
ADRRI JOURNAL OF AGRICULTURE AND FOOD SCIENCES



ADRRI JOURNAL (www.adrri.org)

ISSN: 2026-5204 ISSN-L: 2026-5204 VOL. 3, No.5(2),April, 2017

Quality Foodservice Delivery in Hospitals (Inpatients' Perspective): A Case of Korle-Bu Teaching Hospital, Greater Accra – Ghana

Eric Edem Mensah¹ Ebenezer Nartey² Regina E. Adonu² Grace S. Ametepe¹

¹Department of Hotel Catering and Institutional Management, Accra Technical University, Greater Accra, Ghana. Email: papakadem@gmail.com

²Faculty of Applied Science and Technology, Koforidua Technical University, Koforidua, Ghana. Email: narteynarteh@gmail.com

³Department of Hospitality Management, Takoradi Technical University, Takoradi, Ghana. Email: regina.adonu@tpoly.edu.gh

¹Correspondence: papakadem@gmail.com

Available Online: 30th April, 2017

URL: <http://www.journals.adrri.org/>

[Cite article as: Mensah, E. E., Nartey, E., Adonu, E. R., Ametepe, S. G. (2017). **Quality Foodservice Delivery in Hospitals (Inpatients' Perspective): A Case of Korle-Bu Teaching Hospital, Greater Accra – Ghana**. ADRRI Journal of Agriculture and Food Sciences, Ghana: Vol. 3, No. 5(2), Pp. 15-30, ISSN: 2343-6662, 30th April, 2017.]

Abstract

With health care industry competition on the rise, many hospital foodservice operations are looking for ways to improve patient satisfaction. It is against this background that this study evaluated the foodservice quality (that is the tangibles, reliability, responsiveness, empathy and assurance of foodservice) being delivered in the public hospitals with a critical look at Korle-Bu Teaching Hospital. A multi-stage sampling involving stratified and simple random sampling were used to select 200 patients. According to the results of the study, food quality (4.09) was ranked as the highest followed by food safety (4.085), meal service quality (4.06) and physical environment (3.992) respectively. Confidence in hospital food is built only when proper foodservice is provided (100%). Different geographical locations (80%), different groups of people (78%) and different foodservice managements (75%) are the major factors influencing food preferences among the respondents. However, a holistic approach is needed to provide successful foodservice, considering economic, social and ecology factors in the hospital environment.

Keywords: service quality, foodservice, hospitals, satisfaction

INTRODUCTION

Hospital food and nutrition services play an important role in patient recovery and well-being. Foodservice quality can also influence patients' satisfaction with their overall hospital experience (McLymont, Sharon, & Stell, 2003). With health care industry competition on the rise, many hospital foodservice operations are looking for ways to improve patient satisfaction. In today's highly competitive business environment, organizations all over the world have been forced to focus more on retaining customers rather than acquiring them. In such a situation, customers' interactions with a service firm's contract employees ultimately shape their perceptions about the relationship with that firm and finally their overall satisfaction with it. Satisfaction from service quality is usually evaluated in terms of technical quality and functional quality (Grönroos, 2001). Usually, customers do not have much information about the technical aspects of a service; therefore, functional quality becomes the major factor from which to form perceptions of service quality.

Quality is therefore an important issue that is considered really as a significant concept in life. It is regarded as a strategic organizational weapon. The pressing need of developing service organizations and upgrading their services necessitates the measuring of service quality. As a result of economic changes throughout history, the concept of 'quality' has changed. 'Quality' comes from the Latin word 'Qualitas', which refers to the nature of a person or the nature of an object. In the past Quality meant accuracy and perfection. Traditionally, service quality has been conceptualized as the difference between customer expectations regarding a service to be received and perceptions of the service being received (Grönroos, 2001).

Most research in hospital foodservice quality, to date, has focused on patients' expectations, perceptions of performance, and satisfaction. Although it is the patients who define and evaluate quality, findings based on patients' surveys do not provide rich enough information on what causes quality problems or what foodservice professionals have to do in terms of quality improvement. Hospital foodservice is a system where subsystems, including procurement, production, distribution/service, and safety/sanitation, are interrelated (Gregoire, 1994). Thus, a decision in one part can influence another part of the system, and quality should be managed in an integrated way.

