

**IDENTIFYING THE DETERMINANTS OF CUSTOMER SATISFACTION OF THE
OCCUPATIONAL THERAPY SERVICES AT KATUTURA STATE HOSPITAL**

DECLARATIONS

I, Thelma Marwa, declare that the thesis is my original work. This is my submission of my own work. This thesis may not be reproduced without the permission of the author or the University of Namibia in that behalf.

A RESEARCH REPORT SUBMITTED IN PARTIAL FULFILMENT

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THELMA MARWA

STUDENT No. 201308150

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MAIN SUPERVISOR: DR KABWEBWE HONORE MITONGA

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Thelma Marwa.....*Thelma Marwa*..... Date.....*31/03/2017*.....

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ABSTRACT

Patients' satisfaction is important in healthcare services. It can be an indicator of quality of service in a hospital. Patients' satisfaction is defined as the clients' perception towards the service. Satisfaction is the experience which reflects whether patients like the quality of service for a hospital. The study aims to identify the determinants of customers' satisfaction of the Occupational Therapy Services at Katutura State Hospital in Windhoek. A comprehensive understanding of the patients' needs and their suggestions can be obtained. The information is significant because it can be used to improve areas with gaps.

The research design was a mixed approach - quantitative and qualitative. Questionnaires and interviews were used to collect data. A representative sample size of 385 respondents was collected using a probabilistic sampling method. Data was collected on the following dimensions: quality of care, physical environment and occupational therapy services. For each dimension, different attributes were evaluated in terms of minimum expectation, maximum expectation (ideal) and the actual state as perceived by the respondents.

The descriptive statistics were used to summarise data using the central tendency and dispersion parameters for quantitative variables, absolute and relative frequencies for categorical variables and Graphs. For the analytical part, the inferential statistics were used. The Chi-squared test was used to identify the determining factors of customers' satisfaction and the association between different categorical variables. The Statistical Package for the Social Sciences software version 23 was used to analyse data.

Results of the study showed that Occupational Therapy patients at Katutura State Hospital are satisfied with the quality of service. However, the service was not superior. Perceived quality mean was 5.51 while the desired quality of service was 9.45. 55.8% of the participants were males while females were 44.2%. 164 out of 385 patients who were seen at Katutura hospital were jobless. Out of the three dimensions; quality of care, physical environment and occupational therapy services, patients were mostly satisfied with quality of care with the adequacy mean of 1,02 and least satisfied with the physical environment which had a adequacy mean of 0,31. Patients were not satisfied with the cleanliness, ventilation, privacy lighting, waiting time, consent before treatment and follow up of patients. The Occupational Therapy Department is recommended to develop consent forms, improve on waiting time and

keeping appointments. The physical environment also needs to be improved in order to increase the patient's satisfaction level.

TABLE OF CONTENTS

DECLARATIONS	i
ACKNOWLEDGEMENTS	ii
ABSTRACT	iii
TABLE OF CONTENTS	v
LIST OF TABLES	viii
LIST OF FIGURES	ix
ANNEXURE	x
1. INTRODUCTION	1
1.1 Orientation of the proposed study	1
1.2 Statement of the problem	3
1.3 Objectives of the study	3
1.4 Significance of the study	4
1.5 Limitations of the study	5
1.6 Operational definitions	6
2. LITERATURE REVIEW	8
2.1 Introduction	8
2.2 Satisfaction	8
2.3 Determinants of customer satisfaction	9
2.3.1 Customer expectations	11
2.3.2 Perceived quality	12
2.3.3 Perceived value	13
2.3.4 Quality	13
2.3.5 Physical environment	18
2.3.6 Effectiveness of treatment	20
2.3.7 Respect and privacy	20

