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Original Research Article

# The impact of communication on patients' satisfaction with quality of nursing care: A study of hospitalized patients in Uttar Pradesh, India

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ABSTRACT

**Background:** Patient satisfaction is used as an outcome criterion and a standard tool for evaluating the level of nursing care provided. This study aimed to determine how satisfied hospitalized patients were with the quality of their nurses' care.
**Materials and Methods:** An N=499 and an N=899 sample size group were used in a descriptive cross-sectional study of hospital-based medical treatment. Also, patients' ratings on the quality of their mental treatment were determined. Mean, standard deviation, t-test, and analysis of variance were calculated.
**Results:** The results indicate a mean value of 3.5, a standard deviation of 1.61, and a variance value of 1.269 and a margin of error 0.401 for this patient study.
**Conclusions:** Those admitted to medical wards for treatment were the most pleased with the level of nursing care they got. It became clear from the data that there is room for development in the area of communication. The level of patient satisfaction with their nursing treatment was not correlated with any demographic or clinically relevant factors.



## 1. Introduction

One way to evaluate medical treatment is to examine whether or not patients are content with it. Patient satisfaction is the only metric by which the quality of treatment can be assessed,[1] even though it is fluid and ill-defined. Most people who use health care services do so while hospitalized and who helped the hospital and its reputation flourish in the community. Having happy patients also helps healthcare staff do their jobs well.[2] The medical wards have seen an influx of patients. Patients move across these areas due to environmental and vector factors.[3] It was found that patients were less satisfied with their care on medical wards than they were on surgical wards because of the greater emphasis placed on contact and technical nursing interventions in the latter.[4] Although inpatients often remain in the hospital for longer, outpatient services were better able to meet their fundamental requirements. Thus, improving hospitalized patients' sense of well-being is crucial in ensuring high-quality treatment.[5] Evaluating patients' satisfaction with nurse-quality care provides insight into what needs improvement, where nurse interventions are lacking, and how to improve overall care quality.

Nurses are the backbone of the healthcare team since they are the ones that look after patients around the clock in the hospital and help those who are hospitalized get used to their unfamiliar setting.[6] Hence, nurses need to be aware of patient expectations to exceed those expectations and boost Patient satisfaction.[7] Good bedside manners, complete patient participation, care provider communication, and clear, concise instructions all contribute to satisfied patients.

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First, high-quality patient care relies on executives who can communicate effectively and who can run their departments efficiently. Patients have various needs in the hospital, from basic nursing care to information, psychological, religious, and support and help from nurses.[8] The nurses' ability to keep patients updated on their treatment status during delays in the emergency room had a favourable impact on Patient satisfaction overall.[9] In India, the clinical, surgery, orthopaedic, and maternity departments also saw an increase in Patient satisfaction due to the nurses' ability to communicate effectively, as well as their performance and emotional support.[10,11] Patient satisfaction was also impacted favourably by nurses' ability to clearly communicate with them, provide them with explanations before performing nursing operations, and update them on their health status. Patients in North Ethiopia were pleased with the level of independence they were allowed at the hospital, the warmth of the nurses' demeanour, the attention they received tailored to their specific requirements, and the competence with which they were tasked. Patients wanted better nurses' communication skills and discharge instructions.[12] Patients' perceptions of the hospital's educational offerings and informational resources were found to be more positive than those of coordinated care, psychological support, continuity and transmission, and physical comfort in a study of public hospitals in Chennai. Similarly, the report advised that private sector organizations measure patient satisfaction. So, this research aimed to assess the level of contentment felt by patients admitted to Chennai's private medical wards.[13]

## 2. Materials and Methods

Data were analyzed using SPSS software 2012 software, Stat-kingdom and excel sheet analysis. Further mean, standard deviation, F-test, Kolmogorov–Smirnov, and ANOVA tests were performed to check the hypothesis.

### 2.1. Exclusion criterion

The older age groups patients, patients with prolonged illness, patients will disease and patients admitted for longer durations in the hospital were omitted from these studies.

### 2.2. Inclusion criterion

The inclusion criterion included patients in their early age groups with no history of prolonged illness.

