

PATIENT SATISFACTION WITH HEALTH SERVICES IN A RURAL DISTRICT HOSPITAL

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ABSTRACT

BACKGROUND: The concept of consumer satisfaction is gaining momentum across all business sectors worldwide. In keeping with this trend, health care systems are now also being reviewed to assess patient satisfaction with regard to the quality of care provided. Patient satisfaction is an instrumental tool for identifying shortcomings and challenges of the health system, and provides patients with a constructive outlet to rate their hospital experience.

AIM: To determine the perceived levels of patient satisfaction with health care services.

METHODOLOGY: A descriptive cross-sectional study was conducted using patients who attended the Outpatients Department of Untunjambili Hospital in Kwa-Zulu Natal. A sample of 250 patients was selected using systematic random sampling. The research instrument, a structured questionnaire consisted of 23 questions which were subdivided into five categories, namely: biographical data; accessibility to the hospital; infrastructure; overall satisfaction and general comments. The 5-Point Likert Scale was used to determine the perceived levels of patient satisfaction. Data collected from the responses was analysed using the SPSS Programme, Version 22.0. A Significance level of ($p=0.05$) was applied.

RESULTS: The response rate of the study was 99.2% ($n=248$). The majority of the respondents were female (75.4%) and aged between 20-30 years old. The relative ratio of males to females was approximately 1:3. Nearly half of the participants (48.4%) had a secondary education, and a high degree of illiteracy was noted (21.8%). The majority of patients relied on taxis as the mode of transport to reach the hospital (71.4%), with 55.2% having to pay more than R15.00 for travel costs. While statements relating to personality such as staff friendliness, and doctors treating patients respectfully scored highly (93.5%), more than two thirds reported dissatisfaction with the lengthy waiting times (71.8%). In terms of infrastructure, respondents were mainly satisfied with the seating arrangements, cleanliness and air circulation, but were unhappy with the state of the toilet facilities and the unavailability of drinking water. Overall, 90.3% of patients were satisfied with the level of care they received at Untunjambili Hospital, with 89.5% suggesting that they would recommend the institution to others.

CONCLUSIONS: The findings of the study suggest that although there was a high overall satisfaction rate with the services rendered at Untunjambili Hospital, certain aspects need to be addressed to enhance the patient experience. Prolonged waiting times, poor ablution facilities and the lack of drinking water are all factors that can be easily rectified with minimal financial implications to the institution. By exploring those avenues that patients are dissatisfied with, appropriate corrective measures can be enforced, thereby improving the quality of services offered at the institution.



DECLARARTION

I, Bharti Gangai (Student No. 3364828) the undersigned, hereby declare that this dissertation is my own original work except where indicated in acknowledgements and references. It is being submitted in partial fulfilment for the degree (MSc) in Community Dentistry at the Faculty of Dentistry, University of the Western Cape. It has not been previously submitted in part or its entirety towards any other degree or examination at any other university.

Signature:.....



Date:

DEDICATION

This work is dedicated to my grandparents, whose love knew no bounds. You remain forever in my heart.

To my beloved parents, Naren and Seeta Gangai, thank you for all your love and support. This would never have been possible without you.

To my siblings, Manisha, Ramola and Mahendra, thank you for your unfailing encouragement and guidance. I love you all dearly.



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My sincere thanks to Dr A. Subrati, medical officer at Untunjambili Hospital, for all his assistance during this study. You are a one in a million friend.

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Finally, I thank my God, for all his blessings.



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CHAPTER 1

INTRODUCTION

With the paradigm of healthcare becoming a largely consumer driven entity, the importance of assessing patient satisfaction is a significant indicator of the state of current health care systems. Patient satisfaction embodies the patients perceived needs, relative expectations and overall healthcare experience (Mukhtar *et al*, 2013). It denotes the extent to which general health care needs meet patient requirements (Sharma *et al*, 2014). Decades of research has recognised the concept that patient satisfaction is a relative phenomenon, yet it plays a crucial role in both the evaluation and shaping of health care systems.

Patients are the primary stake holders in the health care system. Health care users today are more knowledgeable and informed as opposed to the past, thereby demanding more valid and accurate evidence of health plan quality (Odhayani and Khawaja, 2014). The traditional paternalistic authority afforded to medical personnel has undergone transformation, with patients now taking a more active involvement in their own health. Access to medical information coupled with the current trends in medical ethics and the improvement in patient education levels have substantially contributed to the changing tides of the healthcare landscape (Khattak *et al*, 2012).

Concepts such as ‘Patient-centred-care’ and ‘shared decision making’ are now at the forefront of service delivery in the health care fraternity. Introduced by the National Research Council in Washington (2001), ‘Patient-centred-care’ is defined as ‘care that is respectful and responsive to individual patient preferences, needs and values,’ and which ensures that ‘patient values guide all clinical decisions.’ Simply translated, it involves navigating the health system through the eyes of the patient (Lateef, 2011). Thus, feedback from the service users constitutes an integral component in ensuring delivery of the highest quality in healthcare.

1.2 The Concept of Patient Satisfaction

Vast amounts of literature support the notion that patient satisfaction is a complex and multi-factorial concept (Ahamed *et al*, 2011; Kuzma *et al*, 2012; Hawthorne, 2006). The absence

of a universally acceptable definition of patient satisfaction leaves the arena open for researchers to apply existing or new interpretations.

The Healthcare Quality theory proposed by Donabedian (1980) suggests that the interpersonal process of care plays an instrumental role in ensuring patient satisfaction. The Expectancy Value Theory of Linder-Pelz (1982) however, states that patients beliefs, values and prior expectations regarding healthcare influence overall patient satisfaction. Various other models and theories regarding patient satisfaction have been described over the years, with no single template being accepted as the gold standard.

The World Health Organisation (1990) defines patient satisfaction as the interlinking relationship between perceived needs, patient expectations and experiences. It is considered to be a key variable affecting health outcomes, and is commonly assessed to determine the quality of care rendered. That being said, there is no clear differentiation between patient satisfaction and patient perceptions of the quality of healthcare received. Some authors consider the two to be one and the same, while others maintain that they are separate entities. While the definition of patient satisfaction may vary among researchers, the core concepts remain fundamentally similar.

It is widely agreed upon that measuring patient satisfaction is a useful tool in determining the effectiveness of health care delivery and the quality of medical care rendered (Al-Abri & Al-Balushi, 2014; Saini *et al*, 2013; Sharma *et al*, 2014). Furthermore, it brings to the fore areas of weakness within the healthcare system, and in doing so, allows for rectification (Baltussen *et al*, 2002). Studies suggest that satisfied patients are more willing to seek medical advice, comply with treatment recommendations, keep appointments and refer other patients to their medical practitioner (Donabedian, 1980; Ferris *et al*, 1992). Research conducted in India by Sharma *et al* (2014) suggests that patient satisfaction studies also serve as a means of holding physicians accountable. Furthermore, the emergence of enhanced competition in the medical field has resulted in hospitals and health care centres striving to satisfy patients' requirements at great lengths. Institutions that are ranked highly in terms of service quality have better customer retention, decreased expenses for attracting new clients, enhanced profitability and greater customer satisfaction (Cronin *et al*, 2000; Janda *et al*, 2002; Gounaris and Dimitriadis, 2003; Yoon and Suh 2004).

1.3 Background to the study

Untunjambili Hospital is a deep rural health facility situated in the Ilembe District, Kwa-Zulu Natal (Figure 1). The district is divided into four smaller sub-districts namely, Maphumulo, Ndwedwe, Kwadukuza and eNondakusuka (Mandeni). The latter two areas are urbanised, while Maphumulo and Ndwedwe remain primarily rural.

Untunjambili Hospital is located within the Maphumulo sub-district, and is approximately 160km from Durban. The hospital is a District facility, and comprises one of four hospitals within the greater Ilembe District. The institution has 130 beds, and serves a total catchment population of approximately 300 000 people. Patients from Kranskop, Ngcolosi, Mabomvini, Makhabeleni, Cele and Mahlongwa frequent the hospital.

Majority of the community in Untunjambili are extremely impoverished and disadvantaged. Ilembe District was rated among the poorer of districts in Kwa-zulu Natal according to the 2001 Census. Unemployment rates within the district are stifling, with the greatest unemployment of 75.9% recorded in the Maphumulo sub-district. Tuberculosis (TB) and HIV remain the leading causes of death respectively. Diarrhoeal disease is highly prevalent in the district and can be attributed to the lack of safe water supply and poor sanitation practices. The communities in the two rural sub-districts particularly, utilize water from the river for their daily needs. This water source is contaminated and harbours infectious organisms. Mountainous terrain, gravel roads and the presence of numerous wandering animals' results in refuse removal vehicles being unable to access these areas, further compromising the health of this population.

The current health status and challenges in the Ilembe district are not peculiar to this region alone. Extreme poverty, inadequate government funding and resources, together with the continuous brain drain of scarce skilled professionals, is crippling the public health system in general. South Africa remains at the centre of the concurrent HIV and TB epidemics, and the Ilembe district exhibits the very same pattern of disease burden. Despite having prevention strategies in place, a radical short term resolution is not possible. The district needs to review its interventions and resource utilization to formulate a comprehensive plan on how best to improve the health status of the Ilembe population in the long term.