2.3.8 Availability of occupational therapy resources	21
2.3.9 Socio-demographic characteristics.....	22
2.3.10 Severity of sickness.....	26
2.3.11 Type of hospital	27
2.3.12 Communication.....	27
2.4 Occupational therapy services.....	28
2.5 Importance of patients` satisfaction.....	289
2.6 How to improve customer satisfaction	32
2.7 Conclusion	32
3 METHODOLOGY	34
3.1 Introduction	34
3.2 Research design.....	34
3.3 Population	34
3.4 Sample	33
3.5 Research instruments.....	35
3.5.1 Questionnaire.....	35
3.5.2 Interviews	36
3.6 Procedure	37
3.7 Data analysis	37
3.8 Research ethics.....	38
3.9 Conclusion	37
4. RESULTS.....	39
4.1 Introduction.....	39
4.2 Research Instrument and reliability.....	39
4.3 Demographic Characteristics	47
5. DISCUSSION, CONCLUSION, RECOMMENDATIONS AND LIMITATIONS OF STUDY	67

5.1 Introduction	67
5.2 Demographic data.....	67
5.7 CONCLUSION	80
5.8 RECOMMENDATIONS	81
5.8.1 Quality of care.....	81
5.8.2 Physical environment	81
5.8.3 Occupational therapy services	82
5.8.4 Demographic data	82
5.9 LIMITATIONS OF STUDY	Error! Bookmark not defined.
REFERENCES	83

LIST OF TABLES

Table 1: Dimensions Proposed by Researchers.....	15
Table 2: Survey Item Summary	41
Table 3: Core Question Dimensions Summary	43
Table 4: Standard Deviation.....	45
Table 5: Standard Deviation Error.....	46
Table 6: Demographic Characteristics.....	47
Table 7: Association between Age and Gender.....	50
Table 8: Association between Age and Occupation	51
Table 9: Satisfaction according to Gender: Quality of Care Dimension	52
Table 10: Satisfaction according to Gender: Physical Environment Dimension	53
Table 11: Satisfaction according to Gender: Occupational Therapy Services Dimension	54
Table 12: Summary for Satisfaction according to Gender for all the Dimensions.....	54
Table 13: Chi-squared Results for Gender.....	55
Table 14: Satisfaction according to the Occupation, Quality of Care Dimension	56
Table 15: Satisfaction according to the occupation, Physical Environment Dimension	57
Table 16: Satisfaction according to the occupation, Occupational Therapy Services Dimension	58
Table 17: Summary of Satisfaction according to Occupation for all the Dimensions	59
Table 18: Chi-Squared Results for Satisfaction According to Occupation.....	59
Table 19: Satisfaction According to the Age: Quality of Care Dimension.....	61
Table 20: Satisfaction according to Age: Physical Environment Dimension	62
Table 21: Satisfaction According to the Age: Occupational Therapy Dimension	63
Table 22: Satisfaction According to the Age Group for all Dimensions.....	64
Table 23: Chi-squared Results for Satisfaction According to Age.....	64

LIST OF TABLES

Table 1: Dimensions Proposed by Researchers.....	15
Table 2: Survey Item Summary	41
Table 3: Core Question Dimensions Summary	43
Table 4: Standard Deviation.....	45
Table 5: Standard Deviation Error.....	46
Table 6: Demographic Characteristics.....	47
Table 7: Association between Age and Gender.....	50
Table 8: Association between Age and Occupation	51
Table 9: Satisfaction according to Gender: Quality of Care Dimension	52
Table 10: Satisfaction according to Gender: Physical Environment Dimension	53
Table 11: Satisfaction according to Gender: Occupational Therapy Services Dimension	54
Table 12: Summary for Satisfaction according to Gender for all the Dimensions.....	54
Table 13: Chi-squared Results for Gender.....	55
Table 14: Satisfaction according to the Occupation, Quality of Care Dimension	56
Table 15: Satisfaction according to the occupation, Physical Environment Dimension	57
Table 16: Satisfaction according to the occupation, Occupational Therapy Services Dimension	58
Table 17: Summary of Satisfaction according to Occupation for all the Dimensions	59
Table 18: Chi-Squared Results for Satisfaction According to Occupation.....	59
Table 19: Satisfaction According to the Age: Quality of Care Dimension.....	61
Table 20: Satisfaction according to Age: Physical Environment Dimension	62
Table 21: Satisfaction According to the Age: Occupational Therapy Dimension	63
Table 22: Satisfaction According to the Age Group for all Dimensions.....	64
Table 23: Chi-squared Results for Satisfaction According to Age.....	64

