105
Old Adults	(100)154	0	(38.5)154
Total	(99.75)399	(1.53)1	(100)400

DISCUSSION

Around 86.75% of total patients have confirmed to consume Breakfast, out of which 65.12% of patients have agreed to consume full meal of Breakfast. Around 86.25% of total patients have confirmed to consume Lunch out of which 63.18% of patients have agreed to consume full meal of Lunch. Around 86.75% of total patients have confirmed to consume Dinner out of which 63.11% of patients have to consume full meal of Dinner. On recording responses of patient's irt food served, 91.3% of patients feel that food appears presentable, 87.8% of patients agrees that meals served were warm enough to be edible, whereas, only 88.9% patients responded that food contains proper ingredient like salt, sugar and spices. Around 93.6% of patients feel that served food in sufficient quantity. Almost all patients (95%) are served with seasonal fruits in Breakfast, whereas patient around 94.3% confirms that different menu was served daily. While asking about Stewarts, 94.8% patients feel that serving attendants wear clean uniform & 94.06% patients believe that they had proper serving skills and 94.75% patients agrees that serving attendant gives all required food. Almost all patients (94.63%) confirms that plates, (94.69%) serving trolley & bowls were washed & cleaned properly and 94.94% patients says that plate size are sufficient. Also all patients (99.75%) answered that there are no distorted / chipped or stained utensils.

In this study 93.6% of patients were satisfied by served quantity of food which is not in consonance with the study done by Vanessa A. Theurer as in her study mean value is 4.00 irt food quantity[4]. Presentation of food in this study was 91.3% which is in consonance with the study conducted by Vinicius Andre do Rosario and Karen Walton[3].

CONCLUSION

The study was aimed to measure and assess patient satisfaction with the food and services in hospital. As is evident from the result & discussion that each respondent was asked according to interview schedule based on likert scale regarding quality parameters of food served in hospital. It was found out that total satisfaction percent was above 90% but 87.8% in case of patient responding to that served food is warm enough to be edible & 88.9% patient rating or responding to that food contain proper ingredient. Hence more improvement is

needed in respect to food served so that meals remain hot for long period of time and before serving meals to patients ingredients like sugar, salt & spices should be checked thoroughly so that it does not cause any discomfort to patient.

Ethical Considerations: In accordance with ethical guidelines and principles, the study was conducted.
Conflicts of Interest: None
Source of Funding: Nil

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