

An Empirical Assessment of Primary Health Care Quality Services and its Effect on Patient Satisfaction in Anuppur District, Madhya Pradesh

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ABSTRACT

There is limited evidence on the quality of primary health care provision in India especially in the rural areas. It has been found that the death rate and the infant mortality rate in rural areas of Madhya Pradesh are quite high as compared to other states. Therefore, if government policy is to revitalize the primary care system, a basic understanding of the quality of services currently provided is a prerequisite. This study attempts to assess the quality of care and patient satisfaction in the primary health care services provided in the rural section of Anuppur District. This study also aimed at exploring the relationship and effect of quality of care on patient satisfaction. This study will also help the primary health care providers and policy maker to further enhance the quality of care and patient satisfaction in the Anuppur District (M.P). Data were analyzed from outpatients from various primary health care centres using descriptive statistics and SPSS 23. Findings indicated that the level of quality of care and patient satisfaction is medium or average and the results also showed that quality of care has a significant correlation with a mild effect on patient satisfaction.

Keywords: Quality of Care, Patient Satisfaction, Primary Health Care, Anuppur Districts.

INTRODUCTION:

Primary Health Care acts as a vital role in healthcare provisions particularly to rural sections of India but the quality of healthcare in India is an immensely neglected area of study especially in the rural areas (Das et al, 2012). It has been found that the death rate and the infant mortality rate in rural areas of Madhya Pradesh are quite high as compared to other states (SRS Bulletin, 2014, 2016 & 2017) and they are the sole problems in the rural areas of Madhya Pradesh (Annual Health Survey, 2012-2013). There is limited evidence on the quality of primary health care provision in India. Therefore, if government policy is to revitalize the primary care system, a basic understanding of the quality of services currently provided is a prerequisite (Bajpai, N., & Goyal, S. 2004).

QUALITY OF CARE:

Quality health care is defined as care that is effective, safe, timely, patient-centered, equitable and efficient, establishing priorities for improvement of the nation's health care system (IOM, 2001). Quality of health care services provided can be assessed along the following dimensions: (1) an adequately equipped and easily accessible public health facility, (2) appropriate and timely clinical care and (3) patient satisfaction with health care received and the outcome of treatment (Bajpai, N., & Goyal, S. 2004). Quality of health care services is a complex variable, encompassing as it does tangibles such as availability of drugs and equipment and intangibles such as courtesy and the respect shown to patients during visits by providers ((Bajpai, N., & Goyal, S. 2004).

PATIENT SATISFACTION:

Patient satisfaction is considered as one of the desired outcomes of healthcare, and it is directly related to utilization of health services. Measurement of patient satisfaction involves multi-dimensional aspects of patients' opinion on healthcare, identifying problems in healthcare, and evaluation of healthcare (Andaleeb SS, 2001). A lot of stress has been made for investment in health, patient care and patient's right to delivery of quality healthcare leading to patient satisfaction (National Rural Health Mission, 2006-2012). Patient satisfaction related to healthcare services largely determines their compliance with the treatment and thus contributes to the positive influence on health. This study was therefore undertaken with the aim to find out outpatient satisfaction related to different parameters of healthcare including quality of care at primary health care facilities in Anuppur District.

SIGNIFICANCE OF THE STUDY:

The findings of this study will provide a guideline for the health care providers to plan for any changes with the purpose of enhancing level in the quality of care and patient satisfaction in primary health care centres of Anuppur District. This study will also be used to examine the relationship and effect of quality of care on patient satisfaction.

OBJECTIVES OF STUDY:

The following are the objectives of the study.

- (i) To assess the level of quality of care and patient satisfaction in the primary health care centres of Anuppur District, Madhya Pradesh.
- (ii) To find the relationship between quality of care and patient satisfaction.
- (iii) To find the effect of quality of care on patient satisfaction.

HYPOTHESES:

There are two hypotheses developed to facilitate the objectives of this study in order to investigate the link between quality of care and patient satisfaction. They are as follows:

- (i) H_1 : There is a significant relationship between quality of care and patient satisfaction
- (ii) H_2 : There is an effect of quality of care on patient satisfaction.

RESEARCH METHODOLOGY:

Sample Size and Sample Technique:

A sample size of 350 patients who received treatment in 7 Community Health Centres (CHC), 16 Primary Health Care Centres (PHC), and 175 sub-centres (SC) of Anuppur District was collected. A simple random sampling technique was utilized to collect the data for the study.

