

Patient satisfaction with care provided by a district dental clinic

By

Dr A.A. SOWOLE



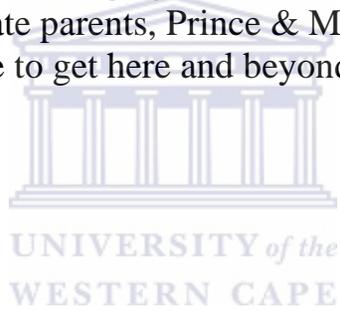
**A thesis submitted in part fulfilment of the degree of MSc (Dent) in the
Department of Community Oral Health, University of the Western
Cape**

March 2007

Supervisor: Professor Sudeshni Naidoo

DEDICATION

This work is dedicated to the almighty God of all possibilities who has made this possible. Also to my late parents, Prince & Mrs M.B. Sowole who desired and encouraged me to get here and beyond in my academic pursuits



ABSTRACT

Patient satisfaction is critical for the growth of oral health service and practice. The success of an oral health service can be assessed by the degree of satisfaction/dissatisfaction of its patients. Although there is general agreement that patient satisfaction is an integral component of service quality, there is paucity of research on patient satisfaction with dental care in Nigeria.

The present study was a descriptive study on patient satisfaction with oral health care provided by a district dental clinic. The aim of the study was to determine whether patients attending the dental clinic of the Lagos State University Hospital were satisfied with the care they received.

The objectives were to determine the pattern of service utilization in the 18 years and above age-group, patient's perceptions of dental care provided and to propose recommendations to improve patient satisfaction.

Materials and Methods:

A sample of 200 patients aged 18 years and above who presented consecutively and received treatment at the clinic, completed a self-administered questionnaire comprising 24 questions. Five dimensions of care were included: Access/Availability, Convenience, Quality, Cost and Pain Management. There was also a question on overall general satisfaction. Patients reported their level of satisfaction on a 5-point Likert scale.

Results

The response rate was 80%. The majority of the respondents were female (53.5%) and in the 18-29 age group. Over two thirds had attained post-secondary education and had attended the clinic within the past year. Only those with post secondary education gave a positive history of attendance for over 5 years. Less than one per cent of the 'illiterate' category has attended within the past year, while 2.2% attended within 2 -5years.

Most respondents reported satisfaction with the care received. Questions rated poorly included aspects of pain management, hard to get treated same day, did not wash there

hands, treatment done in a hurry, fees too high. The question “the doctor treats patients with respect” was rated highest.

The respondents’ ratings for the five dimensions of care showed that the respondents were satisfied with the dimensions of access, availability, quality, cost but dissatisfied with pain management.

The socio-demographic variables and patient satisfaction showed a significant relationship with some dimensions of care. The age group had a significant association with cost ($p=0.0047$) and quality ($p=0.023$). Marital status was significantly associated with access and quality (T -test $p=0.007$ and $p=0.0134$ respectively). There were no statistical associations between educational status and the dimensions of care whereas the association between occupational status and quality was significant ($p=0.001$). Attendance had no significant relationships to the dimensions of care.

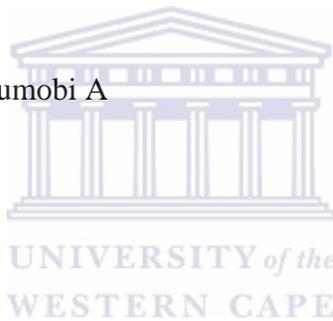
Conclusions

Findings indicate that there was a good overall level of satisfaction with the dental care the patients received. The respondents rated the quality aspects of care especially the interpersonal aspects highest. Cost and pain management and access to care were identified as needing improvement. The care providers would need to be more sensitive to pain management issues as well as exploring other techniques of pain management that best soothes the patient.

DECLARATION

I declare that the thesis entitled “Patient satisfaction with care provided by a district dental clinic” is my own work, that it has not been submitted for any degree or examination at any other University, and that all the sources I have used or quoted have been indicated and acknowledged by complete references.

Full name: Dr Sowole Adejumobi A



Signed:

Date: March 2007

ACKNOWLEDGEMENTS

I wish to acknowledge all those who have contributed to the success of this project in various ways:

My profound gratitude goes to Prof Sudeshni Naidoo for her relentless support and encouragement throughout the course of the program, who despite her very busy schedule took time out to read, critique and advise to produce the final copy of this dissertation.

My sincere thanks to Dr V.O. Ogunbanjo, head of the Department of Dentistry LASUTH and to all the entire staff members of the department for their cooperation in conducting the study.

I would also like to put down on paper my sincere appreciation to the following people for their assistance in ways too many to mention: Ms. O. Sowole, Mrs Coker, Mr S. Coker, Mr Ekundayo, Mr S. Babajide, Dr Odubote, Mr Ogunmodede, Pastor J.Odesola and my dear classmates.

May God bless you all.

I must thank my wife and children for their love and understanding through it all, you are just great!

Finally, to HIM from whom all blessings flow, who has done more than I could ever think or imagine according to HIS glorious power.

TABLE OF CONTENTS

CHAPTER 1	INTRODUCTION	PAGE
1.1	Patient Satisfaction with Dental Care – The Global Context	1
1.2	Background to Study	3
1.2.1	Geography	3
1.2.2	Demography	3
1.2.3	Socio economic	4
1.2.4	Health Care System	4
1.2.5	Patient Satisfaction with Dental Care at the Lagos State University Teaching Hospital	5
CHAPTER 2	LITERATURE REVIEW	
2.1	The Concept of Satisfaction-Marketing Perspective	6
2.2	Disconfirmation theory	6
2.3	Types of Expectations	8
2.4	Patient Satisfaction - Health Care Perspective	11
2.4.1	Dental Patients Satisfaction	13
2.5	Expectations	14
2.6	Perception of Service Quality	15
2.6.1	Technical Competence	15
2.7.2	Interpersonal Skills	15
2.7.3	Convenience	17
2.7.4	Cost	17
2.7.5	Facilities	18
2.7.6	Access	18
2.8	Patient Socio-Demographic Characteristics of Satisfaction	18
2.8.1	Education	18

2.8.2 Age	19
2.8.3 Gender	19
2.8.4 Economic Status	20
2.8.5 Previous Dental Experience	20
2.8.6 Dental Anxiety	20
2.9 Instruments	21
Summary	23
CHAPTER 3	AIM AND OBJECTIVES
	24
CHAPTER 4	METHODOLOGY
Introduction	25
4.1 Study Design	25
4.2 Study Population	25
4.3 Sample	25
4.4 Sample Size	26
4.5 Self administered questionnaires as a Survey Method	26
4.5.1 Design Rules	26
4.6 The development of the study questionnaire	27
4.6.1 Instruments Used	27
4.6.2 Validity and Reliability	27
4.6.3 Piloting the Questionnaire	29
4.6.4 Preparation for the final draft	29
4.7 Data Collection	29
4.8 Coding for analysis and Data entry	30
4.9 Ethical Considerations	31
Summary	32
Limitations	32



CHAPTER 5 RESULTS

5.1 Demography	33
5.2 Education and Attendance	33
5.3 Marital Status	34
5.4 Occupation	34
5.5 Dental Satisfaction Items	35
5.5.1 Agree	35
5.5.2 Neutral	35
5.5.3 Disagree	36
5.6 Scoring for the Dimensions of Care	36
5.7 Relationship of DSQ scales to socio-demographic factors	37
5.7.1 Gender	37
5.7.2 Age Groups	39
5.7.3 Marital Status	39
5.7.4 Educational Status	40
5.7.5 Occupation	40
5.7.6 Attendance	41



CHAPTER 6 DISCUSSION

6.1 Response rate	43
6.2 Demography	43
6.3 Utilisation Rates	44
6.4 Individual questions' ratings	45
6.5 Dimensions of care	45
6.6 Cost	46
6.7 Quality	47
6.8 Pain Management	47
6.9 Convenience/Availability/Access	48
7.0 Limitations to Study	49

CHAPTER 7 CONCLUSIONS & RECOMMENDATIONS

Conclusions	50
Recommendations	50
References	52



LIST OF TABLES

Table 1	Questionnaire content with direction of wording	31
Table 2	Distribution of respondents by occupation	35
Table 3	Respondents satisfaction ratings of all dental satisfaction items	36
Table 4	Respondents scoring for all dental satisfaction questionnaires scales	37
Table 5:	Percentage of respondents sociodemographic factors satisfied with the five dimensions of care	38

LIST OF FIGURES

Figure 1	Cognitive –affect model of satisfaction	11
Figure 2	Distribution of Respondents According To Age And Gender	33
Figure 3	Distribution of Respondents by Educational Status And Attendance Patterns.	34



Appendix 1	Questionnaire
Appendix 2	Consent form
Appendix 3	Ethical approval

CHAPTER 1

INTRODUCTION

1.1 Patient Satisfaction with Dental Care – The Global Context

The world's economy has largely become a service-oriented one, and service quality, regardless of the service being rendered, is a central issue for any kind of business. This is the reason why most organizations seek to satisfy the users (clients, customers, consumers or patients) of its products or services. There is much literature, utilising a variety of study designs, in the different fields of psychology sociology, marketing and health care management on the concept of satisfaction (Peterson, 1992).

Research in the health care management field is more concerned with quality assurance or the continuous quality improvement aspects of service standards to promote service quality (Donabedian, 1980; Doering, 1983; Williams, 1994). Depending on the information needed, a quality assessment or assurance programme is done through a number of data collection methods: these include patient case reviews, clinical examination of patients, evaluation of the setting in which care is provided, and measures of patient satisfaction with care (Butters and Willis, 2000).

Patient satisfaction is becoming an increasingly important indicator of quality dental care (Butters and Willis, 2000; Williams et al. 1998) particularly in the National Health Service (NHS) since the publication of the 1983 NHS management inquiry's call for the collation of user opinion (London Department of Health, 1984). This has arisen partly from the shift towards a "consumer ethos", where the patient is seen as a consumer of services. More people want to have a say about issues related to their own health and health services, the best care for themselves and their families and choice within that care (Mason, 1995).

This call for an acquisition of the “experiences and perceptions” of patients has subsequently developed into a call for a people-centred services (Welsh Office, 1993) and public involvement is planning of the health care process (London Department of Health, 1991; Linder-Pelz, 1982; Williams, 1994).

Another reason given for the increasing recognition of patient satisfaction as a measure of quality care, is the growth of managed care (Butters and Willis, 2000). In the United States of America, an estimated 85-90% of the population would have enrolled in managed care programmes by the end of 2000 (American Association of Medical College, 1995). Most organizations cannot rely solely on lowered costs, which at present are at the lowest levels to compete for enrolments, but need to consider patient satisfaction and quality levels. The patient is seen as central to the success of health care delivery plans, since patients’ satisfaction influences enrolment in the plans (Gerbeat et. al, 1996). Care cannot be of a high quality unless the patient is satisfied (Vouri, 1987). The sensitive nature of the health care management field requires that health care services be of a superior quality, which is why most health care organizations should evaluate the quality of care they deliver.

Studies regarding patient satisfaction (Newsome and Wright 1999; Lahti et al. 1996; Stouthard et al.1992; Butters and Willis, 2000) have concluded that satisfaction is a multidimensional concept addressing many aspect of care. Though the dimensions differ slightly between different studies, the research underscores the notion that since satisfaction is multidimensional, patients can be satisfied with some areas of care, but not with others. Despite the fact that there is a great degree of commonality among the dimensions explored in the dental patient satisfaction literature, no one standardised survey instrument is generally employed in these studies. This appears to be especially so in the case of satisfaction with healthcare where elements of the consumer model do apply although the roles played by patient expectations, perceptions and disconfirmation are not fully understood (Newsome and Wright, 1999).

Much seems to depend on the way patients perceive themselves in relation to the healthcare system and it is possible that some patients might simply remain passive and not evaluate the service provided. Many studies (Collett, 1969, Schouten et al. 2004; Okullo et al. 2004) have indicated that several dimensions of satisfaction including poor communication between dentist and patient, low confidence in the dentist, and dissatisfaction with quality and fees have been associated with poor compliance with dental recommendations, low utilisation and/or the termination of treatment.

1.2 Background to the study site

1.2.1 Geography

Nigeria is a country in West Africa. It is a Federal Republic comprising 36 states and a federal capital territory, the country returned to democratic rule in 1999 following several years of military dictatorship.

Lagos State is one of the 36 states of the Federal Republic of Nigeria. With the capital in Ikeja where this study was carried out, it has a territorial land area of 356,861 hectares been bounded in the south and east by Ogun state, and in the west by neighbouring Republic of Benin. The terrain is that of swamp mangrove and swamp forest which makes the environment a wetland region. Two climatic seasons predominate, - the dry and wet seasons. The major language spoken is Yoruba (Lagos State of Nigeria, 2004).

1.2.2 Demography

Although Lagos State is the smallest state in Nigeria, it has the highest population, which is over five percent of the national estimate. According to the 1991 national census, the State has a population of 5,725,116 out of a national estimate of 88,992,220. However, based on a UN study and the State Regional Master Plan, the State is estimated to have above 12 million inhabitants. Out of this population, Lagos metropolitan area is occupied by over 85 percent on an area that is 37 percent of the land area of Lagos State.

The rate of population growth is about 300,000 persons per annum with a population density of about 1,308 persons per sq. kilometer.

In the built up urban areas of metropolitan Lagos, the average density is 20,000 persons per square kilometer. In a recent UN study (1999), the city of Lagos is expected to hit the 24.5 million population mark and thus be among the ten most populous cities in the world by the year 2015 (Lagos State of Nigeria, 2004).

1.2.3 Socio-economic status

The people of Lagos (Lagosians) are located in both urban and rural settings. Being the commercial nerve centre of the nation, most of the urban dwellers are engaged in commercial activities as well as been employed in the concentrated medium and large scale industries of the capital city, Ikeja. The rural dwellers are farmers and fishers.

The country's Gross Domestic Product (GDP) is 6.2%, while the inflation rate is 11.4%. Life expectancy is 47 years for males and 48 years for females. Gross national income per capita is \$390 while per capita total expenditure on health is \$43 equivalent to 4.7% of the GDP, literacy rates of 66.8% in 2002 and 86.5% in 2004 for adults above 15 years and females 15-24 years respectively (Lagos State Government of Nigeria).