Further F-test (Figure 1) was conducted to evaluate hypothesis $H_0$ that there is no effect of the age group, income of the patients and insurance facilities on the quality of the mental healthcare received by the Patient. Further, the $H_1$ hypothesis is that income and insurance facilities affect the type of healthcare received by the patients admitted to the hospital for getting treated for a disease. The dependent variables are the income and the insurance facilities the Patient avail of for obtaining treatment. The independent variable is the quality of mental care with the satisfaction level felt by a patient while being admitted to the hospital. The F-test for the different variables was used to compare the groups with N=499 and N=899.

## 3. Results

### 3.1. H0 hypothesis

Since the p-value is small thus the $H_0$ hypothesis is rejected. The standard deviation of group 1 with N value 499 is not equal to the standard deviation of group 2 with N value equal to 899. Thus $H_1$ is accepted.

### 3.2. P-value testing for patient satisfaction survey between NABH accreditation and non-NABH accreditation hospitals across India:

The p-value equals *0.0206,* with limit value of 0.9897, which indicates that the chance of error is less within the value of 0.0206 (2.06%). If the p-value is small then hypothesis $H_1$ is accepted.

The statistic test F-value equals 1.1984, which is not present in the 95% acceptance region: with limit values 0.8549 and 1.1656. The variance ratio is =1.09, which is not in the 95% acceptance region with values in the limit of 0.9246 and 1.0796. The 95% confidence interval values for standard deviation results are 1.0281 and 1.4017. The 95% confidence interval for standard deviation value is within the limits of 1.0281 and 1.4017.

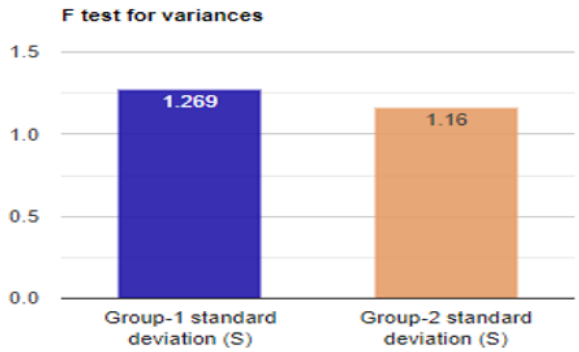


**Fig. 1:** The graph depicting the F-test standard deviation variancevalues for group 1 (N=499) and group 2 (N=899) (Source: Excel sheet software, Stat-kingdom software applications, SPSS)

The Table 6 F-statistics score reveals the following results:

One Way ANOVA test (Table 6), using F distribution df (2,27) (right-tailed) tests are shown as given below. The p-value equals 0.147027 which is high. Thus there are few dependencies of income and insurance policies on mental health.

**Table 1:** Patient characteristics demographic variables used in this statistical study (N = 499) (Original data with the analysis of the demographic variables by the authors with no conflict of interest).

| **Variables** | **N** | **%** |
|---|---|---|
| Male | 142 | 28.45 |
| Female | 244 | 48.89 |
| **Education :** | | |
| No formal education | 45 | 9.01 |
| Primary | 145 | 29.05 |
| Secondary | 123 | 24.64 |
| Graduation/Post Graduation | 32 | 6.41 |
| **Occupation:** | | |
| Management position | 112 | 22.44 |
| Skilled persons | 45 | 9.01 |
| Trained professional job persons | 56 | 11.22 |
| Office clerks | 67 | 13.42 |
| Shop keepers | 43 | 8.61 |
| Agriculture and Fishery | 10 | 2.00 |
| Industrial workers | 5 | 1.00 |
| Lack of skill workers | 3 | 0.60 |
| Unemployed workers | 2 | 0.40 |
| **Type of Family:** | | |
| Joint family members | 134 | 26.85 |
| Nuclear family members | 44 | 8.81 |
| Single parent family members. | 36 | 7.21 |
| **Place of residence:** | | |
| Rural | 45 | 9.01 |
| Urban | 76 | 15.23 |
| Semi-urban | 90 | 18.03 |
| **Monthly family income (Rs) :** | | |
| ≤10,0000 | 35 | 7.01 |
| 10,000-40,000 | 60 | 12.02 |
| ≥40,000 | 50 | 10.02 |
| **No. of previous admission in the hospital :** | | |
| 0 times | Nil | 0 |
| 1-2 times | 56 | 11.22 |
| 3-4 times | 34 | 6.81 |
| ≥5 times | 23 | 4.60 |
| **Length of stay in hospital :** | | |
| ≤3 days | 54 | 10.82 |
| 4-6 days | 32 | 6.41 |
| >7 days | 24 | 4.80 |
| **Type of admission ;** | | |
| Direct entry in hospital | 78 | 15.63 |
| Admission in an emergency department | 67 | 13.42 |
| Transfer of Patient from one ward to another | 56 | 11.22 |
| **Method of payment :** | | |
| Insurance facility | 77 | 15.43 |
| Special insurance schemes | 45 | 9.01 |
| Straight entry patient treatment facility | 32 | 6.41 |
| Patient's relative association | 25 | 5.01 |
| No financial dependency | 35 | 7.01 |
| Partial financial dependency | 28 | 5.61 |
| Totally financial dependency | 15 | 3.00 |
| **Type of discharge** | | |
| Discharge after treatment | 89 | 17.83 |
| After medical advice from a doctor | 56 | 11.22 |

