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Evaluation of Healthcare Services: Cross-sectional Case in KwaZulu-Natal, South Africa

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ABSTRACT Globally, there have been numerous studies conducted on the evaluation of service quality in public health institutions. However, there remains a challenge in South African public health to provide quality service under difficult circumstances, thereby resulting in the offering of the service perceived as being poor. The purpose of this paper is to report on the investigation of service quality provided by two Public Clinics in KwaZulu-Natal, South Africa, in the quest to improve the delivery of service quality to the public. The study adopted a mixed methods' methodology and a narrative research approach was employed using a case of two clinics. A purposive convenient sample of 35 patients per clinic was used. Data was collected via the distribution of questionnaires and face-to-face semi-structured interviews. The data was captured using a Statistical Package for the Social Sciences (SPSS) Version 21 software and the results were processed using variables according to the importance of the statements. The findings reveal that patients are dissatisfied with the quality of service received in terms of courtesy and the waiting times are unacceptable at public health clinics.

INTRODUCTION

The past few years have seen a concerted effort directed towards improving quality management systems in healthcare of a number of countries (Miranda et al. 2012), and South Africa is no exception. The subject of service quality in healthcare has recently attracted the attention of many researchers (see Mlotshwa 2015; Green 2014; Taher 2015; Azizan 2015; Hall 2015). Quality service, in the context of healthcare refers to an act or multiphase interactive action carried out by staff in one moment or situation, the dimensions of which are assurance of competence, activeness, dissemination of information, polite manners by staff and flexible helpfulness, which add valuable meaning to clinic healthcare experiences (Hiidenhovi et al. 2002). Gaining a better understanding of factors impacting patient satisfaction has become a critical concern in healthcare management (Senic and Marinkovic 2013). Quality service delivery to the consumer of health is a legal requirement as is emphasized in the South African White Paper on the Transformation of Public Service delivery (Arries et al. 2008). In the past, literature on quality healthcare only concentrated on the allocation of resources and infrastructure to patients (Richard 2006). Mulgan et al. (2003) suggest that whilst a substantial body of opinion has emerged in the past four decades on innovation in the private sector, a significant knowledge gap exists with regard to innovation within the public sector, where quality research on the subject is rather limited. However, the challenges still remain as to how medical staff and patients should use the available resources and correct attitude to receive and provide the expected service. In this paper, the researchers evaluated the services provided to patients at two separate healthcare facilities in KwaZulu-Natal. Due to the sensitivity of the data and the adherence of ethical standards, these healthcare facilities have been renamed as *Clinic X* and *Clinic Y*. The results of this study provide both a theoretical basis and empirical evidence indicating the relative importance of quality delivery of service in public clinics.

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Background of the Clinics

The two clinics are situated in the Midlands Region in the Pietermaritzburg area in the Province of KwaZulu-Natal, South Africa. Clinic X is located within the suburban area in Pietermaritzburg. Clinic X services patients from around the area who are perceived to be middle class. Clinic Y is in the center of a township in Pietermaritzburg and it generally services patients who

live in the township and the poor peri-urban areas close to informal settlements. According to departmental reports, Clinic X services approximately 25 patients per day instead of 43 patients, whereas Clinic Y services approximately 31 patients per day, instead of 70 patients. This deficiency is largely due to an inadequate number of staff.

Problem Statement

The patients' experiences are a useful determinant for improving the quality of health services. Morrow (2010) and Camgöz-Akdag and Zineldin (2010) advocate that the evaluation of patient satisfaction is being given more attention in developing countries in recent years. Quality issues still remain problematic in the public healthcare sector. In a study of the healthcare in Zimbabwe, Basset et al. (1997) found that both nurses and patients shared common concerns about the quality of service in the clinics in terms of fees, availability of drugs and waiting times. In addition, nurses were found to be concerned about overwork and patient ingratitude. Baltussen et al. (2002) on the perceived quality of healthcare in Burkina Faso, reveal that the patients rate personnel practices and conduct, adequacy of resources and services and the financial and physical accessibility of care as relatively poor. The contributing factors to poor quality service delivery at the clinics are attributed to, amongst other aspects, inadequacy of materials, shortage of staff, equipment, and basic resources. Therefore, this problem requires further attention and mechanisms to prioritize service delivery within public clinics as set out in the patient charter and the Bill of Rights.