1.2.4 Health care system

The care system of the state is organized along the three tier system of health care delivery i.e. primary, secondary and tertiary which are ably complimented by an ever growing private sector to cover the 57 local governments/districts all under the supervision of the Ministry of Health. The public sector, which currently is undergoing reforms, includes several health centers, 15 general hospitals and one teaching hospital at Ikeja, which was where this study was carried out. All the tertiary and all the secondary centers have dental facilities that provide emergency services and more advanced dental services. About 90% of the registered dentists in the country work in Lagos, both in the private and public sectors, to meet the needs of the population.

1.2.5 Patient Satisfaction with Dental Care at the Lagos State University Teaching Hospital

The unavailability of published studies on satisfaction with dental care in Nigeria notwithstanding, the concept of satisfaction still remains a valid and applicable means of assessing service quality.

This study aimed to investigate patient satisfaction with dental care at a hospital dental clinic. It is anticipated that the recommendations proffered can go a long way to improve service provision and a shift towards customer-centred care.



CHAPTER 2

LITERATURE REVIEW

2.1 The Concept of Satisfaction – The Marketing Perspective

The concept of satisfaction in marketing literature was initially seen as an outcome resulting from a consumption experience. “The buyers cognitive state of being adequately rewarded for the sacrifice s(he) has undergone” (Howard and Sheth, 1969). Current definitions now see satisfaction as a complex evaluative process, “an evaluation based on the fulfilment of expectations” (Williams, 1994). This approach is now widely accepted as it takes into account the social psychological determinants of satisfaction such as the perceptions, evaluations and comparisons that precede an evaluation (Newsome and Wright, 1999)

2.2 Disconfirmation theory

The earliest, and by far, the most dominant conceptual model that seems to explain the way consumers process their experiences to influence satisfaction is the theory of expectancy disconfirmation. This theory proposes that the consumers compare his or her perceptions of the product or service against a pre-purchase comparison level or standard, the most widely researched being consumer expectations (Oliver, 1980). The greater the divergence between the consumers perceptions and expectations, the greater the satisfaction or dissatisfaction, depending on the direction of the divergence (Thompson and Sunol, 1995). One of the most well known empirical studies of this theory is the Servqual theory (Parasuraman et al. 1988).

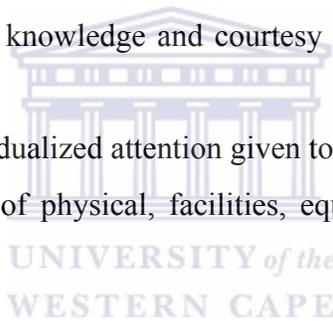
Disconfirmation, with all things being equal, suggest that the higher ones’ expectations, the less likely that service or product performance can meet or exceed them, the result being reduced satisfaction or even dissatisfaction; the higher the perceived level of

performance the more likely that expectations will be exceeded, resulting in increased satisfaction (Newsome and Wright, 1999).

This has resulted in recommendations of deliberate under-pricing of services to increase the likelihood of meeting or exceeding customer expectations (Davidow and Uttal, 1989). Zeithaml and Bitner (1996) however, argue that, while expectations become more realistic on under promising, the competitive appeal of the offer is in turn reduced.

For services, quality assessments that are often interchangeable with satisfaction, comprises patients perceptions of service attributes (Parasuraman et al. 1988). These include the following:

- *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 and
- *Tangibles*: appearance of physical, facilities, equipment, personnel and written materials.



It is noteworthy however, to stress that it is the perceived quality that is important. The notion of 'objective' performance is an indefinable state in most cases. All attributes of performance were judged by a service user in perceptual terms. Even with an apparently objective measure, such as waiting time, it is not so much the absolute time but the evaluation of it, as being long/short or acceptable/ unacceptable, which will always be subjective, dependent on the evaluator (Thompson and Sunol, 1995).

Essentially disconfirmation is based on a cognition process (process of knowing or thinking) with the assumption that people who enter into an exchange relationship bring with them preformed expectations and an ability and willingness to judge the quality of that relationship. A number of psychological themes have been put forth to explain the effect of the disconfirmation expectancy theory.

So far, the most useful explanation appears to be in the assimilation – contrast theory that combines Festinger's theory of cognitive dissonance (Festinger, 1957) with its opposite theory of exaggerating incongruities between expectations and perceptions (Thompson and Sunol, 1995). This theory suggests that when perceptions of attribute performance differ only slightly from expectations, there is a tendency for people to displace their perceptions towards their expectations. The assimilation effect comes to a point on either side of this range, though where people can no longer effect displacement, they begin to exaggerate the increasingly large variation between perceptions and expectations in the contrast effect. The effects of expectations have also been found to differ under difficult conditions between the consumer, across different product categories (high against low consumer – involvement products), and between products and services (Anderson, 1994; Bolton and Drew, 1991; Cadotte et al. 1987; Halstead, 1994; Spreng et al. 1996).

2.3 Types of expectations

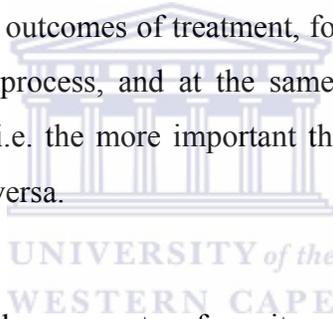
Broadly speaking there is agreement in the literature that expectations are beliefs, and that a given response will be followed by some event, an event has either a positive or negative valence or affect (Linder-Pelz, 1982), implying that they are created and sustained by a cognitive process (Thompson and Sunol, 1995). Researchers have come to realise that consumers can and do hold several different types of expectations and that these are characterised by a range rather than a single level (Newsome and Wright, 1999).

In terms of services, Zeithaml and Bitner (1996) have distinguished between three types of expectations:

- *Desired Service* - This is the level of service the customer hopes to receive, the “wished for” level of performance which blends what the customer believes ‘can be’ and ‘should be’.
- *Adequate Service* - This represents the “minimum tolerable expectation or bottom level of performance”. This comes into play because customers recognise that it is not always possible to achieve the service desired so hold this second, lower level of expectation.

- *Predicted Service* - This is the level of service the customer believes they are likely to get. It implies some objective calculation of the possibility of performance.

Parasuraman et al (1991) propounded another model in which they defined a “zone of tolerance” as the range between the adequate and desired levels of service expectations. It is seen as the range or window in which customers do not notice service performance, so that when performance falls outside the range (either very high or very low) the customer expresses satisfaction or dissatisfaction (Newsome et al 1999) (Figure 1, Page 22). This model makes the useful distinction between outcome and process expectations unlike most previous research that has considered expectations purely in terms of outcomes. This would appear to make sense in the health care context, since the expectations people hold about outcomes of treatment, for example, may be much higher than those for aspects of the process, and at the same time much narrower in range (Thompson and Sunol, 1995) i.e. the more important the service attribute the narrower the zone of tolerance and vice-versa.

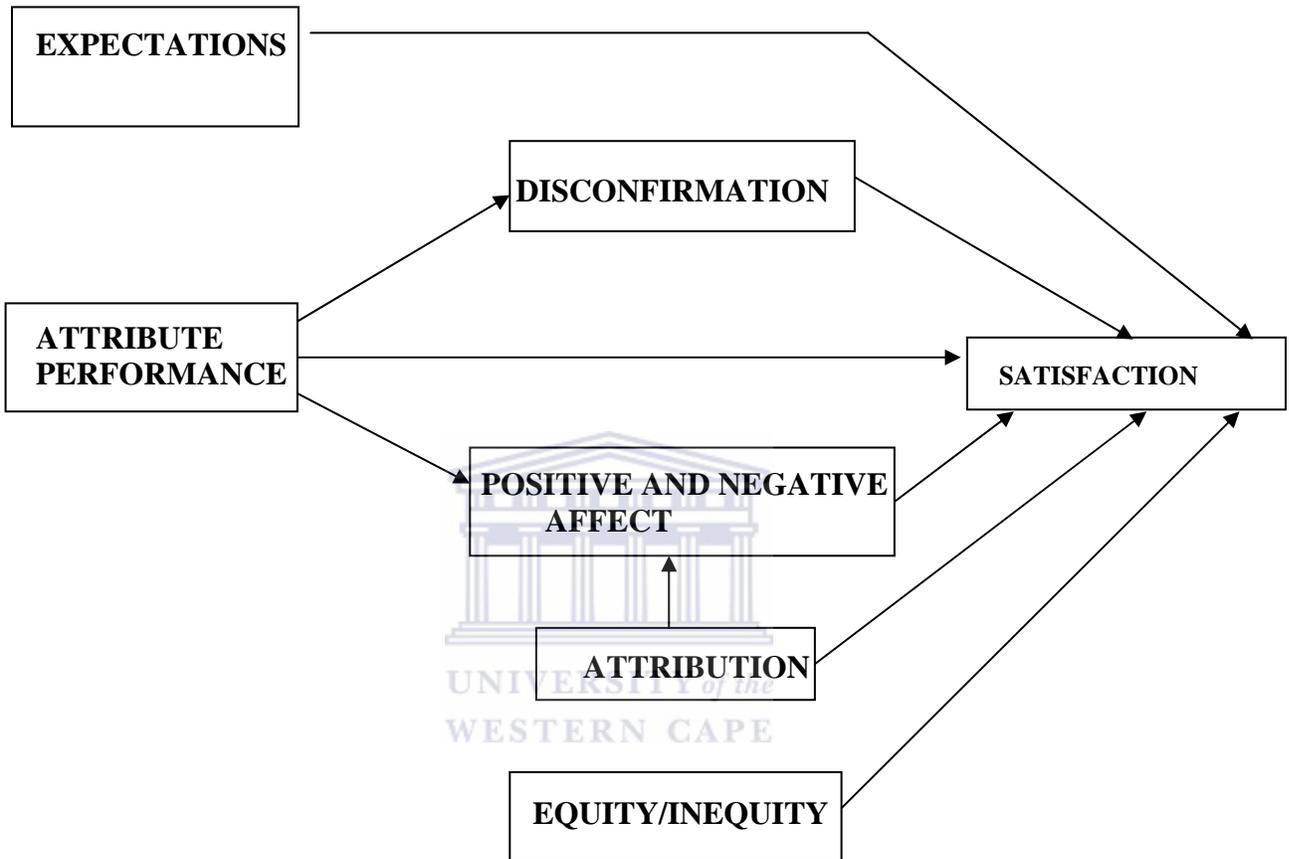


In addition to expectations, the concepts of equity and attribution have also been proposed as determinants of consumer satisfaction. Oliver and Swan (1989) have suggested that satisfaction is higher when people perceive fair treatment i.e. when the comparison made between their gains with those of other consumers and with those of the service provider. However, positive inequity (i.e. beneficial to the consumer) is seen to be fair or satisfactory by consumers. This concept of equity relates to Festinger's theory of social comparison which spells out the way social comparisons influence the formation and evaluation of opinions- people asserting whether their opinions and evaluations are correct by comparing them with other people (Festinger, 1957). On the other hand, the attribution theory comes into play when products or services fall short of consumer expectations. It assumes that people search for causes of events which may be buyer or seller related. The conflict that results from buyer or seller in turn leads to dissatisfaction (Folkes, 1990).

The work of Fishbein and Ajzen (1975) is seen as the bedrock to conceptualising satisfaction in marketing field. Their approach is that satisfaction results from the interplay between affective and cognitive processes. According to them, perceptions and beliefs are cognitive in nature whereas attitudes are affective. The aspect of affect is however less developed and understood although its now accepted that a variety of emotional responses, including emotions as joy, excitement, pride, anger, sadness and guilt play a significant complementary role in determining satisfaction (Newsome and Wright, 1999). A hypothesis stating that patients can hold a dual independent factor situation where a “consumer” holds at the same time, both positive affects, such as joy and interest and negative affects such as anger, disgust and contempt was proposed by Westbrook (1989).

Satisfaction or dissatisfaction can be viewed as a positive or negative affective response. Oliver (1980) proposed a composite model that offers a fruitful way forward for considering the relationship between the various components of satisfaction. This cognition-affect model of satisfaction is shown in Figure 1. It places the disconfirmation paradigm between the preconditions of expectations and attribute performance, and the outcome of satisfaction. The direct link between attribute performance and satisfaction is also recognised as important. The affect domains, both positive and negative, are seen as other intermediaries between both attribution and the satisfaction outcome. Equity is posited as a further distinct contribution to satisfaction, unrelated to affect or other cognitive components.

Figure 1: Cognitive - Affect Model of Satisfaction (Oliver, 1993)



2.4 Patient Satisfaction - Health Care Perspective

The interest that has been shown in patient satisfaction is due to the fact that it is now seen as one of the goals of health care to provide user input to the planning and assessment of services so as to relate to health and illness behaviour (Williams, 1994). Much research has been conducted in the field of health care management to understand the way patients evaluate the care they receive and to develop conceptual models of satisfaction. An earlier review of these models found expectations to be the primary determinant of satisfaction (Thompson and Sunol, 1995).

Studies into the role of expectations in the interaction between patients and health care services date back to the 1970s. Thompson (1986) found that in-patient satisfaction, where expectations strongly relate to satisfaction on some dimensions, explained 14% of the variance in satisfaction with nursing care, 17% of food and physical facilities and 6% of medical care and information but considered that this may have been an artefact of methodology. However, a growing number of researchers are of the opinion that patient and consumer satisfaction are not one and the same thing, and that the marketing oriented conceptual models does not easily fit or is simply inappropriate for many common medical scenarios (Newsome and Wright, 1999).

Linder-Pelz (1982) tested a series of 5 hypotheses of expectations as determinants of patient satisfaction. There was no empirical support for Fishbein and Ajzen's (1975) expectancy-value theory, and little for most of the other hypotheses. She concluded that expectations and perceived occurrences make independent contributions to satisfaction, rather than satisfaction resulting from an interaction between expectations, values and occurrences. Expectations however, while significant, explain only 8% of the variance in satisfaction, and even when values and occurrences are included does not exceed 10% (Thompson and Sunol, 1995).

Williams (1994) further questions whether values and expectations actually exist in all situations. He suggests that they may do for some attributes of care such as amenities, but not for others where there is a passive or "taken for granted" opinion, such as medical technical care. He stated that "the greater the perceived esoteric technical nature of treatment the more likely that many service users will not believe in the legitimacy of holding their own expectations or their evaluations". Invariably the patient might wish the health professional to adopt a paternalistic role in the relationship ("doctor knows best") while they themselves remain passive. Zeithaml et al. (1990) however, argues, that service users who cannot judge the technical quality of outcomes, will base their quality judgements on structure and process domains such as physical settings, time keeping and so on.