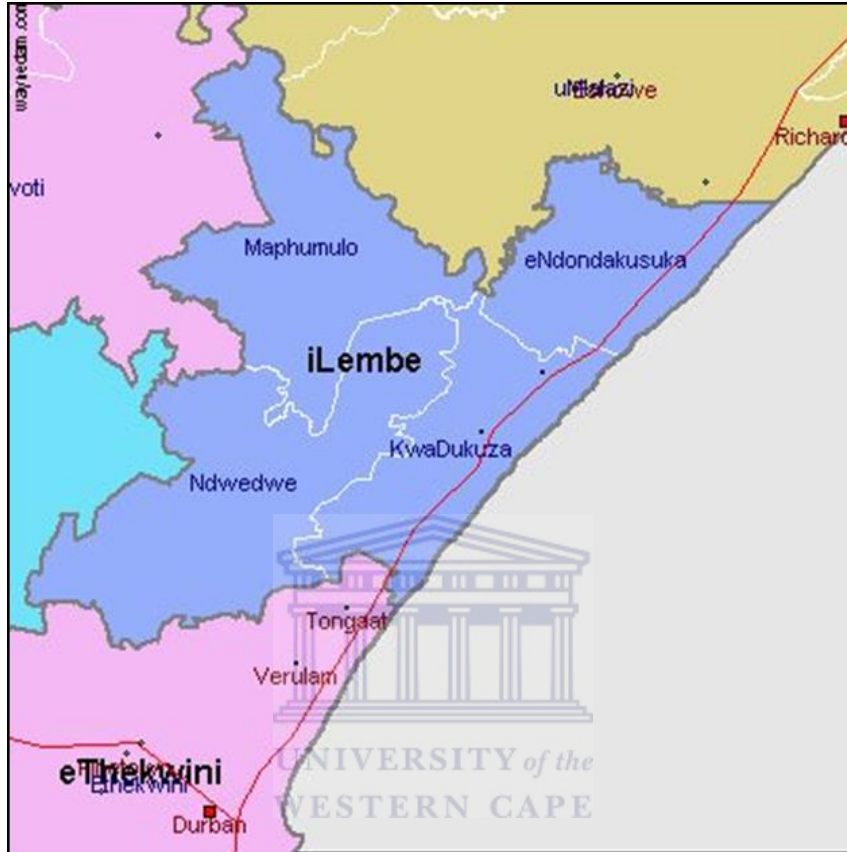


Figure 1: Iembe District with four sub-districts

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

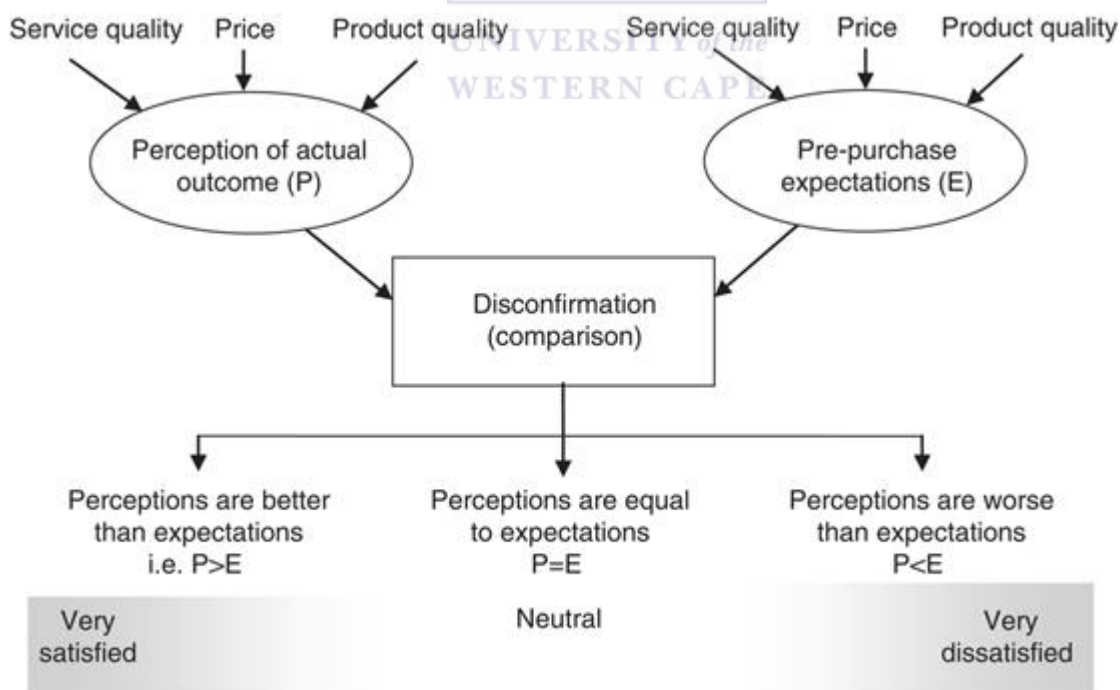
The concept of consumer satisfaction is becoming a practical reality across all business sectors worldwide. Similarly, in the health care system, patient satisfaction is at the forefront of research relating to the quality of care rendered and the current service delivery systems. Patients are the key stake holders in the ever expansive arena of modern medicine. There is a notable move from what used to be considered as the 'passive recipient' to the now 'active participant' as health services become more patient centred (Gajovict *et al*, 2012). This is further reiterated by Aldana *et al* (2001) who suggest that measuring patient satisfaction is an important tool in the growing trends towards accountability among healthcare providers, and the overall outcomes in the quality of care equation. While the concept has invoked much interest since the 1970's, there is still no agreed universal definition of patient satisfaction. Messner and Lewis (1996) propose that patient satisfaction is the degree of congruency between a patient's expectation of ideal care and their perceptions of actual care received. Expectations refer to what a patient may think they will receive, what they desire, what they consider to be important or what they feel entitled to when seeking care (Thompson and Sunol, 1995). Hence, it is when the patient's experience deviates significantly from expectations that dissatisfaction ensues.

2.2 Theories of Consumer/Patient Satisfaction

Over the decades, numerous studies have been conducted to identify the determinants of patient satisfaction, and different theories and models have been formulated. The inaugural work of Donabedian (1980) highlighted the importance of patient satisfaction, and provided much of the foundation for research in the field of quality assurance in healthcare. The author advanced the idea that quality of care should be assessed on the basis of three components, namely, 'structure, process and outcome'. Structure refers to the setting in which healthcare is provided and includes factors such as the qualifications of the care providers, financial policies and the organisational structure.

‘Process’ evaluates the technical management of illness and compliance with clinical protocols, and whether ‘good’ medicine was practiced. Lastly, ‘outcome’ of care is defined in terms of recovery, restoration of function and survival. The above mentioned conceptual domains imply that appropriate structure and process lead to favourable medical care outcomes (Larson and Muller, 2002).

The Disconfirmation – Expectancy paradigm as proposed by Oliver (1980) is one of the most widely used theories in the measure of customer satisfaction. This model suggests that consumers purchase goods or services with certain preconceived expectations in mind. If the service encounter matches their expectations, confirmation occurs. Failure to meet minimum performance criteria results in disconfirmation, of which there are two possible outcomes. Negative disconfirmation ensues as a result of the encounter being less than anticipated, while positive disconfirmation refers to the service having exceeded expectation. Oliver (1980) proposed a Cognition-Affect Model (Figure 1) which illustrates that cognitive factors such as expectations have a direct influence on satisfaction, whilst performance attributes may have both direct and indirect links to overall satisfaction.



Sources: Oliver (1993) and Parasuraman *et al.* (1994)

Figure 2: The Cognition Affect Model

Patient satisfaction with services can be assessed on patient perceptions of the following service attributes as highlighted by Parasuraman *et al* (1988):

- *Reliability*: ability to perform the promised service dependably and accurately;
- *Responsiveness*: willingness to help customers and provide prompt service;
- *Assurance*: employees' knowledge and courtesy and their ability to inspire trust and confidence;
- *Empathy*: caring, individualized attention given to customers;
- *Tangibles*: appearance of physical, facilities, personnel and written materials.

'Patient satisfaction' and 'Quality assessment' are terms that are often used interchangeably. While they do share similarities, satisfaction is generally evaluated on an individual's experience, whereas quality perception can be measured in the absence of an encounter. That being said, it is important to note that it is only 'perceived' quality that is considered. Crow *et al* (2002) suggest that patient satisfaction is a relative concept, and it only implies adequate service. It is a cognitive evaluation of the service that is emotionally affected, and is therefore an individual's subjective perception.

Newsome and Wright (1999) suggest that consumers can and do hold different types of expectations, and that these are determined by a range of levels and not just a single one. These expectations as related to services have been identified by Zithaml and Bitner (1996) as the following:

- *Desired Service*: This is the level of service the customer hopes to receive, the 'wished for' level of performance blending what the customer believes 'can be' and 'should be'.
- *Adequate Service*: This refers to the 'minimum tolerable expectation or bottom level of performance'.
- *Predicted Service*: This is the level of service customers are likely to receive, and it implies some objective calculation of the probability of performance.

Despite having distinct expectation types, the authors acknowledge that consumers recognise that service performance may vary, and the extent to which they are willing to accept this variation is referred to as the 'Zone of Tolerance' (Figure 3). This is a range or window in which consumers do not particularly notice service performance.

It varies for different service attributes, and the more important the factor, the narrower the zone of tolerance is likely to be, whereas less crucial aspects such as service processes may have a far wider leniency (Parasuraman *et al*, 1999).

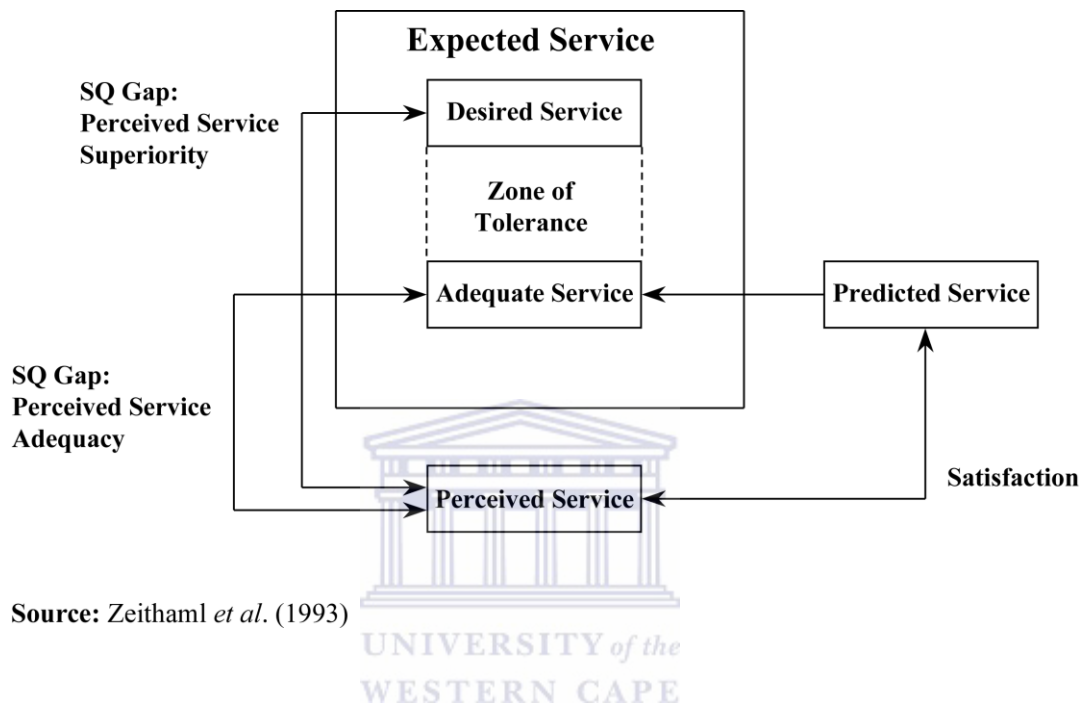


Figure 3: The ‘Zone of Tolerance’

The Expectancy-Value Theory of Linder-Pelz (1982) postulated that satisfaction is mediated by personal beliefs, values about care, as well as prior expectations. The social psychological variables which were considered included expectations, values, entitlement and perceived occurrences. Three dimensions of satisfaction included doctor conduct, convenience and general satisfaction. The outcome of the study showed that the social psychological variants together explained only a small proportion of the variance in satisfaction, although their contribution varied with the dimension of satisfaction. Values had little effect on overall satisfaction.

2.3 The Application of Patient Satisfaction in Healthcare

The health sector has become increasingly receptive to the notion that service quality and consumer satisfaction are critically important factors in the success of healthcare organisations (Juwaheer and Kassean, 2006). The desired need to gauge the patients' unique perspective has been largely driven by the rise in the health consumer movement which suggests that patient satisfaction is one of the articulated goals of healthcare delivery. It is an instrumental tool for improving the quality of services rendered (Dulgerler *et al*, 2012), and aids policy makers and managers to identify and address shortcomings within the health system. Conducting regular satisfaction evaluations provide patients with a constructive outlet to describe their experiences, whilst simultaneously enhancing compliance and confidence in the public health system. The escalating costs of healthcare coupled with a general deterioration in government health services has resulted in patients being far more vocal about their experiences nowadays compared to previously. The complexity of the issue of patient satisfaction however is challenged by the lack of a universally accepted conceptual basis and consistent measurement template that can be applied across the board. Vast amounts of existing literature on the topic focuses on identifying socio-demographic correlates of satisfaction, as opposed to developing a strong socio-psychological theoretical framework. There appears to be agreement that the definitive conceptualisation of satisfaction with healthcare has still not been achieved and that understanding the process by which a patient becomes satisfied or dissatisfied remains largely unanswered (Crow *et al*, 2002).

Research on patient perceptions of the dimensions of service quality is further challenged by the fact that there is no consensus on how best to conceptualise the relationship between patient satisfaction and the relative perceptions of the quality of care received. Whilst some authors refer to the terms as synonymous, patient satisfaction continues to be measured as a proxy for the patient's assessment of service quality (Turriss, 2005). A study conducted by O' Connor and Shewchuck (2003) highlighted that majority of the work on patient satisfaction is based on simple descriptive and correlation analysis in the absence of a theoretical foundation. The authors posit that health services should measure technical and functional quality as opposed to patient satisfaction.

2.4 The Determinants of Patient Satisfaction

Determinants of patient satisfaction appear to be relatively consistent in the published literature, despite the absence of a specific instrument to measure the patient perspective. A systematic review of patient satisfaction studies by Crow *et al* (2002) identifies the following four approaches:

- Approaches based on expectations: These focus on the association between expectations, perceived experiences and patient satisfaction.
- Approaches based on health – service attributes: This approach evaluates patient reported experiences on different health service factors.
- Economic Approach: This considers the financial perspective in relation to services rendered.
- Holistic Approach: This encompasses all the predictors of patient satisfaction in order to assess the interaction between variables that affect consumer evaluations.