In an attempt to address this problem, the research objectives of the study are:

(1) To determine factors, which affect the rendering of quality service at clinics from a patient and staff perspective.
(2) To assess the patients' perceptions on the quality of service provided by two Public Clinics in KwaZulu-Natal.
(3) To assess the nurses' perceptions on the quality of service provided by two Public Clinics in KwaZulu-Natal.

Literature Review

Parasuraman et al. (1990) state that service quality is an extrinsically perceived attribution based on a customer's experience about the service that the customer perceived via the service encounter. Service quality is the extent to which a service meets or exceeds the expectations of customers (Jain et al. 2010; Zeithaml et al. 2006; Nitecki and Hernon 2000). The measurement of service quality has been shown on a continuum ranging from ideal quality to totally unacceptable quality with some point along the continuum signifying satisfactory quality.

Grönroos (2008) advocates that service quality, as perceived by customers, results from a comparison of what they feel the service organization should offer (expectations) with the performance of organizations providing the service (perceptions). This chasm between a customer's expectation of the quality of the service and the perceived quality of the service received can be explained by the Gaps Model. The main idea of the model is focused on the premise that service quality is dependent on the size and direction of the following five gaps that can exist in the service delivery process:

- Gap 1: The gap between customer expectations and those perceived by management to be the customer's expectations.
- Gap 2: The gap between the management's perception of consumer expectations and the firm's service quality specifications.
- Gap 3: The gap between service quality specifications and service delivery.
- Gap 4: The service delivery, and external communication gap.
- Gap 5: The perceived service quality gap, the difference between expected and perceived service (Parasuraman et al.1990).

Previous research undertaken in various healthcare facilities shows the following. Takeuchi and Quelch (1983) assessed the service quality of healthcare services using six dimensions: a) reliability, b) service quality, c) prestige, d) durability, e) punctuality, and f) ease of use. In another study conducted by Walters (2001), the quality of healthcare service was judged according to reliability, availability, credibility, security, competence of staff, understanding of customer needs, responsiveness to customers, courtesy to staff, comfort of surroundings, communication between participants and associated goods provided with the service. Narang (2010) conducted research in Lucknow, India, to understand the perception of patients towards healthcare services, whereby the results indi-

cated that health personnel and practices and health care delivery were found to be significant in impacting the perception. The preceding literature validates the need for such a study to be conducted in KwaZulu-Natal, South Africa.

RESEARCH METHODOLOGY

The study adopted a mixed methods methodology. A sampling technique known as purposive convenience sampling was employed as participants were selected for the study. The empirical work undertaken in the study involved a total of 58 participants who were patients and staff at the Clinics (*X and Y*). The targeted sample was 35 patients per clinic. Due to insufficient numbers, only 58 questionnaires were returned. A total of 9 participants, who were nursing staff at both these clinics were also used for this study. From the 9 participants, there were Nursing Sisters in charge for each of the clinics, who represented management, as it was not feasible to secure appointments with officials from the Department of Health Head Office. Site visits and observations were also part of the study. The research instrument consisted of 15 items for the patients and 15 items for the nursing staff, with a level of measurement at a nominal or an ordinal level. The responses were collected and then captured on a software package called Statistical Package for the Social Sciences (Version 21). Inferential techniques included the use of correlations, which were interpreted using the p-values. The results were first presented using percentages for the variables that constituted each section. Results were analyzed according to the importance of the statements.

RESULTS

The participants were asked to rate the service received to improve the quality standards that existed at the Clinics (*X and Y*) and the results are depicted in Table 1.

