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Evaluating and Improving Patient Satisfaction with Health-care Quality Standards in Uttar Pradesh, India

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Abstract

The level of contentment shown by one's patients is a crucial indicator of quality. Measuring patient satisfaction is useful for several purposes, including investigation, management, and strategic development. Patient happiness should be used as a yardstick for measuring the effectiveness of medical professionals in their daily work. Whole quality management relies heavily on patient happiness as a metric of success. The ultimate goal of any survey of in-patients should be to have those staying at the facility feel as satisfied as possible with their care.

Keywords: Nurse, Patient, and health care, Patient satisfaction, Quality of care

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Introduction

The level of contentment shown by one's patients is a crucial indicator of quality. The patient satisfaction survey is an essential instrument for study, management, and strategy.[1] Patient happiness has a significant role in gauging the effectiveness of medical providers and the care they deliver. Patients' level of satisfaction while in the hospital largely depended on the opinions of the doctors, nurses, machines, cleaners, billers, and cooks.[2] Since the patient (consumer) is the one who determines quality, who takes the products, which causes the other to take it, who chooses your market strategy, who offers proper input regarding the efficacy of the hospital, and who creates success in the program of complete quality control,[3] level of satisfaction is of crucial significance in assuring improved quality on the route to total quality management. The degree to which patients are satisfied with their treatment is a substitute for the caliber of other parts of their experience.[4] Achieving the aims of health care depends on patients being happy with their experiences since this affects whether or not, they will continue with their treatments and seek medical attention when needed.

Patients are able to evaluate the quality of treatment they get when they focus on the whole picture, which includes medical science, the healing arts, and comfort measures.[5] Respondents to a hospital satisfaction survey were given broad questions on the facility's front desk, administrative staff, cleanliness, signs, menu options, and more. The primary goals of a patient satisfaction survey are enhancing service quality and maximizing in-patient satisfaction. According to cross-sectional research conducted by Rajagopal Rao Kodali *et al*.[6] on the happiness of in-patients at a Premier Hospital of Medical College in AP, most in-patients reported excellent satisfaction, followed by fair, poor, very high, and very bad. Nursing care, followed by physicians and billing, and finally, cleaning, had the highest levels of satisfaction from patients. CME events, lectures, and sensitization workshops are suggested as methods of keeping physicians and nurses inspired and motivated during the research. The quality of medical treatment and the cost to the patient may benefit from implementing medical and nursing audits. To keep the wards clean and sanitary at all times, a sufficient number of housekeepers should be stationed there and monitored regularly. Research by Poochikian-Sarkissian *et al*. examining the degree to which staff nurses offered patient-centered care (PCC) as perceived by staff patients and nurses, and studying the links between adoption of PCC and patient outcomes, indicates that the adoption of PCC is likely to enhance patient outcome by boosting patient self-care abilities and improving happiness with treatment and life quality.[7] How several facets of treatment are connected to patients' overall satisfaction in Hong Kong: A population-based PPE-15 study? Overall, patients were 7.3% satisfied with public hospital treatment and 7.8% satisfied with private hospital care.[8] When controlling for patient characteristics, regression models reveal that responses to the questions "want to be more engaged in choice made about the treatment and care," "respect for patient's dignity," and "patients" family have adequate chance to speak to doctor," and "inform about danger signs-related illness/treatment after went home" significantly affect patients' overall satisfaction ratings. According to the study's findings, the connection between a physician and a patient is crucial to the success of care. This might be used in PCC training and health-care curriculum development.[8]

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Aims and Objectives

The aims and objectives are to study of the levels of Patient Satisfaction with Health-care Quality in NABH accreditation and non-NABH accreditation medical hospitals across different regions in Uttar Pradesh in India.

Materials and Methods

SPSS statistical software applications were used to calculate this study's different statistical parameters. The patients admitted in

the hospital were considered in the age groups of 20–50 years, male and female without any racial discrimination, non-conflict, and non-bias while obtaining the results.

Results

Statistical comparison of NABH accredited and non-NABH accreditation medical institutions or hospitals. A total of 200 hospitals were covered in the statistical survey, and 100 NABH accredited and 100 non-NABH accreditation institutions were covered in this statistical survey. The average rating of the quality of the health-care service and satisfaction levels was obtained among the patients admitted in both the NABH accreditation and non-NABH accreditation institutions [Figure 1]. SPSS statistical software was used to calculate the different values in this analysis for both types of hospitals [Figure 2].