The “zone of tolerance” concept seems applicable to the health care setting and would explain the findings of a study which looked at the effect of “good” and “bad” surprises on satisfaction levels (Nelson and Larson, 1993). Depending on the severity of the condition it is highly likely that the satisfaction process will be different in the same individual. Patients will probably use different criteria to judge the management of life threatening emergency as compared to routine check and evaluation may differ also depending upon whether it is the patient or the health care professional who identifies the problem in the first instance. Clearly, health care is not homogenous: it is a distinctive, complex mixture of emotion, the tangibles and intangibles, and its composition cannot be viewed in entirely the same light as those for a consumer product such as television or a washing machine

2.4.1 Dental Patient Satisfaction

With the shift in medicine and dentistry to patients being “consumers” of care, the concept of “consumerism” and inclusion of patients’ opinions in the assessment of services has gained greater prominence (Sitzia and Wood, 1997). A study of Holt and McHugh (1997) found that the main reason for changing dentists among surveyed patients was the dentist interpersonal attributes. In addition, compliance with treatment and in turn treatment quality has also been shown to be influenced by patients’ satisfaction, particularly in orthodontic and periodontal therapy where patients’ co-operation is vital. This is why superior quality is desirable in the sensitive field of health care and most authors suggest that satisfying patients should be a key task for all dental providers (Newsome and Wright, 1999). The key to achieving this is in ensuring good service quality that meets or exceeds patients’ expectations about the service (Karydis et al. 2001).

2.5 Patient Expectations

A number of recent studies have examined the fulfilment of expectations by comparing patient's views on ideal and actual behaviour of dentist (Lahti et al. 1996; Unell et al. 1999). These studies reveal the gap that exists between the kind of service patients hope to receive and that which they actually receive. Satisfaction with dental care was high, 94%. Twenty-six percent of respondents reported visiting a dentist twice or more per year, and 64% at least once a year (Unell et al. 1999).

Lahti et al, (1996) described an ideal dentist according to behaviour desired by patients in a ranked order from most to least desirable as follows: (i) communicative and informative; (ii) tough and domineering; (iii) gentle and understanding; (iv) keeping contact to a minimum and (v) occupational status. Individual opinions about the ideal dentist and patient were quantified by Likert –type scale statements. Before and immediately after the treatment, both dentists and patients filled out questionnaires containing similar statements. Differences between each individual and individual ideal and actual score were compared and cross-tabulated, with regard to the ideal behaviour that was directly related to the treatment procedure, the expectations of both the dentists and patients were met. The discrepancy between the ideal and actual concerned the level of communication as patients would like to be talked to more and encouraged. On the other hand dentists were not sure if patients were interested in or motivated about the treatment or whether they followed home care instructions.

Clow et al, (1995) found that in the formation of expectations, the patient's image of the dentist, tangible cues, situational factors and patient satisfaction with previous encounters, appear to influence patient satisfaction, whereas market variables, such as price and advertising, appear to have no effects. Newsome and Wright (1999) observed that knowledge of patient expectations is important, in that it helps dentist to change both the service delivery process and service outcome, so as to meet expectations, and to ensure that they coincide with the service to be provided.

2.6 Perception of Service Quality

Although quality is a genuine concern for dentistry, nowadays more emphasis is being placed on quality issues. As dentist-patient interaction is involved in many aspects of care and it is more crucial for dentistry when compared to many other professions, a good dentist-patient relationship is an integral element of quality care (Yamalik, 2005a).

The perception of service quality attribute has generated enough interest in dental patient satisfaction studies. Hitherto it has always been the domain of the dental profession who decided what good dental service is, however, increasing importance is now being placed on the patient's point of view. In a study to determine criteria for good dental practice, generated by patients and dental practitioners (Burke and Croucher, 1996), it was found that criteria generated by patients ranked higher than those generated by dental practitioners. Most studies deal with a generic list of five criteria that affect patient satisfaction with dental care, which criteria also correspond to the service quality dimension of Parasuraman and Berry (1988). These are technical competence, interpersonal skills, convenience, cost and facilities. Each of these dimensions is described below:

2.6.1 Technical Competence – this criterion is supported by studies as being a key determinant of dental satisfaction. It has been observed however, that patients generally find it difficult to evaluate technical quality of a service accurately and so form impressions of the service from a number of other cues that may not be apparent to the provider (Zeithaml and Bitner, 1996). Adherence to the rules of antisepsis and sterilization was considered top priority by a group of patients (Karydis, 2001).

2.6.2 Interpersonal Skills – Besides technical expertise, the success of dental care depends on the behavioural patterns of the dentist and the patient and the way they interact with each other. Since communication is involved in the process of care, in many ways it is a 'key' concept of this interaction.

As patient satisfaction and quality care are closely related with the dentist's positive attitudes and communicative skills, dentists need to focus on patients as 'individuals' and have 'real' communication with them (Yamalík, 2005c). Not only is patients' satisfaction positively related to the communicative behaviour of dentists, but the principle of informed consent requires dentists also to inform their patients adequately enough for them to reach a well-informed decision about the treatment. Patients who made decisions about the treatment themselves were more satisfied with their communicative behaviour than patients who let the dentist decide. There was a trend for patients who asked more questions to be more satisfied with the communicative behaviour of the dentist (Schouten et al. 2003). Emphasis should be placed on communication skills when dentist are trained (Schouten et al. 2003; Lahti et al. 1995).

Patients expect empathy and responsiveness to their problem. The largest quality gap was observed with regards to these two factors by Karydis et al, (2001). The public in general and individual patients in particular, have a high level of trust in the dental profession. As trust is an important moral value and a demand in health care, a better understanding of the multidimensional nature of trust and its impact on the efficiency and quality of care is of utmost importance. The core values and principles of dentistry serve to maintain the professional status and the associated trust in the profession and thus are of particular concern to the individual dentist and to organised dentistry (Yamalík, 2005b).

The interpersonal skills of the dentist and office staff were found to be the most important factor affecting dental consumer satisfaction (Kress and Shulman, 1997). Unlike technical quality, patients are well placed to pass judgement as to the most important traits a dentist should possess. In one study, 90% of the respondents rated interpersonal skills as the most important factor that influence dentist/practice loyalty (Holt and McHugh, 1997). Communication skills have also been shown to be important in limiting patient dissatisfaction so preventing liability claims (Mellor and Milgrom, 1995). Communicative skills of dental professionals will be more important in new attendees than in regular attendees as in the regular attendees the communication between dentist and patients is already established (Goedhart et al. 1996). Schouten et al, (2003) described this as “the less information provision, the less satisfied the patients”.

2.6.3 Convenience – although convenience factors do not appear to carry much weight with patients as communication factors, recent findings favour such convenience characteristics such as after-hours clinics (Hendelman et al. 1996). However, Holt and McHugh (1975) found that three of the four least important “decision forming” factors for patients were opening hours, waiting time, and time spent with the dentist. Janda et al, (1996) concluded that dentists should not emphasise convenience-oriented attributes such as location and parking facilities, but should rather focus on the characteristics of the core service such as quality of service, professional competence, personality and attitudes of dentists. On the contrary, Al-Mudaf et al, (2003) found that the areas rated poorest included waiting time for an appointment and waiting time in the clinic to access the dentist. Participants were less satisfied with doctor's explanation of illness, dental treatment and confidentiality of medical records, these areas need to be improved upon.

2.6.4 Cost – Although fees were considered as an important consumer satisfaction factor, fees themselves do not appear to be a problem with patients, as does the communication about fees. Patients under the National Health Insurance (NHI) attach more importance to “telling in advance how much the treatment will cost” (Goedhart, 1996). Cost of treatment was given as reason for non-attendance or postponing a trip to the dentist. Patients also reported that dental charges were confusing and that charges of dental treatment should be openly advertised (Hill et al. 2003). The most frequently reported reason for wanting to be a patient at the dental school was low cost (Lafont et al. 1999). In a Chinese study (Chu et al. 2001) even though the cost of dental service is heavily subsidized by the university 13% still stayed away from dental care due to the perceived high fees. The reason deduced for this according to the University Health Service Annual Reports was that, even if there is no increase in the dental treatment charges, with the growing service consumption by the students, their dental fees will increase annually. As such, the overall dental service charge may be perceived as high by the students.

Moreover, all students knew about the reduction in subvention to the university dental service. This would easily have induced a subjective intuition that there was an increase in dental service charges under the new fee-paying system.

2.6.5 Facilities – the availability of latest equipment, cleanliness, comfort of seating, background music and choice of magazines have been shown to influence patient satisfaction although these are not as important as the other factors mentioned (Andrus and Buchheister, 1985).

2.7 Access

In a particular study (Anderson et al. 2005) compared patients' satisfaction with four types of out-of-hours emergency dental service, including both 'walk-in' and telephone-access services. It was concluded that out-of-hours dental services should be better designed to reflect patients' needs: the need for telephone advice as well as face-to-face consultations, and greater awareness that theoretically available services may be difficult to access unless public expectations and awareness are raised.

2.8 Patients socio-demographic characteristics and satisfaction

Patients' socio-demographic characteristics are often the most studied, but paradoxically, the least well understood. Authors frequently comment that these patient variables show relations that are weak, inconsistent and non-existent. (Gurdal et al. 2004). Okullo et al, (2004) showed that the key to satisfaction with dental services among both urban and rural adolescents was in the inter-personal interaction with the dentist.

2.8.1 Education - the less educated rather than educated attach a higher priority to care. The higher educated seem to give a higher priority to a professional contact and they see the dentist as an equal conversation partner (Goedhart et al. 1996) Dental dissatisfaction was higher among people with a tertiary education (Thomson et al. 1999). Curbow et al,

(1986) showed that people who had few choices in the care they received, as commonly found in programs that treat the poor, demonstrated more negative perception.

2.8.2 Age – The increasing geriatric population poses unique treatment challenges for the dental practice. Satisfaction from dental treatment is considered to be an important issue that influences the attitude and cooperation of the geriatric patient. It is associated with the quality of treatment and with different variables, such as physical, emotional, social and financial (Vered et al. 2002). Some researchers found no significant association between the degree of satisfaction from dental treatment and the examined variables of social activity, self-image and level of apprehension. Good doctor-patient relationships-- "the art of care", is considered to have an important impact on the level of satisfaction, especially among the geriatric patients (Vered et al. 2002). Studies had agreed that older patients are often more satisfied with dental care they receive (Arnbjerg and Soderfeldt, 1992; Yoshida and Mataka, 2002). Strong association was found between satisfaction with the dental staff in the success of geriatric treatment (Sgan- Cohen et al. 2004). Some studies have differed, as they found older patients to be less satisfied and explained their findings by the fact that oral health status of younger patients are usually better than that of older people, which may lead to the latter having better dental care experience (Lahti et al. 1996). Age has been directly associated with accumulated oral health neglect in one study, with the youngest age group having significantly more reparable oral diseases (Gift et al. 1997).

2.8.3 Gender – Female patients have reported being more satisfied with dental care than men (Gopalakrishna and Mummalaneni, 1993). This is attributed to their greater exposure to dental services that would likely moderate their expectations, which in turn, are more likely to be met. Female patients are also believed to show more preference for information and participation in the decision making process though this association has been shown to be a weak one (Schouten et al. 2004)

2.8.4 Economic Status –A review found higher education to be associated with greater satisfaction (Newsome et al. 1999). Women of the middle and lower socio-economic groups were more demanding than men of the same groups, while men of the upper socio-economic group appeared to be more demanding than women (Karydis et al. 2001)

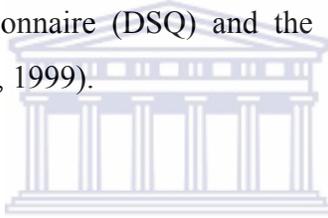
2.8.5 Previous Dental Experience – Lathi et al, (1996) demonstrated a positive relationship between previous dental experience and satisfaction. Perceptions of oral health status and levels of satisfaction with oral health status generally were closely associated. Greater dissatisfaction with oral health status and perception of poorer oral health status were associated with higher usage of non-preventive dental services. Perception of a less favourable oral health status was strongly associated with higher restorative and periodontal services usage, but had only a weak association with preventive services usage (Maupome et al. 2004). Gift et al, (1997) also showed that individuals with a dental visit in the past two years had considerably less accumulated oral neglect, fewer self-perceived problems, less non-reparable oral disease, and higher values of oral health than those without a dental visit in the past two years. Patients who had dropped out of care were less satisfied than active or recall patients in terms of quality of care, length and number of appointments, treatment explanation, and fees. (Butters and Willis. 2000)

2.8.6 Dental Anxiety – Dental anxiety is common, and is a notable factor for avoidance of dental care. In their study, Thomson et al, (1999) found that 20.8% of the respondents were dentally anxious. This was more prevalent among younger people who were dissatisfied with the care received. The lowest percentage of highly anxious subjects was found in the age group of 15-19 years. Dental anxiety is positively related to irregularity of dental visits (Milgrom et al. 1988; Hakeberg et al.1992)

2.9 Instruments to measure satisfaction

Few instruments exist, that measure patients' satisfaction specifically with dental care (Golletz et al. 1994) as compared to the numerous satisfaction measures used for medical care (Wolf et al. 1978). Earlier dental studies aimed to develop reliable and valid measures of patient satisfaction with dental care, include those by Koslowsky et al, (1978) and Hengst and Roghmann, (1978).

These studies combined questionnaire items into multi-item scales and recorded reliability in their data, though none explicitly addressed measurement validity (Davies and Ware, 1982). Later studies however, resulted in the development of two well-established valid and reliable measures of patient satisfaction with dental care: These are the Dental Satisfaction Questionnaire (DSQ) and the Dental Visit Satisfaction Scale (DVSS) (Newsome and Wright, 1999).



The DSQ was developed by the Rand Corporation based on the data from the health insurance study (HIS) of which both metropolitan and low income areas were involved although the use of DSQ in general population studies is also supported by this result (Davies and Ware, 1982). It is a 19-item instrument designed for self-administration within 5 minutes. Five subscales are used to assess access, availability, cost, pain management and the quality of care. The individual items are rated on a five point Likert-like scale, ranging from strongly disagree to strongly agree (Golletz et al. 1995). Validation studies of this instrument confirmed the internal consistency and reliability of the factor structure. However, HIS validation efforts will not address other validity issues. Some modifications or additions to the DSQ, such as, the inclusion of questions on the other dental team members may make it more comprehensive.