From the initial fifteen issues, which are shown in Table 1, the patients were requested to rate them in terms of importance. From the ratings, it was deduced that the patients considered the following issues as most important in receiving quality service:

- Adhere to consistency regarding opening times of clinics
- Reduction of waiting periods for medical care
- Courtesy and care during the registration process
- Adequate explanation of an ailment
- Keep the environment clean

A similar methodology was applied to staff in terms of rating the issues in order of importance. The staff considered the following as most important when rendering a service:

- Relationship and respect between parties involved
- The provision of a conducive working environment

Table 1: Ideas generated of service delivery process

	Patient issues - Ratings		*Staff issues - Ratings*
1	Frequency of visits to the clinics.	1	The shift allocation per staff.
2	Normal opening times of the clinics.	2	Busy period. For example, Christmas and Easterholidays – ways of coping.
3	Waiting periods.	3	Work performance and shift allocated.
4	Registration period.	4	Relationship with patients.
5	Effectiveness of the registration process.	5	The level of respect between patients and nursing staff.
6	Empathy shown by staff to patients.	6	Administration of patients with special needs.
7	Conducive clinic facilities.	7	Strategies used when faced with challenging patients.
8	Care shown towards patients by staff.	8	Conducive working conditions.
9	Explanation of diagnosis/ailment.	9	Availability of quality equipment.
10	File management system.	10	Conditions of consultation rooms.
11	Dispensing of medication.	11	Supply of consumables, for example, syringes, cotton wool, etc.
12	Explanation of medication dispensed.	12	Comments on the administration process to assist nursing staff to render a service effectively.
13	Time spent waiting for medication.	13	Channels of communication.
14	Notification by staff of the next visit.	14	Community outreach programs.
15	The rating of the service received.	15	Social trends and how they affect service delivery.

- The provision of quality working equipment to render an efficient service
- The provision of sufficient consumables such as syringes, and cotton wool
- Maintain open channels of communication
- To provide the awareness on the urgency of community outreach programs

The results in Table 2 indicate that only three statements had significant differences, as the p-values were less than the level of significance of 0.05. The remaining p-values imply that the scoring patterns, albeit they were slightly different numerically, were not statistically or significantly different. On comparison of the two clinics, the following salient points are highlighted:

1. Frequency of visits to the clinics was significantly different.
2. The p-value in the Table (0.029) is the Fisher's exact test value, which indicates that there is a significant relationship between the clinic and opening times.
3. The Mann-Whitney and Fisher's exact tests indicate significant differences between the clinics regarding duration for the dispensing of medication.

The results in Table 3 indicate that none of the significance values are less than 0.05, indicating that there is no significant difference in the scoring patterns between the clinics. The Fisher's exact test also shows no significant differences.

DISCUSSION

The analysis of data shows that there is a mixture of perceptions when it comes to service delivery at each of these clinics. All of the respondents from *Clinic Y* indicated that they visited the clinic once a month. From these results, it is clear that this clinic was not used to its full capacity. Fourteen percent of the patients from *Clinic X* visited the clinic once a week. From the analysis, it is clear that *Clinic X* was used to its full capacity and there was an indication that they were understaffed. The frequency of visits was significantly different.

It was evident that there was a positive response to the clinic and opening times. The patients were happy to have the clinics opening earlier (between 07:00 and 08:00), thereby reducing their waiting time at these clinics. From the observations it was noted that patients were treated according to their status and appearance. If a patient showed some level of education and looked cleaner and neater than others, they were attended to promptly. It was also evident that most of the time was consumed when the sister in charge was attending to the administrative work rather than patients. It is for this reason that Mlotshwa (2015) conducted a study in exploring the perceptions of community health workers using role identity theoryIt was evident that patients from *Clinic X* were dissatisfied with the administration process whereas *Clinic Y*