Parasuraman (1991) presented their Service Quality Model for investigating problems related to service quality management and identifying causes of the problems. According to the model, service quality management is the process that maintains a balance between customers'

expectations and perceptions of service quality and minimizes the discrepancy between the two. The gap between expectation and perception is a service problem that results from four other gaps on the service provider's side. Parasuraman (1991) stated that a service manager should identify causes of the four other gaps on the side of the service provider and develop strategies to reduce the gaps to improve service quality.

To better understand hospital food service quality management, the Service Quality Model was modified by Kim (2008), Kim (2007) & Lee (2004) in a research "Assessment of foodservice quality and identification of improvement strategies" to reflect the hospital foodservice environment based on the review of literature. The modified Service Quality Model was named "Hospital Foodservice Quality Model". For this study, hospital foodservice quality was defined as "foodservice meeting patients' nutritional requirements" based on the review of literature and the modified model. The purposes of the study were to evaluate hospital foodservice quality and to identify causes of quality problems and improvement strategies for hospital foodservice quality using the new model.

Measuring service quality is difficult due to its unique characteristics such as Intangibility, heterogeneity, inseparability and perishability (Vázquez *et al.*, 2001). Service quality is linked to the concepts of perceptions and expectations. Customers' perceptions of service quality result from a comparison of their before-service expectations with their actual service experience. The service will be considered excellent, if perceptions exceed expectations; it will be regarded as good or adequate, if it only equals the expectations; the service will be classed as bad, poor or deficient, if it does not meet them (Vázquez *et al.*, 2001). This research therefore assesses service quality in hospital foodservice using Korle-Bu Teaching Hospital as the case study area.

METHODOLOGY

Both exploratory and descriptive research design were used for this study. The research study was conducted using a case study approach on the basis of cross sectional research. In this case, data was gathered just at once for a period of two weeks in order to answer a research question in form of a snap shot or one shot research. Both qualitative and quantitative research designs methods were used.

A multi-stage sampling approach involving cluster, stratified and simple random sampling was adopted in this study to select a sample of 200 respondents. Since there were a lot of wards in the hospital and are mostly homogeneous, a cluster sampling was used to select four wards. The wards from which the four clusters were selected are Surgical Ward, Maternity Ward,

Children Ward, Recovery ward, General Ward and Orthopedic Ward. The wards selected included Maternity, General Ward and Surgical Ward. The remaining ward which was Children's Ward, Recovery Ward and Orthopedic Ward were re-grouped under other wards. A disproportionate stratified and simple random sampling was then used to select 8, 116, 68 and 8 respondents respectively from the side Surgical Ward, General ward, Maternity Ward and the other wards.

For ethical reasons, a letter for permission to conduct data collection was submitted to the chief administrator of the Hospital and this was granted. Data was collected using the primary source; the primary source of data was gathered through administered questionnaires. Closed-ended and a few open-ended questions were used. The questionnaires were distributed directly to the respondents, respondents were allowed to fill in the questionnaires and collected on the spot, in some cases respondents asked the researcher to come back later for the questionnaires. A period of two weeks was used to administer and collect the questionnaires personally for the analysis of the data obtained. In this case questionnaires were self-administered to allow further probing and clarification of unclear issues. After data collection, analysis and processing were done by use of computer programs such as SPSS and Microsoft excel to enable easy interpretation of the findings.

RESULTS AND DISCUSSIONS

Demographic Profile of Respondents

Table 3.1 indicates the demographic profile of the sampled respondents used for the study. Out of the 200 respondents sampled, majority of them (56%) were females and the males constituted 44% of the population. This implies that the female population on the ward as at the time of the study were higher than that of the males. The results indicated that majority of the respondents sampled for the study were youths within the active working forces. Respondents with the age range of between 20 to 25 and 26 to 30 years formed the most dominant age group of the study. This age group both constituted 22% of the sampled population while respondents under the 19 years represented the least of the sample population (4%). About 18% of respondents were also aged between 31 to 35 years. The distribution of respondents sampled from the wards included the general ward (58%), maternity ward (34%), surgical ward (4%) and other ward which were mainly children (4%). The significant percentage of respondents sampled from the maternity ward could explain the female dominance of the sampled respondents.