In a Norwegian Study (Skaret et al. 2004) to explore the internal structure, reliability, and construct validity of the Dental Satisfaction Questionnaire (DSQ). The construct validity of the DSQ was indicated by: (i) its correlation with the Patient's Beliefs Survey, and (ii)

differences in DSQ scores between subjects who had dropped out from dental care at the age of 23 years and regular attendees. This study generally confirms the structure of the DSQ instrument and indicates that it is a reliable and valid instrument in cultures other than the one for which it was previously tested. The DSQ was found to be simple and useful tool in obtaining consumer feedback on a dental service and regular surveys on consumer satisfaction using this tool will help to monitor and evaluate improvements (Chu et al. 1999)

The DVSS on the other hand, is an adaptation of the Wolff et al, (1978) instrument: the Medical Interview Satisfaction Scale, which was developed to assess patients' perception of the physician directly following a medical interview and examination. The 26 items of the Medical Interview Satisfaction Scale (MISS) were reworked for the dental setting resulting in the 26-item Dental Visit Satisfaction Scale (DVSS) instrument. This instrument contains three sub scores relating to cognitive, affective and behavioural satisfaction, as well as an overall satisfaction score. The items have Likert-like response format from strongly disagree to strongly agree. All items are scored in a positive direction ranging from one to five, depending on the category selected (Corah and O'Shea, 1984). Ten items were selected for the final scale that made a content description of the three dimensions of satisfaction easy to specify.

These factors included information/communication (I-C), understanding/acceptance (UA) and technical competence (TC). The study showed that the DVSS discriminated between groups of patients experiencing different types of dentist behaviour during dental care situations. To construct validity the DVSS was used to assess patient satisfaction in a study that varied the character of doctor-patient interaction. Two styles were used viz (i) in the control there was minimal interaction between dentist and patient and (ii) experimental or maximum interaction condition. Analysis of first visit DVSS scores yielded no significant Fs for group mean, sex mean and dentist analyses of variance. The experimental group gave significantly greater I-C, UA, and total satisfaction scores than the control group. Men in the two groups gave no differences in satisfaction for technical

competence; the women in the experimental group gave significantly higher TC scores than the women in the control group.

The advantages of the DVSS are that it is short, easy to use, and practical to include in research surveys (Hakeberg et al. 2000). The validity and reliability of this measure have been investigated and proven to be satisfactory (Corah and O'Shea, 1984; Corah and O'Shea, 1985; Stouthand et al. 1992).

In an epidemiological study by Locker and Lidell (1998) concerning dental anxiety and concomitant factors among older adults, the DVSS was used to evaluate the behavioural consequences of dental anxiety.

Stouthard et al, (1992) translated and tested the DVSS on a Dutch sample of psychology students. The mean overall and subscale scores show accordance with studies by Corah and O'Shea, (1985), but a suggestion for modification was made based on exploratory factor analysis and intercorrelations. Item 8 i.e. 'the dentist was too rough when he worked on me', had low correlation with the subscales, thus the authors proposed removal of that item from the DVSS. Magnus et al, (2000) also believes that item 8 should be removed. Locker and Lidell (1998) study also included minor alteration of the DVSS in that they changed the item from past to present tense.

Summary

Patient satisfaction has gained a wide spread recognition as a measure of quality care, partly due to the shift towards a consumerist ethos. The theory of disconfirmation is the most dominant conceptual model which explains the process of satisfaction with expectations as the primary determinant. However the 'zone of tolerance' concept is most applicable to the health setting. Two well established instruments for evaluating satisfaction with dental care are the Dental Satisfaction Questionnaire (DSQ) and the Dental Visit Satisfaction Scale (DVSS).

CHAPTER 3

AIM AND OBJECTIVES

Aim

To determine patient satisfaction with dental care at a hospital dental clinic.

Objectives

- To determine the pattern of service utilization in the 18 years to 65 years age group.
- To determine patient's perceptions of dental care provided.
- To propose recommendations to improve patient satisfaction.

CHAPTER 4

METHODOLOGY

Introduction

Research methodology refers to steps or guiding principles of executing a research work. There are four main aspects of research methodology, which are Design, Sampling, Data collection and Data analysis. Studies are commonly seen as being either quantitative or qualitative. Quantitative data are seen as being objective, quantifiable, hard, generalisable, based on numbers, whereas qualitative data are seen as being subjective, socially constructed, soft and non generalisable, based on words (Banwell and Coulson, 2004). In this chapter, the methodology used in the present study will be described.

4.1 Study design

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

4.2 Study Population

The present study was carried out at the dental clinic of the Lagos University Teaching Hospital (LASUTH), Ikeja, Lagos, Nigeria. The clinic, though within the recently upgraded teaching hospital, is yet to attain to a teaching institution status. It does however, have the responsibility of providing care for the Ikeja Local Government/District area. Between forty to forty five patients are attended to on a daily basis. The study was carried out daily over a two-month period between September and October 2005. An average of 5 completed questionnaires was returned daily.

4.3 Sample

A convenience sampling technique was chosen for this study. A convenience sample does allow for the use of a smaller population, it is simpler, involves less time and costs when compared to other sampling techniques.

4.4 Sample size

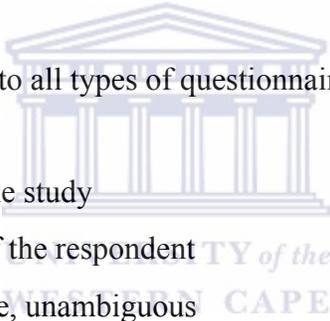
The sample size for this study was 200. However, 250 questionnaires were distributed in order to accommodate incompletely or inadequately filled questionnaires. From a statistical point of view, a sample size of more than 100 is large and precision of the results only improve slightly when a larger sample size is used (Chu and Lo, 1999).

4.5 Self-Administered questionnaires as a survey method

A self-administered questionnaire was the method chosen for collecting data in this study. The purpose of a questionnaire is to collect factual and/or attitudinal data for measurement. It needs to be well designed to obtain accurate and valid responses.

4.5.1 Design rules

The same rules of design apply to all types of questionnaire:

- 
- It must suit the aim of the study
 - It must suit the nature of the respondent
 - It should be clear, simple, unambiguous
 - The design should minimize potential errors from respondents and coders
 - The subject of the questionnaire should interest the respondent, encourage their co-operation and elicit truthful answers
 - Well worded questions are essential, and pitfalls must be avoided, for example, 'double-barrelled questions' that is, when two questions are included in one- the questions will have to be separated so that the respondent and the researcher can distinguish between the two.
 - The wording of the questions should not lead the respondent to feel obliged to answer in a particular way, which may not be truthful
 - Questions must not alienate either the respondent or the researcher
 - Efficient and meaningful analysis of the acquired data should be possible.

4.6 The development of the study questionnaire

4.6.1 Instrument used

The Dental Satisfaction Questionnaire (DSQ) developed by Davies and Ware (1982), was the framework for the development of the questionnaire used in the present study. The validated 19 items of the DSQ were modified by the inclusion of 5 items on the performance of the other dental operatives and resulted in a 24-item questionnaire using the 5-point Likert scale ranging from “strongly agree” to “agree”, “not sure”, “disagree” to “strongly disagree”. The questionnaire was in English and items categorised under the five dimensions: access, availability/ convenience, cost, pain and quality. It was unnecessary to translate the questionnaire into the local language as English is the common language spoken by majority of the dwellers of Lagos State. The modifications to the original DSQ included the addition of items on the performance of other dental operatives’ i.e. dental hygienist, dental therapist, and dental surgeons’ assistant. The choice of this instrument was based on the literature review that showed that the DSQ was the only dental satisfaction questionnaire that measured dental satisfaction constructs and its validity and reliability have previously been tested and reported (Mascarenhas, 2001; Davies and Ware, 1982; Evangelidis-Sakellson, 1999; Chapko et al. 1985)

4.6.2 Validity and reliability

Validity of a scale is the ability of an observation to capture the underlying phenomenon. There are three forms of validity: content validity, criterion validity and construct validity.

- Content validity consist of evaluating the capacity of the scale to reflect all relevant facets of an issue (the construct) (Calnan, 1988).
- Criterion validity consists of evaluating the capacity of the scale to be correlated with a criterion of interest or a reference criterion, an association which can be strictly empirical. (De Villis, 1991).

- Construct validity deals with the theoretical relationships between the measurements and the construct they are supposed to operationalise (Slim et al, 1998).

Reliability reflects a scale's ability to reproduce an observation in a consistent manner. (Slim et al, 1998) there are two types - internal and external:

- Internal refers to difference between the results obtained by the same observer on separate occasions.
- External refers to the difference between results obtained by at least two observers.

The principal investigator was the only investigator involved in study, in keeping records, gathering and interpretation of data, thereby assuring confidentiality and the standardized recording of information. Furthermore to ensure validation, the triangulation method was used, whereby another person reviewed ten per cent of the data to check for bias.

Planning of the questionnaire began in January 2005. It took nearly a year to generate the questionnaire, as there were no existing local dental questionnaires on DSQ to extrapolate from.

The data was grouped into the following categories: access, availability/ convenience, cost, pain and quality where:

- Access: the physical and financial process of arranging to get to dental care
- Availability/Convenience: whether the necessary providers and services exist in the area and the convenience of location and working hours.
- Cost: fees paid whether affordable or high
- Pain: how well the dentist handles pain associated with the treatment and how its management affects attitudes toward seeking dental care
- Quality: how good the care is both in technical and interpersonal aspects of the process.

4.6.3 Piloting the questionnaire

A pilot questionnaire was administered in August 2005 (n=20) at the dental clinic of LASUTH. The pilot study was done to:

- Test the suitability of the method of collecting the data
- Check the adequacy of the questionnaire
- Check that all questions were clear and unambiguous

4.6.4 Preparation for the final Questionnaire

After the pilot study, irrelevant and ambiguous questions were identified and either reformulated or deleted. Following the pilot, the following modifications were made to obtain the final questionnaire (Appendix 1):

- The questionnaire was expanded by including questions on patients' satisfaction with the performance of the entire dental team, namely receptionists and dental operatives in contrast to the original, which evaluated patients' satisfaction with the dentist's performance only.
- The question as to whether the dentist was thorough, was changed to "the dentist checked my whole mouth and asked my medical history" for better clarity.

This resulted in a general improvement of the questionnaire in terms of clarity, comprehensiveness and an increase in the efficiency of the enquiry.

4.7 Data collection

The participants in the study were required to complete a consent form (Appendix 2) if they were willing to participate in the study. Each individual had the right to refuse to be included in the study or to withdraw from the study at any time. Furthermore, it was reiterated that their decision to participate or not did not affect their management or care in any way whatsoever. The participants were assured confidentiality regarding their names and the information given should they decide to take part. None of the patients declined participation in the study. Questionnaires were completed after treatment at the various

specialists' clinics at the dental clinic i.e. oral surgery, restorative, and the preventive/periodontology clinics. The participants placed the completed questionnaires on their way out in a "drop box" within the oral diagnosis clinic.

4.8 Coding for analysis and Data entry

The principal investigator was the only investigator involved in study, in keeping records, gathering and interpretation of data, thereby ensuring confidentiality and the standardized recording of information.

Furthermore to ensure validity, the triangulation method was used, whereby another person reviewed ten per cent of the data to check for bias. The data set was entered, edited and analysed using SPSS software, Microsoft Excel, STATA software. Responses were reordered according to instructions from the DSQ i.e. items were converted according to the direction of the wordings, whether positive /negative from 1 (strongly agree) to 5 (strongly disagree) (Table 1).

Data was analysed by examining frequency tables and charts generated. Frequency distribution tables were generated for categorical variables, means and standard deviation were determined for these variables. Cross tabulations were done between selected categorical variables and occurrence of dental problems. Associations were subjected to the Chi square test, Analysis of variance (ANOVA), and Test of Regression with significance defined as p less than or equal to 0.05 ($p \leq 0.05$).

The frequencies of the responses of the respondents were recorded under the categories of DISAGREE which is inclusive of the 'strongly disagree' and 'disagree' ratings i.e. score range between 1-2.9. The second category was the 'NEUTRAL' category for respondents who scored 3, while the third category is that of those who 'AGREE'. This includes the 'agree' and 'strongly agree' ratings with scores ranging from 3.1 to 5.

Table 1: Questionnaire content with direction of wording

ITEM	ABBREVIATED CONTENT	DIRECTION OF WORDING	CONTENT CATEGORY
1	Clinic conveniently located	+	Convenience
2	Opening hours good	+	Access
3	Wait a long time	-	Access
4	Difficult to get treated same day	-	Access
5	Enough dentists here	+	Availability
6	Enough operatives here	+	Availability
7	Waiting area comfortable	+	Quality
8	Surgery is modern	+	Quality
9	Receptionist helpful	+	Quality
10	Dentist treat patients with respect	+	Quality
11	Operatives treat patients with respect	+	Quality
12	Explains what they do	+	Quality
13	Examination and medical history	+	Quality
14	Did not wash there hand	-	Quality
15	Do more prevention	+	Quality
16	Able to remove most problems	+	Quality
17	Treatment done in a hurry	-	Quality
18	Avoid dentist because of pain	-	Pain
19	Not concerned about pain	+	Pain
20	Should reduce pain	-	Pain
21	Fees too high	-	Cost
22	Should offer different treatment	-	Quality
23	Offer treatment we can afford	-	Cost
24	Happy with treatment	+	General satisfaction

4.9 Ethical Considerations

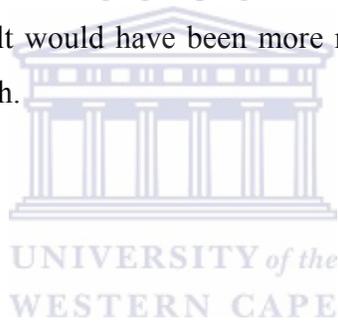
Ethical clearance was obtained from the Lagos State University Teaching Hospital (LASUTH) approval reference LASUTH/DCST/047 (Appendix 3) and the Senate Research Ethics Committee of the University of the Western Cape, South Africa.

Summary

Two hundred patients participated in the present study. The instrument developed to collect the data was described in this chapter. The instrument chosen was a self-administered questionnaire with 24 questions in five categories.