Questionnaire Design:

The instrument for the data collection in this research was close-ended questionnaire with Likert scale format. It's a five-point scale from the strongly agree to strongly disagree with the statement. The respondents were asked from 1 (strongly disagree) to 5 (strongly agree) in the questionnaire to acquire the desired information about the variables under study. The questionnaires consist of two parts, which are Section A and Section B. In Section A, it requires the information regarding demographic characteristic and personal information of the respondents. For Section B, it is related to the variables of the research which are quality of care as the independent variable and patient satisfaction as the dependent variable. The measurement of the quality of care consists of 18 items (1 – 18) and patient satisfaction consists of 10 items (19-28). In this study, the quality of care is considered as the independent variable and patient satisfaction as the dependent variable. In measuring the level of quality of care and patient satisfaction, the used scale is indicated in Table 1.1 based on the maximum score and lowest score.

Table 1.1: Interpretation of Level Score

| Scale | Classification |
|--------------|----------------|
| 1.00 to 2.33 | Low |
| 2.34 to 3.67 | Medium |
| 3.68 to 5.00 | High |

Statistical Tools:

The statistical tools used for the study were Pearson Correlation Analysis, Simple Regression Analysis, Factor Analysis and Cronbach’s Alpha. SPSS version 23 software was utilized to obtain the results.

RESULTS:

A total number of 261 patients responded to the questionnaires out of 350. All the collected data were properly examined before they were coded into SPSS version 23.0. Out of the 261 respondents, some respondents were found as outliers. Therefore, a total of 253 respondents were considered for the study. A number of 142 were male and 111 were female.

In order to test the construct validity, the factor analysis test was used for all the variables in this study. The suitability of this test was subjected to the utilization of Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and the Bartlett’s Test of Sphericity. Therefore, if the KMO values are greater than 0.6 (Coakes, Steed & Ong, 2009), and the Bartlett’s test is large and significant ($p < 0.05$) (Hair, Black, Babin, Anderson & Tatham, 2006), factorability is then considered possible. Table 1.2 shows the result of KMO and Bartlett’s test. It showed that the sample is adequate for further factor analysis.

Table 1.2: KMO and Bartlett's Test

| | | |
|--|--------------------|----------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .825 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 1789.774 |
| | Df | 210 |
| | Sig. | .000 |

Factor Analysis:

A factor analysis was conducted comprising of 28 items that represent the quality of care and patient satisfaction. Once factor analysis has been carried out, items with factor loadings of more than 0.35 will be accepted to represent a factor since it is regarded as the threshold to meet the minimal level for interpretation of the structure (Sekaran, 2003; Hair et al., 2006). 13 items (2, 3, 5, 9, 8, 10, 6, 1, 4, 7, 11, 17, and 18) that measures quality of care were retrieved out of 18 items and 8 items (21, 20, 23, 19, 22, 24, 28 and 25) were retrieved out of 10 items that measure patient satisfaction. Therefore, a total number of 21 items were retrieved out of 28 items. After factorization, two components were extracted that represents the quality of care and patient satisfaction. Table 1.3 represents the summary of factorization.

Table 1.3: Rotated Component Matrix

| Items | Component | | Factor |
|---|-----------|------|------------------------|
| | 1 | 2 | |
| Doctor/Nurse/Staff makes me feel at ease | .696 | | Quality of Care |
| Doctor, Nurse and staff are competent and well-trained. | .643 | | |
| Doctor/Nurse/Staff pay attention to what I’m saying and are responsive. | .618 | | |
| Doctor/Nurse/ Staff explains the reason for the test taken. | .610 | | |
| Doctor/Nurse/ Staff treated me with respect. | .598 | | |
| Doctor/Nurse/ Staff never expose me to risk or damage. | .587 | | |
| Doctor/ Nurse Diagnosis are correct. | .578 | | |
| Doctor/Nurse/Staff answers my questions clearly and adequate information. | .573 | | |
| Medicines prescribed for me cure my illness. | .540 | | |
| Doctor/Nurse/ Staff does not make mistakes in their works. | .507 | | |
| I was treated well without any ethnicity discrimination. | .486 | | |
| I was treated well without any social status biasness. | .407 | | |
| I’m satisfied with the treatment procedures given to me. | | .795 | |
| I’m satisfied with the doctor/nurse empathy in understanding my problems. | | .790 | |
| I’m satisfied with the communication & responsiveness of the | | .776 | |

| Items | Component | | Factor |
|---|-----------|------|--------|
| | 1 | 2 | |
| doctor/nurse. | | | |
| I'm satisfied with the Staff and Doctor Care. | | .733 | |
| I'm satisfied with the respect and dignity given to me in the treatment. | | .722 | |
| I'm satisfied with the medical prescription and the price of the medicines. | | .590 | |
| I'm satisfied with the cleanliness of the rooms and physical environment. | | .568 | |

