

A Comparative Study Of Outsourced Vs In-House Dietary Services In Two Hospitals To Study The Cost Effectiveness

Madhu Arora¹, Sheetal Thakur², Rekha Kaushik³, Dr. Ravi Gupta⁴

¹Research scholar, Department of Food and Nutrition, MMIT&BM(HM), Maharishi Markandeshwar (Deemed to be University) Mullana, Ambala.

^{2,3}Assistant Professor, Department of Dietetics and Nutrition.

ABSTRACT

The study will investigate the reasons and advantages of in-house and outsourced dietary services. The eating services of the hospital are an integrated, well-established system meant to assure patient satisfaction. The hospital's dietary department typically offers two types of services: In an in-house service, the hospital is responsible for money while the government provides food supplies. High-quality, nutrient-dense, and nutritionally-balanced meals should be provided to hospital patients. The hospital administration must ensure that patients are satisfied with dietician services. The investigation used the primary data using face to face interview of 360 patients, that indicates the significance of better in-house and out-of-house services and how they impact patient satisfaction-related criteria. In case for in-house dietary services the hospital allocation separate fund for it while in Contractual services the Hospital out-source their services to external vender. This vender is thereafter responsible for the quality of the food provided to the patients. With this meal, the hospital merely needs to document the patient's additional nutritional needs. The observational units for this study are comprised of 360 patient volunteers, and a questionnaire was utilized to collect data. The number of hospitalized patients was used to establish the size of the observation unit. The number of patients in a hospital ward effects data collecting. Patients' demographic parameters were characterized by their mean, standard deviation, unpaired student test, p value, and significance level. The link between patient features and answers was discovered by SPSS 25.0. The respective values for positive meal satisfaction were 1 and 2. To determine nutritional deficiency, fiber, calories, protein, fat, and carbs were computed and compared to the revised RDA. Similar coding reduces prejudice. Each group served trays and trolleys. Quantifying patients' food choices, opinions, and complaints.

INTRODUCTION

Currently, health costs are on the rise in many nations around the world. This trend is the consequence of a mix of variables, such as rising individual earnings, advancements in medical technology, and a shift in demographic structure toward an aging population, resulting in an

increase of chronically ill people(Yigit et al., 2006). Hospital food services are an integrated system well established for patient satisfaction.Usually, two types of services run in the dietary department of hospitals. In an in- house service the hospital itself has to see the budgeting part and food material is bought from government sources.Here the department of dietetics checks whether the vegetables are fresh or not and themselves have to tie up with the whole sale vegetables markets. The department itself has to buy the utensils and crockery or any other things required. Here the ration is from government and pilferage is likely to occur. Some mistakes are likely to occur in any aspect, thus the hospital would need a large team of staff specially trained for every step of their dietary services.The storekeeper has to be careful in dispensing the daily raw materials. The leaves sanctioning of the staff has to be seen by the head of department or medical superintendent according to hospital rules. Pension, gratuity, employees fund, group insurance has to be given by the hospital. The staff kept is mostly permanent employees of the hospital. This definitely affects the efficiency of the staff in a positive manner.

Whereas, in outsourcing dietary services, a lot of money is spent and the responsibility is given to a professional food service contractor.The relevance and importance of patient meal service, when compared to many clinical activities, is not always appreciated and is often seen as an area where budgetary cuts will have the least impact. The provision of a foodservice system that optimizes patient food and nutrient intake in the most cost-effective manner is therefore seen as essential (Hartwell et al., 2006).

Thus, it is important to decide which method of food services is better for a hospital considering its budget and facilities available.Apart from the serving system method a close relationship between the patients and serving staff is essential for recovery of the patients.The hospital wards, often at considerable distances from the kitchen, adds an additional logistics burden, and in consequence, a long stream of possible delays between production, service, delivery and consumption (do Rosario & Walton, 2019).

According to (Huckman, 2014) Companies that view outsourcing merely as an easy way to offload commodity work are missing important benefits to be gained by working closely with service providers.

In India there are no large efficient companies which can be hired for outsourcing work hence we have to consider small vendors or go in for in-house system of food catering. There are several large outsourcing vendors, the larger ones being Sodexo and Aramark, and they use their size to demand lower prices and higher quality from supply vendors, equipment merchants, and other service organizations. Smaller outsource vendors often do not enjoy this benefit (Roberts et al., 2013).