Limitations

The result is limited especially in the age groupings where actual ages of the respondents were requested. Also this result would have been more reliable if the sample size were bigger than that for this research.



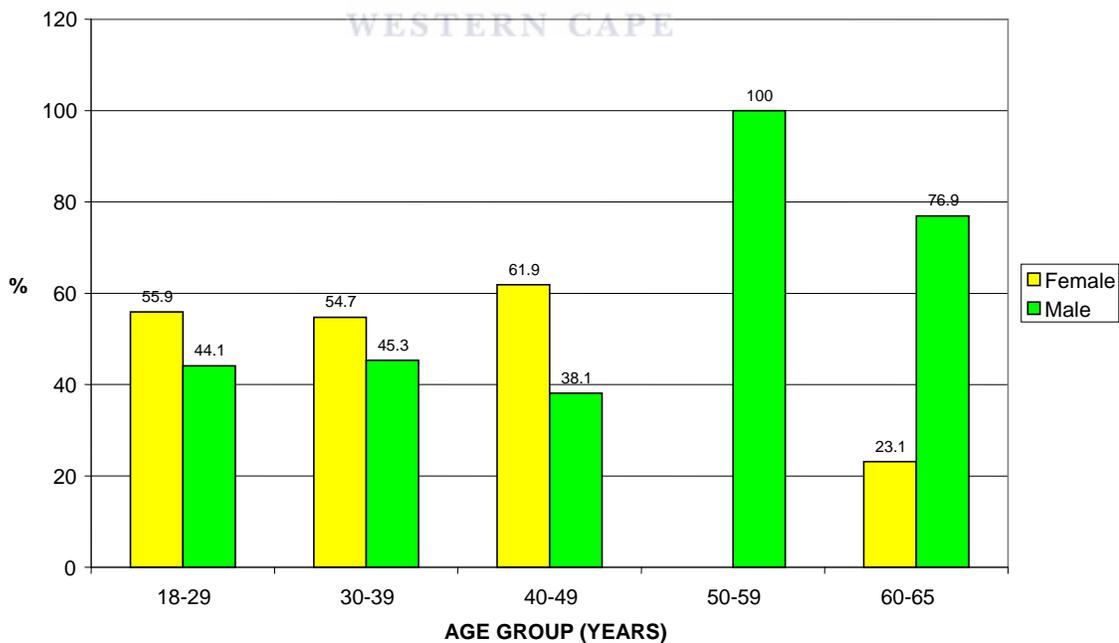
CHAPTER 5

RESULTS

5.1 Demography

A total of 250 questionnaires were distributed consecutively to participants. Two hundred (n=200) were adequately completed, giving a response rate of 80%. Of the remaining 20%, four percent questionnaires were inadequately filled while 16% were not returned. The age of the respondents ranged from 18 to 65 years. There were slightly more females 107(53.5%) than males 93 (46.5%). The difference was not statistically significant $\chi^2=6.4$, $df=4$, $p>0.05$ ($p=0.14$) The predominant age group were the 18-29 year olds for both genders (Figure2).

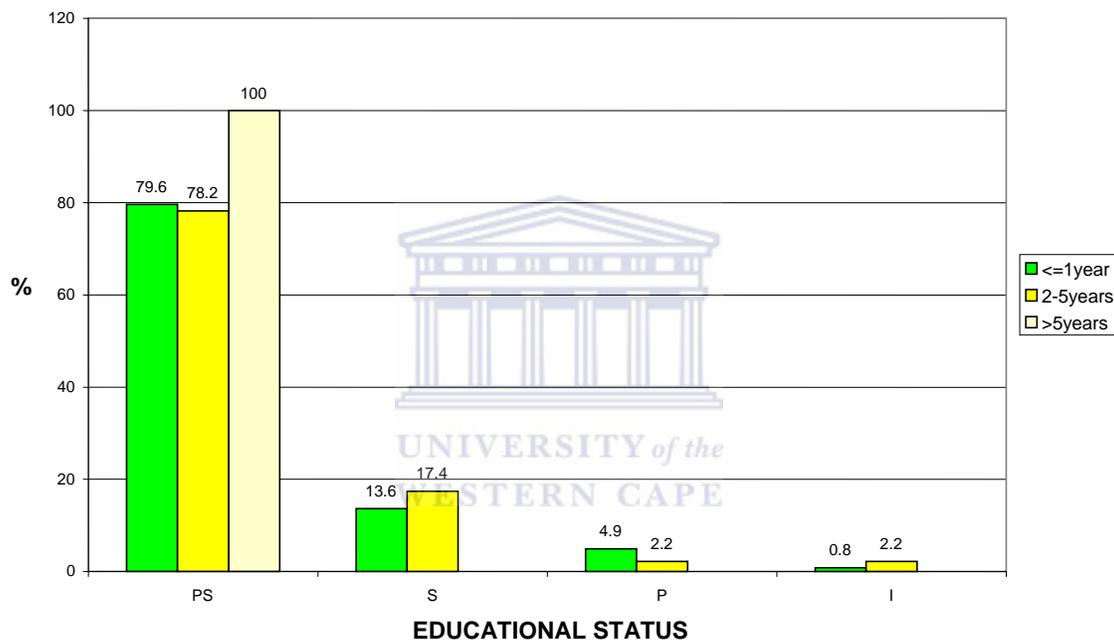
FIGURE 2 DISTRIBUTION OF RESPONDENTS ACCORDING TO AGE AND GENDER



5.2 Education and Attendance

More than two thirds of the respondents 98 (76.6%) with post-secondary (PS) education had attended the clinic within the past year, 36 (76.2%) within 2-5 years. It is noteworthy that only those with post secondary education 18 (100%) gave a positive history of attendance for over 5 years. Only 0.8% had attended the clinic among the illiterate (I) group within the past year while 2.2% attended within 2-5years. The association was not statistically significant $X^2= 21.3$, $df =15$ $p>0.5$ ($p=0.12$) (Figure 3).

FIGURE 3 DISTRIBUTION OF RESPONDENTS BY EDUCATIONAL STATUS AND ATTENDANCE PATTERNS



5.3 Marital Status

Majority of the respondents were single 118 (59.6%), while 80 (40.4) were married.

5.4 Occupation

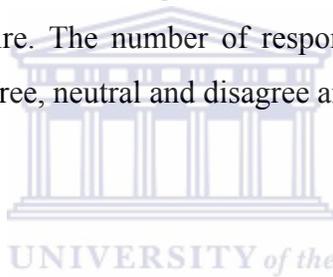
Overall, the distribution of the respondents by occupation showed that the highest percentage were students 77 (38.5%), (Table 2).

TABLE 2: DISTRIBUTION OF RESPONDENTS BY OCCUPATION

OCCUPATION	Number	%
Business/Trader	62	31.0
Civil servant	28	14.0
Pensioners	12	6.0
Students	77	38.5
Other (housewife, unemployed)	21	10.5
Total	200	100.0

5.5 Dental Satisfaction Items

Table 3 below, shows the satisfaction rating of the entire 24 numeric dental satisfaction items asked in the questionnaire. The number of respondents who rated the questions under the three categories of agree, neutral and disagree are shown.



5.5.1 Agree

The patients reported varying degrees of satisfaction to the dental satisfaction items. The responses to the items ranged from 39.5% (n=79) of the respondents to the item ‘not concerned about pain’ to 93% (n=187) for the item ‘Dentist treats Patients with respect’.

The Negatively worded items agreed to by majority of the respondents includes ‘hard to get treated same day’ 51% (n=102), ‘did not wash there hands’ 53.5% (n=107), ‘treatment done in a hurry’ 73.5% (n= 147), ‘avoid dentist because of pain’ 61% (n=122), ‘should reduce pain’ 74% (n=148), fees too high 43.5%, ‘should offer different treatment’ 45.5% (n= 91), ‘offer treatment we can afford’ 71% (n=142), (Table 3).

5.5.2 Neutral (Not Sure)

The neutrality observed from the items was as low as 4% (n=8) for the item ‘dentist treats patients with respect’ to a high percentage of 39.5% (n=79) for the item ‘surgery is modern’ (Table 3).

5.5.3 Disagree

The item 'dentist treats patients with respect' 2.5% (n= 5) was least agreed to by all the respondents while the majority disagreed with the item 'not concerned about pain' 49% (n= 98), (Table 3).

TABLE 3: RESPONDENTS SATISFACTION RATINGS OF ALL DENTAL SATISFACTION ITEMS (N)

ITEM	ABBREVIATED CONTENT	Agree		Neutral		Disagree	
		(n)	(%)	(n)	(%)	(n)	(%)
1	Clinic conveniently located	178	89.4	14	8.1	7	3.5
2	Opening hours good	164	82.8	21	10.6	13	6.6
3	Wait a long time	86	43	17	8.5	97	48.5
4	Hard to get treated same day	102	51	47	23.5	51	25.5
5	Enough dentists here	124	62	49	24.5	27	13.5
6	Enough operatives here	107	53.5	64	32	29	14.5
7	Waiting area comfortable	125	62.5	23	11.5	52	26
8	Surgery is modern	86	43.2	79	39.7	34	17.1
9	Receptionist helpful	169	84.5	17	8.5	14	7
10	Dentist treat patients with respect	187	93.5	8	4	5	2.5
11	Operatives treat patients with respect	164	82	29	14.5	7	3.5
12	Explains what they do	175	87.5	15	7.5	10	5
13	Examines whole mouth and ask medical history	168	84	14	7	18	9
14	Did not wash there hand	107	53.5	60	30	33	16.5
15	Do more prevention	148	74	25	12.5	27	13.5
16	Able to remove most problems	169	84.9	22	11.1	8	4
17	Treatment done in a hurry	147	73.5	26	13	27	13.5
18	Avoid dentist because of pain	122	61.6	30	15.2	46	23.2
19	Not concerned about pain	79	39.5	23	11.5	98	49
20	Should reduce pain	148	74	25	12.5	27	13.5
21	Fees too high	87	43.7	45	22.6	67	33.7
22	Should offer different treatment	91	45.5	61	30.5	48	24
23	Offer treatment we can afford	142	71	20	10	38	19
24	Happy with treatment	173	87	19	9.5	7	3.5

5.6 Scoring for the Dimensions of Care

The ratings of the dimensions of care by the respondents showing the number of respondents ratings from the categories agree, neutral and disagree are shown in Table 4.

Ninety percent of the respondents (n=180) were satisfied with the quality aspects of care received.

Availability ratings showed that 64 % (n=129) of the respondents were satisfied with care received while 58% (n=116) were satisfied with access to care.

Satisfaction with cost and pain management were 50% (n=100) and 14% (n=29) respectively.

The neutral ratings showed that 38% (n=76), 19% (n=39), 8% (n=17), 30% (n=61) and 32% (n=65) for access, availability, quality, pain management and cost aspects of care respectively.

However, 55% (n=110) of the respondents were dissatisfied with pain aspects of the care received.

TABLE 4: RESPONDENTS SCORING FOR DENTAL SATISFACTION QUESTIONNAIRE SCALES

Scale	Agree (n) / %	Neutral (n) / %	Disagree (n) / %
Access	116 / 58	76 / 38	8 / 4
Availability	129 / 64	39 / 19	32 / 16
Quality	180 / 90	17 / 8	3 / 1.5
Pain	29 / 14	61 / 30	110 / 55
Cost	100 / 50	65 / 32	35 / 17.5

5.7 Relationship of DSQ Scales to Socio-demographic factors

5.7.1 Gender

The scoring for all the dimensions of care by both the female and male respondents, showed that the female respondents who rated satisfied to the dimensions of care were more than their male counterparts generally, with the highest satisfaction in the quality scale female 49% (n=98) and 36% (n=72) for their male counterparts. Others were access female 33.5% (n=64), male 24.5% (n=49), availability female 37% (n=74), male 27% (n=54), cost female 26.5% (n=53) male 23.5% (n=47). However, majority of both the male and female respondents were dissatisfied with the pain management aspect of care,

female (28%) and male (14.5%), (Table 5). There were no significant differences in the relationship between gender and all the dimensions of care.

TABLE 5: PERCENTAGE (%) OF RESSPONDENTS SOCIODEMOGRAPHIC FACTORS SATISFIED WITH THE FIVE DIMENSIONS OF CARE

	% of Respondents satisfied				
	Access	Availability/ Convenience	Quality	Pain	Cost
GENDER					
Female	33.5	37	49	10	26.5
Male	24.5	27	36	4.5	23.5
TOTAL	200	200	200	200	200
AGE					
18-29years	30.5	37	49	7.5	31.5
30-39years	14.5	15	33	3	11.5
40-49years	8.5	7	9.5	3	3.5
50-59years	0.5	0.5	-	-	-
60-65years	4	5	6.5	-	3.5
TOTAL	200	200	200	200	200
MARITAL STATUS					
Married	26.5	29.5	37.5	6.5	18
Single	31	35	57	8	32
TOTAL	198	198	198	198	198
EDUCATIONAL STATUS					
Post Secondary	47.5	52	77	13	40
Illiterate	1	1.5	1.5	0.5	1.5
Primary	2.5	2.5	4	-	3.5
Secondary	6.5	8	12	1	5.5
TOTAL	200	200	200	200	200
OCCUPATION					
Business/Trading	18	19.5	26.5	5.5	15..5
Civil Servants	9	9.5	12.5	1.5	5
Pensioners	3.5	5	6	0.5	2.5
Students	18	24.5	34	3.5	15
Others	7.5	5	8.5	2.5	5.5
TOTAL	200	200	200	200	200
ATTENDANCE					
Past 1 year	39.2	39.7	57.1	9	32..3
2-5 years	12.1	16.4	21.2	4.7	12.2
Over 5 years	6.8	6.8	4.2	1.6	4.7
TOTAL	189	189	189	189	189

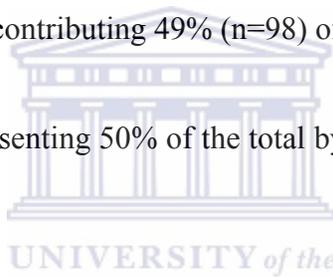
5.7.2 Age Groups

The percentages of the different age groups which rated satisfied to the dimensions of care, showed a general trend of more satisfied respondents in the 18-29 year group than the other groups.