**Table 2:** Patient characteristics demographic variables (N = 899) (Original data with the analysis of the demographic variables by the authors with no conflict of interest).

| **Variables** | **N** | **%** |
|---|---|---|
| Male | 342 | 38.04 |
| Female | 244 | 27.14 |
| **Education:** | | |
| No formal education | 345 | 38.37 |
| Primary | 156 | 17.35 |
| Secondary | 86 | 9.56 |
| Graduation/Post Graduation | 256 | 28.47 |
| **Occupation:** | | |
| Management position | 345 | 38.37 |
| Skilled persons | 278 | 30.92 |
| Trained professional job persons | 145 | 16.12 |
| Office clerks | 56 | 6.22 |
| Shop keepers | 45 | 5.00 |
| Agriculture and Fishery | 45 | 5.00 |
| Industrial workers | 23 | 2.55 |
| Lack of skill workers | 11 | 1.22 |
| Unemployed workers | 15 | 1.66 |
| **Type of Family:** | | |
| Joint family members | 345 | 38.37 |
| Nuclear family members | 245 | 27.25 |
| Single parent family members. | 167 | 18.57 |
| **Place of residence:** | | |
| Rural | 235 | 26.14 |
| Urban | 145 | 16.12 |
| Semi-urban | 75 | 8.34 |
| **Monthly family income (Rs):** | | |
| ≤10,0000 | 245 | 27.25 |
| 10,000-40,000 | 322 | 35.81 |
| ≥40,000 | 156 | 17.35 |
| **No. of the previous admission in the hospital :** | | |
| 0 times | Nil | Nil |
| 1-2 times | 357 | 39.48 |
| 3-4 times | 212 | 23.58 |
| ≥5 times | 245 | 27.25 |
| **Length of stay in hospital:** | | |
| ≤3 days | 145 | 16.12 |
| 4-6 days | 128 | 14.23 |
| >7 days | 123 | 13.68 |
| **Type of admission;** | | |
| Direct entry in the hospital | 389 | 43.27 |
| Admission in the emergency department | 134 | 14.90 |
| Transfer of Patient from one ward to another | 126 | 14.01 |
| **Method of payment:** | | |
| Insurance facility | 457 | 50.83 |
| Special insurance schemes | 234 | 27.02 |
| Straight entry patient treatment facility | 53 | 6.12 |
| Patient's relative association | 33 | 3.81 |
| No financial dependency | 24 | 2.77 |
| Partial financial dependency | 23 | 2.55 |
| Totally financial dependency | 21 | 2.33 |
| **Type of discharge:** | | |
| Discharge after treatment | 145 | 16.12 |
| After medical advice from a doctor | 243 | 27.03 |

**Table 3:** The questionnaire analysis of the mental health quality score of the patients according to the mean and standard deviation values.

| **Questionnaire analysis questions** | |
|---|---|
| 1. | Whether the nurses obtain all the necessary information from the nurse regarding treatment? |
| 2. | Do nurses have the necessary skill and expertise to treat patients? |
| 3. | Whether the nurses communicate and coordinate with the patients properly? |
| 4. | Do the nurses maintain proper healthcare facilities while caring for the patients? |
| 5. | Whether the patients are monitored properly in the hospital ward room? |
| 6. | Did the nurses show courtesy and friendly behaviour while caring for the patients? |
| 7. | Do the nurses follow a flexible schedule of caring for the patients admitted in the hospital ward? |
| 8. | Do the nurses perform the daily work of providing medicines on time? |
| 9. | Whether the nurses provide all the instructions to the patients on time? |
| 10 | Do nurses work with genuineness, trustworthiness and honest behaviour while caring for the patients admitted in a hospital? |