Table 2: Patients responses to the service received

		Mann-Whitney U	*Asymp. Sig. (2-tailed)*
1.	How often do you visit the clinic?	333.000	.019
2.	If you were to estimate, what time does the clinic normally open?	290.000	0.029*
3.	Does the nursing staff arrive for duty on time?	342.000	.366
4.	How long do you have to wait to receive attention?	364.500	.686
5.	How long does the registration process take?	363.000	.612
6.	Is the registration process effective enough to allow patients to receive prompt attention?	387.500	.985
7.	Does staff at the registration desk show politeness, courtesy and empathy when speaking to you on registration?	328.500	.190
8.	Is the clinic environment conducive enough for all patients to wait for medical care?	357.500	.499
9.	Do you feel cared for at the consultation room?	297.000	.060
10	Does your diagnosis get explained to you clearly?	323.000	.091
11.	Is the information electronically updated at each stage of your visit?	339.000	.268
12.	How long does it take for medication to be dispensed?	267.500	.032
13.	Are you informed on how to administer the medication?	354.500	.297
14.	At the dispensary, do you get notified of the next date for you to return for a repeat visit?	312.500	.060
15.	How would you rate the service received at this clinic?	346.500	.481

Table 3: Nurses responses on the service provided

		Mann-Whitney U	*Exact Sig. [2* (1-tailed Sig.)]*
1.	Describe the shift you usually get allocated per month?	9.000	.905
2.	During public holidays, for example, Easter weekend, Christmas and New Year's day, are you able to cope with the workload, given the fact that many accidents happen?	8.500	.730
3.	How does your shift affect your work performance?	8.000	.730
4.	Describe your relationship with your patients?	8.000	.730
5.	Are patients respectful and co-operative towards the nursing staff?	9.000	.905
6.	How do you deal with patients with special needs, for example, wheelchair- bound and elderly patients?	10.000	1.000
7.	When you are faced with challenging patients, how do you handle them?	6.000	.413
8.	At the clinic where you are deployed, is the environment conducive enough to work effectively?	3.000	.700
9.	Comment on the availability of the equipment being used.	4.500	1.000
10.	Are the consulting rooms large enough for you to execute your duties?	9.000	.905
11.	Do you have enough consumables for example syringes, cotton wool etc.) to effectively deliver the service?	9.500	.905
12.	Is the administration department functioning well enough to enable you to do your job?	8.000	.730
13.	Are communication channels to head office open to clinic staff to ensure quality delivery of service?	8.000	.730
14.	How often do you have community outreach programmes to enlighten your patients about health issues?	4.000	.190
15.	Comment on the difficulties relating to the locality served.	.500	1.000
16.	Describe the size of the population you normally service each day, week or month.	4.000	.190
17.	How often do you get breaks, during working hours to ensure quality delivery service?	8.000	1.000
18.	How would you rate the level of the service you render to your patients?	6.500	.686

patients seemed to be satisfied with the administration processes. This finding was very interesting to note, as these two clinics were located at two different sites. Azizan (2015) suggests that two service quality aspects, that is, technical, which refer to core service delivery or service outcome, including the provider competence as staff go about performing their routines. In the healthcare context, these include doctors' and nurses' skills and clinical outcomes, and secondly, functional care, which refers to service delivery processes or the way in which the customer receives the service. Approximately seventy-two percent of the *Clinic X* patients and sixty percent of the *Clinic Y* patients waited between 3 to 4 hours for the registration process to commence. 71.4 percent of patients from *Clinic X* waited less than an hour for the registration process to commence. In a study conducted by Fullerton (2015) on dissatisfaction and violation based on waiting experience, it was found that consumers generally felt disappointed or dissatisfied when they experienced a wait when they had expectations about waiting time. In contrast, 64.9 percent of *Clinic Y* patients waited less than an hour. 28.6 percent of *Clinic X* patients waited more than an hour, whereas 35.1 percent of *Clinic Y* patients waited for more than an hour for the registration process. From the results it was evident that *Clinic Y* patients (59.5%) were willing to wait for medication irrespective of the hours, as long as it was dispensed the same day, as compared to 38.1 percent from *Clinic X* patients, who waited for a shorter period of time.