A total of 58% (n=116) of which the 18-29 year group contributed 30.5% (n=61) were satisfied with access to care, while a total of 64% (n=129) of the different age groups were satisfied with the availability aspects of care received.

The highest satisfied scores was observed in the quality scale with a total of 98% (n=197), the 18-29 year group contributing 49% (n=98) of this.

One hundred respondents representing 50% of the total by age groups were satisfied with cost of care (Table 5, Page 49).



The scoring for pain management showed that majority of respondents representing 54% (n=109) were dissatisfied with this aspect of care. Twenty-eight and a half percent (n=57) of this was contributed by the 18-29 year group.

The differences in the relationship between the age groups and quality was significant ($p=0.023$), in addition to that between the age groups and cost ($p=0.047$).

5.7.3 Marital Status

It was observed that a greater percentage of the respondents who were satisfied with the different dimensions of care were in the singles group relative to the married group.

The percentages of singles satisfied with access, availability, quality, pain management and cost were 31% (n=62), 35% (n=70), 57% (n=104), 8% (n=16) and 32% (n=64) as compared to 26.5% (n=53), 29.5% (n=58), 37.5% (n=74), 6.5% (n=13) and 18% (n=36) of the married respondents.

Both categories had greater percentages, married 24%, (n=48) and singles 30% (n=60), who were dissatisfied with pain management than those who were satisfied with this dimension. (Table 5, Page 49).

The scoring by marital status with regards to access and quality were statistically significant (p=0.007 and p=0.0134 respectively), whereas those for availability/convenience, pain and cost were insignificant.

5.7.4 Educational Status

Satisfaction to access, convenience/availability, quality and cost was observed by all the educational status categories.

This represented 57.5% (n=115) for access of which the post secondary group contributed the most at 47.5%, sixty-four percent (n=128) for availability of which 52% were from the post-secondary group, 89.5% (n=179) rated satisfied with quality of which 72% were at the post-secondary level of education.

Fifty percent of the respondents in this category were satisfied with cost where as 17% of them were dissatisfied, the rest 33% were neutral.

It was observed from the pain management ratings that 55% (n=110) were dissatisfied with pain management (Table 5, Page 49).

There were no statistically significant differences in the relationship of educational status and all the dimensions of care.

5.7.5 Occupation

A total of 56% (n=112) of the occupational categories were satisfied with the dimension of access, both the students and business/trading group 18% each (n=72) of this total.

Convenience/availability scoring were 63.5% (n=127) for satisfied respondents for which the students group contributed the highest 24.5.

One hundred and seventy-seven of the respondents in this category representing 87.5% were satisfied with the quality aspects of care.

Those satisfied with cost of care were 43.5% (n=87) while 32% (n= 64) were neutral. The rest 24.5% were dissatisfied.

Dissatisfaction with pain management was observed in the majority of respondents in this category 54.5% (n=109), the students group forming the greater percentage (21%) of this (Table 5, Page 49).

The difference in the relationship between occupation and quality was statistically significant $p=0.001$.



5.7.6 Attendance

The results showed that the attendance groups i.e. Past year, 2-4 years, >4 years were satisfied with the dimensions of access, convenience/availability, quality, and cost. They were however dissatisfied with pain management showed (Table 5, Page 49).

Respondents in the past 1year group contributed 39.2% (n=74) of the 54.1% of those satisfied with access to care. A total of 62% of respondents in this category were satisfied with convenience/availability while the quality scale recorded the highest satisfaction rating of 82.5% with the past 1 year group contributing 57.1% of this.

Those satisfied with cost totalled 49.2% (n=93), while 37.1% of the respondents in this group were neutral and the rest 13.7% were dissatisfied with cost (Table 5, Page 49).

A greater percentage of the respondents (n=109) representing 57.7% were dissatisfied with pain management aspects of care received.

There were no statistically significant differences in the relationship between attendance and the dimensions of care, access (p=0.368), convenience/availability (p=0.939), quality (p=0.543), pain management (p=0.955) and cost (p=0.885)



CHAPTER 6

DISCUSSION

The results of this study have provided insight into patient behaviour and an evaluation of the service delivery in a dental setting. This chapter discusses the findings and compares it with other studies as reported in the literature review chapter.

6.1 Response Rate

The study achieved a response rate of 79.2%. This rate is slightly higher than most published studies (Bedi et al, 2005; Skaret et al, 2005) and is comparable to the 77% observed for dental staff respondents in the study by Chu and Lo (1999) and the 78% reported by Brennan et al (2001). The high response rate can be attributed to the short completion time of the questionnaire, as well as, the effect of the direct contact and personal invitation to the participants by the researcher.

6.2 Demography

The percentage of respondents who were female was fifty-three and a half (53.5%) and aged between 18-29 years. This higher number of female respondents observed is in agreement with other studies which showed that women were more likely to seek dental care than men such as that of Yoshida and Matakai (2002) who while investigating the influence of patients perception on their acceptance and understanding of dental care amongst 1483 patients within an education system, found that 64.9% of the respondents were female. Other studies include Lahti et al, 1995; Stenberg et al, 2000; Kosteniuk et al, 2006. Many of the respondents (78.5%) had post secondary level of education, this being comparable to the 74.7% reported by Gurdal et al (2000) in a Turkish dental faculty out-patient clinic. This is not surprising as the Lagos State Teaching Hospital (LASUTH) is located in Ikeja the capital of Lagos State. The majority of the patients that presented were well educated probably because they lived or worked in the capital.

Students constituted the highest category of respondents in terms of occupation (38.5%), this is similar to the observation of Chu and Lo (2001), at a Hong Kong university dental

service where they monitored patient satisfaction with dental services under two fee-paying systems amongst 190 students and 207 members of staff and their spouses. Both clinics located within a university setting would most likely get their patronage from members of the university community which largely are students.

6.3 Utilisation rate

More than two thirds of the respondents in this study had only been using the clinic in the past year, this compares to the study of Unell et al (1999) whose study showed that 64% of respondents had visited the dentist at least once a year. This may be a reflection of the type of service rendered by clinic - vis-à-vis patients' needs. The majority of interventions at the clinic are emergency dental services such as extractions, fillings and dental prophylaxis.

An important finding in the present study was that less than a fifth had over five years of attendance. This may indicate a lack of continuity/follow-up visits, as well as the difficulty of continuing with the same dentist at each visit and may also represent missed opportunities for oral health promotion and prevention education. It could also be that patients were dissatisfied with the care provided, hence not attending for follow up. Other reasons that could be proffered includes, inability to afford treatment cost and the attraction of cheaper traditional and herbal remedies, also patients perception of the unavailability of facilities and dental materials needed for treatments as well as the long waiting periods and multiple appointments patients go through before getting treated. Further studies are needed to investigate any dissatisfaction with dental care at the clinic by previous attendees.

The utilisation rate within the past year was highest among those with post secondary education, as was reported in a previous study by Vargas et al, (2003) in a national health survey of US rural residents of respondents 2 years and above. It is expected that care seeking behaviours in this group of people will be better.

6.4 Individual Questions' Ratings

The respondents were satisfied with the dentists and dental operatives' interpersonal aspects of care. Patients' satisfaction with care has been reported to be influenced by the dentists' communicative behaviour (Esa et al, 2006; Okullo et al, 2004; Schouten et al, 2003; Vered et al, 2002; Gurdal et al, 2000).

The access and availability questions also received satisfied ratings, and this could be due to the fact that the majority of the patients came from within the locality. However, respondents were not sure (i.e. rated neutral) whether the 'surgery is modern'. Dissatisfaction was reported in this study to 'hard to get treated same day' , 'did not wash there hands' , 'treatment done in a hurry' , 'avoid dentist because of pain' , 'should reduce pain' , 'fees too high' , 'should offer different treatment' and 'offer treatment we can afford'

These compares with the study of Chu and Lo (1999), who studied patient's satisfaction with dental services provided by a university in Hong Kong amongst 140 students and 180 members of staff and their spouses. The patients recorded varying degrees of satisfaction with waiting time, fee cost and all the aspects of pain management. It follows from the above that the interpersonal aspects of quality were responsible for the overall general satisfaction observed. This is similar to the findings of Okullo et al (2004); Gurdal et al (2000) and Al-Mudaf et al (2003).

6.5 Dimensions of care

Overall patient satisfaction in this study was high. Previous studies have also reported high satisfaction levels with dental care (Andreas and Buchester, 1985; Lafont et al, 1999; Butters et al, 2000; Al-Mudaf et al, 2003; Zini et al, 2006). The high DSI scores notwithstanding, patients have different scoring of satisfaction and dissatisfaction for the different scales/dimensions of satisfaction.

6.6 Cost

Previous studies had reported low mean scores for cost such as Golletz et al, (1995) in study of mothers or female guardians of a low-income US population and that by Alvesalo and Uusi-Heikkila, (1984) in a study of university dental clinic patients in Finland. However, the present study reported a higher percentage of respondents being satisfied with the cost of care received (50%) especially amongst those with post secondary educational status as compared those at primary and non-formal educational status. The average cost of a routine/emergency dental treatment is about 10-15US\$ out of pocket payment. These higher scores may be attributable to the fact that the fees had by and large, remained unchanged for some years due to government subsidy and patients had become accustomed to this. Another reason would be the great disparity which exists between private practice and public clinic fees, where the former is higher than the latter.

Cost of care has been observed as an important factor to the satisfied patient. Butters et al (2000) in their comparison of patient satisfaction among current and former school patients, through a telephone survey of 291 patients, reported that most patients who dropped out of the care programme in their study, attributed this to high fees. This finding has been corroborated by Chu and Lo, (1999). In another study of patient satisfaction in a New Orleans dental school where 500 patients were participated, 67% of respondents attributed low costs for the reason for wanting to attend a dental school clinic (Lafont et al, 1999). The relationship between cost and age groups in this study was however significant $p \leq 0.05$ ($p=0.047$). This could be explained by differential subsidy rates for different age groups by the government, while the patients aged 60 and above enjoy 100% subsidy on treatment others pay the full charges. Again treatment needs for the different age groups differ. The older age groups from the middle age to the older groups have mostly periodontal and prosthetic needs whilst the younger groups require the more extensive restorative/conservative treatment needs which are more expensive.

6.7 Quality

The quality of care scale formed the majority of questions asked and included both interpersonal and technical aspects of quality. The results showed that all the respondents satisfied with the quality of care received. This compares with the studies of Chu and Lo, (1999, 2001) and Tasso et al, (2002). This finding showed the value of doctor-patient relation which can be linked to how well motivated the staff are and their training, as the main contributor to the satisfaction observed when compared to the technical aspects of care, this could also be related to provision of equipment to the hospital, as well as, its renovation and expansion by government so as to elevate it to a teaching hospital status.

The difference between age groups, marital status, and occupation of respondents were significantly related to quality at $p=0.023$, $p=0.013$ and $p=0.01$ respectively. Older age groups expressed better satisfaction to most of the dimensions of care when compared to the younger age groups. Although the numbers of respondents in this group are fewer when compared to other groups, some other studies mostly from the developed countries with different settings and context have shown that older age groups expressed better satisfaction to care (Yoshida and Mataka, 2002; Unell et al, 1999; Handelman et al, 1990). It is possible that the interpersonal aspect of quality, considered important by the elderly, may not be good enough, and in addition the younger age groups may have started attending the clinic after it had been renovated and equipped by government. Yet again the inability to continue with the same dentists over a period of time may play a role in this.

6.8 Pain management

The 55% of all the respondents were dissatisfied with pain management aspects of care, this more than double the 20.8% reported by Thomson et al, (1999) in a New Zealand study on dental anxiety and satisfaction with dental services. The view that patients are concerned about dental pain, dental anxiety, is an established one (Arora, 1999). In this present study, 61% of respondents avoid the dentist because of the pain experience and

another 74% agreed that dentist should do more to reduce pain. Most studies, including the present one, recorded dissatisfaction with all or some aspects of pain management such as that by Golletz et al (1995) in a low-income U.S. population.

This high percentage of dentally anxious patients seen in this study can be related to previous dental experience, wrong perception / beliefs held by the patients, they could also be psychological. In this study, respondents who had been attending the clinic between 2-5 years had a better score for dental anxiety which infers that regularity / of treatment may be related to dental anxiety.

However, it is the choice of pain management made by the dentists that perhaps has a bearing on whether patients are satisfied or not with pain management aspect of care. This study found that the female respondents had a better satisfaction than males to the aspect of pain management, the difference was however not significant $p = 0.143$.

This may be explained in a number of ways: it is possible that the dentists or dental team members treat the female patients more cautiously i.e. a discriminative approach to care; females report more regular attendance and exposure of female patients to care have made them accustomed to the pain management processes as irregular dental visits is positively related to dental anxiety. Female patients are also believed to show more preference for information and participation in the decision making process though this association has been shown to be a weak one (Schouten et al. 2004)

A bad previous dental experience could also be responsible for this, which infers that the communicative behaviour of the dental care providers on the aspect of pain management could be better.

6.9 Convenience/Availability and Access

The present study showed that the majority of respondents were satisfied with both convenience/availability. The importance of access and convenience is buttressed by one third of the respondents who were dissatisfied with care provided in a study where the health care centres were too far from them. This study, Ali and Mahmoud, (1993), estimated patient satisfaction in 14 primary health care services within Riyadh city, Saudi Arabia where 900 respondents were interviewed. This present study found a significant

association between age group and access by a test of regression $p=0.003$ with the 40-49 years group being largely responsible. This group being the middle age group comprise entrepreneurs, civil servants who have both the economic power and knowledge to have their dental needs met as required. Only 3.5% of the pensioners were satisfied with the aspects of access to care. This finding can be explained by the lack of economic power and or sound health to have their dental needs met. Some may even have to travel long distances to get to the clinic.

7.0 Limitations of the study

- The sample was may not have been representative of the general adult population.
- Patients attending private practices were not included
- Majority of the respondents were in the age group 18-29, and consequently the age distribution may have been skewed.
- Further studies should focus on middle age and elderly and that can be compared with the present study.
- The present study did not take into consideration past attendees who may have been dissatisfied with care and did not report for further dental care.

WESTERN CAPE

CHAPTER 7

CONCLUSIONS & RECOMMENDATIONS

This study determined whether patients were satisfied with dental care provided by a hospital dental clinic, and identified the contributing factors. The objectives had been:

- To record the pattern of service utilization in the 18years and above age-group.
- To determine patients' perceptions of dental care provided.
- To propose guidelines to improve patient satisfaction.

