



Research Article

Quality Assessment of Cafeteria Services Provided at a Public Sector Medical College Karachi, Pakistan

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Abstract | This study was conducted to determine the quality of services and significant factors leading to students' level of satisfaction towards services provided by cafeterias in public sector medical institute of Karachi, Pakistan. A cross sectional study design was adopted with a sample size of 318 round of to 400 and by using qouta sampling. A self-administered questionnaire was used to collect data regarding cafeteria use, food consumption, frequency, waiting time, cost, ambience, attitude of cafeteria staff, and cleanliness after taking informed consent. The study findings revealed that majority of students reported high cost of meals in the cafeteria as compared to the local market. The food items such as snacks and cold drinks were found expensive as compared to local market. About half of the study participants reported that the cost of mineral water was high in the cafeteria as compared to the local market. Forty-two percent of the students were not satisfied with the staff attitude and dissatisfied with the availability of food. The study findings reported that cost, availability of food and staff attitude should need improvement to maintain quality of cafeteria services so that majority of the students become satisfied with services available at the campus cafeteria.

Received | January 23, 2023; **Accepted** | September 28, 2023; **Published** | November, 04, 2023

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Citation | Nisar, N., Qadri, H.M., Afridi, A., Khan, M.S., Khan, M.A., 2023. Quality assessment of cafeteria services provided at a public sector medical College Karachi, Pakistan. *Journal of Innovative Sciences*, 9(2): 226-230.

DOI | <https://dx.doi.org/10.17582/journal.jis/2023/9.2.226.230>

Keywords | Quality assessment, Cafeteria services, Satisfaction, Students, Quality of food



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1. Introduction

Quality assessment is an important tool for evaluation of cafeteria services by the consumers. It is considered that service quality has a positive effect on customer satisfaction reported by research studies carried out in Asia (Chang and Nalini, 2014; Lee *et al.*, 2016). The improvement of food quality requires regular monitoring in terms of hygiene, cost, cleanliness, safe environment, and

well-taken care of food with good presentation and served in a proper manner that satisfies customers (Manning and Baines, 2004). The quality assessment plays a major role in determining the originality and accuracy of a system, as the higher level of standard leads to higher level of satisfaction among students' patronizing their energy, body fuel and mental health (Rad and Yarmohammadian, 2006). The Universities are increasing in number and becoming aware of the importance of quality assessment of cafeteria

services provided to students with time (Ghani *et al.*, 2011). Research has focused on cafeteria food attributes in developed and developing countries. According to research it has been reported that 55.40% of university students did not frequently eat at cafeteria due to bad food quality and 6.0% students feels that the cafeteria environment is not satisfactory (Raman and Chinniah, 2011). Very few studies have been conducted to explore the quality assessment of medical students in developing countries. This study will be helpful in identifying the quality of services provided by cafeterias, and determine the significant factors leading to quality of services that can have great impact on satisfaction and health of students. The objective of the study is to assess quality of cafeteria services, and level of student’s satisfaction towards services provided by cafeteria in public sector medical institute of Karachi, Pakistan.

2. Materials and Methods

A cross sectional study was conducted in a public sector medical college Karachi. The study subjects included were first year to final year students of MBBS. The sample size of 318 was calculated by using frequency of student satisfaction with food consumption from cafeteria 29.6% from a study conducted in university of Malaysia (Anshul and Kumar, 2017), taking 95% confidence interval and 5% margin of error. The figure round of to 400 and by using a proportionate sample of 80 students from each class by utilizing quota sampling. A semi-structured self-administered questionnaire was used to collect information regarding cafeteria use, food consumption, frequency, waiting time, cost, ambience, attitude of cafeteria staff, and cleanliness. The informed consent was taken prior to data collection. The IRB reference number is IRB/16 dated 10-02-2022, the data were collected after IRB approval collection. The data collected were entered and analyzed by using SPSS version 21. Frequency and percentages were generated and appropriate statistical test was applied in deriving the inferences.

