Research Article

## **Impact of Outpatient Quality Services on Patient Satisfaction**

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**Abstract: Background:** The success and survival of any healthcare organization depends on the patient's satisfaction and quality. Patient satisfaction plays a vital role in the performance of care.

Objective: To identify the factors influencing patient satisfaction with outpatient quality services in public and private hospitals.

Materials and Methods: The study was conducted on outpatient patients from different public and private hospital settings in Karachi, Pakistan. Data was collected through virtual tools such as Google Docs, asking about their experience of outdoor patients (OPD) in public or private hospitals. Using a non-probability, convenience sampling technique, a 5% margin of error and a confidence interval of 95%, the sample size was calculated as 377 participants rounded off to 400. Respondents were divided into males and females who visited any specialty department or general OPD. A self-administered questionnaire was designed to gather data, and a digital tool such as Google Docs was used to reach a wider audience. The reliability of the pre-validated tools has been assessed through Cronbach's alpha. The Cronbach alpha for outpatient quality services is 0.717, and patients' satisfaction is 0.98. The data were analyzed using the SPSS 25V by IBM Corporation.

**Result:** Most respondents were from the age group (26-35 years), making up 42% of the entire population. Data gathered showed private hospitals preference over public hospitals and satisfaction as well. All the quality service variables identified in the study had a direct relationship with patient satisfaction except waiting time, which had a negative relationship. Regression Analysis showed a positive impact on the availability of services; thus 1% increase in service will lead to a 0.484% change in patient satisfaction. A negative relationship was also witnessed with a 1% increase in waiting time patient satisfaction is down by 0.119%.

**Conclusion:** The level of satisfaction in public hospitals was not quite adequate, and the services were correspondingly rated as exceptional. The findings suggest that focusing on the nature of physician-related services, waiting for test results, and waiting for appointments are the most important factors impacting patient satisfaction in the outpatient division.

Keywords: Patient satisfaction, Service quality, Public health, OPD, Healthcare, Questionnaire.

### INTRODUCTION

Healthcare delivery is a system that can serve the best quality services to outpatients effectively and efficiently through organized resources and infrastructure to develop the country's most excellent healthcare services. Hospitals are emerging in competition to incline more patients to provide healthcare services. In this way, the healthcare departments are beginning to emphasize health and the development of quality services to outpatients. Overall satisfaction and the quality of services are the utmost critical elements of service providers to put the hospital as the first choice of the patients. Hence, it needs to be enhanced timely [1]. In the healthcare system, there are two types of service providers in developing countries: public and private hospitals. Choosing the right hospital and qualified and experienced physicians are the main factors influencing a patient's treatment [2].

So, the present study finds the gap in why patients prefer private hospitals more than public hospitals and which factor adds value and changes the patients' preferences.

The success and survival of any healthcare organization depends on the patient's satisfaction and quality. Patient satisfaction plays a vital role in the performance of care. The unsatisfied patients will only last for a while with the organization.

In today's corporate world, sustaining a patient is more complex than finding a new one. In recent research, patients around the world are paying more attention to how satisfied they are with their healthcare treatments [4]. Patient satisfaction is influenced by their visits to their healthcare department, which vary in

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Private hospitals are providing more individualized care and treatments. In contrast, the government regulates the public hospitals' rules and regulations regarding providing services and funding. Regarding providing services in public and private hospitals, various studies and their results show that patients choose private hospitals over public hospitals for multiple reasons [2, 3].

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severity—leading to changes in the behavior of patients towards the organization. Previous research has indicated that outpatient service quality is critical in ensuring patient satisfaction and loyalty, particularly in private hospitals [5]. Several hospitals fail to provide an adequate concentration to supply high-level outpatient services because of a lack of understanding between outpatient quality and hierarchical seriousness [6]. Thus, the research will help to explore the factors that have a more significant impact on outpatient quality services and public satisfaction in public and private hospitals, which will facilitate the stakeholders in formulating new strategies for improving outcomes from their relevant organizations, accordingly, in the light of Pakistani culture.