In the present times patient are much more aware and thus demanding better dietary care. Hence patient satisfaction responses need to be good to assess improvement in this field. Quality of food provided, ambience of the ward, cleanliness, and comfort of a patient play an important role in patient healing.

From outsourcing ethical issues may also come up from some aware patients who might demand to know who are the services providers. Nearly any organization that intends to outsource some of its in-house services must contend with five fundamental barriers. Organizational size, culture, and values have a significant role in locating and choosing the ideal vendor. On the way to effective outsourcing, the key hazards include (Roberts et al., 2013):

- (a) a poorly designed request for proposal,
- (b) possible pressures from internal stakeholders,
- (c) shifting priorities,
- (d) excessive expectations
- (e) poor decision-making.

Material and Methods

In this cross-sectional study the hospitals were selected according to, one having outsourcing system of food services and other having in-house system. Government Medical College and Hospital, Sector- 32, Chandigarh, had outsourced system (GMCH) and Government Multispeciality Hospital Sector 16, Chandigarh (GMSH) had in-house system. Both hospitals cater to mostly North West population of India. Sixty adult patients of both sexes were selected randomly from various ward?? of each hospital. Exclusion criteria: Critically ill patients were excluded due to their inability to assess food satisfaction. Patients with a minimum stay of 5 days were taken for study. Patients with therapeutic diets-diabetic, renal, hypertensive, low fat diets, high protein diets were also taken besides those taking normal and semi-solid diets. Twenty four hour dietary intake of each patient was taken and fibre, calories, protein, fat and carbohydrates were noted and after compared with new Recommended Dietary Allowances (RDA), their nutrients deficit was assessed. The food delivery system pattern by trolley and plate system was noted from both hospitals.

A descriptive survey (describes characteristics of a population) study design was used and socio-demographic data of the hospitals and patients responses were noted by making a self-structured questionnaire using guidelines. Only closed ended questions were set for the patient satisfaction interview. The Patients were informed about the study and verbal consent was taken from those who voluntarily wanted to participate in this study (Appendix 1)

The quantitative data viz. demographic profile of patients was analyzed for mean, SD, unpaired student t test, p value and significance levels, Statistical significance between correlations among demographic data and how both the systems related to the responses of patients was also found by SPSS software 25.0. The responses of patients to the food satisfaction questionnaire which were in the form of yes or no – were coded as 1 and 2 respectively and noted. Patient satisfaction regarding therapeutic diets-diabetic, renal, hypertensive, low fat diets, high protein diets, normal and semi-solid diets, fibre, calories, protein, fat and carbohydrates were calculated and compared with new Recommended Dietary Allowances (RDA), and their nutrients

deficit was assessed. these were coded in similar manner, as less personal bias is there in interpreting data by giving codes. The food delivery system pattern by trolley and plate system was noted from both hospitals. Foods liked and disliked, suggestions and complaints by the patients were noted and similarly coded to calculate percentages.

RESULTS

The research is based on both the primary and secondary resources in the field of dietary services and hospital setup. As described in the section of sampling method, the primary research is completely qualitatively. This involves the face-to-face interviews with the patients which have been conducted in the six hospitals of tricity. The observational units of the research are the 360 patients as volunteers and the questionnaire has been used the primary method of data collection. The unit of observation was selected on the basis of number of patients which were available in the hospital at the time of the research. The data collection is dependent on the availability of the patients in different wards who are being admitted into the hospital.

Gender of Respondents

Below section presents the demographic profile of the respondents including gender response of the patients who were admitted in the private and the govt hospitals.