3. Results and Discussion

The majority (75.3%) of students reported the high cost of meals in the cafeteria as compared to the local market. The food items which were found expensive as compared to local market were snacks (p-value<0.01) and cold drinks (p-value<0.01). About 47.3% of

students revealed that the cost of mineral water was high in the cafeteria as compared to the local market. Majority (90.3%) of the students liked the flavor and taste of the meal (p-value<0.004). About 79.5% were satisfied with the flavor and taste of snacks.

Table 1: Demographic Characteristics of Medical students.

Variables	Frequency n=400	Percentage
Age (Years)		
≤ 20	201	50.3
≥ 20	199	49.7
Gender		
Male	139	34.8
Female	261	65.3
Class		
First year	170	42.5
Second year	37	9.3
Third year	12	3.0
Fourth year	116	29.0
Final year	65	16.3
Cafeteria used		
Male	125	31.3
Female	75	18.8
Both	50	50.0
Satisfied with cafeteria services		
Yes	184	46
No	216	54

High quality of satisfaction with meals was reported by majority of students (81.8%, p-value<0.00). About 75.3% of students were satisfied with the quality of snacks (p-value<0.00). About two-thirds of the students were satisfied with the quality of cold drinks (p-value<0.001) and hot drinks (p-value<0.00).

Majority (84%) of the students reported that the cost of meals in the cafeteria fits in their budget (p-value<0.001). About, three quarter of the students indicated that the cost of snacks, cold drinks and hot drinks in the cafeteria fits into their budget. Most of the students (88.3%) stipulated satisfaction regarding the cleanliness of washroom (p-value<0.00) and serving area (p-value<0.00) of the cafeteria, only a small number of students were not satisfied with the cleanliness of washrooms (11.8%) and serving the area (20.3%) of the cafeteria. Majority (81.5%) students reported the seats are comfortable, and 76.5% were satisfied with the seating arrangement in the cafeteria (p-value<0.00).

Approximately, more than half of the students (57.8%) were contented with the attitude of cafeteria staff

(p-value<0.001) and 42.3% were not satisfied with the staff attitude. Predominantly, students were pleased with the appearance (76%), cleanliness (80.8%) and training (73.3%) of the cafeteria staff (p-value<0.00), 24% were not happy with the appearance of the staff and 19.3% stated that the staff was not clean, and 26.8% of students reported that the cafeteria staff was not well trained.

Table 2: Distribution of variables showing satisfaction with cafeteria services.

Variables	Satisfied with cafeteria services N= 184	Not satisfied with cafeteria services N= 216	Chi square	p value
Age				
≤ 20	99	102	1.72	0.18
≥ 20	85	114		
Gender				
Male	75	64	5.43	0.02
Female	109	152		
Cafeteria used				
Male	65	60	3.65	0.16
Female	36	39		
Both	83	117		
High cost in cafeteria compared to local market				
Meals				
Yes	129	172	4.83	0.02
No	55	44		
Snacks				
Yes	81	122	6.17	0.013
No	103	94		
Cold drink				
Yes	85	126	5.87	0.015
No	99	90		
Hot drink				
Yes	83	110	1.34	0.24
No	101	106		
Mineral water				
Yes	83	106	0.62	0.42
No	101	110		
Cost of food fits in budget				
Meal				
Yes	142	194	11.81	0.001
No	42	22		
Snack				
Yes	128	172	5.36	0.021
No	56	44		
Cold drink				
Yes	123	176	15.18	0.001
No	61	40		
Hot drink				
Yes	111	169	15.18	0.000
No	73	47		

Student satisfaction regarding waiting time for food was 75% (p-value<0.005). On the contrary 25% were dissatisfied with waiting time for food. Food price matches the quality of food according to most of the students (83.8%), 16.3% stated the quality of food was unsuitable for the price paid. Satisfaction with the availability of food in the cafeteria was significant (p-value<0.004) reported by 56.8% of students whereas 43.3% were dissatisfied with the availability of food.

Table 3: Distribution of variables showing satisfaction with cafeteria services.