In accordance with Donabedian's model of quality measurement, patient satisfaction is defined as a patient reported outcome measure which is influenced by structures and process measures of patient experiences. The determinants of satisfaction include evaluations of the quality of clinical service, medicine availability, behaviour of doctors and allied staff, the cost of care, hospital infrastructure, physical comfort, emotional support and respect for patient preferences (Jenkinson *et al*, 2002)

Patient Expectations

Patients are the primary clientele of any hospital and as such, they have explicit needs and desires when seeking medical care. Expectations regarding hospital services are influenced either by previous personal experience or based on information relayed by other users (Tateke *et al*, 2012). Market research by Horovitz (1990) has shown that customers who are dissatisfied with a service will divulge their experience to more than three other people. This suggests that negative word of mouth can have far reaching consequences for an organisation as it severely impacts on its credibility and efforts to attract new clients. Knowing the expectations of patients would help in avoiding negative publicity, minimising exposure to liability, and also enhance the healthcare experience of the patient (Lateef, 2011). Every patient seeking a medical consult has expectations that are influenced by their understanding of the illness, their cultural background, health beliefs and attitudes.

While patient expectations are an important predictor of patient satisfaction, the effect that expectations have on satisfaction is seldom assessed empirically (Crow *et al*, 2002). A recent study in Norway cited fulfilment of expectations and patient reported experience as the leading predictor of overall patient satisfaction (Bjertnais *et al*, 2012).

Interpersonal Skills

Effective doctor-patient communication is central in building a therapeutic doctor-patient relationship. Breakdown in communication between healthcare providers and end users is one of the leading causes of dissatisfaction among patients. Aldana *et al* (2001) reported that the behaviour of doctors and associated staff towards patients' is the most powerful determinant of satisfaction with government health services. The willingness of doctors to listen to patients and inform them of their health status is a significant factor for overall satisfaction (Gajovic *et al*, 2012). Healthy communication between doctor and patient has the potential to regulate patient emotions, facilitate their understanding of medical information and provide clarity on patient needs and expectations (Fong Ha *et al*, 2010). Patients reporting good interpersonal relations with their health care providers are more likely to be satisfied, follow advice and adhere to prescribed treatment (Gajovic *et al*, 2012). Fentiman (2007) identified the possible barriers to effective doctor-patient communication and these include: patient anxiety, unrealistic patient expectations, high doctor work load, and doctors' fears of litigation. A general sense of apathy and unconcern is reflected by health care workers in a number of hospitals (Andaleeb, 2001). Patient satisfaction studies in Bangladesh decry the nonchalant attitudes of health providers in government institutions. Poor communication and interpersonal skills among doctors and patients is an important weakness in the public health sector which needs to be addressed. Attentive listening skills, empathy and mutual respect are essential in any consultation between physician and patient.

Hospital Cleanliness

General cleanliness and maintenance of patient waiting areas in a hospital are important predictors of patient satisfaction. Dirty surroundings and unsanitary toilet facilities are the hallmark of government hospitals, and great source of patient dissatisfaction with services (Saini *et al*, 2013). Research done in Delhi suggests that more than 50% of respondents were displeased with the cleanliness of the hospital. On the contrary, Galhotra *et al* (2013) found that 100% of patients were satisfied with the cleanliness of a rural health facility in Chandigarh, North India.

Hospital Access

Health care access for all in South Africa is a constitutionally enshrined concept, yet considerable inequities exist due to improper resource allocation. Barriers that hinder accessibility to health care include vast distances, exorbitant travel costs, long queues at facilities and disempowered patients. Research by Harris *et al* (2011) suggest that access barriers in South Africa are largely related to the geographic inaccessibility of health facilities particularly in rural and under resourced provinces.

Prolonged Waiting Times

Waiting time is a measure of the time spent by the patient at the facility from arrival to completion of the visit. The negative association between long waiting times and patient dissatisfaction is well documented. Research conducted in Nigeria suggests that long waiting times are most common in outpatient clinics, and this has a significant impact on patient satisfaction. Similar findings by Sekandi *et al* (2011) in Uganda reiterate this notion. Public health facilities particularly in rural areas are more often than not under resourced in terms of personnel and equipment. The lack of computerised administration systems results in patients having to wait for extended periods while their charts are manually retrieved. Furthermore, the shortage of doctors and nursing staff impacts negatively on waiting times. Thompson *et al* (1995) noted that patients were least satisfied when waiting times were longer than expected, relatively satisfied when the time met expectation, and highly satisfied when waiting times were shorter than anticipated.

Socio-demographic considerations and Patient satisfaction

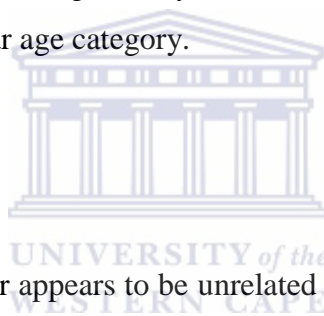
Education

Some authors have explained observed dissonance with health services to be the result of low educational status of participants. Harutyunyan *et al* (2010) suggest that patients who are less educated and those from rural areas were more likely to be satisfied with the care providers' quality. The authors are of the opinion that less educated patients have little or no knowledge of what ideal care should entail, and are less likely to have experienced an informed

comparison. Patient satisfaction and the educational level of the participant appears to have an inverse correlation (Tateke *et al*, 2012, Harutyunyan *et al*, 2010).

Age

While some studies show no significant relationship between patient age and satisfaction, others suggest differently. Elderly patients (60 and above) appear to be more satisfied than other age groups (Ahmad *et al*, 2011). This is consistent with findings by Dulgerler *et al* (2012) and Crow *et al* (2002). It is suggested that possible reasons for the elderly displaying greatest levels of satisfaction include lower expectations, or reluctance to communicate dissatisfaction. The effect of age on satisfaction was not significant in the Japipaul-Rosenthal (2003) study, but it yielded some interesting results. The 15-24 year age group showed the greatest level of satisfaction, and it gradually decreased over the next age groups, and increased again in the over 60 year age category.



Gender

Similar to the age variable, gender appears to be unrelated to satisfaction in some studies, but plays a role in others. A study done in Pakistan suggests that females were more satisfied with their treatment and management compared to their male counterparts. Janicic *et al* (2011) claim no statistical difference in general satisfaction between males and females.

2.5 Instruments measuring Patient Satisfaction

Over the decades, much work has been undertaken to evaluate the consumer's perception of service quality, and a number of models have been developed. Parasuraman *et al* (1988) devised the SERVQUAL which offered significant advances into the understanding and measurement of perceived service quality (Gill and White, 2009). Although the founders of the SERVQUAL model propose that it can be applied to most service sectors, Camilleri and O' Callaghan (1998) argue that there is a need to develop a framework specific to the health care industry. As a result, they utilised Donabedian's classification of structure, process and outcome, to identify sixteen primary service quality sentinels, which they believed to be a

good indication of issues requiring attention at a hospital. These 16 sentinels were then grouped under 6 broad sub-headings, including: Catering, Hospital Environment, Professional and Technical Quality, Patients Amenities, Service Professionalism and Accessibility.

The HEALTHQUAL model draws on the work of Donabedian (1980) and Parasuraman *et al* (1985), combined with relevant features of service quality as identified in the literature. The model consists of 6 key elements, namely: Admission Process, Attitudes of Medical Staff, Attitudes of Nursing Staff, Hospital Environment, Patient Amenities and Discharge Planning and Co-ordination. Modified versions of this model have been used by researchers in an attempt to evaluate perceived levels of service quality. Juwaheer and Kassean (2006) note that although numerous models have been tested in the health care context, a model which tracks the whole 'journey' of a patient is still non-existent.

2.6 Conclusion

A wealth of medical literature supports the concept that there have been unprecedented shifts in the traditional 'Doctor-Patient' relationship. The classic paternalistic role assigned to healthcare workers no longer exists in most developed countries, and developing countries are also following suit. As health care evolves, the paradigm of 'Patient-centred care' is becoming extremely popular. This implies that patients are better informed and play a more active role in their health and wellbeing. As a result, patient perceptions and expectations relating to health care service delivery have changed. There is now a need to better understand all the factors that influence patient satisfaction, so that managers and policy makers can enhance the patient experience positively.

CHAPTER 3

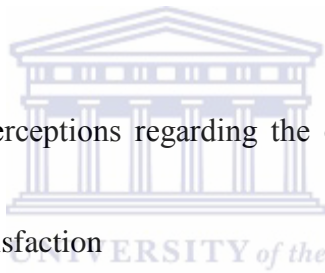
AIM AND OBJECTIVES

3.1 AIM

To determine the perceived levels of patient satisfaction with health care services in an outpatient department

3.2 OBJECTIVES

- To determine patients' perceptions regarding the outpatient department health care rendered
- To identify areas of dissatisfaction
- To make recommendations to address the concerns of patients



CHAPTER 4

METHODOLOGY

4.1 Introduction

Patients evaluation of care serves as a useful tool to enhance strategic decision making, monitor performance of health plans, and provide benchmarking across all health care institutions (Ahmed *et al*, 2011; Shou-Hisa *et al*, 2003). The process of analysing patient satisfaction however remains challenging due to the ambiguity of the concept, compounded by its subjective and contextual dual nature (Turris, 2005). In a recent systematic review conducted by Al-Abri and Al-Balushi (2014), the authors acknowledge that there are two approaches by which patient satisfaction can be evaluated – quantitative and qualitative methods. Quantitative research generates reliable population based data and is well suited to identifying cause-and-effect relationships. It is an objective measure that is derived from numbers and is quantifiable. Qualitative research entails the collection, analysis and interpretation of data by observing what people do and say. It is far more subjective than quantitative research, and is primarily exploratory and open-ended (Anderson, 2006). This chapter provides an overview of the methods used to carry out the present study.

4.2 Study Design

A descriptive cross-sectional study design was selected for this study.

4.3 Study Population

The study was conducted among the patients attending the Outpatients Department (OPD) of Untunjambili Hospital located in the Ilembe District of Kwa-Zulu Natal. The research was carried during one week in May 2014. Untunjambili Hospital is a district facility that caters to a largely rural population. The OPD is often referred to as the shop window of a hospital (Kunders, 1998; Sakharkar, 1998). The majority of patients are treated in this department, for

various issues ranging from chronic illness to acute medical emergencies. On average, the daily OPD attendance at Untunjambili Hospital is approximately 200 patients.

4.4 Sample Size

The weekly number of patients attending the OPD for three months was reviewed. The data was entered into a sample size calculator programme which determined the sample size for the present study to be 250.

4.5 Development of the Measurement Tool

A self-administered questionnaire was chosen to gather data for this study (Appendix 1). The advantages of this type of research method are that there is a good response rate, and it is easy to gauge the immediate response of the patient regarding their hospital experience. The disadvantages of self-administered questionnaires as a survey tool is that responses are limited to those who are on site at the time, which may lead to a non-representative sample, and it is time consuming.

The measurement of patient satisfaction is challenging due to the lack of a universal tool that can be applied. Previous studies on the topic create questionnaires from extrapolations of existing research. Similarly, the questionnaire for this study was compiled based on information from other published articles following a thorough review of the literature. The aims and objectives were the main guidelines that were applied when formulating the questionnaire, and the setting of the hospital was also kept in mind. The instrument consisted of both closed and open-ended questions. The 5-Point Likert Scale was used to determine the participants' level of agreement/disagreement with the set of statements. The scale ranges from 'Strongly agree' on one end to 'Strongly disagree on the other'. The draft measurement tool was compiled in March 2013.

The measurement tool was developed following a similar format to many of published patient satisfaction questionnaires. Questions were phrased simply for easy understanding by participants. The questionnaire comprised of 24 questions divided into four categories namely: demographics (Section A); accessibility of the hospital (Section B), infrastructure (Section C) and overall satisfaction (Section D). Biographical data included independent variables such as the participant's age, gender, marital status and educational status. Section

B of the questionnaire related to the accessibility of the hospital, and sought to identify how the patients arrived at the facility, the costs associated thereof and the approximate time taken. The waiting time to consult with the doctor as well as the interpersonal skills of the health care providers was also incorporated. The section on infrastructure aimed to assess the physical environment of the hospital in terms of cleanliness, patient comfort in waiting areas and the availability of drinking water. Section D elicited information related to overall patient satisfaction, and whether the treatment received met pre-existing expectations. Respondents had the opportunity to make any comments or recommendations at the end of the questionnaire.