This research identifies the factors influencing patient satisfaction with outpatient quality services in public and private hospitals. This study aims to find the patient's view towards public and private healthcare service providers and determine the factors essential to the patient's satisfaction with outpatient services in relative organizations [6, 7]. The study's findings will help the stakeholders of healthcare professionals in Karachi. The results can serve as a foundation to provide better service to outpatients and earn patient satisfaction in a relative healthcare setup. In addition to that, it also helps doctors and paramedical staff be more direct towards service quality, patient care, and general satisfaction of the patients.

The study focused on the main factors of patient satisfaction with outpatient services. This research provides a better understanding of the state of the healthcare industry in terms of service quality, patient satisfaction, and outpatient factors (availability of services, professional care, hospital overall service assessment, and hospital waiting time) in both public and private hospitals.

## MATERIALS AND METHODS

The study used a cross-sectional design to acquire a snapshot of the healthcare organizations in Karachi. The study will be carried out between May 1<sup>st</sup> 2021 to July 31<sup>st</sup> 2021 on outpatient patients from different public and private hospital settings in Karachi, Pakistan. Data will be collected through virtual tools such as Google Docs, asking about the patient's experience of OPD in either public or private hospitals. Patients who have visited the outpatient department in the hospital, both male and female, visited any specialty department or general OPD in public or private hospitals in Karachi.

With a margin of error of 5% and a confidence interval of 95%, the sample size calculated using the Rao soft sample size calculator was 377 participants rounded off to 400. The sampling technique for this study is non-probability, convenience sampling. Convenient sampling allows quick, inexpensive data collection from 400 participants for research. The instrument for this study consisted of four main sections: demographics, outpatient quality services (the availability of services, professional care, overall assessment, and waiting time), and patient satisfaction.

The SERVQUAL questionnaire for the present study was adapted from Tucker and Adams [8-11]. The tool consists of 21 items related to five subscales, as follows: (a) Availability of services (b) Professional care (c) Overall assessment (d) Overall impression (e) waiting time. The reliability of the pre-validated tools [8] has been assessed through Cronbach's alpha. The Cronbach alpha for outpatient quality services is 0.717, and patients' satisfaction is 0.98. A self-administered Google document form was shared among the study participants for data collection with informed consent at the beginning and requesting the participants to fill the form voluntarily.

### **Developing Hypotheses**

- The accessibility of services has a positive impact on patient satisfaction.
- 2. Waiting time has a positive impact on patient satisfaction.
- 3. The quality of professional care has a positive impact on patient satisfaction.
- Overall assessment has a positive impact on patient satisfaction.
- 5. The hospital's overall impression has a positive impact on patient satisfaction.

### STATISTICAL ANALYSIS

The collected data was analyzed by using the SPSS package 25th version. The collected data were analyzed into descriptive and inferential statistics.

## RESULT

## **Descriptive Analysis**

Four hundred questionnaires were floated as per Rao software, of which only 333 were filled. The participants of this research were those who have visited the outpatient department in the hospital, both male and female and visited any specialty department or general OPD in public or private hospitals in Karachi. Male respondents comprised 51.70 % of the sample, while female respondents comprised 48.30 %; a detailed chart has been given below to analyses the sample size (Table 1).

**Table 1.** Descriptive Statistics of the Study.

| Descriptiv | <b>Descriptive Statistics</b> |     | Percent |
|------------|-------------------------------|-----|---------|
|            | 16-25                         | 79  | 23.7    |
|            | 26-35                         | 142 | 42.6    |
| AGE        | 36-45                         | 63  | 18.9    |
| AGE        | 46-55                         | 42  | 12.6    |
|            | 56-65                         | 7   | 2.1     |
|            | Total                         | 333 | 100     |