Variables	Satisfied with cafeteria services N= 184	Not satisfied with cafeteria services N= 216	Chi square	p value
Flavor and taste of food				
Meal				
Yes	157	27	9.38	0.00
No	204	12		
Snack				
Yes	140	178	2.43	0.11
No	144	8		
Cold drink				
Yes	104	138	2.25	0.13
No	80	78		
Hot drink				
Yes	121	150	0.61	0.43
No	63	66		
Quality of food is satisfactory				
Meal				
Yes	135	192	16.04	0.000
No	49	24		
Snack				
Yes	127	174	7.09	0.008
No	57	42		
Cold drink				
Yes	102	146	6.23	0.01
No	82	70		
Hot drink				
Yes	107	153	7.02	0.008
No	77	63		
Cleanliness of café				
Serving				
Yes	135	184	8.59	0.003
No	49	32		
Seats comfortable				
Yes	133	193	19.20	0.000
No	51	23		
Seating arrangement				
Yes	118	188	29.00	0.000
No	66	28		

Table 4: Distribution of variables showing satisfaction with cafeteria services.

Variables	Satisfied with cafeteria services N= 184	Not satisfied with cafeteria services N= 216	Chi square	p value
Attitude of staff				
Attitude of staff				
Yes	93	138	7.25	0.007
No	91	78		
Appearance of staff				
Yes	114	190	36.84	0.000
No	70	26		
Staff clean				
Yes	123	200	42.366	0.000
No	61	16		
Staff trained				
Yes	114	179	22.17	0.000
No	70	37		
Waiting time for food				
Yes	126	174	7.72	0.005
No	58	42		
Money spent per day				
Yes	111	119	1.11	0.29
No	73	97		
Availability of food				
Yes	90	137	8.52	0.004
No	94	79		

The student satisfaction regarding quality of cafeteria services is important because students spend majority of their time on campus and it's their right to have quality meal at cost effective prices in conducive environment. This study is conducted to determine the student's satisfaction for quality of food, atmosphere, and price of food which can influence student's satisfaction towards on-campus food service. Food quality and food prices are important factors that determines the satisfaction level of customers. The quality assessment of food service cafeterias in educational institutions is an important research area that is explored in this study. The findings of this study reported that students were not satisfied with cost, attitude of staff, and availability of food in cafeteria.

The result showed that students' satisfaction with campus cafeteria is affected by cost of the food price and value fairness which is consistent with the findings of other studies conducted on similar research area (Ha and Jang, 2010; Ha et al., 2007; Martin et al., 2007; Ahmed et al., 2019; Herrmann et al., 2007) proposed

that price value must be affordable to students to make value relationships whether the price is higher or lesser in association of the food and beverage offered by the campus cafeterias. In our study students reported that cost of food and beverages are higher than local market which is not acceptable and at least the cafeteria administration should provide quality food with same price as available in local market. It is critical for campus cafeteria administrators to continue enhancing the quality of food and beverage served to the students to increase their satisfaction level. It's important to serve an attractive menu with different food varieties at a reasonable cost to the students and served in an appropriate ambience that can provide energy that can promote their enthusiasm for dining at the cafeteria. Previous studies confirmed that food, beverage, and service quality have positive and significant relationship with consumer satisfaction in university cafeteria service which is consistent with the findings of this study which also supported the positive affiliation of food and service quality with customer satisfaction (Ha and Jang, 2010; Oliver and Swan, 1989). Another research showed that cafeteria services from university hospital needs improvement in healthcare service quality in all dimensions by paying particular attention to responsiveness and tangibility to minimize gaps in provision of quality services (Ozretic et al., 2020). The study findings strongly suggest quality improvement of the cafeteria on the identified factors like cost, availability and attitude of the staff by involving all stakeholders, university administration, students affairs and student representatives to work in mutual interest for the improvement of quality of life of the students so that they can be healthy individuals working in national interest of the society.

Conclusions and Recommendations

This study concluded that the students were not satisfied with quality of food, atmosphere, staff attitude, and cost of food which are leading to student's dissatisfaction towards on-campus food service.

Food quality and food prices need important which determines the satisfaction level of students utilizing cafeteria services. The quality assessment of food service cafeterias in educational institution's is an important research area that needs further exploration and needs attention.

