

# Validation of Patient Satisfaction Scale and Measurement of Patient Satisfaction Level Among Inpatient of a Tertiary Care Hospital, Chengalpattu District Tamil Nadu

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DOI: 10.55489/njcm.140420232649

## ABSTRACT

**Background:** Patient satisfaction is crucial for research, administration, and planning. Since it reveals the effectiveness of the provider, customer happiness is of utmost importance as a gauge of the quality of service. Inpatient satisfaction is an essential tool to identify the level of patient satisfaction and it is one of the important goals of any healthcare system. The objective of the study is to validate the questionnaire developed and to assess the inpatient satisfaction level among patients admitted to OBG ward in a tertiary care hospital.

**Methods:** A cross-sectional study was done among 160 women inpatients admitted in the OBG ward in a tertiary care hospital, Chengalpattu. Patient satisfaction was measured by a validated questionnaire with seven domains, the data were collected by face-to-face interview method.

**Results:** The mean age of the respondent were 28 years. 60% of respondents were highly satisfied with the effectiveness of the treatment. Only 33.8% of respondents were highly satisfied with the diet food served and 56.3% were highly satisfied with the cleanliness of wards, and restrooms.

**Conclusions:** The results obtained from the present study can serve as a baseline to compare the future survey and helps to provide healthcare services that fulfil patient desires and expectations.

**Keywords:** OBG ward, satisfaction level, Inpatient care

## ARTICLE INFO

**Financial Support:** None declared

**Conflict of Interest:** None declared

**Received:** 12-12-2022, **Accepted:** 06-03-2023, **Published:** 01-04-2023

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### How to cite this article:

Ranjana R, Anantharaman AA, Kaveri P, Bincy K, Manoharan M. Validation of Patient Satisfaction Scale and Measurement of Patient Satisfaction Level Among Inpatient of a Tertiary Care Hospital, Chengalpattu District Tamil Nadu. Natl J Community Med 2023;14(4):267-270. DOI: 10.55489/njcm.140420232649

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www.njcmindia.com | pISSN09763325 | eISSN22296816 | Published by Medsci Publications

## INTRODUCTION

Patient satisfaction is a crucial instrument for research, administration, and planning. Since it reveals the effectiveness of the provider, customer happiness is of utmost importance as a gauge of the quality of service.<sup>1</sup> The new health care consumers demand compassionate care, successful patient outcomes from healthcare professionals, symptom relief and increased treatment effectiveness, as well as updates on patient progress.<sup>2</sup> Patients' satisfaction has been used as a significant indicator of quality services provided by health care personnel.<sup>3</sup> Health care provider organizations wishing to meet those needs more effectively have shown growing interest in using patient evaluations and reports as a complement to other quality assessment and assurance methods.<sup>4</sup> While some researchers focus on patients' happiness with the quality of healthcare services they receive, others focus on people's contentment with the healthcare system, making it difficult to conduct patient satisfaction studies.<sup>5</sup> The opinions of patients are crucial because unhappiness points to areas where hospital health services should be improved.<sup>6</sup> Satisfaction measures are crucial instruments for planning, administration, and research.<sup>7</sup> Patient satisfaction surveys attempt to translate subjective results into meaningful, quantifiable, actionable data. The present study aimed at developing a validated tool to measure the level of satisfaction with health services offered in OBG ward for providing prompt care to patients.

## METHODOLOGY

A cross sectional study was done among 160 women participants, using convenient sampling method. In patients who were admitted in the OBG ward from April 2022 to July 2022 at SRM Medical College Hospital and Research Centre, Chengalpattu district, Southern India, and gave consent to participate were included in the study. The study was approved by the institutional ethical committee. The semi structured questionnaire was developed by collecting all related questions for each component from different study questionnaire and organized in a single frame to assess the patient satisfaction level. It includes demographic details regarding age, sex, education, marital status, occupation, income and question to measure the level of satisfaction. Level of satisfaction in each domain of Admission process, Physician service, Nursing service, Diagnostic service, Dietary service, Accommodation facility/Cleanliness, Discharge process, was recorded by selecting responses in 5-point likert scale. The data was collected during discharge by face-to-face interview. The data was then computerized and subjected to statistical analysis, using SPSS version 22. The analysis was summarized in frequencies, percentages, mean and standard deviation. Semi-structured Questionnaire was developed by collecting all related questions for each compo-

nent from different study tool which have been already validated. We organized these question in a single frame to assess the satisfaction level among patients and then we validated the scale

## RESULTS

The present study including 160 women participants, were the inpatients admitted in OBG ward the mean age of the respondent were 28 years.