According to the results majority of the respondents (36%) have been on admission between 4 to 7 days. Few (10%) of the respondents were those with admission duration ranging from 3 to 4

weeks. Respondents on admission between 1 to 2 weeks and over 1 month both constituted 20% of the total number of respondents sampled while respondent with a duration between 1 to 3 days stay on admission constituted 14% of the total number of respondents sampled which is slightly above the least admission group (10%).

Table 3.1: Demographic Information of Respondents

Demographics	Number of Respondents	Percentage of Respondents (%)
Age		
Under 19 yrs	8	4.0
20-25 yrs	44	22.0
26-30 yrs	44	22.0
31-35 yrs	36	18.0
36-40 yrs	12	6.0
41-45 yrs	24	12.0
Above 70 yrs	32	16.0
Total	200	100.0
Gender		
Male	88	44.0
Female	112	56.0
Total	200	100.0
Ward of Respondents		
Surgical ward	8	4.0
General ward	116	58.0
Maternity ward	68	34.0
Others	8	4.0

Total	200	100.0
Duration on admission		
1-3 days	28	14%
4-7 days	72	36%
1-2 weeks	40	20%
3-4 weeks	20	10%
1 month and more	40	20%

Source: Field study, 2012

Table 3.1a represents the link between the wards and time of admission. It appears from the study that most of the surgical warders have been in the hospital within 1-3 days. Again majority of patients in the Maternity ward have been there within 4-7 days. Also, most of the patients in the General ward have been there within either 4-7days or 1-2weeks or more than a month. All the respondents in the other wards have been there within 4-7 days. The differences in the length of admission of patients at the different wards were significant ($p < 0.05$).

Table 3.1a: Ward's of Respondents and Duration on admission

		Duration on admission					Total
		1- 3 days	4 – 7 days	1 – 2 weeks	3 – 4 weeks	1 month and more	
Which ward do you reside	Surgical ward	4	0	4	0	0	8
	General ward	20	44	16	16	20	116
	Maternity ward	4	20	20	4	20	68
	Others	0	8	0	0	0	8
Total		28	72	40	20	40	200

Source: Field study, 2012

Characteristics of Hospital Food Choices of Respondents

According to the results exactly (50%) of the respondents perceived hospital food as nutritious, explaining that they experience much health improvement when they consume hospital food.

Adequate nutrition intake is an important part of healing the hospital patient. In general, under nutrition is associated with loss of muscle strength and impaired immune function which can lead to an increase in complication rates, infection rates, and mortality (Plum, 2004). Most (26%) of the respondents perceived the food as palatable while 20% perceived the food to be unpleasant. The 4% constitutes respondents who didn't have any options to choose from. The details are shown below in table 3.2

The majority of respondents representing 48% ate the hospital's food base on its availability while 38% of them indicated that they ate it for its convenience. Also, 14% of the respondents ate the hospital's food based on no choice in that once there is food they will consume, availability in this context referred to the patients getting food to eat on time when they are in need of whereas convenience portrayed hospital patients not waiting so long for their home made foods. The details are represented below in table 3.2.

From the study, majority of the respondents (176) constituting 88% indicated that they eat three times daily while 16 respondents representing 8% ate twice a day and 8 respondents representing 4% were the minority that eat only once a day (Table 3.2). According to the study, majority (80%) of the respondents gets food from other places apart from the hospital. Again, majority (74%) of the respondents get food from home. It was surprising that all the respondents preferred homemade food (table 3.2). According to the study, there were no evidence to indicate that the respondents ate all food served by the staff as shown in the table 3.2 this is because, most (46%) of the respondents neither agreed nor disagreed with the fact that the food served is wasted.

Table 3.2: Characteristics of hospital food choices of respondents

Characteristics of hospital food choices of respondents	Number of Respondents	Percentage of Respondents
Perception of Respondents on Hospital Food		
Nutritious	100	50.0
Palatable	52	26.0
Unappealing	40	20.0
Others	8	4.0

Total	200	100.0
Factors influencing respondents' patronage of the hospital food		
Convenience	76	38.0
No Choice	28	14.0
Availability	96	48.0
Total	200	100.0
Frequency of consumption of hospital food by respondents		
Once	8	4.0
Twice	16	8.0
Thrice	176	88.0
Total	200	100.0
An indication of whether patients have other sources of food		
Yes	160	80.0
No	40	20.0
Total	200	100.0
Other Sources of Food		
Home	148	74.0
Restaurant	16	8.0
Others	36	18.0
Total	200	100.0
Sources of food patients prefer most		
Homemade food	200	100.0