4.6 Pilot Study

A pilot questionnaire was done in November 2013 as a 'pre-testing' of the research instrument. Ten (n=10) participants from the OPD completed the questionnaire on a voluntary basis. The responses from those participants were not included in the study sample.

The main reasons for conducting a pilot study were to:

- Test the adequacy of the research questionnaire
- Assess the feasibility of the study
- Establish whether the sampling frame and technique are effective
- Determine the time required to complete the questionnaire
- Identify any logistical problems that may arise
- Ensure questions are clear and unambiguous

After the pilot study, irrelevant and problematic items were deleted and the questionnaire reformulated. A final draft of the questionnaire was then printed and used for the study (Appendix 1).

4.7 Data Collection

The principal researcher and one nurse were responsible for the data collection. Data was collected for a period of five days, from 12 May 2014 – 16 May 2014. Every third patient exiting the OPD was approached to complete the research survey.

The background of the study was explained to the participants, and patients were informed that it was completely voluntary, and that they could withdraw from the study at any time (Appendix 2).

All willing patients were to complete a consent form (Appendix 3), before the questionnaires were distributed. Patients were assured of confidentiality regarding their personal details as well as their responses to the questions. All participants were encouraged to be completely honest in their response to the questions.

4.8 Validity and Reliability

Validity is defined as the extent to which a measure accurately represents the concept it claims to measure (Punch, 1998). There are two broad measures of validity, namely, internal and external validity. Internal validity addresses the specific reasons for the outcome of a study, and can be assessed in one of three ways: content-validity, criterion-related validity and construct-validity. It describes the extent to which research findings are a true representation of reality. External validity refers to the degree to which reflections or representations of reality are legitimately applicable across groups (Brink, 1993).

Validity of the present study was maintained through continuous input and feedback from the supervisor, and the expertise of a statistician. Standardisation and calibration was applied to ensure uniformity in the administration of the questionnaire and the interviews for patients who were illiterate.

Reliability is associated with consistency, stability and repeatability of the findings of a study, as well as the researcher's ability to accurately collect and record information. It refers to the ability of a research method to consistently yield the same results repeatedly (Brink, 1993) Reliability of the study was computed by taking several measurements on the same subjects. A reliability coefficient of 0.70 or higher is considered 'acceptable' according to the Cronbach's alpha score. Table 1 below shows the Cronbach's alpha score for each of the sections in the questionnaire. The reliability scores of each section exceeds the recommended value of 0.70. This indicates a high overall degree of acceptable, consistent scoring for the research for all sections.

Table 1: Cronbach's Alpha co-efficient

	Accessibility	Infrastructure	Overall Satisfaction
Cronbach's Alpha	0.700	0.709	0.767

4.9 Data Analysis

All data was captured on Microsoft Excel before being imported to SPSS Version 22.0 for complex statistical analysis. Frequency tables were generated, and cross tabulations performed to determine the relationship between demographic characteristics and the variables. The Chi-square Test was applied to identify associate variables with significance denoted as $p < 0.05$. Further analysis was done using Regression Models and Analysis of Variance (ANOVA).



4.10 Ethical Considerations

Ethics clearance (Appendix 4) was obtained from the University of the Western Cape Senate Research Ethics Committee (Ref 13/4/31). In addition, the study was approved by the Kwa-Zulu Natal Department of Health (Appendix 5). The CEO of Untunjambili Hospital was approached for permission to conduct research at the institution, and this was granted. All participants signed informed consent prior to completing the questionnaire (Appendix 3). Patients were advised that their participation was voluntary, and should they not wish to be a part of the study, they could leave the study at any stage and it would be no implications on their management.

CHAPTER 5

RESULTS

5.1 Introduction

The results report on the findings of the questionnaire survey regarding patient satisfaction with health care service in a rural district hospital. The responses were analysed using SPSS Version 22.0, and the results are presented using bar graphs, cross tabulations and pie charts.

5.2 Response Rate

The total number of questionnaires distributed was 250, of which two hundred and forty eight (n=248) were completed appropriately and returned. The response rate was 99.2%.

5.3 Demography

The majority of the respondents were female (75.4%), with an approximate male to female ratio of 1:3. The predominant age group for males was between 30-40 years (37.5%), and females, 81.0% was in the 20-30 year old category (Table 2).

5.4 Marital Status

The majority were single 183 (73.8%).

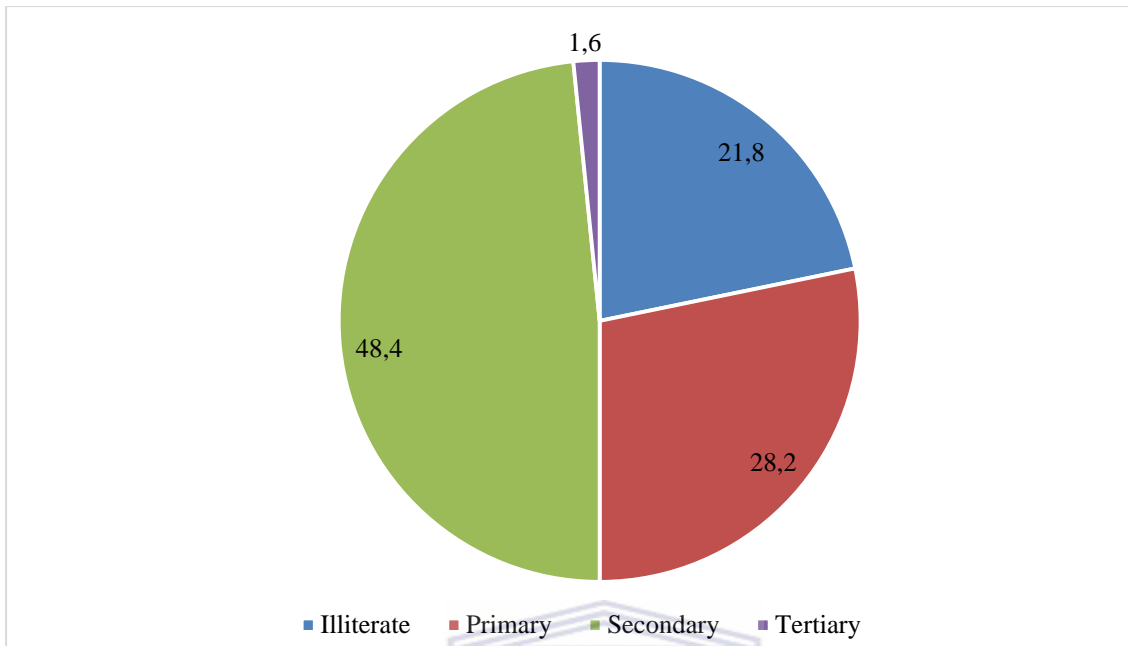
5.5 Educational Status

Nearly half of the participants in the study received secondary education (48.4%), whilst a significant percentage did receive primary schooling (28.2%). The high level of illiteracy is noteworthy in this rural community (21.8%). A very small percentage of participants reported having any tertiary education (1.6%) (Figure 4).

Table 2: Demographic Data

	Gender		Total
	Male	Female	
Age Grouped (years)			
10 - < 20	8	24	32
20 - < 30	11	47	58
30 - < 40	15	25	40
40 - < 50	9	36	45
50 - < 60	6	26	32
60 - < 70	9	17	26
70 - < 80	3	10	13
80 - < 90	0	2	2
Total	61	187	248

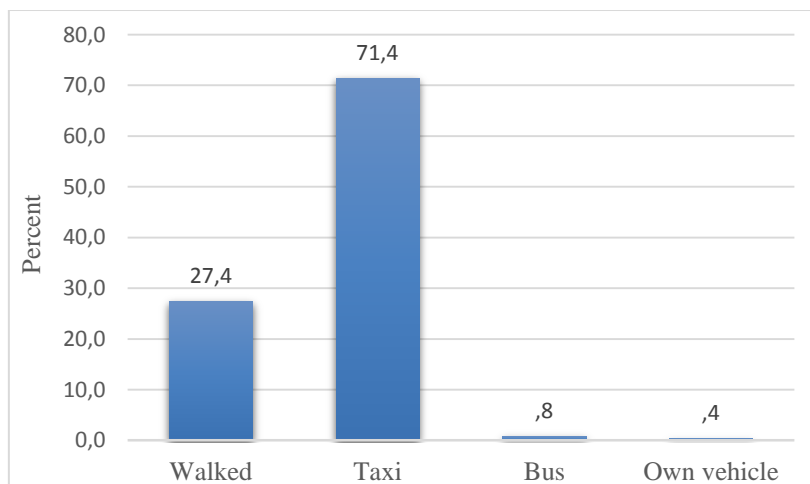
Figure 4: Educational Status



5.6 Mode of transport

The majority of the respondents relied on public transport in the form of taxis as a mode of transport to access medical care (n= 177; 71.4%). Of the study group, 68 individuals (27.4%) walked to the hospital, with only 1 person (0.4%) having their own vehicle as a means of transportation (Figure 5).

Figure 5: Mode of transport used



5.7 Time taken to reach the hospital

The time taken to reach the hospital varied. Of those who walked, the majority (n=30; 44.1%) took between 15-30 minutes to reach the hospital. 26 patients (38.2%) walked a shorter distance and arrived within fifteen minutes. Among the respondents using taxis, the majority (n=139; 78.5%) reported that the journey to the institution took more than half an hour (Table 3).

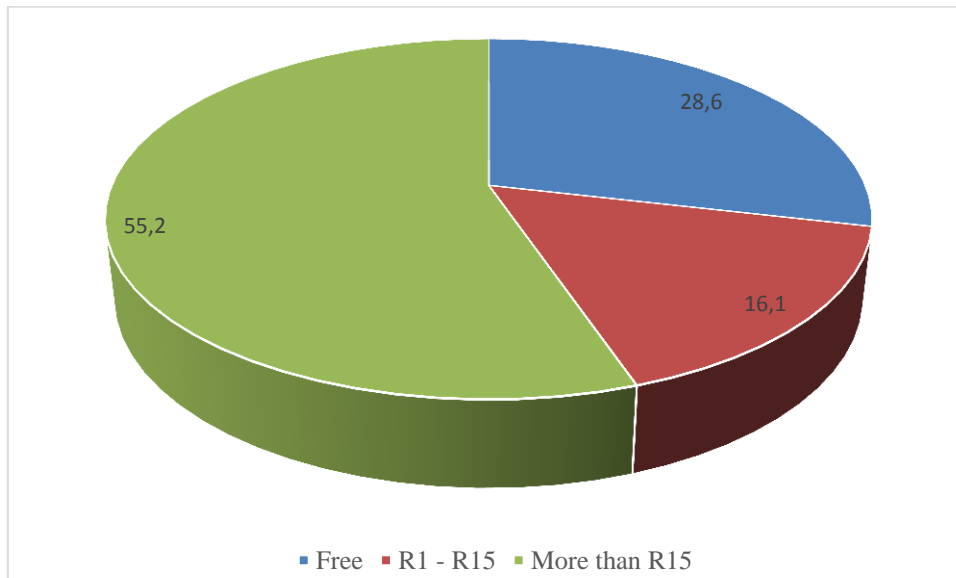
Table 3: Mode of transport and time taken to reach the hospital

			How did you arrive at the hospital today?				Total
			Walked	Taxi	Bus	Own vehicle	
How long was the journey to the hospital?	1 - 15 mins	Count	26	11	1	1	39
		% within How did you arrive at the hospital today?	38.2%	6.2%	50.0%	100.0%	15.7%
	15 - 30 mins	Count	30	27	0	0	57
		% within How did you arrive at the hospital today?	44.1%	15.3%	0.0%	0.0%	23.0%
	More than 30 mins	Count	12	139	1	0	152
		% within How did you arrive at the hospital today?	17.6%	78.5%	50.0%	0.0%	61.3%
Total	Count	68	177	2	1	248	
	% within How did you arrive at the hospital today?	100.0%	100.0%	100.0%	100.0%	100.0%	

5.8 Cost of Transport

55.2% (n=137) of the respondents spent more than R15.00 on travel costs, with 16.1% (n=40) spending less. 28.6% (n=71) incurred no costs (Figure 6).