**Validation of questionnaire:** Explanatory factor analysis was done for the questionnaire developed to measure the level of satisfaction. We have found KMO index of 0.755, which is  $>0.06$  and the data set is suitable for factor analysis. Bartlett's test of sphericity also noted with high significance. PCA of 21 items yielded a seven-factor model that accounted for 64.57% of the variance. Items in the questionnaire are well loaded [Table 1] with respective factors. Correlation coefficients show significant and positive correlation with one another. Cronbach's alpha was estimated for the items and factors. All the extracted factors had good internal consistency (Cronbach's alpha  $>0.75$ ).

Majority of the patients were in the age group of 20–30 years, 39.4% of schooling and undergraduate respondents, and 88.8% of respondents were housewives. Among study participants, (Table-2) 65% were highly satisfied, 33% were satisfied, and 2% rated neutral. Overall, most of the patients are satisfied with the admission process. 70% of patients were highly satisfied and 30% of patients were satisfied by the physician service. Satisfaction regarding the behaviour of nursing staff towards patients is good. Where 60% of respondents are highly satisfied and 39% of patients were satisfied and 1% rated Neutral. 46% were highly satisfied, 45% said satisfied, 7% neutral respondents and 2% were dissatisfied about the laboratory services. 3% were highly dissatisfied and 46% were highly satisfied by the food served on obstetrics and gynaecology wards. 2% were dissatisfied by the cleanliness of restrooms. 7% rated neutral for ventilation in wards and 47% were highly satisfied by overall facilities. 42% of inpatients were highly satisfied and 2% rated dissatisfaction in discharge and billing process.

## DISCUSSION

Healthcare providers should manage quality by continually redesigning processes and recognizing the elements strongly linked to patient satisfaction. Our studies confirm that patient satisfaction is a broad concept that includes satisfaction with hospital service elements, including the admission process, dietary services, housekeeping services, the discharge process, the hospital's facilities, diagnostic services, medical and clinical services, and nursing services.

**Table-1: Principal component analysis with Factor loading**

Factors	Admission process	Physician service	Nursing service	Diagnostic service	Dietary service	Accommodation /Cleanliness	Discharge process
Q3	0.735						
Q1	0.727						
QE2	0.705						
QB3	0.516						
QD3		0.858					
QD2		0.802					
QD1		0.574					
QG2			0.876				
QG1			0.853				
QG3			0.718				
QF2				0.85			
QF3				0.754			
QF1				0.704			
QA2					0.817		
QA1					0.636		
QA4					0.624		
QA3					0.585		
QB4						0.714	
QB1						0.661	
QC1							0.818
QC2							0.797
Cronbach alpha	0.75						
% variance	25.27	9.524	8.188	6.079	5.78	5.108	4.629
KMO	0.755						
Bartlett's Test of Sphericity, $\chi^2$	146.582						
df	276						
Sig	0.001						