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Reliability Test:

Reliability analysis was again performed on all the variables to ensure that internal consistency exists after factor analyses were carried out. It was found that all variables had adequate levels of internal consistency (Cronbach's Alpha) of 0.814 (for the quality of care), and 0.848 (for patient satisfaction). Therefore, all the variables met the threshold as suggested by Hair, Money, Samouel and Page (2007) and Nunnally (1983).

Level of quality of care and patient satisfaction:

Further, the level of quality of care and patient satisfaction was determined by the summation of mean total scores, dividing by the total number of respondents. It is found that the level of Quality of care and patient satisfaction is medium level in the Primary Health Care Centres of Anuppur District (M.P). Further data analysis was carried to determine the interactions between the variables understudied. Table 1.4 represents the level of quality of care and patient satisfaction.

Table 1.4: Level of Quality of care and Patient Satisfaction

| Variables | Level Score | Classification |
|----------------------|-------------|----------------|
| Quality of Care | 3.60 | Medium |
| Patient Satisfaction | 2.57 | Medium |

Correlation Analysis:

At a significance level of 5% (0.05) (Sekaran & Bougie, 2009), the result of the correlation analysis shows that quality of care is significantly related to patient satisfaction with a strength of 0.270. Since the p-value is less than 0.005, null hypothesis is rejected and the alternate hypothesis, H₁ is accepted. Therefore, there is a positive significant relationship between quality of care and patient satisfaction. Table 1.5 shows the correlation analysis between quality of care and patient satisfaction.

Table 1.5: Correlation between Quality of care and Patient Satisfaction

| Correlations | | | |
|--------------|---------------------|--------|--------|
| | | QC | PS |
| QC | Pearson Correlation | 1 | .270** |
| | Sig. (2-tailed) | | .000 |
| | N | 253 | 253 |
| PS | Pearson Correlation | .270** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 253 | 253 |

** . Correlation is significant at the 0.01 level (2-tailed).

Regression Analysis:

A simple regression analysis was conducted to analyze the effect of quality of care on patient satisfaction. Table 1.6, 1.7 and 1.8 provided the result of the regression analysis between the independent variables (quality of care) and the dependent variable (Patient Satisfaction).

| Model Summary | | | | |
|--------------------------------------|-------------------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .270 ^a | .073 | .069 | 5.167 |
| a. Predictors: (Constant), QC | | | | |

| ANOVA ^a | | | | | | |
|--------------------------------------|--------------|-----------------|------------|-------------|--------|-------------------|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 526.252 | 1 | 526.252 | 19.713 | .000 ^b |
| | Residual | 6700.712 | 251 | 26.696 | | |
| | Total | 7226.964 | 252 | | | |
| a. Dependent Variable: PS | | | | | | |
| b. Predictors: (Constant), QC | | | | | | |

| Coefficients ^a | | | | | | |
|----------------------------------|------------|-----------------------------|------------|---------------------------|-------|------|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 7.608 | 2.366 | | 3.216 | .001 |
| | QC | .241 | .054 | .270 | 4.440 | .000 |
| a. Dependent Variable: PS | | | | | | |

Based on the results, it showed that quality of care only had a mild effect (24.1%) on explaining the patient satisfaction amongst the patients in Anuppur District (M.P). Since the p-value is less than 0.005, null hypothesis is rejected and the alternate hypothesis, H₂ is accepted. Therefore, quality of care has an effect on patient satisfaction.

CONCLUSIONS:

Overall, this research is to assess and investigate the effect of quality of care on patient satisfaction. This study found that the level of quality of care and patient satisfaction is medium. Based on the result of the correlation analysis, this study confirmed that there is a significant relation between quality of care and patient satisfaction. The finding of the study also suggested that quality of care has an effect on patient satisfaction.

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