Limitation of study

This research is limited to one university so the findings and suggestions will be applied to this university. There are several universities across the country so future researches must have included these in research sample. The large sample size increases the representativeness of research findings.

Acknowledgement

We acknowledge all the study participants for the contribution and time for this research study.

Novelty Statement

This is an evidence-based findings or enhancing quality of healthy food provision to the students at study place where they spent most of their time. This will have great impact on their health and quality of life.

Author's Contribution

NN, HMQ, AA, MSK, MAK: contributed to conception of research idea and execution of research. MHQ, AA, MSK, MAK: collected and analysed data and assisted in writing manuscript. NN: written and edited manuscript and supervised research.

Conflict of interest

The authors have declared no conflict of interest.

References

- Ahmed, Z., Nisar, N. and Zafar, M., 2019. Assessment of quality of food services in the cafeteria of medical schools of Karachi, Pakistan. Multicenter study. *Indian Journal of Applied Research*, 9(7): 19-22.
- Anshul, G. and Kumar, J., 2017. Exploring Customer Satisfaction with University Cafeteria Food Services. An empirical study of temptation restaurant at Taylor's University, Malaysia. *European Journal of Tourism, Hospitality and Recreation*, 8(2): 96-106. <https://doi.org/10.1515/ejthr-2017-0009>
- Chang, Suki. N.M. and Nalini. A., 2014. A Structural Approach on Students' Satisfaction Level with University Cafeteria. *Asian Social Science*, 10(18): 202-209. <https://doi.org/10.5539/ass.v10n18p202>
- Ghani, F.A., Zahari, M.S.M., Ramli, N., Jusoff, K., Zaini, Z.M. and Hamid M, Munirah, Samsudin, Azlina, Ngali, Norzaidah, Rahmat, and Norazlina. 2011. Services at UiTM residential hostel cafeterias-is it satisfactory? *World Appl. Sci. J.*, 12: 8-13.
- Ha, J. and Jang, S., 2010. Effects of service quality and food quality: The moderating role of atmospherics in an ethnic restaurant segment. *International Journal of Hospitality Management*, 29(3): 520-529. <https://doi.org/10.1016/j.ijhm.2009.12.005>
- Herrmann, A., Xia, L., Monroe, K.B. and Huber, F., 2007. The influence of price fairness on customer satisfaction. *Journal of Product and Brand Management*, 16(1): 49-58. <https://doi.org/10.1108/10610420710731151>
- Lee, S.H., Liaw, M.S., Lee, K.S. and Rha, Y.A., 2016. International Students' Perception on University Cafeteria in Malaysia. *Culinary Science and Hospitality Research*, 22(6): 24-32. <https://doi.org/10.20878/cshr.2016.22.6.003003003>
- Manning, L. and Baines, R.N., 2004. Effective management of food safety and quality. *Br. Food J.*, 106(8): 598-566. <https://doi.org/10.1108/00070700410553594>
- Martin, D.C, Molina, A. and Esteban, A., 2007. An integrated model of price, satisfaction, and loyalty: An empirical analysis in the service sector. *Journal of Product and Brand Management*, 16(7): 459-468. <https://doi.org/10.1108/10610420710834913>
- Oliver, R.L. and Swan, J.E., 1989. Consumer perceptions of interpersonal equity and satisfaction in transactions: A field survey approach. *Journal of Marketing*, 53(2): 21-35. <https://doi.org/10.1177/002224298905300202>
- Ozretic, Dosen, D., Skare, V., Cerfalvi, V., Bencekovic, Z. and Komarac, T., 2020. Assessment of the quality of public hospital healthcare services by using Servqual. *Acta Clin. Croat*, 59(2): 285-293.
- Rad, A.M.M. and Yarmohammadian, M.H., 2006. A study of relationship between managers' leadership style and employees' job satisfaction. *Leader Health Service*, 19(2): 11-28. <https://doi.org/10.1108/13660750610665008>
- Raman, S. and Chinniah, S., 2011. An investigation on higher learning students' satisfaction on food services at University cafeteria. *Int. J. Res. Com. IT Manage.*, 1(2): 12-16.