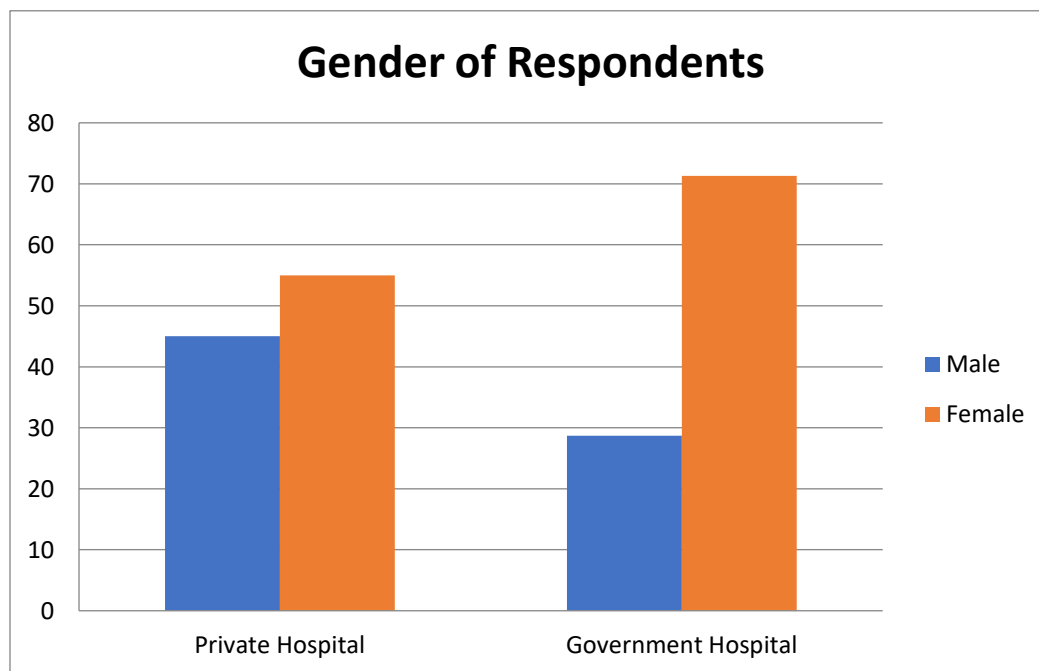


Fig: 1: Gender of respondents in Private and Government Hospitals

Table 1 represents that among the total respondents from private hospitals 45 percent were male and 55 percent respondents were female. Likewise, respondents from government hospitals also included more female respondents i.e., 71% and 29% males.

Table 1: Gender of respondents in Private and Government Hospitals

	Private Hospital	Government Hospital
Male	81 (45%)	51 (28.7%)
Female	100 (55%)	130 (71.3%)