The methodology used generated a data set, whose interpretation has shown that there was a good overall level of satisfaction with dental care the patients received.

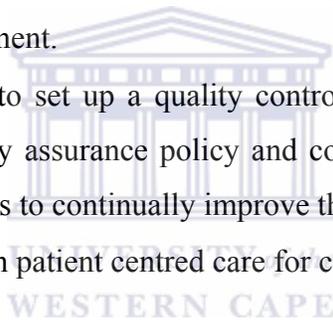
Cost and pain management were areas identified as needing improvement. Furthermore, the study has demonstrated that patient satisfaction with dental care is a valid measure of the quality of care and that regular measurements of satisfaction will go a way long to help improve service delivery.

Recommendations

The issues resulting from this study that would help to improve the quality care of delivered are as follows:

- This study reported that majority of the respondents had only visited the clinic in the past year, probably for emergency dental treatment. The need for continuity of care has to be stressed to the patients i.e. patients require follow up appointments as well as regular check- ups.

- For the benefit of the older age groups, particularly the pensioners who were very dissatisfied with access to care, it is suggested that potential opportunities make care more accessible.
- The choice of pain management needs to be re-examined to determine if there are viable, affordable and appropriate alternatives that better suit the patient such as psychotherapeutics, general anaesthesia, premedication. Dentists need to be more sensitive to the pain management aspects of care.
- The cost of service was a source of dissatisfaction for some respondents. Alternative means of payment, such as insurance, should be investigated to help relieve the cost burden to the patients.
- Development of a quality assurance policy aimed at improving service quality and patient satisfaction should be considered and this policy document should be well circulated in the department.
- The department needs to set up a quality control unit that should among other things, enforce a quality assurance policy and conduct regular measurements of patient satisfaction, so as to continually improve the quality of care delivered.
- Continuing education on patient centred care providers is recommended



REFERENCES

Ali M el-S, Mahmoud ME. A study of patient satisfaction with primary health care services in Saudi Arabia. *J Community Health*. 1993; 18: 49-54.

Al-Mudaf BA, Moussa MA, Al-Terky MA, Al-Dakhil GD, El-Farargy AE, Al- Ouzairi SS. Patient satisfaction with three dental speciality services: a centre-based study. *Med Princ Pract*. 2003 r; 12:39-43

Alvesalo I, Uusi-Heikkila Y. Use of services, care seeking behaviour and satisfaction among university dental clinic patients in Finland. *Community Dent Oral Epidemiol* 1984; 12: 297-302.



American Association of Medical Colleges, AAMC, curriculum directory, 1994/95. Washington: AAMC, 1995.

Anderson E. Cross- category variation in customer satisfaction and retention. *Market Lett* 1994; 5:19-30

Andrus D, Buchheister J. Major factors affecting dental consumer satisfaction. *Health Market Q* 1985; 3: 57-68

Arnbjerg D, Soderfeldt B, Palmqvist S. Factors determining satisfaction with dental care. Community Dent Health 1992; 9: 295-300.

Arora R. Influence of pain-free dentistry and convenience of dental office on the choice of a dental practitioner: an experimental investigation. Health Mark Q. 1999; 16: 43-54.

Banwell L and Coulson G. Users and user study methodology: the JUBILEE project. Information Research 2004; 9: 167

Bedi R, Gulati N, McGrath C. A study of satisfaction with dental services among adults in the United Kingdom. Br Dent J. 2005 9; 198: 433-7

Berg A, Horev T, Zusman S P. Patient satisfaction, quality indicators and utilization of dental services in Israel. Harefuah 2001; 140: 1151-5, 1230.

Bolton R, Drew J. A multiple model of customers' assessment of service quality and value. J consumer Res 1991; 17: 375-384.

Brennan DS, Gaughwin A, Spencer AJ. Differences in dimensions of satisfaction with private and public dental care among children. Int Dent J 2001; 51: 77-82

Burke L, Croucher R. Criteria of good dental practice generated by general dental practitioners and patients. Int Dent J 1996; 46: 3-9.

Butters J, Willis D. A comparison of patient satisfaction among current and former dental school patients. *J Dent Educ* 2000; 64: 409-415.

Cadotte E, Woodruff R, Jenkins R. Expectations and norms in models of consumer satisfaction. *J Market Res* 1987; 24: 305-314.

Calnan M. Lay evaluation of medicine and medical practice: report of a pilot study. *Int J Health Services* 1988; 27: 927-933.)

Cardozo R. An experimental study on consumer effort, expectation and satisfaction. *J Market Res* 1965; 2: 244-249.



Chapko M, Bergner M, Green K, Beach B, Milgrom P, Skalabrin N. Development and validation of a measure of dental patient satisfaction. *Med Care* 1985; 23: 39-49

Chu C, Lo E. Patient satisfaction with services provided by a University in Hong Kong. *Int Dent J* 1999; 49: 53-59.

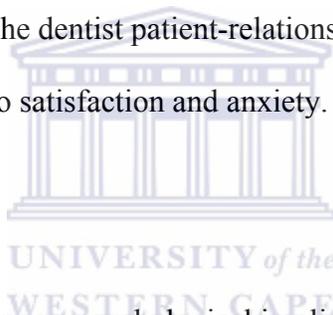
Chu CH, Yeung CYYJ, Lo ECM. Monitoring patient satisfaction with university dental services under two fee-paying systems. *Community Dent Oral Epidemiol* 2001; 29: 390-398

Clow K, Fischer A, O'Bryan D. Patient expectations of dental services. *J Health care market* 1995; 15: 23-31.

Collett H.A. Influence of dentist-patient relationship on attitudes and adjustment of dental treatment. *J Am Dent Assoc* 1969; 70: 879-84

Corah N, O'Shea R. Development of a patient measure of satisfaction with the dentist: The dental visit satisfaction scale. *J Behav Med* 1984; 7: 367-373.

Corah N, O'Shea R, Basel D. The dentist patient-relationship: perceptions by patients of dentist's behaviour in relation to satisfaction and anxiety. *J Am Dent Assoc* 1985; 111: 443-6.



Curbow B. Health care and the poor: psychological implications of restrictive policies. *Health Psychol* 1986; 5: 375-91.

Davidow W, Uttal B. Service companies: focus or falter. *Harvard Bus Rev* 1989: 77-85.

Davies AR, Ware JE Jr. Development of a dental satisfaction questionnaire for the health insurance experiment. Santa Monica, CA: The Rand Corporation. 1982

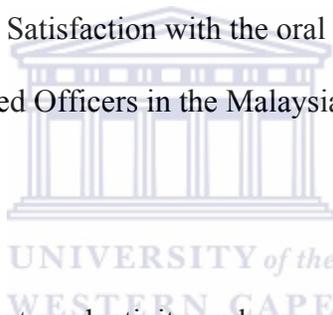
DeVaus D.A. *Surveys in Social Research*. Allen and Unwin London 1986

De Villis RF. Scale Development. Theory and Applications. Newbury Park: Sage Publications, 1991. Applied Social Research Methods Series, Vol. 26.

Doering E.R. Factors influencing in patient satisfaction with care, Qual Rev Bull 2 1983.

Donabedian A, Exploration in quality assessment and monitoring: Vol 1: The definition of quality and approaches to its assessment. Ann Arbor, MI: Health Administration Press, 1980.

Esa R, Rajah P, Abdul Razak I. Satisfaction with the oral health services. A qualitative study among Non-Commissioned Officers in the Malaysian Armed Forces. Community Dent Health. 2006; 23: 15-20.



Evangelidis-Sakellson V. Student productivity under requirement and comprehensive care system. J Dent Educ 1999; 63:407-4 12

Festinger L. A theory of social comparison processes: Human Relations 1954; 7: 117-140.

Festinger L. A theory of cognitive dissonance, Harper and Row, New York, USA 1957.

Fishbein M, Azjen I. Belief, attitude, intension and behavior: an introduction to theory and research. Addison- Wesley, Reading, MA. USA. 1975.

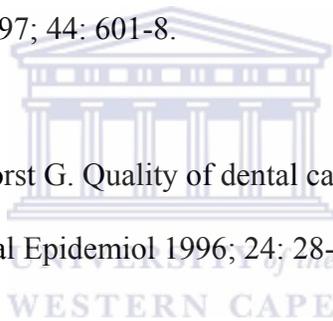
Folkes V S, Conflicts in the market place : explaining why products fail. Attribution theory: applications to achievement, mental health and interpersonal conflict.

Graham S and Folkes V S (Eds), 143, Erlbaum, Hillside, NJ, USA, 1990.

Gerbert B, Love C, Caspers N. the provider-patient relationship in academic health centers: The movement toward patient centered care. J Dent Educ 1996; 60: 961-966.

Gift HC, Atchison KA, Dayton CM. Conceptualizing oral health and oral health-related quality of life. Soc Sci Med. 1997; 44: 601-8.

Goedhart H, Eijkman M, ter Horst G. Quality of dental care: the view of regular attenders. Community Dent Oral Epidemiol 1996; 24: 28-31.



Golletz D, Milgrom P, Mancini L. Dental care satisfaction: the reliability and validity of DSQ in a low -income population. J Public Health Dentist 1995; 55: 210-217.

Gopalakrishna P, Mummalaneni V. Influencing satisfaction with dental services. J Health Care Market 1993; 13: 16-22.

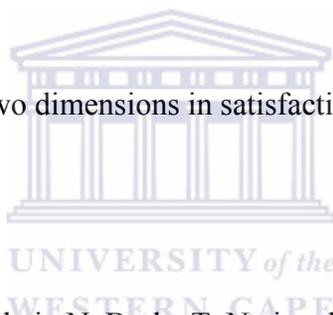
Gurdal P, Cankaya H, Onem E, Dincer S, Yilmaz T. Factors of patient satisfaction/dissatisfaction in a dental faculty outpatient clinic in Turkey. Community Dent Oral Epidemiol. 2000; 28: 461-9.

Hakeberg M, Heidari E, Norinder M, Berggren G. A Swedish version of Dental Visit Satisfaction Scale. *Acta Odontol Scand* 2000; 58: 19-24.

Halstead D, Hartman D, Schmidt S. Multisource effects on the satisfaction formation process. *J Acad Market Sci* 1994; 22: 114-129.

Hendelman S, Jensen O, Jensen P, Black P. Patient satisfaction in a regular and after - hours dental clinic. *Spec Care Dent* 1996; 16: 194-198.

Hengst A, Roghmann K. The two dimensions in satisfaction with dental care. *Med. Care* 16, 202. 1978.



Hill B, White A, Morris J, Goodwin N, Burke T. National evaluation of personal dental services: a qualitative investigation into patients' perceptions of dental service. *Br Dent J* 2003; 195: 654-656.

Holt V, McHugh K. Factors influencing patient's loyalty to dentist and dental practice. *Br Dent J* 1997; 183: 365-370.

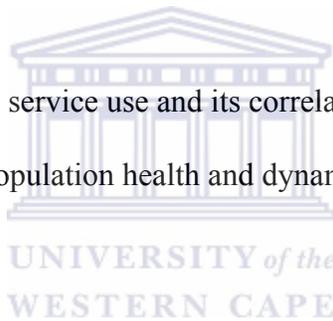
Howard J, Sheth J. *The theory of buyer behavior*. New York: Willey, 1969.

Janda S, Wang Z, Rao C. Matching dental offerings with expectations. *J Health Care Market* 1996; 16: 38-44.

Karydis A, Komboli-Kodovazenti M, Hartzigeorgiou D, Panis V. Expectations and perceptions of Greek patients regarding the quality of dental health care. *Int J Qual Health Care* 2001; 13: 409-416.

Koslowsky M, Balit H, Vallugo P. Satisfaction of the patient and the provider; Evaluation by questionnaire. *J Pub Health Dent* 1975; 34: 188-194

Kosteniuk J, D' Arey C. Dental service use and its correlates in a dentate population: an analysis of the Saskatchewan population health and dynamics survey, 1999-2000. *J Can Dent Assoc.* 2006; 72: 731.



Kress G. Dental education in transition. In: Cohen L, Gift H, eds *Disease prevention and oral health promotion: Socio-dental sciences in action*. Copenhagen: Munksgaard, 1995.

Kress G, Shulman J D. Consumer satisfaction with dental care: where we have been and where are we going? *J Am Coll Dent* 1997; 64:9-15.

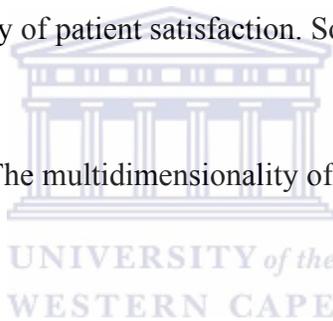
Lafont BE, Gardiner DM, Hochstedler. Patient satisfaction in a dental school. *Eur J Dent Educ.* 1999; 3: 109-16.

Lagos State Government of Nigeria. History of Lagos State (2004) Retrieved 17 November, 2006, from the official web site of Lagos State Government of Nigeria: <http://www.lagosstate.gov.ng/about/about.htm>.

Lathi S, Hausen H, Kaariainen R. Patients expectations of an ideal dentist and their view concerning the dentist they visited: Does it conform with the expectations and how well they conform. *Community Dent Oral Epidemiol* 1996; 24: 240-244.

Linder-Pelz S. Towards a theory of patient satisfaction. *Soc Sci Med* 1982; 16: 577.

Linder-Pelz S, Struening E L. The multidimensionality of patient satisfaction with dental visit 1985; 10: 42.



Locker D, Lidell AM. Correlates of dental anxiety among older adults. *J Dent Res* 1991; 70: 198-203.

Locker D, Shapiro D, Liddell A. Negative dental experiences and their relationship to dental anxiety. *Community Dent Health* 1996; 13: 86-92.

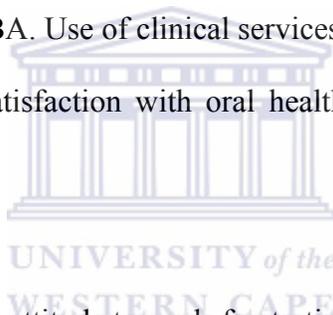
London Department of Health. *The Health of a Nation* 1991. (HMSO).

Magnus H, Ellie H, Moa N, Ulf B. A Swedish version of the Dental Visit Satisfaction Scale. *Acta Odontol Scand* 2000; 58: 19-24.