LIST OF FIGURES

Figure 1: Service quality at Occupational therapy department, Katutura State Hospital	44
Figure 2: Gender	49
Figure 3: Age of Patients.....	49
Figure 4: Line Graph for Gender and Age	50

ANNEXURE

English Questionnaire

Questionnaire in English and Oshiwambo

Consent form for research participants

Approval letter from the Ministry of Health

ACRONYMS

SERVIQUAL -Service Quality

HIV-Human immunodeficiency virus

HAART-Highly Active Antiretroviral Therapy

SPSS-Stastical Package for the Social Sciences

CHAPTER 1

1. INTRODUCTION

1.1 Orientation of the proposed study

Satisfaction is the client's perception towards the service or product in terms of meeting or even exceeding their expectations (Kamra, K., Sharma, 2013). Researchers reported that customer satisfaction is very important to every organisation whether public or private (Ibrahim, 2008). Grant (2012) defined patient's satisfaction as the core of human experiences, when we are reflecting our liking of a hospital's services. Patient satisfaction is a highly desirable outcome of clinical care in the hospital and patient's expression of satisfaction or dissatisfaction is a judgement on the quality of hospital (Hirsh, 2004). In addition patient's satisfaction is a requirement for healthcare as it is related to the quality of hospital.

Patients' satisfaction surveys are done for several reasons. According to Vadhana (2012), a comprehensive understanding of the patients' needs and their suggestions can be obtained. Furthermore, gaps in the health systems can also be identified through satisfaction surveys. Health service providers can take actions to address concerns in the best possible way to ensure that minor problems do not become permanent complications (Custer, 2012). In private hospitals, satisfaction surveys can help to increase profit margins, while in public hospitals, they can help to improve the quality of service so as to best serve the community. High levels of client satisfaction with pleasurable experiences in profit making organisations are strong predictors of customer retention, customer loyalty and product repurchase; while in non-profit making organisations they are predictors of a good public image (Tung, 2003).

Determinants of customer satisfaction vary. Research has shown that the common determinants of patients' satisfaction include friendliness of staff and waiting time. It was

reported that therapist-patient relationship; friendliness and clear instructions determine satisfaction of patients.

Katutura State Hospital is a government hospital with a bed capacity of about 900. It is a national referral hospital, meaning that people from all over the country with complicated health cases are referred to the Katutura State Hospital. There are many departments including pharmacy, medicine, and physiotherapy, dental, nursing and occupational therapy. Satisfaction surveys have been carried out in other departments but literature shows that no survey was done for the occupational therapy department.

Occupational therapy is the assessment and treatment of physical and psychiatric conditions using specific activities to prevent disability and promote an independent function in all aspects of daily life (Otterbacher & Maas, 2001). In the Katutura State Hospital Occupational Therapy department, patients with conditions like burns, stroke, cerebral palsy, upper limb fractures, learning problems and many other diseases are seen. There are seven qualified occupational therapists, one rehabilitation worker, one occupational therapy assistant and one porter working in the department. Patients are referred for occupational therapy by the doctors, physiotherapists or school teachers. The occupational therapy system entails assessment, treatment, and reintegration, follow up and discharge of patients. The aim of occupational therapy treatment is usually to help a patient regain function after an injury or suffering from a disease. This study therefore focuses on customers' satisfaction with occupational therapy services at Katutura State Hospital.

1.2 Statement of the problem

There is no evidence of research which was done about satisfaction surveys for the Occupational Therapy Department at the Katutura State Hospital. The whole picture of the hospital depends on the service offered in different departments. If patients are not satisfied with the service received from any of the department, they will say that Katutura State Hospital has poor services and not necessarily mentioning the department in which they received the poor service. It is very important to do a satisfaction survey for occupational therapy services in order to assess the customers' service quality perception and satisfaction rate which will contribute to the improvement of the image of the whole hospital. Healthcare expenditure represents a substantial aspect of Namibian budget and there is increasing pressure to deliver quality and satisfactory services to the Namibian people.