Figure 6: Cost of transport



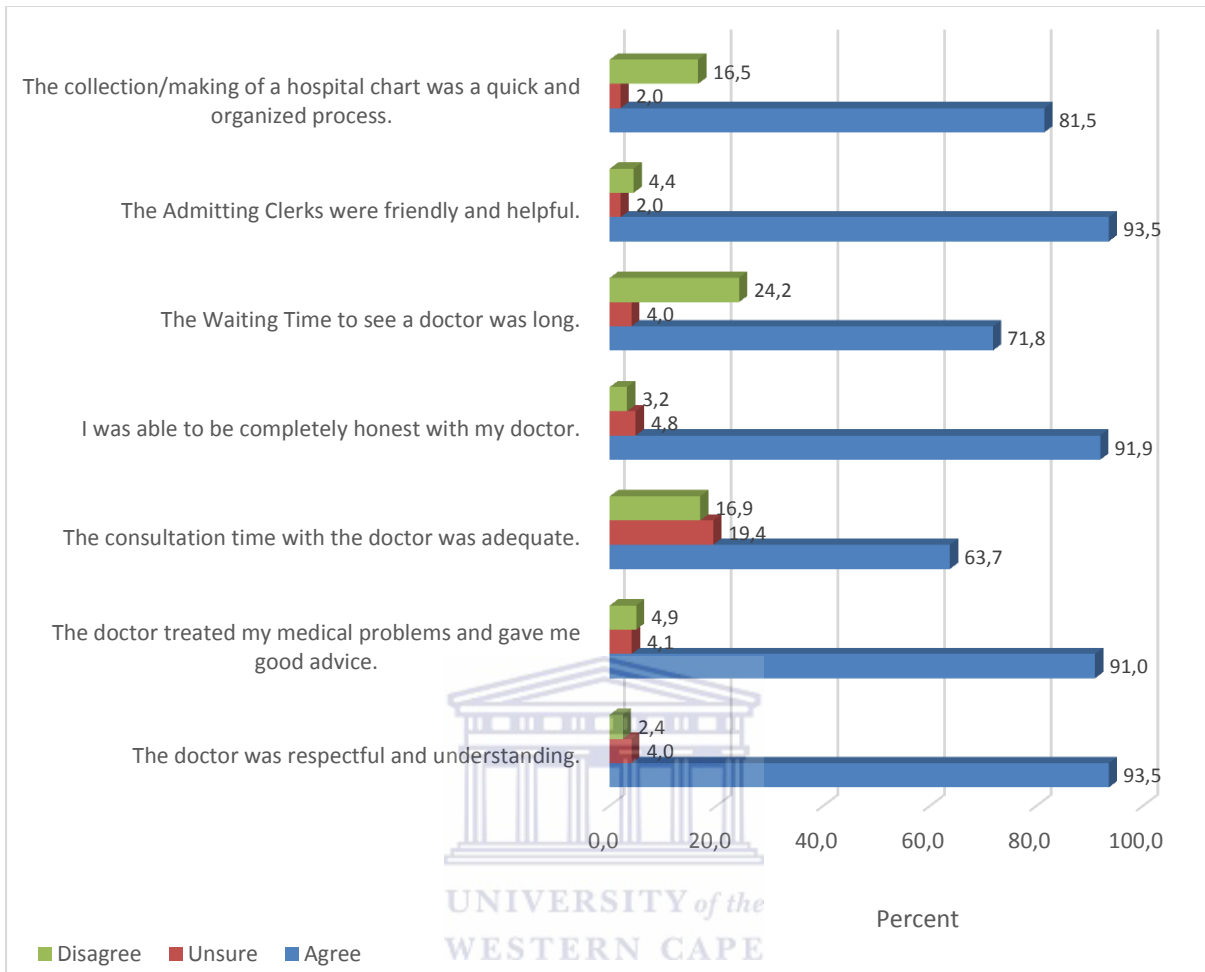
5.9 Patient Satisfaction Ratings

The figures below present a summary of the ordinal scoring patterns for the different sections of the questionnaire. Where applicable, levels of disagreement (negative statements) were collapsed to show a single category of “Disagree”. A similar procedure was followed for the levels of agreement (positive statements). This is allowed due to the acceptable levels of reliability.

5.9.1 Satisfaction Ratings related to Interpersonal Skills and Waiting Time

Statements relating to personality and interpersonal skills were rated highly among the patients (Figure 7). Nearly all (93.5%; n=232) agreed that clerks in the Admitting Office were friendly and helpful, and that the medical doctors treated them with respect and understanding. In addition, 91.9% (n=228) of patients reported that they were able to be completely honest with the doctor during the consult, with 91.0% (n=224) being satisfied with the medical advice provided by the healthcare provider. A high percentage of patients reported dissatisfaction with the waiting time to see the doctor (n=178; 71.8%). More than half the patients (n=158; 63.7%) were of the view that the consultation time with the medical doctor was adequate, while 16.9% (n=42) did not concur.

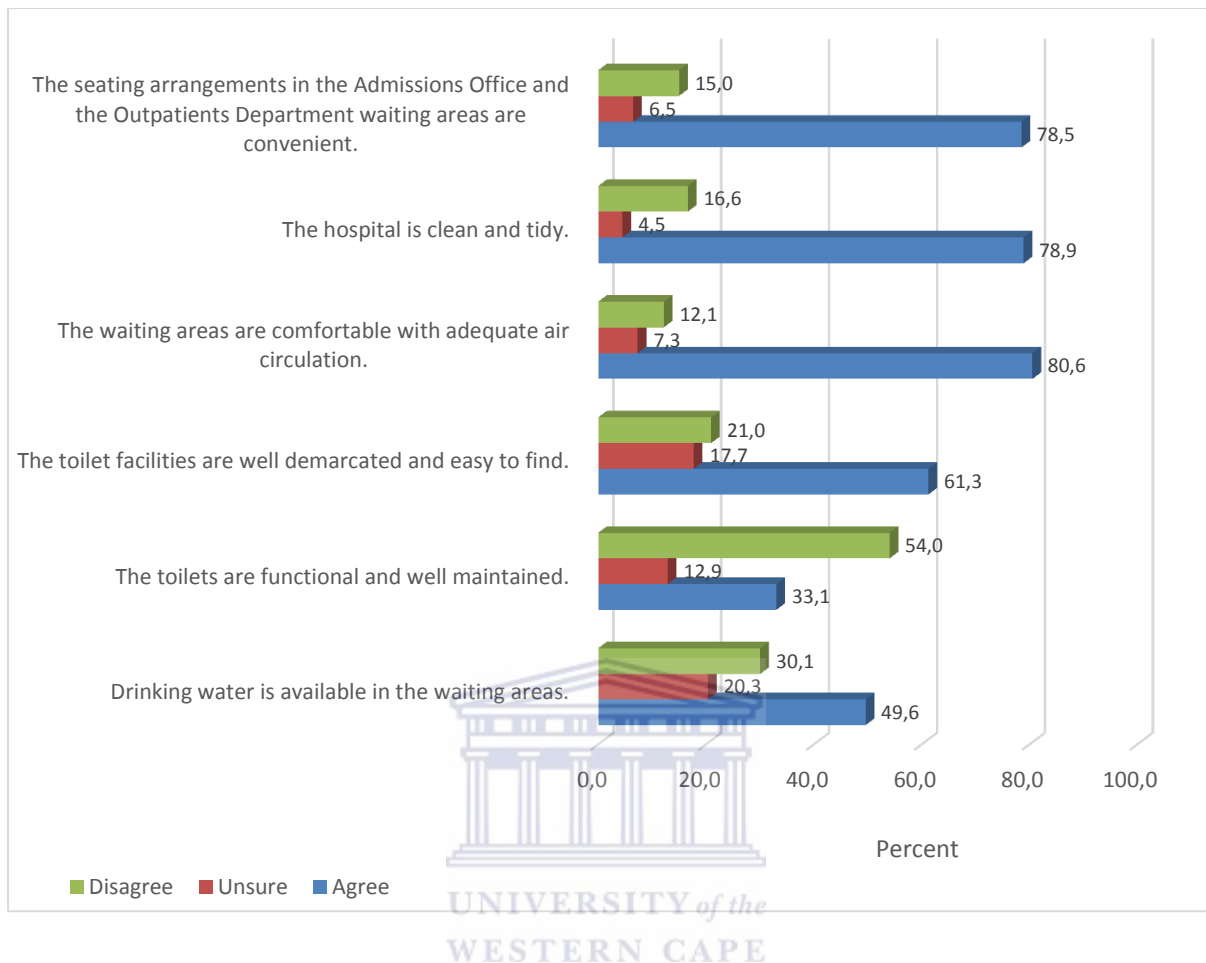
Figure 7: Satisfaction Ratings: Interpersonal Skills and Waiting Time



5.9.2 Satisfaction Ratings: Infrastructure

More than two thirds (78.5%; n=195) positively rated the seating arrangements in the admissions office and the OPD (Figure 8). 15% (n=38) disagreed with the statement. Regarding the cleanliness of the hospital, 78.9% (n=195) were of the opinion that the institution was neat and tidy, whilst 16.6% (n=41) did not agree. More than half the respondents (54.0%; n=134) were displeased with the condition of the toilets. 30.1% (n=75) reported no available drinking water in the OPD department, whilst 20.3% (n=50) remained neutral.

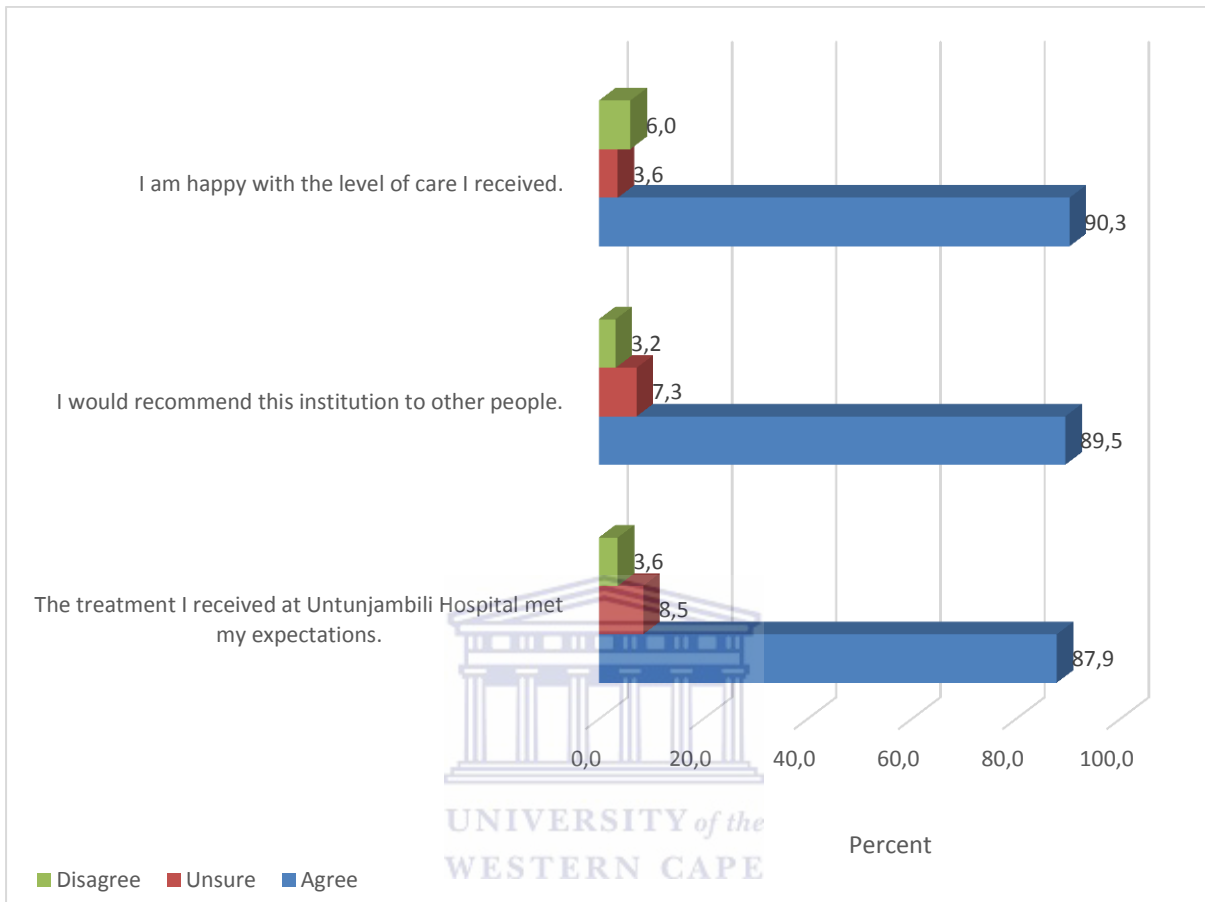
Figure 8: Satisfaction Ratings related to Infrastructure



5.9.3 Satisfaction Ratings: Overall Patient Satisfaction

The majority of the patients were pleased with the level of care they received at Untunjambili Hospital (90.3%; n=224) (Figure 9). Very few patients reported dissatisfaction (6.0%; n=15). When asked if they would recommend the institution to others, 89.5% (n=222) of the respondents answered positively, whilst 7.3% (n=18) were uncertain. 218 patients (87.9%) suggested that the treatment they received met their expectations, with 9 participants (3.6%) disagreeing.