Mascarenhas A.K. Patient satisfaction with the comprehensive care model of dental care delivery 2001; 65: 1266-1271

Mason D. General dental practice- challenges and opportunities: a personal view. *Br Dent J* 1995; 179: 350-354.

Maupome G, Peters D, White BA. Use of clinical services compared with patients' perceptions of and satisfaction with oral health status. *J Public Health Dent*. 2004; 64: 88-95.



Mellor A, Milgrom P. Dentists' attitude towards frustrating patient visits: relationship with satisfaction and malpractice complaints. *Community Dent Oral Epidemiol* 1995; 23: 15-19.

Nelson E, Larson C. Patients' good and bad surprises: how do they relate to overall patient satisfaction. *Qual Rev Bull* 1993; 3: 305-314.

Newsome PRH, Wright G. A review of patient satisfaction: 1. concepts of satisfaction. *Br Dent J* 1999; 186: 161-165.

Newsome PRH, Wright G. A review of patient satisfaction: 2. Dental patient satisfaction: an appraisal of recent literature. *Br Dent J* 1999; 186: 166-170.

NHS Management Inquiry, London: Department of Health and Social Security, 1984.

Okullo I, Astrom A, Haugejorden O. Influence of perceived performance on satisfaction with oral health care among adolescents. *Community Dent Oral Epidemiol* 2004; 32: 447-55

Oliver R. A cognitive model of the antecedents and consequences of satisfaction decisions. *J Market Res* 1980; 17: 460-469.

Oliver R, Swan J. Equity and disconfirmation perceptions as influences on merchant and product satisfaction. *J Consumer Res* 1989; 16: 372-383.

Parasuraman A, Berry L. Servqual: a multiple item scale for measuring consumer perception of service quality. *J Retailing* 1988; 1: 12-40.

Parasuraman A, Berry L, Zeithaml V. Understanding customer expectations of service. *Sloan Management Rev* 1991; 32: 39-48.

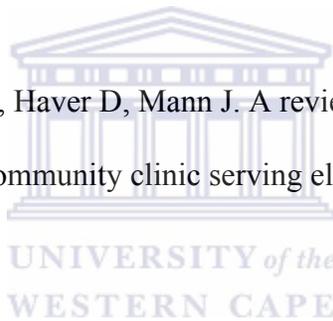
Patterson P, Johnson L, Spreng R. Modelling the determinants of customer satisfaction for business - business professional services. *J Acad Market Sci* 1997; 25: 4-17.

Peterson R. Measuring customer satisfaction: Fact and artefact. *J acad Market Sci* 1992; 20: 61-71.

Schouten B C, Eijkmann M, Hoogstraten J. Dentists' and patients' communicative behavior and their satisfaction with the dental encounter. *Community Dent Health* 2003; 20: 11-5

Schouten B C, Eijkmann M, Hoogstraten J. Information and participation preferences of dental patients. *J Dent Res.* 2004; 83: 961-5.

Sgan-Cohen HD, Mansbach IK, Haver D, Mann J. A review of satisfaction with Dental service at a Jerusalem community clinic serving elderly patients
Int Dent J. 2004; 54(4): 224-8.



Sitzia J, Wood N. Patient satisfaction: a review of issues and concepts. *Soc Sci Med* 1997; 45: 1829-43.

Skaret E, Berg E, Raadal M, Kvale G. Factors related to satisfaction with dental care among 23-year olds in Norway. *Community Dent Oral Epidemiol.* 2005; 33: 150-7.

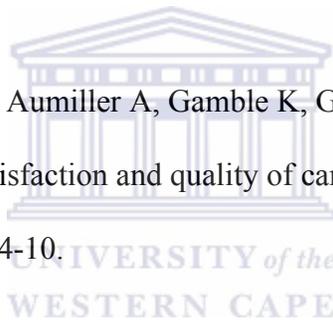
Slim H, Piere F, Louise P. Measuring people's perceptions of the quality health care services in developing countries. Validation of a 20-item scale. *International Journal for Quality in Health Care* 1998; 10: 93-104.

Spreng R, MacKenzie S, Olshavsky R. A re-examination of the determinants of consumer satisfaction. *J Market* 1996; 60: 15-32.

Stenberg P, Hakansson J, Akerman S. Attitudes to dental health and care among 20 to 25-year-old Swedes: results from a questionnaire. *Acta Odontol Scand*. 2000; 58(3): 102-6.

Stouthard A, Hartman A, Hoogstraten J. Development of a Dutch version of the Dental Visit Satisfaction Scale. *Community Dent Oral Epidemiol* 1992; 20: 351-3

Tasso K, Behar-Horenstein LS, Aumiller A, Gamble K, Grimaudo N, Guin P, Mandell T, Ramey B. Assessing patient satisfaction and quality of care through observation and interview. *Hosp Top* 2002; 80: 4-10.



Thompson A.G.H, The soft approach of hospital care, *Int J Qual Reliability* 1986; 3: 59.

Thompson A, Sunol R. Expectations as determinants of patient satisfaction: Concepts, theory and evidence. *Int J for Quality in Health Care* 1995; 7: 127-141.

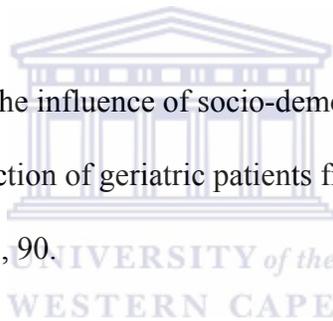
Thomson WM, Dixon GS, Kruger E. The West Coast Study. II: Dental anxiety and satisfaction with dental services. *N Z Dent J* 1999; 95: 44-8.

Unell L, Soderfeldt B, Halling A, Birkhed D. Attitudes to and experience of dental care among 50-year-olds in two Swedish counties. *Swed Dent J.* 1999; 23: 87-96

Unell L, Soderfeldt B, Halling A, Paulander J, Birkhed D. Equality in satisfaction, perceived need and utilisation of dental care in 50 year old Swedish population. *Community Dent Oral Epidemiol* 1996; 24: 191-195.

Unell L, Soderfeldt B, Halling A, Birkhed D. Attitudes to and experience of dental care among 50-year-olds in two Swedish counties. *Swed Dent J.* 1999; 23(2-3): 87-96.

Vered Y, Zadik D, Mersel A. The influence of socio-demographic and psychological variables on the level of satisfaction of geriatric patients from dental care. *Refuat Hapeh Vehashinayim.* 2002; 19: 58-61, 90.



Vouri H. Patient satisfaction - an attribute or indicator of quality care? *Qual Rev Bull* 1987; 13: 106-108

Welsh Office. Strategic intent and direction: Protocol for Investment in Health Gain 1993. Welsh Office, Cardiff.

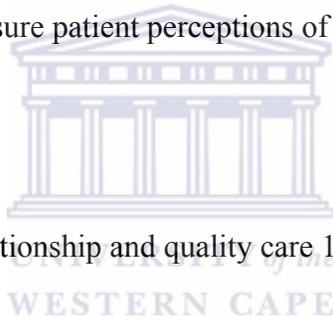
Westbrook R A. Product/consumption based affective responses and post purchase processes. *J Marketing Res* 1987; 24: 258.

Williams B. Patient satisfaction: A valid concept? Soc Sci Med 1994; 38: 509-516.

Williams B, Coyle J, Healy D. The meaning of patient satisfaction: An explanation of high reported levels. Soc Sci Med 1998; 47: 1351-1359.

Williams C, Bower J, Newton T. Research in primary dental care Part4: Measures. Br Dent J 2004; 197: 739-746.

Wolff H, Putnam M, James A, Stiles B. The medical interview satisfaction scale: Development of a scale to measure patient perceptions of physician behaviour. J Behav Med 1978; 1: 391-401.



Yamalik N. Dentist-patient relationship and quality care 1. Introduction. Int Dent J. 2005a; 55: 168-170.

Yamalik N. Dentist-patient relationship and quality care 2. Trust. Int Dent J. 2005b; 55: 168-170.

Yamalik N. Dentist-patient relationship and quality care 3. Communication. Int Dent J. 2005c; 55: 254-6.

Yoshida N, Matakai S. Influence of patient's perception on their acceptance and understanding dental care within an education system. J Med Dent Sci. 2002; 49: 143-9.

Zeithaml V, Bitner M. Services marketing. New York: McGraw-Hill, 1996.

Zeithaml V, Parasuraman A, Berry I. Delivering quality service. New York: The free press, 1990.

Zini A, Pietrokovsky J, Dgani A, Dgani R, Handelsman M. Survey of patient satisfaction at the Yad Sarah Geriatric Dental Clinic. Refuat Hapeh Vehashinayim. 2006; 23: 36-41,

70



APPENDICES

APPENDIX 1

QUESTIONNAIRE

BIODATA: Please tick the option that's applicable.

GENDER: - Female Male

AGE: - 18-29yrs 30-39yrs 40-49yrs 50-59yrs 60yrs+

MARRITAL STATUS: - Single Married

TOWN/DISTRICT: -----

EDUCATION BACKGROUND:-

- Primary
- Secondary
- College
- University
- None



OCCUPATION: -

- Civil Servant.
- Business/Trading.
- Pensioner/Retired.
- Student.
- Other Specify-----

For how long have you been attending this clinic?

<1yr between 1-5yrs >5yrs

Please check the response that most reflects your experience as a patient here and tick only one response. Space is provided for any additional comments you wish to make. Your response will be kept confidential at all times. Thank you for your cooperation.

A. ACCESS/CONVENIENCE/ FACILITY

Q1. How did you get here today?

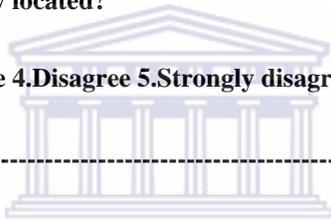
Car Bus Walked Bicycle Other Specify-----

Comments-----

Q2. The dental clinic is conveniently located?

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

Comments-----



UNIVERSITY of the
WESTERN CAPE

Q3. The opening hours are good.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

Comments-----

Q4. I wait a long time to see the dentist?

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

Comments-----

Q5. It is hard to get treated the same day.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

Comments-----

Q6. There are enough dentists here

. 1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

Comments-----

Q7. There are enough dental operatives here.

. 1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

Comments-----

Q8. The waiting area is comfortable.

. 1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

Comments-----

Q9. The dentists' surgery is modern and up to date

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

Comments-----

B. QUALITY (INTERPERSONAL/TECHNICAL/OUTCOME)

Q10. The receptionist/assistant is helpful/professional.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

Comments-----

Q11. The dentist treats patients with respect.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

Comments-----

Q12. The dental operative patients with respect.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

Comments-----

Q13. The dentist explains what they do.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

Comments-----

Q14. The dentist always examines my whole mouth and teeth and ask me about my medical history

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

Comments-----

Q15. The dentist should do more to keep people from having problems with their teeth.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

Comments-----

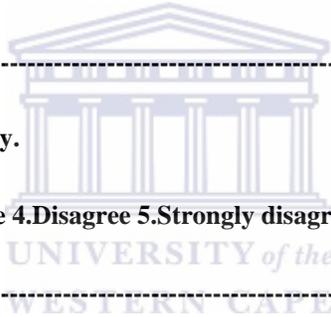
Q17. The dentist was able to relieve most of my dental problems.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

Comments-----

Q18. The dentist is always in a hurry.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree



Comments-----

C. PAIN

Q19. I avoid dentist because of the pain experience.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

Comments-----

Q20. I am not concerned about pain during treatment.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

Comments-----

Q21. The dentist should do more to reduce pain.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

Comments-----

Q22. The fees at the hospital are too high.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

Comments-----

Q23. The dentist should always offer a different treatment option.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

Comments-----

Q24. The dentist should always offer us treatment we can afford.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

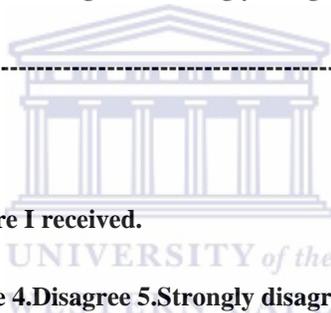
Comments-----

D. GENERAL SATISFACTION

Q25. I am happy with the dental care I received.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

Comments-----



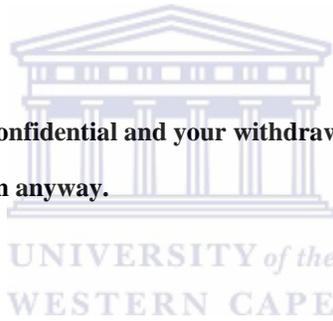
APPENDIX 2

This research is aimed at determining whether you are satisfied /dissatisfied with dental care provided by this hospital. It is going to provide us with information on the factors contributing to this that we might be able to address and correct if need be.

We would like you to please complete this anonymous questionnaire as fully as possible and drop it in the box provided.

Patient satisfaction is a health goal, being an indispensable factor of quality assurance. Therefore your participation is essential to the success for this research to find ways to of improving satisfaction with dental care that you receive.

This questionnaire is anonymous, confidential and your withdrawal from the research at any time will not impact on your treatment in anyway.



Thanks for your cooperation

Yours sincerely

Dr. Sowole A.A

I AGREE TO PARTICIPATE

DATE-----

SIGNATURE-----

APPENDIX 3



LAGOS STATE UNIVERSITY TEACHING HOSPITAL, IKEJA.

1-3, OBA AKINJOBI WAY, IKEJA.

DR. FEMI OLUGBILE MRCPsych.
Medical Director
08023118876, 4710670

DIRECTORATE OF
CLINICAL SERVICES
AND TRAINING

DR. A. O. FABAMWO
FWACS, FMCOG
Acting Director
08037787788, 4726572,
4937584

Ref. No: LASUTH/DCST/047

14th February 2006

Dr. A. A. Sowole,

PERMISSION TO CARRY OUT RESEARCH PROJECT.

I am directed to refer to your application for assistance towards your research project and to convey the approval of the Management after due recommendation by the Research and Ethics Committee for you to utilize our facilities for your project titled: "SATISFACTION WITH DENTAL CARE AT A NIGERIAN UNIVERSITY TEACHING HOSPITAL".

You are therefore advised to relate directly with the HOD, Dental Department, LASUTH for the required assistance.

Congratulations.


Ola. Salami.
Secretary, Research & Ethics Committee.



UNIVERSITY *of the*
WESTERN CAPE