Total	200	100.0
Plate Waste of Hospital Food		
Strongly Disagree	8	4.0
Disagree	52	26.0
Neither Agree nor Disagree	92	46.0
Agree	40	20.0
Strongly Agree	4	2.0
Not Applicable	4	2.0
Total	200	100.0

Source: Field study, 2012

Table 3.2a represents the association between the times patients have been in the hospital and how they perceived the hospital’s food before consumption. It was obvious from the study that majority of the patients who have been in the hospital all the times think the food served by the hospital was nutritious. Meanwhile, the P-value of the chi square statistic was less 0.05 as shown in table 3.2a. This means that there was an association between the opinions of patients in terms of the time they have been in the hospital.

Table 3.2a: Perception of Patients on the Hospital Food before Consumption and Duration on Admission

		duration on admission					Total
		1- 3 days	4 – 7 days	1 – 2 weeks	3 – 4 weeks	1 month and more	
Perception of Patients on the hospital food before consumption	Nutritious	16	28	28	4	24	100
	Palatable	8	24	8	12	0	52
	Unappealing	0	16	4	4	16	40
	Others	4	4	0	0	0	8
Total		28	72	40	20	40	200

Source: Field study, 2012

Physical Environmental Factors Influencing Food Patronage

The results indicated that the most important environmental factors that influenced respondents' perception on patronage of hospital food were the cleanliness of the ward (4.12), décor and ambiance of the ward (4.1) and arrangement of the beds (4.02). Factors such as the presence of television (3.86) and the quality of table ware (3.86) were not too important to the respondents (table 3.3). Therefore, more attention should be paid on cleanliness of the ward, décor and ambiance of the ward and arrangement of the beds. This however conforms to the findings of Jung and Sohn (2007). According to them, quality improvement for foodservice should involve various components including menu items, atmosphere, tray presentation, sanitation and service

Table 3.3: Rank of Physical Environmental Factors Influencing Food Patronage

Factors	AR	Rank
Cleanliness of ward	4.12	1
Décor and ambiance of the ward	4.1	2
Seating/Bed arrangement	4.02	3
Presence of Television	3.86	5
Quality of tableware	3.86	5

Note: AR=Average Rating

If the AR lies within 1-1.49=1=Very Important (VI), 1.5-2.49=2=Important (I), 2.5-3.49=3=Neither/not important (NNI), 3.5-4.49=4=Not Important (NI) and 4.5-5=5=Not Very Important (NVI)

Source: Field Study, 2012

Table 3.3a represents the opinion of patients in various wards and how they see the physical environment of the hospital. It was obvious from the study that majority of the patients in the various wards were satisfied with the nature of the physical environment of the hospital. Meanwhile, the P-value of the chi square statistic was less 0.05 as shown in table 3.3b. This means that there was an association between the opinions of patients in the various wards towards the physical environment of the hospital, despite majority of them confirmed that the physical environment of the hospital was good.

Table 3.3a: Ward’s of Respondents and Physical Environment Factors Influencing Food Patronage

		Physical Environment Factors Influencing Food Patronage				Total
		Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Totally satisfied	
Ward’s of Respondents	Surgical ward	0	0	0	8	8
	General ward	0	8	68	40	116
	Maternity ward	0	0	52	16	68
	Others	4	0	0	4	8
Total		4	8	120	68	200

Source: Field study, 2012

Meal Service Quality

The results indicated that patients were satisfied with the table ware (plates and cutlery) (4.12), the assistance given them by the non-service staff (4.12), attitude of staff (4.1) and provision of beverage (4.1). However, they were neither satisfied nor dissatisfied with the politeness (4.02), promptness (4.02), smartness (4.02), efficiency of trolley (4.02) and timeliness of food service delivered by the staff (4.02). Therefore, more attention should be paid on these very aspects (table 3.4).