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|         | Male                 | 172 | 51.7 |
|---------|----------------------|-----|------|
| GENDER  | Female               | 161 | 48.3 |
|         | Total                | 333 | 100  |
|         | Illiterate           | 8   | 2.4  |
|         | School               | 13  | 3.9  |
| EDUCA-  | Graduation           | 168 | 50.5 |
| TION    | Post-gradu-<br>ation | 125 | 37.5 |
|         | Others               | 19  | 5.7  |
|         | Total                | 333 | 100  |
|         | Government services  | 45  | 13.5 |
|         | Business             | 55  | 16.5 |
| OCCUPA- | Laborer              | 14  | 4.2  |
| TION    | House wife           | 50  | 15   |
|         | Student              | 53  | 15.9 |
|         | Others               | 116 | 34.8 |
|         | Total                | 333 | 100  |
| HEALTH- | Public               | 145 | 43.5 |
| CARE    | Private              | 188 | 56.5 |
| SECTOR  | Total                | 333 | 100  |

### **Correlation of Quality Services and Patient Satisfaction**

Table 2 provides the Pearson's correlation coefficient between the quality services attributes (availability of services, waiting time, professional care, overall assessment and overall impression of the hospital) and patient satisfaction. The results indicated a relation between all factors and patients' satisfaction. So, as per the results, there is a significant impact on patient satisfaction with the quality services attributes mentioned above, except waiting time, which negatively impacts each attribute and patient satisfaction.

# Regression Analysis between Quality Services and Public Satisfaction

Table 3 provides the model summary of the services' availability, specifying patient satisfaction. The r square of the model is 0.727, which implies that the 72.7% of the variation in the dependent variable. Therefore, patient satisfaction accounted for this model, which is quite good.

Further, Table 4 shows the ANOVA table of regression analysis of the relationship between the outpatient quality services and the patient's satisfaction. The analysis of variance tells whether the model is significantly better at predicting the outcome.

Moreover, Table 5 shows the positive impact concerning patient satisfaction and availability of services as the P-value is less than  $0.05\ (0.00)$ .

**Table 2.** Correlation between the Quality Services and Public Satisfaction.

| Outpatient Quality services |                             | Wait-<br>ing<br>Time | Professional Care | Overall<br>Assess-<br>ment | Overall<br>Impression<br>of the<br>Hospital | Patient<br>Satis-<br>faction |
|-----------------------------|-----------------------------|----------------------|-------------------|----------------------------|---|------------------------------|
| Avail-<br>ability           | Pearson<br>Correla-<br>tion | 320**                | .817**            | .856**                     | .775**                                      | .812**                       |
| Of Ser-<br>vices            | Sig. (2-tailed)             | 0                    | 0                 | 0                          | 0   | 0                            |
| Waiting<br>Time             | Pearson<br>Correla-<br>tion | 1                    | 280**             | 323**                      | 284**                                       | 347**                        |
| Time                        | Sig. (2-tailed)             |                      | 0                 | 0                          | 0   | 0                            |
| Profes-<br>sional           | Pearson<br>Correla-<br>tion | 280**                | 1                 | .848**                     | .699**                                      | .761**                       |
| Care                        | Sig. (2-tailed)             | 0                    |                   | 0                          | 0   | 0                            |
| Overall<br>Assess-          | Pearson<br>Correla-<br>tion | 323**                | .848**            | 1                          | .824**                                      | .813**                       |
| ment                        | Sig. (2-tailed)             | 0                    | 0                 |                            | 0   | 0                            |
| Overall<br>Impres-<br>sion  | Pearson<br>Correla-<br>tion | 284**                | .699**            | .824**                     | 1   | .742**                       |
| of the hospital             | Sig. (2-tailed)             | 0                    | 0                 | 0                          |   | 0                            |
| Patient<br>Satis-           | Pearson<br>Correla-<br>tion | 347**                | .761**            | .813**                     | .742**                                      | 1                            |
| faction                     | Sig. (2-tailed)             | 0                    | 0                 | 0                          | 0   |                              |
|                             | N                           | 333                  | 333               | 333                        | 333   | 333                          |

\*\* 1% Level of significance.

Thus, for every 1% increase in services, patient satisfaction will increase by 0.484%. This suggests that the availability of services significantly impacts patient satisfaction, hence accepting H1. On the other hand, Table 4 shows a negative relationship between waiting time and patients' satisfaction, where the P-value is less than 0.05 (0.017). Thus, for every 1% increase in waiting time, patient satisfaction will decrease by 0.119%. Therefore, results suggest that the waiting time has a significant but negative impact on patient satisfaction, hence accepting the H2.