Figure 9: Overall Patient Satisfaction Ratings



5.10 Associations

The traditional approach to reporting a result requires a statement of statistical significance. A p-value is generated from a test statistic. A significant result is indicated with "p < 0.05". The Chi square test was performed to determine whether there was a statistically significant relationship between the variables. A null hypothesis suggests that there is no association between the two. The alternate hypothesis indicates that there is an association.

Associations between variables

These associations are shown in Table 4. Statistical analysis suggested significant findings related to the manner in which patients arrived at the hospital and gender (p= 0.007), age (p= 0.037) and education (p=0.030).

The relationship between the cleanliness of the facility and marital status ($p=0.015$), and education levels ($p=0.047$) were significant.

Patients' educational status showed significant findings to all the variables associated with overall patient satisfaction including the level of care received ($p=0.025$), recommending the facility to others ($p=0.023$) and whether the treatment met expectations ($p=0.018$).

The scoring of gender in relation to the recommending the hospital to others and determining if expectations were met was significant ($p=0.034$ and $p=0.012$) respectively.



Table 4: Chi-Square test with p-values

		Gender	Age Grouped	Marital Status	Education
How did you arrive at the hospital today?	Chi-square	12.119	33.894	6.599	18.510
	df	3	21	3	9
	Sig.	.007*	.037*	0.086	.030*
What was the cost for the above mention transport?	Chi-square	9.978	24.914	3.304	14.071
	df	2	14	2	6
	Sig.	.007*	.035*	.192	.029*
How long was the journey to the hospital?	Chi-square	4.067	19.518	1.023	11.739
	df	2	14	2	6
	Sig.	.131	0.146	.600	0.068
The collection/making of a hospital chart was a quick and organized process.	Chi-square	3.546	11.756	.321	4.299
	df	2	14	2	6
	Sig.	0.17	0.626	0.852	0.636
The Admitting Clerks were friendly and helpful.	Chi-square	3.438	6.403	2.363	6.951
	df	2	14	2	6
	Sig.	0.179	0.955	0.307	0.325
The Waiting Time to see a doctor was long.	Chi-square	2.164	8.644	1.165	9.065
	df	2	14	2	6
	Sig.	.339	0.853	.558	0.17
I was able to be completely honest with my doctor.	Chi-square	.747	9.441	3.645	10.289
	df	2	14	2	6
	Sig.	0.688	0.802	0.162	0.113
The consultation time with the doctor was adequate.	Chi-square	2.141	13.140	2.691	7.906
	df	2	14	2	6
	Sig.	.343	0.516	.260	0.245
The doctor treated my medical problems and gave me good advice.	Chi-square	4.290	16.053	4.604	9.289
	df	2	14	2	6
	Sig.	0.117	0.31	0.1	0.158
The doctor was respectful and understanding.	Chi-square	5.939	16.652	3.817	7.708
	df	2	14	2	6
	Sig.	0.051	0.275	0.148	0.26
The seating arrangements in the Admissions Office and the Outpatients Department waiting areas are convenient.	Chi-square	1.984	15.012	3.069	9.267
	df	2	14	2	6
	Sig.	.371	0.377	.216	0.159

The hospital is clean and tidy.	Chi-square	.725	10.943	8.376	12.786
	df	2	14	2	6
	Sig.	.696	0.691	.015*	.047*
The waiting areas are comfortable with adequate air circulation.	Chi-square	1.387	10.823	1.640	5.652
	df	2	14	2	6
	Sig.	.500	0.7	.440	0.463
The toilet facilities are well demarcated and easy to find.	Chi-square	10.454	10.331	.926	9.968
	df	2	14	2	6
	Sig.	.005*	0.738	.629	0.126
The toilets are functional and well maintained.	Chi-square	4.673	16.065	1.094	8.575
	df	2	14	2	6
	Sig.	.097	0.309	.579	0.199
Drinking water is available in the waiting areas.	Chi-square	5.388	20.387	.420	13.000
	df	2	14	2	6
	Sig.	.068	0.118	.810	.043*
I am happy with the level of care I received.	Chi-square	4.928	22.849	3.746	14.443
	df	2	14	2	6
	Sig.	0.085	0.063	0.154	.025*
I would recommend this institution to other people.	Chi-square	6.779	17.994	1.810	14.622
	df	2	14	2	6
	Sig.	.034*	0.207	0.405	.023*
The treatment I received at Untunjambili Hospital met my expectations.	Chi-square	8.897	13.696	1.844	15.334
	df	2	14	2	6
	Sig.	.012*	0.473	.398	.018*

CHAPTER 6

DISCUSSION

Patient satisfaction is a relative phenomenon which is evaluated on the basis of patient experiences, expectations and perceived needs (Merkouris *et al*, 1999). Both medical and non-medical factors influence patient satisfaction scores. This chapter discusses the findings of the present study that sought to determine the perceived levels of patient satisfaction with health care services and compares the results with the published literature in this area.

The present study achieved a response rate of 99.2%. This is significantly higher than the majority of other similar studies (Odhayani and Khawaja, 2014; Gajovic *et al*, 2012; Ogunfowokan and Mora, 2012). Das *et al* (2010) reported on client satisfaction in rural Bengal, and had a 93.5% response rate. Studies conducted in Ethiopia and Lahore however, showed comparable response rates to the current study.

The majority of respondents were female. This is in keeping with other studies which suggest that women frequent health care facilities more than their male counterparts (Wang *et al*, 2013; Tateke *et al*, 2012, Bertakis *et al*, 2000). Galhotra *et al* (2013) evaluated the patient satisfaction levels at a rural health facility in North India, and reported similar demographic findings with over three quarters of the participants being female. A study in Spain researched the gender differences in the utilisation of health care services among the older population, and reported that the types of services utilised varied between men and women. Females used preventive and diagnostic services more, whereas males made greater use of emergency services (Redondo-Sendino *et al*, 2006).

Wang *et al* (2013) reported that gender differences in consultation rates varied across life span. The most significant difference in the gender utilisation rate was noted during the reproductive years. Contrary to the present study however, research by Saini *et al* (2013) in Delhi showed opposite findings, with 72.3% of respondents being male. Mukhtar *et al* (2013) cited an almost equal representation of males and females in their study, with males having only a very slight majority.

The predominant age group in this study was the 20-30 year old category. This was in contrast to Patavegar *et al* (2012) who reported that majority of their participants (43.7%) were in the age group of 49 years and above and the study by Afzal *et al* (2014) reported the predominant age category was between 25-40 years old.

Education enables patients to make well informed health decisions. A knowledgeable patient has a better understanding and greater exposure to what constitutes ‘ideal’ care, and is not willing to settle for sub-standard service delivery. Almost half of the participants in this study received a secondary education (48.2%), which is comparable to the 44.3% reported by Gadalean *et al* (2011) in a study conducted in Romania. The high level of illiteracy (21.8%) was alarming, and echoed the findings of Afzal *et al* (2014) in Islamabad, who reported that 31.8% of their participants received no schooling whatsoever. Illiterate patients tend to be satisfied with services irrespective due to a lack of knowing any better. A study in Beijing among oncology patients concluded that patients’ education levels influenced their expectations of care, and higher educational statuses were associated with decreased patient satisfaction (Liu *et al*, 2006). Only 1.6% of the respondents in this study reported having had a tertiary education.

South Africa’s first elected democratic government of 1994 made a concerted effort to redress the inequalities of the past in terms of health care. The ‘Batho Pele’ Principles were developed to serve as a legislative framework by which all public services were to be rendered. It comprises a list of eleven key aspects, including increased access to health care; openness and transparency; value for money; a clear complaints pathway and to be treated in a courteous manner by service providers, among others. The ‘Batho Pele’ Principles are aligned with the Constitutional ideals of providing high quality care for all in an equitable manner, and in accordance with the highest ethics. Government developed new policies that sought to improve accessibility to health care for all South Africans, with particular focus on availability and affordability. Health care facilities were established in previously under-serviced areas to improve availability in relation to geographic access, especially in rural areas. In some instances, patients travelled for days to reach health care institutions, and paid exorbitant costs which they could ill afford. The majority of patients in the present study utilised public transport in the form of minibus taxis to reach the hospital. More than three quarters of those who used taxis reported that the travel time was greater than thirty minutes. The location of the hospital coupled with poor road infrastructure meant that bus routes do not pass by the facility.

A study by Silal *et al* (2012) explored the inequalities in access to maternal health care services in South Africa, and concluded that rural women faced the greatest access barriers such as the longest travel times, the highest costs associated with child delivery and the lowest service acceptability compared to women living in urban areas.

Approximately 21.4% of participants in the present study reached the hospital on foot, with 44.1% stating that the journey took between fifteen to thirty minutes. Sodani *et al* (2010) showed that more than half the patients in their study (52%) also walked to the hospital, and reached it in less than fifteen minutes.

The administration process of making a hospital chart was rated unsatisfactorily by some respondents and the long queues at the Admissions area may be attributed to the lack of a computerised system. Patient records needed to be manually retrieved and poor filing systems resulted in prolonged waiting times to create/collect a hospital chart. Sodani *et al* (2010) measured patient satisfaction at the OPD of multiple public health facilities (District hospitals, Civil hospitals, Community Health Centres and Primary Health Centres) in Madhya Pradesh, India and found that nearly two thirds of the participants were of the view that the registration counter was over crowded. This observation was more obvious at the district hospital level as the patient load was the greatest.

The interaction between health care providers and patients is the primary core of the “service business” in the health care fraternity. Staff attitude and communication skills directly impact the patients’ evaluation of their experience at the facility and determine whether the patient would re-visit the institution in the future, or seek medical help elsewhere. The interpersonal skills of the doctors and staff were rated extremely highly among the participants of this study, and nearly all agreed that the health care providers had a friendly and respectful demeanour. Consistent with the finding of the present study, numerous other studies have also highlighted the importance of good practitioner-patient interaction, and have acknowledged it as an integral contributor to patient satisfaction (Odhayani and Khawaja, 2014; Sodani *et al*, 2010; Muhondwa *et al*, 2008). Messner and Lewis (1996) suggested that simple human values such as respect, good communication skills and trust are the key determinants of patient satisfaction in health care. In 2011, Otani *et al* conducted extensive research across thirty-two tertiary hospitals in the United States of America to ascertain the relationship between practitioner care, nursing care, and the physical environment in relation to overall patient satisfaction.

The outcome of the study showed significant associations between the care rendered by the health care providers and overall patient satisfaction levels. Kulkarni *et al* (2011) reported that 87.8% of patients were satisfied with the behaviour of the doctors, whereas Bhattacharya *et al* (2003) cited an impressive 98.2% satisfaction rating on the same aspect.

In terms of the medical doctor's skills, again nearly all participants were satisfied that they were appropriately managed and advised. This finding was significantly higher than that of Galhotra *et al* (2013) which reported that less than two thirds of patients were satisfied with the advice they received, and 72% felt that the practitioner's medical skills were satisfactory. A study carried out at the Dhaka Medical College Hospital by Islam and Jabbar (2008) suggested that 81% of patients were satisfied with the responsiveness and patience of the doctors, but 49% were dissatisfied with the lack of explanation or clarity regarding their prescribed treatment.