Table 4.4: Rank of Meals Service Quality Factors Influencing Food Patronage

Factors	AR	Rank
Table ware (plates and cutlery)	4.12	1
Assistance by non service staff (nurses/family)	4.12	1
Attitude of staff	4.1	2
Provision of beverage	4.1	2
Prompt response by service staff	4.02	3
Smartness of service staff	4.02	3
Efficiency of trolley service	4.02	3

Timeliness of food service	4.02	3
Politeness of staff	4.02	3

Note: GPT=Grade Point Total=The Sum of the product of Weight of the grades (from NVS to VS) and their respective frequencies, AR=Average Rating (i.e. GPT/200)

Also, if the AR lies within 1-1.49=1=Very Satisfied (VS), 1.5-2.49=2=Satisfied (S), 2.5-3.49=3=Neither/not Satisfied (NNS), 3.5-4.49=4= Not Satisfied (NS) and 4.5-5=5=Not Very Satisfied (NVS).

Source: Field Study, 2012

Table 3.4a represents the opinion of patients in various wards and how they see the service quality of the hospital. It was obvious from the study that majority of the patients in the various wards were satisfied with the nature of the service quality of the hospital. Meanwhile, the P-value of the chi square statistic was less 0.05 as shown in table 4.4b. This means that there was an association between the opinions of patients in the various wards towards the service quality of the hospital, despite majority of them confirmed that the service quality of the hospital was good.

Table 3.4a: Ward's of Respondents and Meal Service Quality

Factors	AR	Rank
Table ware (plates and cutlery)	4.12	1
Assistance by non service staff (nurses/family)	4.12	1
Attitude of staff	4.1	2
Provision of beverage	4.1	2
Prompt response by service staff	4.02	3
Smartness of service staff	4.02	3
Efficiency of trolley service	4.02	3
Timeliness of food service	4.02	3
Politeness of staff	4.02	3

Source: Field study, 2012

Food Quality at Korle-Bu Teaching Hospital

The results indicated that patients were satisfied with the nutritional content (4.1), taste (4.1), smell or aroma (4.1), variety (4.12) and temperature of foods (4.1) served. However, they were neither satisfied nor dissatisfied with the presentation (4.02) of food served. Therefore, more attention should be paid on food presentation (table 3.5).

Table 3.5: Rank of Food Quality Factors Influencing Food Patronage

Factors	AR	Rank
Variety of food	4.12	1
Nutritional needs	4.1	2
Taste of food	4.1	2
Smell/aroma of food	4.1	2
Temperature of food	4.1	2
Presentation of food	4.02	3

Note: GPT=Grade Point Total=The Sum of the product of Weight of the grades (from NVS to VS) and their respective frequencies, AR=Average Rating (i.e. GPT/200)

Also, if the AR lies within 1-1.49=1=Very Satisfied (VS), 1.5-2.49=2=Satisfied (S), 2.5-3.49=3=Neither/not Satisfied (NNS), 3.5-4.49=4= Not Satisfied (NS) and 4.5-5=5=Not Very Satisfied (NVS)

Source: Field Study, 2012

Table 3.5a represents the opinion of respondents in various wards and how they see the food quality of the hospital. It was obvious from the study that majority of the patients in the various wards were satisfied with the nature of the food quality of the hospital except those in the other wards who forms the minority of the patients in the various wards. Meanwhile, the P-value of the chi square statistic was less 0.05 as shown in table 4.10b. This means that there was an association between the opinions of patients in the various wards towards the food quality of the hospital, despite majority of them confirmed that the food quality of the hospital was good.

Table 3.5a: Ward’s of Respondents and Food Quality

		Food Quality				Total
		Totally dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Totally satisfied	
Ward’s of Respondents	Surgical ward	0	4	0	4	8
	General ward	4	8	48	56	116
	Maternity ward	4	0	52	12	68
	Others	8	0	0	0	8

		Food Quality				Total
		Totally dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Totally satisfied	
Ward's of Respondents	Surgical ward	0	4	0	4	8
	General ward	4	8	48	56	116
	Maternity ward	4	0	52	12	68
	Others	8	0	0	0	8
Total		16	12	100	72	200

Source: Field study, 2012

Food Safety

According to the results of the study, patients agreed that foods served by the hospital are well cooked (4.1), refrigerated (4.1) and heated (4.12) appropriately. Meanwhile, they were neither in agreement nor in disagreement with the fact that the food served was free of contamination (table 3.6).