Dietary Services of the Patients

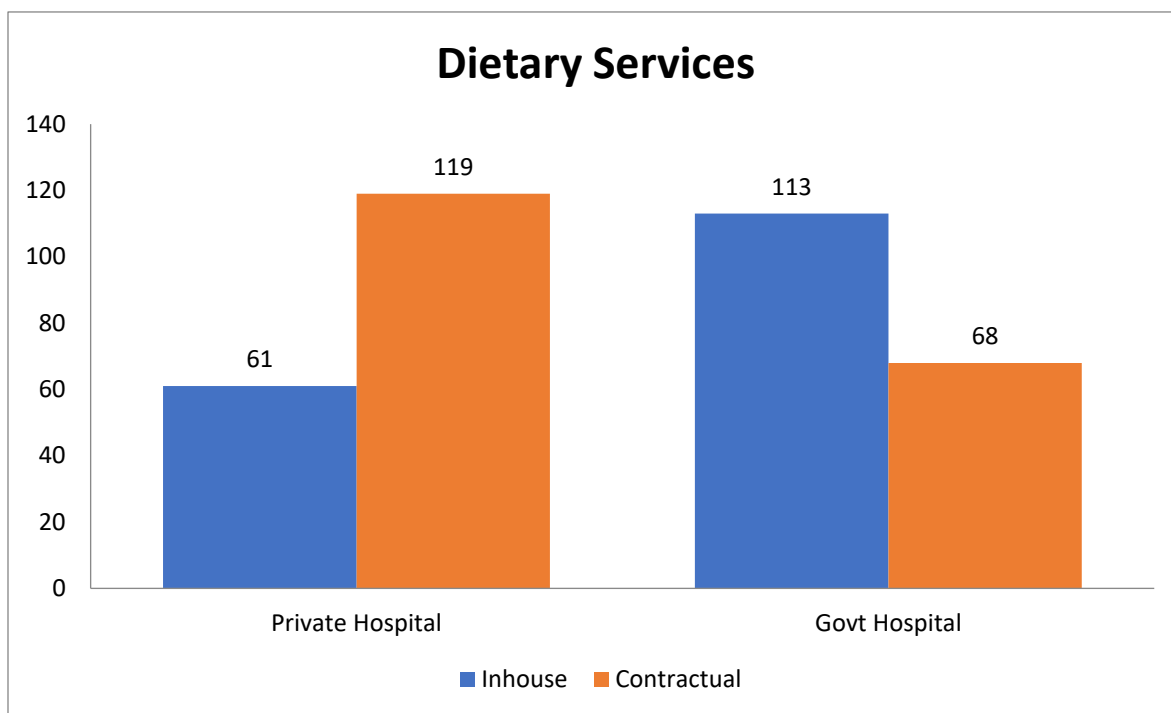


Fig 2: Dietary Services of Respondents of Government and Private Services

Table 2: Dietary Services of Respondents of Government and Private Services

Dietary Services	Private Hospital	Government Hospital
Inhouse	61 (35.06%)	113 (64.94%)
Contractual	119 (63.64%)	68 (36.36%)

Figures mentioned in table no 2 states that in case of private hospitals 35.06% respondents were having inhouse dietary services and 63.64% were having contractual dietary services. While in case of government hospitals the arrangement seems to be different as 64.94% patients as

respondents were availing inhouse dietary services and 36.36% were availing contractual services.

Results of Dietary Services (Inhouse/ Contractual) and satisfaction level

Table 4.10 Results of Dietary Services (Inhouse/ Contractual) and satisfaction level

Dietary Service		N	Mean	Std. Deviation	Std. Error Mean
Satisfaction Points	Inhouse / Government	120	88.9833	12.62782	1.15276
	Contractual	180	88.3556	11.81639	.88074

Table 4.10 represents the descriptive statistics related to the dietary services of in house / government and contractual hospitals. As per the figures, the mean value for inhouse / government hospitals is 88.9833 and the mean value for contractual hospitals is 88.3556. While the standard deviation for inhouse hospitals is 12.627 and that of contractual hospitals is 11.816. Further t-statistics was considered to find the significance level related to difference in means.

Table 4.11: Results of Independent t-test for government/In house and contractual/ outsourced dietary services

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Dietary Services	Government	.030	.861	.439	298	.661	.62778	1.43153	2.18941	3.44496
	Contractual									

In order to assess the difference government / inhouse and private / outsourced dietary services independent sample t-test was applied. As per Levene's test for Equality of Variance for dietary services, $F = 0.030$, $p = 0.861$ (which is > 0.05), therefore variances have been assumed to be equal. For this, $t(.439) = 298$, $p > 0.05$ in the score for private hospitals ($M = 88.983$, $SD = 12.627$) was is approximately equal to dietary services government / inhouse dietary services ($M = 88.3556$, $SD = 11.816$). The magnitude of mean difference is 95%, Confidence Interval; 2.18941 to 3.44496 was significant and it can be concluded that there is no significant difference of dietary services of contractual and inhouse on satisfaction of patients.

DISCUSSION

CONCLUSION

According to the results of investigation, the contractual dietary service is preferred by the majority of patients and generates more favorable feedback. In addition, this service receives a greater number of compliments. Because of the amenities supplied by the public hospital, such as the on-site dietary services, it was a popular destination. As a direct result of the patient's happiness with the treatment, the patient's level of focus on it increases. Using the primary data acquired from 360 patients who were treated in either publicly or privately operated hospitals, we were able to identify the key factors associated with patient satisfaction with the nutritional services offered during hospitalization. we concluded an extraordinarily intriguing section in which we examined how gender disparities in people's responses to the numerous paid nutritional services affect their levels of pleasure. Despite the fact that males are more likely than females to use men's contractual dietary services, it is a well-known truth that both men and women like this type of service. This is not the case, however. According to the statistics, the different key inputs

suggest that services done by third parties are much more important than those done by people inside the company. 35.06 percent of private hospital respondents had in-house dietary services, whereas 63.64 percent of private hospital respondents had contracted nutritional services. In contrast, government hospitals appear to have a unique arrangement, since 64.94% of respondents use in-house food services and 36.36% use contract services. in order to deliver better services Men and women choose outsourcing services because they bring comfort and a sense of accomplishment.