The vast majority of patients in the present study rated the friendly and helpful disposition of the admitting clerks very highly. A similar study conducted in Pune, Maharashtra by Patavegar *et al* (2012) reported congruent findings of satisfaction with the demeanour of the registration staff. On the contrary, Islam and Jabbar (2008) found that only a mere quarter of the patients (25%) were satisfied with the manner in which they were handled by admitting staff.

Waiting time is a well-established predictor of patient satisfaction, and the strong inverse relationship between the two variables is widely documented (Bar-Dayyan *et al*, 2002; Dansky and Miles, 1997; Huang, 1994). Anderson *et al* (2007) suggested that long waiting times coupled with short consultation duration with the medical doctor is a 'toxic combination for patient satisfaction.' More than two thirds of the participants in the present study expressed dissatisfaction with the waiting time taken to be seen by the doctor. This finding was similar to research conducted in Abuja, Nigeria by Ogunfowokan and Mora (2012), who posit that the patients' levels of overall satisfaction decreased from 'excellent' to 'poor' as waiting times increased. Dissatisfaction as a result of prolonged patient waiting times has been widely cited in patient satisfaction literature (Odhayani and Khawaja, 2014; Gajovic *et al*, 2012; Tateke *et al*, 2012). A study investigating patient satisfaction at a hospital in Tanzania by Muhondwa *et al* (2008) reported that the proportion of patients who highly scored the Outpatients Department (OPD) services decreased as waiting times increased.

On the contrary, Sharma *et al* (2014) reported that majority of the respondents were satisfied with the waiting times they experienced at the OPD of a tertiary hospital in India. Similarly, Harutyunyan *et al* (2010) suggested that patients were pleased with the waiting times at the facility in Armenia. This may be attributed to the health care facility working on an appointment basis, hence patients have minimal waiting times before consultation.

In the present study however, the option of an appointment system is not viable, and waiting times were further increased due to staff shortages of medical doctors. Untunjambili is one of only four hospitals in the Ilembe District, and as such, has a large catchment population. Patients travel from far for medical treatment, and cannot afford to be told that they would need to be booked for a future appointment. Hence, all patients need to be consulted and managed on the day that they arrive at the hospital. Due to its deep rural location, the hospital does not attract many health care workers. There is a dire shortage of medical doctors, and those who do provide services are required to cover all aspects of the facility, including the general wards, paediatrics, maternity, ARV clinic and the OPD. This results in OPD patients having a significantly long waiting time as doctors first have to complete ward rounds before attending to the outpatients.

Nearly two thirds of the participants in the present study were satisfied with the adequacy of the consultation time with the doctor. A study conducted in Addis Ababa by Tateke *et al* (2012) compared health services at public and private hospitals, and yielded interesting findings in this regard. At the private hospitals, 65% of participants reported that the consultation time was adequate, whereas in the public facility only 46% were satisfied. Jawahar (2007) at a speciality hospital in Kerala found that nearly all patients were pleased with the time spent by the doctor during consultation.

The condition of the physical environment in a health facility is critical to the quality of services provided, and a major determinant of overall patient satisfaction (Ahmad *et al*, 2011). The present study found that more than two thirds of patients were satisfied with the seating arrangements in the Admissions and OPD waiting areas. This was higher than the findings of Sodani *et al* (2010) who reported that just over half were happy with the seating plan. On the contrary, a study conducted at a rural health centre in Chandigarh, India reported that 100% of respondents were satisfied with the seating arrangements.

There has been much research acknowledging the importance of health care institutions to have optimal cleanliness, however this is not always the case. In the present study, only three quarters of the patients felt that the hospital was clean and tidy. This finding was significantly higher than that reported by Chahal *et al* (2004) where less than half were in agreement that the unit was hygienic. Jadhav *et al* (2011) showed the most comparable score to our study in terms of cleanliness, with a 78.2% agreement from participants.

Tsai *et al* (2007) reported on outpatient perceptions on the physical environment of hospital waiting areas and noted that patients who attended the facility in the morning were more satisfied with the cleanliness than those who arrived later in the day.

The greatest dissatisfaction reported by patients in this study in terms of infrastructure was regarding the ablution facilities. More than half the respondents were displeased with the condition of the toilets. Sharma *et al* (2014) found that 68% of participants rated the toilet facilities as unsatisfactory. Poorly maintained and dysfunctional ablution facilities were also reported by Saini *et al* (2013) who went so far as to say that ‘the unsatisfactory condition of toilets was a hallmark of government hospitals,’ and is one of leading factors that dissuade people from visiting public hospitals. Similar findings have been observed by Kumari *et al* (2009), and Bhattacharya *et al* (2003). Research done in Nagpur by Kulkarni *et al* (2011) showed better patient feedback in terms of toilet cleanliness.

One third of the participants in the present study reported dissatisfaction regarding the availability of drinking water in waiting areas. Chimbindi *et al* (2014) cited a similar finding during their research in Hlabisa, Northern Kwa-zulu Natal, where patients noted the unavailability of drinking water and cups in the recommendations for improvement. An assessment of patient satisfaction with services rendered at a tertiary hospital in rural Haryana reported the same results. Quadri *et al* (2012) found that a third of patients complained that the water coolers were not functioning, and in areas where the drinking water facilities were available, it was not clean. At another tertiary care hospital in Madhya Pradesh, Sharma *et al* (2014) noted that more than half of patients were dissatisfied with the water facility in the OPD. A more recent study by Singh *et al* (2015) in Bareilly revealed a high patient satisfaction score regarding the availability of drinking water in the hospital (75.3%). The authors attributed this finding to the installed water purifier system, and also took into consideration that the study was conducted during the winter and autumn seasons.

Overall Patient Satisfaction

The majority of participants in this study were satisfied with the level of care they received at Untunjambili Hospital. Chimbindi *et al* (2014) reported on patient satisfaction with HIV and TB in a public programme in rural Kwa-Zulu Natal, and also found that almost all the patients were satisfied with the overall health care services received.

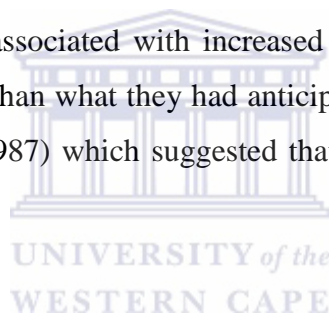
Numerous authors have reported that demographic characteristics such as gender, age and education were strongly associated with overall patient satisfaction. While age and gender showed no statistically significant association in the present study, its prevalence in other work was noteworthy. Male patients were found to be more satisfied than their female counterparts in many studies (Nguyen *et al*, 2002, Biderman *et al*, 1994, Thi *et al*, 2002). In contrast, a study conducted in Dhaka by Islam and Jabbar (2008) reported that women were more satisfied with the OPD services compared to the males. Other authors including Afzal *et al* (2014), Gajovic *et al* (2012) and Dulgerler *et al* (2012) reported that gender showed no significant effect on the satisfaction score in their research.

While age appears to have no correlation with patient satisfaction in some studies (Japipaul and Rosenthal, 2003), Afzal *et al* (2014) reported that the mean satisfaction level increased with an increase in age, and that patients above 55 years old showed the greatest levels of overall satisfaction. Sung-Hyun Cho (2007) evaluated the trends in patient satisfaction adjusted for socio-demographic factors over a five year period. A review of surveys from 1989-2003 all concurred that older patients were more satisfied than younger patients. Ahmed *et al* (2011) and Al-Windi (2005) were in agreement that elderly patients over the age of 60 were more pleased than the other age groups.

The present study showed a statistically significant inverse relationship between education and patient satisfaction with the level of care received at the hospital ($p=0.025$). Patients who were illiterate or had basic primary schooling were more satisfied than patients who received secondary and tertiary education. The same finding was noted in Pakistan by Ahmed *et al* (2012) and in Saudi Arabia by Al – Doghaither (2004). Similarly, a study done in Armenia by Harutyunyan *et al* (2010) suggested that less educated people had little idea of what comprised ideal care, and were less likely to have experienced an informed comparison. They found an inverse relationship between respondent education levels and overall patient satisfaction with a provider.

In the present study, nearly all the participants reported that they would recommend the hospital to others. This suggests that patients had a positive hospital experience, and rated the facility highly if they were willing to promote it to others. The concept of patient expectations in relation to overall satisfaction is widely discussed in the literature and nearly all patients reported that the treatment received at the hospital met their expectations.

Tateke *et al* (2012) reported that expectations regarding hospital services were influenced by previous experiences or by information from other end users. In the study comparing the determinants of patient satisfaction at public and private hospitals in Ethiopia, the author suggested that patients attending government facilities had significantly lower expectations than those who sought treatment at private hospitals. Despite that finding, the variable of patient expectations was reported as an important determinant of satisfaction at both public and private health care facilities. A study in Thailand by Net *et al* (2007) revealed that patients with high expectations were more satisfied than those with lower expectations. High expectations were significantly associated with increased patient satisfaction implying that patients received better services than what they had anticipated. This is inconsistent with the findings of Abramowitz *et al* (1987) which suggested that patients with lower expectations were more likely to be satisfied.



Limitations of the study

The limitations to this research included the study design and while studies of this nature are useful in gauging patient perceptions, they can be associated with acquiescence bias. Descriptive studies are also highly subjective, and it is debatable as to whether their ratings accurately reflect on technical aspects of care. In addition, the cross-sectional design only provides a snapshot of findings, whereas patient satisfaction is likely to vary between visits depending on external factors such as waiting time, staff shortages etc, on the day of the study. The study was limited to patients attending the Outpatients Department (OPD) at Untunjambili Hospital, and as such, the results cannot be applied to in-patients, or patients attending other clinics within the institution. While the findings of the study are congruent with many rural hospitals in the public sector, it should not be generalized for all institutions. The data collection was done over a relatively short period making it possibly subject to seasonal or other effects. While the majority of the dimensions of patient satisfaction in health care were assessed, not all variables were incorporated in the present study.

CHAPTER 7

CONCLUSION AND RECOMMENDATIONS

Patient satisfaction is the ultimate goal of any health care institution. Satisfied patients are more likely to comply with prescribed treatments, return to the facility for future medical needs and recommend the hospital to others. The aim of the present study was to identify the perceived levels of patient satisfaction with the health care provided at a deep rural hospital. While the findings revealed high overall patient satisfaction scores, varying degrees of dissatisfaction were observed in some aspects. Recognition and modification of the variables that cause dissatisfaction is crucial in the re-shaping of the health system. The concept of 'patient-centred care' has gained popularity in the fraternity, and provides patients with the opportunity to be actively involved in their health outcomes. The 'Batho Pele' Principles encapsulate what ideal care should comprise. As such, patients are more informed on what to expect of health service providers, and are assertive enough to raise complaints in the case of poor service delivery.

The present study has provided valuable insight regarding patient satisfaction with outpatient health care services, and the predictors thereof. It may be useful in the future to investigate the satisfaction levels of other categories of patients such as inpatients and clinic patients, for comparative purposes. Furthermore, it would be interesting for other public hospitals in similar settings to research patient satisfaction levels, to identify possible trends in the challenges that patients experience.

RECOMMENDATIONS

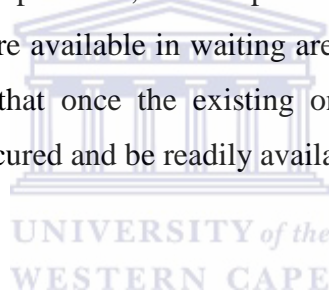
Patients in the present study reported dissatisfaction with some aspects of care. Applying corrective measures to these areas will not only improve the hospital experience of the patients', but also enhance their faith in the public health system at large.

Long waiting times were a significant contributor of patient dissatisfaction. This can be addressed by employing more medical doctors and allied health care workers. Incentives to work in this outlying facility should be applied, and could include perks such as a higher rural allowance and improved living conditions for doctors.

In the event that medical staff cannot be recruited to practice in such areas, the Department of Health needs to review its placement of Community Service Officers (CSO), and ensure that under serviced areas such as these are allocated with the newly qualified CSO's. If more staff were employed, patients would experience shorter waiting times, and this will improve their satisfaction with the facility.