Further, a positive relationship is shown between professional care and patient satisfaction, where the P-value is less than 0.05 (0.014), which is again significant, hence accepting H3. The

coefficient of overall assessment and patients' satisfaction has a positive relation where the P-value is less than 0.05 (0.00), which is significant. Therefore, results suggest that the overall assessment positively and significantly impacts patient satisfaction, hence accepting H4. Finally, the coefficient overall impression of the hospital has a positive relation on patients' satisfaction where the P-value is equal to 0.005, which is significant, hence accepting H5.

### **DISCUSSION**

The study aimed to find that all the determined characteristics of services are relevant to the quality-of-service providers by the public and private healthcare institutions. The study found five main relevant characteristics: the availability of services, professional care, overall assessment/examination, the impression of a hospital, and waiting time.

**Table 3.** The Model Summary of Regression Analysis between the Quality Services and the Public Satisfaction.

| Model | R     | R Square | Adjusted<br>R Square | Std. Error of the Estimate |
|-------|-------|----------|----------------------|----------------------------|
| 1     | .853ª | 0.727    | 0.723                | 0.56168                    |

<sup>&</sup>lt;sup>a</sup>Predictors: (Constant), Overall Impression of the hospital, Waiting Time, Professional Care, Availability of services, Overall Assessment.

**Table 4.** ANOVA<sup>a</sup> Table of Regression Analysis between the Quality Services and the Public Satisfaction.

|   | Model      | Sum of<br>Squares | df  | Mean<br>Square | F       | Sig.  |
|---|------------|-------------------|-----|----------------|---------|-------|
| 1 | Regression | 275.129           | 5   | 55.026         | 174.418 | .000b |
|   | Residual   | 103.162           | 327 | 0.315          |         |       |
|   | Total      | 378.291           | 332 |                |         |       |

<sup>&</sup>lt;sup>a</sup>Dependent Variable: Patient Satisfaction.

All the characteristics have positive correlations with the patient's satisfaction.

**Table 5.** Coefficientsa Table of Regression Analysis between the Quality Services and the Public Satisfaction.

|   | Model                            | Unstan-<br>dardized<br>Coeffi-<br>cients | Stan-<br>dardized<br>Coeffi-<br>cients | t      | Sig.   |       |
|---|----------------------------------|--|--|--------|--------|-------|
|   |                                  | В  | Std. Error                             | Beta   |        |       |
| 1 | (Constant)                       | 0.439                                    | 0.197                                  |        | 2.227  | 0.027 |
|   | Avail-<br>ability of<br>services | 0.484                                    | 0.088                                  | 0.337  | 5.488  | 0.000 |
|   | Waiting<br>Time                  | -0.119                                   | 0.050                                  | -0.073 | -2.398 | 0.017 |

| sional<br>Care                           | 0.218 | 0.089 | 0.143 | 2.463 | 0.014 |
|--|-------|-------|-------|-------|-------|
| Overall<br>Assess-<br>ment               | 0.350 | 0.099 | 0.259 | 3.525 | 0.000 |
| Overall<br>Impression of the<br>hospital | 0.182 | 0.065 | 0.147 | 2.795 | 0.005 |

<sup>a</sup> Dependent Variable: Patient Satisfaction.

The availability of services and its positive impact on overall satisfaction was discussed in past studies [12, 13] and found similar results that accessibility and availability significantly correlate with overall patient satisfaction. Various countries have different responses towards the availability of services [14].