The questionnaire table is given below as follows:

The questionnaire questions were formulated according to the Laschinger, McGillis Hall, Pedersen and Almost, 2005 questionnaire format. Further, the Likert 5-point scale was used for analyzing the results. The scale rating is as follows: (1) Strongly disagree; (2) disagree; (3) neither agree nor disagree; (4) agree; and (5) strongly agree on a scale from 1 to 5.

Further, Levene's test was used to compare the level of satisfaction obtained among the patients admitted in NABH accreditation and non-NABH accreditation hospitals across different regions in Uttar Pradesh [Table 1]. The initial hypothesis H_o is that there is little effect of accreditation on the quality of care and the satisfaction levels received by the patients in both the NABH accreditation and NABH non-accreditation hospitals across Uttar Pradesh in India [Table 2].

Levene's test uses F distribution degree of freedom (1,20) (right tailed) to compare the NABH accreditation hospitals and non-NABH accreditation institutes in India [Table 3]. Further, Tukey-Kramer test was also conducted to explain the difference between the two groups being studied in this statistical study, i.e., both the NABH accreditation and NABH non-accreditation groups [Table 4].

1. H_0 hypothesis: Since the p-value is small, hypothesis H_1 is accepted. The difference between the variance values between the two groups is not significant.
2. *P*-value: The p-value equals 0.0267 with boundary limits of 0.973. Thus the, hypothesis H_0 is rejected and hypothesis H_1 is accepted.
3. The statistics: The F value is 5.714 so it is present in the 95% acceptance region in the graph.
4. Effect size: The F-value is small and is equal to 0.53. The difference between the average values is large. The η^2 is equal to 0.22. The group variance is present in the limits of 22% region of acceptance.
5. Tukey HSD/Tukey Kramer: There is a significant difference between the variances of the pairs.

According to the Tukey-Kramer test given in Table 5, the p-value is small so hypothesis H_1 is accepted and hypothesis H_o is rejected. There is a significant difference between the values of the two groups.

Discussion

Nurses in Cyprus need to be taught to be more patient centered and understand the value of their patients' right to privacy and autonomy, according to a research by Merkouris *et al*. (2013).[9]

Table 1: The standard deviation, mean, median, and variance of the different NABH accreditation institutes across different regions in Uttar Pradesh in India

Parameter	*Value*
Population SD (σ)	1.3266
Variance (σ^2)	1.76
Sample SD (S)	1.3984
SD confidence interval	0.9619–2.553
Sample variance (S^2)	1.9556
Sample size (*n*)	10
Mean ($\bar{x}$)	3.8
Median	4
SEM	0.4195
Sum of squares	17.6
MAD (mean)	1.08
MAD (median)	1
Sum	38

SD: Standard deviation, SEM: Standard error of mean, MAD: Median absolute deviation

Table 2: The mean, standard deviation, variance, and median on the liking scale for the patients admitted in the non-NABH accreditation institutions

Parameter	*Value*
Population SD (σ)	0.9798
Variance (σ^2)	0.96
Sample SD (S)	1.0328
SD confidence interval	(0.7104,1.8855)
Sample variance (S^2)	1.0667
Sample size (*n*)	10
Mean ($\bar{x}$)	2.2
Median	2
SEM	0.3098
Sum of squares	9.6
MAD (mean)	0.84
MAD (median)	1
Sum	22

SD: Standard deviation, SEM: Standard error of mean, MAD: Median absolute deviation

Table 3: The questionnaire response of the different patients admitted in the NABH accreditation hospitals across different regions in Uttar Pradesh

Sl No.	*Questionnaire set of questions*
1	Did the nurse treating you in the hospital have good skill, expertise, and knowledge about different aspects of medical sciences?
2	Does the nurse taking care of you in the hospital has good communication and verbal skills?
3	Was the nursing willing to listen to you in the hospital?
4	Did the nurse communicate well and send messages to the physician and the relatives of the patient regarding the patient's condition?
5	Did the nurse show courtesy, willingness to help, and friendliness while caring for you after being admitted to the hospital?
6	Do the nurses monitor you regularly to keep an update of your health status?
7	Do the nurses ask you what you want in the admitted room of the hospital?
8	Was the nurse flexible in handling you in the hospital room?
9	Was the nurse willing to help you in the hospital?
10	Was the nurse working with teamwork with the other health-care staff in the hospital?
11	Did the nurse coordinate well and show privacy while caring for you in the hospital?