**Table 4:** Represents the mean, standard deviation and the questionnaire analysis of the mental healthcare of the Patient based on the 5-point Likert scale consisting of the below points– (1) Strongly Disagree; (2) Disagree; (3) Neither Agree nor Disagree; (4) Agree; (5) Strongly Agree (Source: SPSS, Stat kingdom software)

| **Questionnaire-based on the Likert Scale analysis** | **Mean** | **Standard deviation** | **Variance** | **Margin of error** |
|---|---|---|---|---|
| | 3.5 | 1.61 | 1.269 | 0.401 |

**Table 5:** for the Likert analysis scores for the different groups with the frequency of the occurrence about satisfaction in receiving the desired healthcare standards in NABH accreditation hospitals:

| **Value** | **Frequency** |
|---|---|
| 1 | 1 (10%) |
| 2 | 1 (10%) |
| 3 | 2 (20%) |
| 4 | 4 (40%) |
| 5 | 2 (20%) |

**Table 6:** Shows the F-value distribution between the different variables used in this demographic study like income, insurance policies and the mental healthcare quality received by the patient.

| **Source** | **DF** | **Sum of Square** | **Mean Square** | **F Statistic** | **P-value** |
|---|---|---|---|---|---|
| Groups (between groups) | 2 | 5.6 | 2.8 | 2.0599 | 0.147 |
| Error (within groups) | 27 | 36.7 | 1.3593 | | |
| Total | 29 | 42.3 | 1.4586 | | |

## 4. The statistics (Table 6)

The test statistic F equals 2.059945, which is present in the 95% acceptance region with values in the range of -∞ and 3.3541.

## 5. Effect size (Table 6)

The observed effect size f is high, with a value equal to 0.39. That indicates that the value of the difference between the averages is large. The $\eta^2$ value, according to the statistical results, is 0.13. It means that there is 13.2% variance of the group.

## 6. Kolmogorov–Smirnov Test Table Result is Given Below as Follows:

Mean: 3.7
Median: 4
Standard Deviation: 1.207734
Skewness: -0.505858
Kurtosis: -0.845648

The Kolmogorov–Smirnov test indicates a D-value of 0.199 for the test.

## 7. Discussion

An important goal of high-quality medical treatment is high-quality nursing care. Customers who get excellent service are more likely to return for future consideration, refer their friends, and positively affect the company's reputation. It's

assumed that any hospital would provide high-quality care. Patient satisfaction is correlated with demographic factors such as age, sex, level of education, marital status, income, and more. Intriguingly, the current investigation found no statistically significant link between patients' satisfaction with the quality of nursing care and the confounding factors. Comparable research by Alsaqri in Hail, Saudi Arabia, across three tertiary care settings with a total of 87 patients and 90 head nurses using convenience sampling found no association between nurses' caring behaviour and patients' satisfaction.[14] Patient satisfaction was shown to be unrelated to demographic characteristics such as age, gender, and admission method, duration of stay, previous admission, or pre-admission health state in a research of 140 patients done in Northern India, similar to the results observed in the current study.[15] Similar findings were found in research done in Thiruvananthapuram, Kerala, which revealed that demographic factors such as patients' sex, marital status, education, income, duration of hospital stay, and the number of prior admissions did not influence their level of satisfaction.[16] The second research came to the same conclusion: there was no link between Patient satisfaction and nurses' effectiveness.[3] Few patients were even somewhat satisfied with the nurse's communication skills; however, this may be remedied by having nurses engage in basic, comforting conversations with patients in their native tongue while doctors explain medical procedures and diagnoses to family members.

## 8. Conclusion

Medical ward patients were the most pleased with the quality of their nursing care. Nurses' ability to provide necessary information to patients before procedures, at discharge, and after the Patient has left the hospital needs improvement.

## 9. 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. There is no racial conflict, bias and discrimination amongst 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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None.

## 11. Conflict of Interest

None.

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