Katutura State Hospital has been referred to in an Audit report which was ordered by President Pohamba in 2012 because of poor service (Kamwanyah, 2013). The President of Namibia (Hifikepunye Pohamba) ordered an inquiry in 2012 because of a huge public outcry (Kisting, 2012). Patients were complaining of health services at Katutura State hospital through the cell phone text message service (SMS) columns of the Newspapers and television. The complaints included longer waiting times, unavailability of resources, dilapidated physical environment and unfriendly staff members.

1.3 Objectives of the study

The research study aims to contribute to the improvement of the occupational therapy services by assessing the service quality and customer satisfaction rate and find out the

determinant factors that are associated with patient satisfaction at the Occupational therapy department, Katutura State Hospital. Therefore the objectives of this study are:

1. To identify the level of patients' expectations of the Occupational therapy service quality and the perceived quality.
2. To assess the customers' satisfaction levels with regards to the quality of the services offered by the Occupational therapy department considering different dimensions and attributes of the services such as quality of care, physical environment and occupational therapy.
3. Identify and analyse the demographic (gender, age and occupation) and other factors influencing the satisfaction levels of the patients, for guiding the improvement of the service quality of the Occupational therapy department.
4. To assess whether the Occupational therapy departmental services are meeting patients' expectations.

1.4 Significance of the study

The aspect of patients' satisfaction has not received much attention at the Occupational therapy department of the Katutura State Hospital. Researchers support the view of identifying the determinants of customer satisfaction to effectively deliver health services (Alrubaiee & Alkaaida`ida, 2011; Andaleeb, 2006; Berquist, 2014; Bosse & Group, 2008). Assessment of patient satisfaction is viewed by many authors as vital and necessary in modern health care delivery (Mancuso et al., 2003; Ogunsanwo, 2012; Sherif, & Van Wyk, 2013; Weis & Senf, 1990; Williams, 1994). Furthermore, it was stated that positive satisfaction with health care is further viewed as a determinant of patient compliance and subsequent health status outcomes.

Occupational therapy services are very crucial in the holistic treatment of both inpatients and outpatients of the Katutura State Hospital. Despite the widespread use of patient satisfaction measures, there has been only a small amount of research and writing on the topic in rehabilitation (physiotherapy and occupational therapy). It is therefore important to conduct a study, specifically for occupational therapy services, in order to identify gaps and improve on the services.

The department will be able to improve the established practices of occupational therapy and improve the public image of the Katutura State Hospital. The quality of care can improve through the feedback from the research. Patients' satisfaction has become an outcome indicator of the quality and efficiency of composite health care systems (Kamra.;Sharma, 2013). It is therefore important to conduct satisfaction surveys to know the determinants of customer satisfaction. Satisfaction surveys are significant since they help managers to understand and measure consumer perspectives and services quality gaps, so that any perceived gap in the delivery of service is identified and suitably addressed (Maas, 2001).

1.5 Limitations of the study

The participants of the study were patients. Some of the patients were interested in taking part in the research while others were not because of their health conditions. Many patients who visit the Katutura State Hospital have a low literacy level because it is regarded as a hospital for the poor. The level of understanding was low therefore questionnaires were translated into the main local language for the Katutura State Hospital patients which is Oshiwambo. The level of education for the participants might have some effect in the understanding of the questions. Although the questionnaires were translated to the most common local language some participants needed further explanations to understand what the research was all about.

There was a lot of literature about satisfaction of services however it was not from Africa or developing countries. There was not much literature for developing countries which made it difficult to compare the results with countries with the economy more or less like Namibia.

1.6 Operational definitions

Patient- is anyone who goes to the doctor, therapist, nurse or healthcare workers with an illness or sickness. A patient can also be a customer or consumer.

Customer- it is a person who make use of the health care service.

Consumer- is a person who is using the service.