All patients were seen on the same day, irrespective of their ailment in both the clinics. This could have been a reason for the perceived poor service quality at these clinics. Working conditions were a challenge at one clinic. This is supported by responses received and observations made. Through observation, staff worked under unhygienic conditions. Toilets were dirty, bins were not emptied, there was no office furniture and the general condition of the clinic did not look appealing. A study conducted by Azizan (2015) suggests that the healthcare service relies on physical evidence to improve customer

experience. Healthcare services are high in credence qualities as such physical evidence, which provides a cue for the patients' service quality perceptions (Ramsaran-Fowdar 2008). Generally, in hospitals, infrastructure such as physical facilities, equipment, personnel and written material must appear good to create positive impressions and to influence favorable patient perceptions (Andaleeb et al. 2007). Studies show that the relationship between infrastructure and perceived service quality is significant and positive (Dagger et al. 2007; Chahal and Kumari 2010). Patients had to wait long hours in venues. The supply of consumables, at times for example, syringes, cotton wool and other medication was a challenge to both clinics.

In certain instances, staff had to borrow consumables from neighboring clinics. This is supported by an observation that was made as follows. A sister in charge had to drop everything to go to one of the neighboring clinics to obtain the vaccine for immunization for children. This is also supported by an article published in Times Live (31 July 2015), which reported that the Minister of Health in KwaZulu-Natal was addressing the Legislature on the 'limited quantities" of medicines. Among other drugs in short supply were the BCG Vaccine, Tuberculin, morphine, Tilidine drops, Suxamethonium, Furosemide injection and Abacavir. Community outreach programs were not popular in both the clinics. However, one clinic hosted at least one program per month. This meant that patients only had the opportunity to interact openly about their health issues once a month as compared to the one clinic, which only conducted this program once in six months. The public was being deprived of the right to access to health information.

Clinic Y was rated poorly in nearly all statements. This could be because of its strategic location, lack of proper resources and commitment of staff. It could also be linked to the level of staff absenteeism and their attitude towards patients. It must be noted that *Clinic X* and *Clinic Y* report to the same District Manager, but the level of service received from one clinic differs from the other.

It is also possible that patients are not aware of their human rights and the Batho Pele Charter, with reference to medical care. Access to clinic services can also be associated with the lack of knowledge about the facilities available at the clinic and the manner in which the public is addressed. It was also observed that some clinics' facilities are not user friendly for the physically challenged patients, and therefore, it is difficult to visit the clinic if there is no one to assist. The time spent by patients while waiting for medical care also poses a serious challenge because some patients have to wait for more than the normal expected time. Some patients had to travel long distances using public transport to seek medical help. Some patients had to return the following day because they were not seen by the medical staff.

CONCLUSION

The purpose of this paper was to report on the investigation of service quality provided by two Public Clinics in KwaZulu-Natal, South Africa in the quest to improve the delivery of service quality to the public. The study showed that there were challenges in the health sector, particularly at clinics, and there was room for improvement. The patients were not dissatisfied with several aspects of the service delivery at the clinics. The findings showed that there was a level of satisfaction when delivering a service to a patient in both clinics in these areas. These pertained to courtesy, care, kindness, sympathy, registration process, dispensing, explanation on how medication should be taken, and notice of the next visit. The findings also showed that both patients and nursing staff held positive perceptions about quality service delivery, and there were similarities in the responses relating to courtesy, care, kindness, sympathy, and an effective registration process.

The study provides the basis for continued quality delivery of service as all the activities are tracked and recorded electronically at Head Office. Similar studies using more clinics in KwaZulu Natal would be useful to compare the common challenges and compare the findings of this study and to address the limitations of the small sample size.

RECOMMENDATIONS

The following recommendations are proposed for this study:

- Staff should be deployed equitably to maintain similar service delivery standards across clinics within KwaZulu-Natal.

- All patients should be treated equally irrespective of their origin, race or appearance.
- Consultants, suppliers and agents should visit the clinic after lunch when most patients have been attended to.
- Patients should be informed about their rights to medical care.
- Each nursing staff on duty should attend to patients promptly and follow the Batho Pele Principles.
- The Department of Health should invest in upgrading the reception areas where patients receive the first impression and perception of the health facility.

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