Table 3.6: Rank of Food Safety Factors Influencing Food Patronage

Factors	AR	Rank
Food free of contamination	4.02	3
Food well cooked	4.1	2
Provision of reheating facilities	4.12	1
Refrigeration storage	4.1	2

Note: GPT=Grade Point Total=The Sum of the product of Weight of the grades (from SA to SD) and their respective frequencies, AR=Average Rating (i.e. GPT/200)

Also, if the AR lies within 1-1.49=1=Strongly Agree (SA), 1.5-2.49=2=Agree (A), 2.5-3.49=3=Neither Agree nor Disagree (NAD), 3.5-4.49=4= Disagree (D) and 4.5-5=5=Strongly Disagree (SD)

Source: Field Study, 2012

Overall Satisfaction

According to the results of the study, food quality (4.09) was ranked as the highest followed by food safety (4.085), meal service quality (4.06) and physical environment (3.992) respectively.

However, though there are more rooms for improvement in all the areas, more attention should be paid on the physical environment of the hospital (table 3.7).

Table 3.7: Average Rank of the Overall Factors Influencing Food Patronage

Factors	MAR	Rank
Food quality	4.090	1
Food safety	4.085	2
Meal service quality	4.060	3
Physical environment	3.992	4

Note: MAR=Mean of the Average Rating

Source: Field Study, 2012

CONCLUSIONS

The findings of this study show that, most of the respondents perceived hospital food as nutritious. Additionally, the respondents were satisfied with the service of the staff of the hospital. It was obvious from the study that food was served at its right temperature. It also appears from the study that food served by the staff was free from contamination. It was obvious from the study that food served by the staff was always well cooked. Also, the food served was of good quality. The study also found out that the food quality was good and really satisfied the patients. It could however be concluded that quality service delivery at the hospital was satisfactory. The findings of this work conform to the findings of Jung and Sohn (2007), Kim (2008), Jung (2007) and Lee (2004). According to them, taste of food, nutrition, sanitation, food temperature, meal size, meal time, menu variety, tray presentation among others are factors influencing food patronage in hospitals.

REFERENCES

- Gregoire M, Sames K., Dowling R. and Lafferty L. (1994). Are Registered Dieticians adequately Prepared to be Hospital Foodservice Directors? *Journal of the American Dietetics Association*. Vol 105, Issue 8, 215-1221 Nursing Employees. *J Am Diet Assoc.* 94: 1129-1134
- GrÖnroos, C. (2001). *Strategic Management and Marketing in the Service Sector*. Marketing Science Institute, Report, 12, 83-104.
- Hwang LJJ, Eves A. and Desombre T. (2003). Gap Analysis of Patient Meal Service Perceptions. *International Journal of Health Care Quality Assurances.* 16/13, 143-153.
- Jung SH, Yeom HS, Sohn CM. The improvement of hospital food service in quality and customer satisfaction by using 6-sigma strategy. *Journal of Korean Dietetic Association* 2007;13:331-4.
- Kim HJ, Jang EJ, Hong WS. Task analysis on foodservice, clinical nutrition service in hospital dietetic association. *Journal of the Korean Dietetic Association* 2007; 6:148-60.
- Kim MY, Kim KJ, Lee KE (2008). In-patients' food consumption and perception on foodservice quality at hospitals. *Journal of the Korean Dietetic Association.*
- Kim MY, Kim KJ, Lee KE. In-patients' food consumption and perceptions on foodservice quality at hospitals. *Journal of the Korean Dietetic Association* 2008; 13:87-96.
- Lee HY, Chang SH, Yang IS. Development of quality assessment tool and application to Customer-oriented hospital foodservice management. *The Korean journal of nutrition* 2004; 37:329-38.
- McLymont, V., Sharon, C., & Stell, F. (2003). Improving patient meal satisfaction with room service meal delivery. *Journal of nursing care quality*, 18(1), 27-37.
- Parasuraman, A., Zeithaml, V. A. & Berry, L.L., (1991). A Conceptual Model of Service Quality and its Implication of Future Research. *Journal of Marketing*, 4, 45-50.
- Vazquez (2001), "Expectations: a comparison standard in measuring service quality: an assessment of a reassessment", *Journal of Marketing*, Vol. 58 No. 1, pp. 132-9.