Table 4: The Levene's test *F*-statistic and *P* value for the NABH accreditation hospitals in Uttar Pradesh in India

Source	*DF*	*Sum of square*	*Mean square*	*F statistic*	*P*
Groups (between groups)	1	0.7273	0.7273	5.7143	0.02678
Error (within groups)	20	2.5455	0.1273		
Total	21	3.2727	0.1558		

Table 5: Tukey-Kramer test value of significance between the two groups of accreditation and non-accreditation of NABH in the medical colleges in Uttar Pradesh in India

Pair	*Difference*	*SE*	*Q*	*Lower CI*	*Upper CI*	*Critical mean*	*P*
X1–X2	0.3636	0.1076	3.3806	0.04632	0.681	0.3173	0.02678

SE: Standard error, CI: Confidence interval, NABH: NABH accreditation hospitals or medical institutions

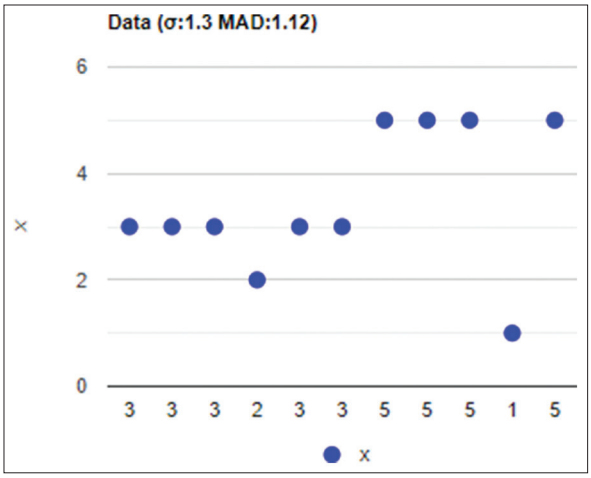

Figure 1: The standard deviation and median absolute deviation value for the different NABH accreditation hospitals across India for a questionnaire set asked thrice to a group of patients admitted in a hospital

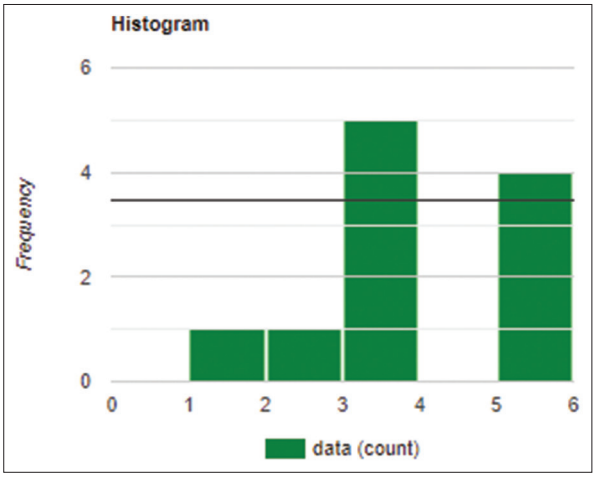

Figure 2: The Likert analysis questionnaire scale on the X-axis and the frequency on the Y-axis for the group of patients admitted in the NABH accreditation hospital for a survey conducted thrice

The hospital's dining service, in particular, could need some work; patients should be offered a wider variety of nutritious meals, and noise reduction measures should be implemented. Kashinath *et al*. (2010) researched to evaluate the variables influencing patients' satisfaction levels at a dentistry college in Tumkur City. The researchers concluded that more needs to be done to fill the information gap, such as putting up signs and describing the treatment process or any delays. Therefore, progress cannot be inferred from just aiming for fewer complaints.[10] To encourage and back up complaints, there must be an accurate assessment of the availability of processes and evidence of actual action.

Conclusion

The statistical analysis shows a substantial disparity between the data gleaned from the questionnaire research conducted at medical institutions with and without NABH accreditation in various parts of India. Due to the low p-value found in the Levene's test, the null hypothesis Ho may be rejected in favor of the alternative hypothesis H_1. Thus, the hypothesis H_o is rejected and H_1 is accepted.

Ethical Consideration

All the statistical analysis was conducted in the laboratory with no conflict of interest. The samples were collected across different regions of Uttar Pradesh including Gorakhpur, India. There is no racial conflict, bias, and discrimination among the participants who volunteered to answer the set of questionnaire present in this survey with consent of non-disclosure of the personal information of the volunteers. Further, the authors have no conflict of interest and all the authors contributed equally in developing the statistical results.

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