**Table 2: Level of patient satisfaction**

Domains	Highly Dissatisfied (%)	Dissatisfied (%)	Neutral (%)	Satisfied (%)	Highly Satisfied (%)
<b>Admission Process</b>					
Courtesy and respect of staff	0	0	1(0.6)	72(45)	87(54.3)
Ability of the admission staff to provide information	0	0	2(1.25)	58(36.25)	100(62.5)
Time Taken for admission	0	0	2(1.25)	40(25)	118(73.7)
<b>Physician Service</b>					
Patient opinion regarding attention & attitude of doctors	0	0	0	60(37.5)	100(62.5)
Doctors listening to patients queries & explaining condition	0	0	0	47(29.3)	113(70.6)
Prior explanation of treatment plan is provided.	0	0	0	49(30.6)	111(69.3)
Effectiveness of treatment	0	0	0	31(19.3)	129(80.6)
<b>Nursing Service</b>					
Behavior of nursing staff towards patients	0	0	0	91(56.8)	69(43.1)
Listening attitude towards patients' needs	0	0	0	73(45.6)	87(54.3)
Information regarding daily progress	0	0	0	1(0.6)	45(28)
Attention to the call of needy patients	0	0	0	42(26.2)	118(73.7)
<b>Diagnostic Service</b>					
Opinions regarding laboratory and department facilities	0	0	8(5)	101(63.1)	51(31.8)
Are the investigations done on time	0	1(0.6)	10(6.2)	72(45)	78(48.7)
Patient opinion regarding speedy test results	1(0.6)	3(1.8)	9(5.6)	54(33.7)	96(60)
<b>Dietary Service</b>					
Quality & taste of the diet served	1(0.6)	3(1.8)	20(12.5)	82(51.2)	54(33.7)
Regular visit of dietician	0	1(0.6)	11(6.8)	77(48.1)	71(44.3)
Diet served on time	1(0.6)	0	7(4.3)	54(33.7)	98(61.2)
<b>Accommodation Or Physical Facility</b>					
Comfort provided & facilities available	0	1(0.6)	14(8.7)	90(56.2)	55(34.3)
Opinion regarding the hospital environment	0	0	7(4.3)	71(44.3)	82(51.2)
Cleanliness of wards, restrooms & corridors	0	2(1.25)	15(9.3)	53(33.1)	90(56.25)
<b>Discharge Process</b>					
Explanation about discharge process	0	1(0.6)	3(1.8)	97(60.6)	59(36.8)
Time taken for bill clearance	0	1(0.6)	2(1.2)	90(56.2)	67(41.8)
Explanation about procedures & care to be taken at home	0	0	1(0.6)	81(50.6)	78(48.7)

Overall, 71.3% of patients are satisfied with admission process and same results observed in the study on patient satisfaction in multispecialty hospitals by UnNisa.M, where 70% of patients said they had a good experience on admission.<sup>8</sup> Satisfaction regarding patient opinion on attention and attitude of the doctors is very good. Nearly 70- 80 % of patients were satisfied with explanation of treatment and effectiveness of treatment given, and our results matches with the study on inpatient satisfaction done by Shivani-Shekhawat (2016).<sup>2</sup>

Overall, most of the patients are satisfied with the behaviour, listening attitude, attention given to calls of needy patients nursing services (56.9%, 54.4%, 71.3% respectively) which was similar to the study on patients' satisfaction by J ChitwanMedColl (2014)<sup>9</sup>, 68.5% of patients said that nurses treat them in a friendly way, and 49% said that doctors clearly explained treatments. Satisfaction regarding lab facilities towards patients is good. Most of the patients are satisfied with the diagnostic service and also 78% reported satisfaction with time taken for completing investigations, and very few were dissatisfied by receiving lab test report on time. This statement agreement with previous study done by Sharma.R on patient satisfaction in tertiary care hospitals in India (2011),<sup>10</sup> where 48.6% of respondents were satisfied and 2.5% of respondents were dissatisfied that laboratory tests were done on time. Satisfaction with dietary services was found to be neutral in most of the patients, 33% were satisfied with quality and taste of the diet served, 44.4% of respondents are highly satisfied with the regular visit of a dietician, 61 % of respondents were satisfied with diet served on time, similar results was observed in study on the study on nutrition and diet quality during pregnancy<sup>11</sup> Satisfaction with accommodation and housekeeping services was good, nearly 56% of participants were satisfied with cleanliness services and comfort facilities, these services should be concentrated more in improving the satisfaction level in patient, similar results was observed in the article by Jawahar SK(2007)<sup>12</sup> where 50% of respondents were satisfied with the cleanliness of restrooms. Nearly 90% of the patients were reported satisfaction with explanation of discharge process and bill clearance. Only 50.6% of respondents said they were satisfied with an explanation about the procedures and care to be taken at home, this was aligned with the previous study by zineldin (2006)<sup>13</sup>. Hence health managers should outlook on these dimensions to bring patient satisfaction and outperform the firms that do not provide patient satisfaction. Limitation of the study was, it is only based on information provided by patient perspective in utilizing the services.

## CONCLUSION

Understanding the importance of patients' satisfac-

tion in determining the quality of medical care delivered, patient satisfaction scale was developed and it shows good fit with Cronbach alpha 0.75. According to our study, patients' overall satisfaction with hospital discharge processes, physician service, laboratory diagnostic services, nursing services, accommodation services, and dietary services were all strong predictors of net overall satisfaction. Feedback from patient will help to improve the quality of hospital services and better treatment. Study yielded better understanding on patient views and perceptions. Patient satisfaction has a great impact on referring the quality of hospital service. Patients' complaints should also be addressed to improve the services.

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