One of the factors of service, which is an assessment of a patient by a service healthcare provider, has a positive relationship with patient satisfaction, and the results were similar to our research, where various new tools and policies were introduced to improve the level of assessment provided by healthcare specialists such as doctors and nursing staff [15]. A contrasting study conducted in Haryana [16, 17] measured patient satisfaction at a single hospital. It found that 90% of patients were happy with the hospital services. Primarily due to the patient-care provider relationship, and those who were dissatisfied were mainly due to the level of care received by the patients [18-21]. Similarly, study conducted in Athen, shows the level of patient satisfaction is closely tied to the quality of healthcare services provided [22]. In a study conducted in Nigeria, also emphasis has been given to the professional approach of the caregiver during the assessment as it is highly critical. Furthermore, emphasis has also been placed on caregivers' communication skills to relieve the patient from the stress they have been facing [23].

Overall, patients' satisfaction is also affected by the service provider's impression, which can be direct and indirect [24]. This research found that patients' overall satisfaction with the quality is impacted by the impression of the hospital's service quality, and it essentially forms the opinion of whether to use the service again or not.

These days, patients are more selective and want convenience for themselves, so they opt for the healthcare provider who has all the services they require and would lead to their satisfaction towards the overall quality of care.

Professional care is one of the critical elements in the health-care industry and is significant in service quality. Many kinds of research have been conducted, and the majority of the focus has always been that professional care is one of the critical parts of healthcare delivery [25]. Therefore, Healthcare organizations prioritize medical care and patient satisfaction due to its beneficial impact on treatment compliances and the establishment of enduring relationships with the physicians, leading to improved

<sup>&</sup>lt;sup>b</sup>Predictors: (Constant), Overall Impression of the hospital, Waiting Time, Professional Care, Availability of services, Overall Assessment.

healthcare outcomes [26-29]. Research by [30] establishes the relationship between care and its relationship with patient satisfaction. As mentioned, researchers have identified the great significance of this predictor, such as professional care reliability, assurance, tangibles, responsiveness, and empathy and its impact on patient satisfaction [31].

Many patients have complained about the doctor's lack of interest in assessing the situation and have a very casual attitude towards treating them. Such cases are primarily observed in emergency wards of various hospitals where nursing staff checks the patients [32, 33]. Healthcare professionals and their subordinates must implement tools to improve their facilities' overall assessment techniques and procedures to gain more patients' acceptance and positivity.

Healthcare is a sensitive matter, and whenever people require healthcare, they tend to go to the facilities where they have been before, or they seek advice from their peers and family based on their experiences [34]. In scarce situations, people opt for a random facility and go there, but in most cases, patients prefer seeking advice before opting for any random selection.

The healthcare industry requires continuous improvement and quality enhancement initiatives. In this digital age, people can communicate with anyone and seek opinions about any healthcare facility, and based on the opinions received, people make decisions accordingly. Reviews of any hospital, clinic, or pharmacy are readily available online.

## CONCLUSION

This study investigated the impact of outpatient quality services on public satisfaction. The level of satisfaction in public hospitals needed to be adequate. The findings suggested that focusing on the nature of physician-related services, waiting for test results, and waiting for appointments were the most critical factors impacting patient satisfaction in the outpatient division. Working on these elements will help improve patient outpatient services and satisfaction.

### RECOMMENDATIONS

This research may assist managers and directors of public and private hospitals in Karachi in dealing with growing challenges relating to health care, particularly in public hospitals. Recommendations for the industry are as follows:

Public hospitals need to prioritize patient satisfaction, especially in light of the increasing population and its strain on healthcare services. The government should allocate more funds to healthcare, enabling the hiring of additional managers and the expansion of public outpatient clinics. It's crucial to provide training to healthcare professionals to address concerns about staff discourtesy and rudeness, which can lead to patient migration to private hospitals. Establishing complaint offices for efficient grievance resolution is essential, as indicated by many respondents who felt their concerns were not adequately addressed. Lastly, facili-

ties should use various technological tools to resolve the waiting time issue. For example, they can implement a token system where patients can get tokens and wait for their turn.

#### AUTHORS' CONTRIBUTION

- Ather Akhlaq: Critical review, Manuscript writing.
- Paras Azam: Conception and design of the study, Data analysis, Manuscript writing.
- Mahwish Mumtaz and Sadaf Nawaz: Manuscript writing.

### CONFLICT OF INTEREST

Declared none.

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