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APPENDIX 1

PROFORMA

HOSPITAL DETAILS

1. Hospitals name: _____
2. Govt/Pvt/Autonomous: _____
3. Number of wards: _____
4. Number of beds: _____
5. Dietary services in the hospital (in house)/ contractual (outsourced)_____
6. Menu: _____Fixed/Flexible
7. General Diet: _____

8. Private Diet: _____
9. Therapeutic diets: _____

DEMOGRAPHIC PROFILE OF THE INDOOR PATIENTS

1. Patient name: e.g. Mrs.Raman w/o -----but will be kept Anonymous and the patient will be apprised of the same. _____
2. Ward name: _____
3. Gender: M F
4. Age(years): _____
5. Ht (cm): _____
6. Wt (kg): _____
7. BMI: (Wt(kg)/Ht²(m): _____
8. Marital status: _____
9. Language spoken: _____
10. Salary per month: _____
11. Minimum period of stay on the day of interview: _____
- 12.If operated, number of post-operated days: _____
- 13.Diagnosis _____ /Clinical _____ History: _____

- 14.Diet Prescribed: _____

PATIENTS PERCEPTION OF DIETARY SERVICES

A. PATIENT S' PERCEPTION OF FOOD

1. Was the food tasty?
 Yes 1
 No 2
2. Did you like the appearance of food?
 Yes 1
 No 2
3. Was the quantity of food enough?
 Yes 1
 No 2
4. Did you like the aroma of food?
 Yes 1
 No 2
5. Was the food served at right temperature?
 Yes 1

- No 2
- 6. Was the food soft enough to be easily digestible?
 - Yes 1
 - No 2
- 7. Did you consume all the food served to you?
 - Yes 1
 - No 2
- 8. Was the prescribed food given to you?
 - Yes 1
 - No 2
- 9. Was the menu changed daily?
 - Yes 1
 - No 2
- 10. Did your appetite with hospital food increase as compared to your home?
 - Yes 1
 - No 2
- 11. Are you allergic to specific foods?
 - Yes 1
 - No 2
- 12. Are you satisfied with the time of food service?
 - Yes 1
 - No 2
- 13. Are you satisfied with cleanliness of cutlery?
 - Yes 1
 - No 2
- 14. Out of 100 how many marks will you give to the food served?-----

B. PERCEPTION OF HOSPITALITY

- 1. Was the food trolley bearer polite while serving food?
 - Yes 1
 - No 2
- 2. During food serving time, does the noise of plates and cutlery disturb you?
 - Yes 1
 - No 2
- 3. Was the food served in a hurry?
 - Yes 1
 - No 2
- 4. Did the trolley person give you enough time before carrying away your food utensils?
 - Yes 1
 - No 2

5. Out of 100 how many marks will you give to hospitality? _____

C. PERCEPTION OF CLEANLINESS OF DIETARY STAFF

1. Was the food server looking neat?

Yes 1

No 2

2. Was his dress clean?

Yes 1

No 2

3. Was his beard shaved?

Yes 1

No 2

4. Was his hair cut short?

Yes 1

No 2

5. Was He Wearing a Cap?

Yes 1

No 2

6. Was he wearing gloves while serving food?

Yes 1

No 2

7. If no gloves were his nails cut short?

Yes 1

No 2

8. Out of 100 how many marks would you give to the food servers for their cleanliness?

D. PERCEPTION OF DIETETICS DEPARTMENT

1. Are you visited by the dietitian regularly?

Yes 1

No 2

2. If you have any problems regarding food or food service are they solved?

Yes 1

No 2

3. Is your diet changed on demand?

Yes 1

No 2

4. Could you understand the language of the interviewer?

Yes 1

No 2

5. Out of 100 how many marks will you give to the department? _____

GENERAL VIEWS OF PATIENTS REGARDING DIET AND DIETARY SERVICE

Food Mostly Liked 1 2 3 4	
Complaints 1 2 3 4	
Suggestions 1 2 3 4	