The poor maintenance and cleanliness of the ablution facilities was another source of discontent. Cleaning services at the hospital need to be informed of this so that it can be rectified. The toilets need to be cleaned on an hourly basis, and not just in the mornings only. Regular checks on the toilet facilities need to be conducted by the Infection Prevention and Control Committee, and any leaks or breakage needs to be reported to the Maintenance Department so that they can be addressed as speedily as possible.

Patients expressed dissatisfaction with the unavailability of drinking water in the OPD. In consultation with the Finance Department, the hospital should consider purchasing water dispensers and ensure that they are available in waiting areas. Re-fills of the water canisters should also be available, such that once the existing one is empty, it can be replaced. Drinking cups should also be procured and be readily available on stock.



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Appendix 1: Questionnaire

Record no	
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Section A: Demographic Details

Indicate your answer with an x

1. Gender

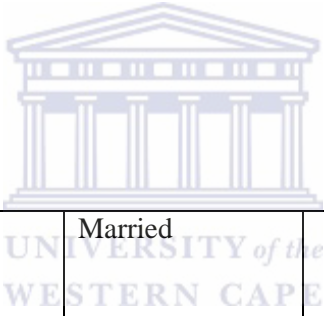
Male		Female	
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2. Age

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3. Marital Status :

Single		Married	
--------	--	---------	--



4. Education

Illiterate		Primary		Secondary		Tertiary	
------------	--	---------	--	-----------	--	----------	--

Section B: Accessibility of the Hospital

5. How did you arrive at the hospital today?

Walked		Taxi		Bus		Other	
--------	--	------	--	-----	--	-------	--

6. What was the cost for the above mention transport?

Free		R1-R15		More than R15	
------	--	--------	--	---------------	--

7. How long was the journey to the hospital?

1-15 mins		15-30 mins		More than 30 mins	
-----------	--	------------	--	-------------------	--

8. The collection/making of a hospital chart was a quick and organized process.

Strongly Agree		Agree		Unsure		Disagree		Strongly Disagree	
----------------	--	-------	--	--------	--	----------	--	-------------------	--

9. The Admitting Clerks were friendly and helpful.

Strongly Agree		Agree		Unsure		Disagree		Strongly Disagree	
----------------	--	-------	--	--------	--	----------	--	-------------------	--

10. The Waiting Time to see a doctor was long.

Strongly Agree		Agree		Unsure		Disagree		Strongly Disagree	
----------------	--	-------	--	--------	--	----------	--	-------------------	--

11. I was able to be completely honest with my doctor.

Strongly Agree		Agree		Unsure		Disagree		Strongly Disagree	
----------------	--	-------	--	--------	--	----------	--	-------------------	--

12. The consultation time with the doctor was adequate.

Strongly Agree		Agree		Unsure		Disagree		Strongly Disagree	
----------------	--	-------	--	--------	--	----------	--	-------------------	--

13. The doctor treated my medical problems and gave me good advice.

Strongly Agree		Agree		Unsure		Disagree		Strongly Disagree	
----------------	--	-------	--	--------	--	----------	--	-------------------	--

14. The doctor was respectful and understanding.

Strongly Agree		Agree		Unsure		Disagree		Strongly Disagree	
----------------	--	-------	--	--------	--	----------	--	-------------------	--

Section C: Infrastructure

15. The seating arrangements in the Admissions Office and the Outpatients Department waiting areas are convenient.

Strongly Agree		Agree		Unsure		Disagree		Strongly Disagree	
----------------	--	-------	--	--------	--	----------	--	-------------------	--

16. The hospital is clean and tidy.

Strongly Agree		Agree		Unsure		Disagree		Strongly Disagree	
----------------	--	-------	--	--------	--	----------	--	-------------------	--

17. The waiting areas are comfortable with adequate air circulation.

Strongly Agree		Agree		Unsure		Disagree		Strongly Disagree	
----------------	--	-------	--	--------	--	----------	--	-------------------	--

18. The toilet facilities are well demarcated and easy to find.

Strongly Agree		Agree		Unsure		Disagree		Strongly Disagree	
----------------	--	-------	--	--------	--	----------	--	-------------------	--

19. The toilets are functional and well maintained.

Strongly Agree		Agree		Unsure		Disagree		Strongly Disagree	
----------------	--	-------	--	--------	--	----------	--	-------------------	--

20. Drinking water is available in the waiting areas.

Strongly Agree		Agree		Unsure		Disagree		Strongly Disagree	
----------------	--	-------	--	--------	--	----------	--	-------------------	--

Section D: Overall Satisfaction

21. I am happy with the level of care I received.

Strongly Agree		Agree		Unsure		Disagree		Strongly Disagree	
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22. I would recommend this institution to other people.

Strongly Agree		Agree		Unsure		Disagree		Strongly Disagree	
----------------	--	-------	--	--------	--	----------	--	-------------------	--

23. The treatment I received at Untunjambili Hospital met my expectations.

Strongly Agree		Agree		Unsure		Disagree		Strongly Disagree	
----------------	--	-------	--	--------	--	----------	--	-------------------	--

24. Recommendations or Comments



Appendix 2: Information Sheet



health

Department:
Health
PROVINCE OF KWAZULU-NATAL

UNTUNJAMBILI HOSPITAL
Private Bag X 216 KRANSKOP 3268
Untunjambili Area Kranskop 3268
Tel.:033 444 1707, Fax.:033 444 0987
Email.: lungile.phakathi@kznhealth.gov.za
www.kznhealth.gov.za

Study Title

Patient satisfaction with health care services in a rural district hospital

Overview

I, Dr Bharti Gangai, am a Dentist working at Untunjambili Hospital, Kranskop. I am a registered Masters student in the Department of Community Dentistry at the University of Western Cape.

As with most businesses globally, consumer/client satisfaction is an instrumental tool that is utilized to assess and improve service delivery. Similarly, in the health sector, there is a progression towards more patient oriented care. This entails that patients are now more actively involved in their overall health and wellbeing. Measuring patient satisfaction is an ideal way to evaluate whether all the policies and protocols that are implemented are effective and indeed in the best interests of the consumers. Patients attending public facilities have often been faced with numerous challenges and shortcomings of the health system. This has been noted across the board, and is an issue that needs to be addressed.

I am interested in providing you, the patient, with an opportunity to rate the experience of your visit to the Untunjambili Hospital. Your participation will enable me to get a better understanding of the current challenges that you are experiencing, and will assist me to make recommendations that will result in your future hospital visits being more pleasurable.

In order to carry out this study, and to obtain information on patient satisfaction with the health services, I need to ask you a few questions. This will take about 10 minutes of your time. There are no risks involved in participating in this study and it is entirely voluntary. If you do not wish to take part, you can withdraw from the study at any time without it being held against you. All information gathered in the study will be treated as strictly confidential. No one will have access to this information except me, the principal investigator. No names will be used in the reports of this study. All information collected will be maintained and stored in such a way as to keep it as confidential as possible.

Your participation in this study would be greatly appreciated. If you would like to know anything further about this research study, please contact me, Dr Bharti Gangai, on telephone 033-444 0818 (work) or 082 266 5712 (cellphone), or email at: bgangz1@gmail.com. You may also contact my supervisor Professor Sudeshni Naidoo (suenaidoo@uwc.ac.za) if you have any concerns regarding the manner in which the study is being carried out.

Thanking you in advance for your co-operation.

Yours faithfully
Dr Bharti Gangai BDS (Wits)
Email: bgangz1@gmail.com

Appendix 3: Consent Form



health

Department:
Health
PROVINCE OF KWAZULU-NATAL

UNTUNJAMBILI HOSPITAL
Private Bag X 216 KRANSKOP 3268
Untunjambili Area Kranskop 3268
Tel.:033 444 1707, Fax.:033 444 0987
Email.: lungile.phakathi@kznhealth.gov.za
www.kznhealth.gov.za

Title of Project: Patient Satisfaction with health services in the OPD of a rural district hospital

REC Ref No:

Name of Researcher: Dr Bharti Gangai

(Select the applicable)

➤ I confirm that I have read and understood the information sheet for the above study and what my contribution will be

Yes	No
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➤ I have been given the opportunity to ask questions (face to face, via telephone and e-mail)

Yes	No
-----	----

➤ I agree to take part in the interview

Yes	No
-----	----

▪ I understand that my participation is voluntary and that I can withdraw from the research at any time **without giving any reason**

Yes	No
-----	----

▪ I agree to take part in the above study

Yes	No
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Name of participant

Signature

Date

Name of researcher taking consent Dr Bharti Gangai.....

Researcher's e-mail address bgangz1@gmail.com.....

Appendix 4: Ethics Clearance Certificate

Office of the Deputy Dean
Postgraduate Studies and Research
Faculty of Dentistry & WHO Collaborating Centre for Oral Health

UNIVERSITY OF THE WESTERN CAPE
Private Bag X1, Tygerberg 7505
Cape Town
SOUTH AFRICA

Date: 3rd May 2013

For Attention: Dr B Gangai
Community Dentistry

Dear Dr Gangai

STUDY PROJECT: Patient satisfaction with health services in a rural district hospital

PROJECT REGISTRATION NUMBER: 13/4/31

ETHICS: Approved

At a meeting of the Senate Research Committee held on Friday 3rd May 2013 the above project was approved. This project is therefore now registered and you can proceed with the study. Please quote the above-mentioned project title and registration number in all further correspondence. Please carefully read the Standards and Guidance for Researchers below before carrying out your study.

Patients participating in a research project at the Tygerberg and Mitchells Plain Oral Health Centres will not be treated free of charge as the Provincial Administration of the Western Cape does not support research financially.

Due to the heavy workload auxiliary staff of the Oral Health Centres cannot offer assistance with research projects.

Yours sincerely



Professor Sudeshni Naidoo

Appendix 5: Approval Letter from Department of Health



health

Department:
Health
PROVINCE OF KWAZULU-NATAL

Health Research & Knowledge Management sub-component
10 – 103 Natalia Building, 330 Langalibalele Street
Private Bag x9051
Pietermaritzburg
3200
Tel.: 033 – 3953189
Fax.: 033 – 394 3782
Email.: hrkm@kznhealth.gov.za
www.kznhealth.gov.za

Reference : HRKM 126/14
Enquiries : Mr X Xaba
Tel : 033 – 395 2805

Dear Dr B. Gangai

Subject: Approval of a Research Proposal

1. The research proposal titled 'Patient satisfaction with health services in a rural district hospital' was reviewed by the KwaZulu-Natal Department of Health.

The proposal is hereby **approved** for research to be undertaken at Untunjambili Hospital.

2. You are requested to take note of the following:
 - a. Make the necessary arrangement with the identified facility before commencing with your research project.
 - b. Provide an interim progress report and final report (electronic and hard copies) when your research is complete.
3. Your final report must be posted to **HEALTH RESEARCH AND KNOWLEDGE MANAGEMENT, 10-102, PRIVATE BAG X9051, PIETERMARITZBURG, 3200** and e-mail an electronic copy to hrkm@kznhealth.gov.za

For any additional information please contact Mr X. Xaba on 033-395 2805.

Yours Sincerely

Dr E Lutge

Chairperson, Health Research Committee

Date: 27/05/14

uMnyango Wezempilo . Departement van Gesondheid

Fighting Disease, Fighting Poverty, Giving Hope



health

Department:
Health
PROVINCE OF KWAZULU-NATAL

UNTUNJAMBILI HOSPITAL
Private Bag x 216, Kranskop, 3268
Tel: 033 444 0818
Fax: 033-444 0987
Email: lungile.phakathi@kznhealth.gov.za
www.kznhealth.gov.za/untunjambilihospital.htm

Enquires: Dr. N.L. Phakathi

TO	DR B.GANGAI
FROM	DR N.L. PHAKATHI
DATE	22 MAY 2014
SUBJECT	REQUEST TO CONDUCT RESEARCH AT UNTUNJAMBILI HOSPITAL

Dear Dr. Gangai

RE: REQUEST FOR APPROVAL TO CONDUCT RESEARCH AT UNTUNJAMBILI HOSPITAL.

1. The above request refers.
2. The approval to conduct research at Untunjambili Hospital is hereby granted provided that the application to conduct research has been made and has been granted by the provincial head of department.
3. The chosen topic is relevant to our setting and we would request that you share your findings with us, as it would assist in improving the patient experience in our hospital.

We wish you all the best in your studies.

Compiled By
Dr N.L. Phakathi
Medical Manager/ CEO