Quality of care – comprises of waiting time, friendliness of staff, consent and engagement with patient.

Physical environment – is privacy, accessibility, cleanliness, lighting and ambiance.

Occupational therapy – is helping a person to regain independence using purposeful activities.

Perceived quality- a view or opinion patients have of the quality of service received.

Perceived expectation- the opinion patients have of service they will receive in future.

Service adequacy - In general, service adequacy is an indicator of the extent to which the Occupational therapy department is meeting the minimum expectations of the customers (patients). A negative service adequacy gap score indicates that the customers' (patients') perceived level of service quality is below their minimum level of service quality (LibQual Survey, 2012).

Service superiority - In general, service superiority is an indicator of the extent to which the Occupational therapy department is exceeding the desired expectations of the customers. A positive service superiority gap score indicates that the customers' perceived level of service quality is above their desired levels of service quality (LibQual Survey, 2012).

1.7 Conclusion

The introduction has highlighted that customer satisfaction surveys are important in hospitals. There is no evidence of satisfaction surveys which were done previously at the Katutura State Hospital. The objectives of the study include determining factors which influences satisfaction. In the next chapter the literature is reviewed.

CHAPTER 2

2. LITERATURE REVIEW

2.1 Introduction

Under this section a review of literature was done. Different sources were used including text books, internet sources, journal articles and newspapers. Information related to the objectives was researched, read, analysed, compared and contrasted.

2.2 Satisfaction

Patient satisfaction is broadly defined as the human experience of being filled and enriched by an experience (Agosta, 2005). Patient satisfaction can be defined as *“the level of congruence between patients’ expectations and their perceptions concerning care received”* (Onyeonoro, Chuku, Nwafor & Duru, p25, 2015).

There are a lot of definitions of patients’ satisfaction, however, they all talk about experience, needs and expectations (Agosta, 2005; Alrubaiee & Alkaaida’ ida, 2011; Berquist, 2014; Chika, 2012; Onyeonoro et al., 2015). According to Mwihoti (2015), the ultimate validation of quality is patient satisfaction while Oliver (2005, p.67) define satisfaction as *“a post consumption judgement by the consumer that a service provides a pleasing level of consumption-related fulfilment, including under or over fulfilment”*. Alrubaiee and Alkaa’ida, (2011) agree with Oliver (2005) that satisfaction mirrors the quality of health service delivered while Onyeonoro et al., (2015) view patient satisfaction as an evaluation factor of quality. Furthermore patients’ satisfaction and quality of care at a hospital are positively related hence, patients’ satisfaction increases as the quality of care increase.

There are many studies which were carried out about the relationship between patient satisfaction and quality (Finley, 2001; Grant, 2012; Griskonis, 2006; Ibrahim, 2008; Kamra & Sharma, 2013). It is agreeable that there is a positive relationship between quality of care and satisfaction of patients; the higher the quality of service the higher the satisfaction rate of patients. On the contrary, Mackary (2013) carried out a study in the United States of America hospitals and found out that there was no link between patient satisfaction and quality of care. The author argued that although it is important to track patients' satisfaction, it is misleading to say that the quality of care determine satisfaction.

There is evidence of a reciprocal relationship between patient satisfaction and continuity of care (Grant, 2012). Furthermore satisfied patients spread through word of mouth and social media their positive experience hence the good public image of the hospital. On the other hand, dissatisfied patients spread negative experience to the others and the risk of lawsuits increases. Grant (2012) and Prakash (2010) agree that patient satisfaction affects clinical outcomes, patient retention and medical malpractice claims. In another research conducted by Boshoff and Gray (2004), results show that when patients are fully satisfied with the service they receive they will comply with the treatment and always come back to the same hospital in future. A satisfied patient is more compliant and more likely to be willing to follow the doctor's prescription therefore satisfaction has an impact on the treatment outcome of a patient (Tobergte & Curtis, 2013; Gurung, 2003; Ibrahim, 2008; Hillis, 2008; Ogunsanwo, 2012; Qin & Prybutok, 2009; Tayue, Tateke, Woldie, & Ololo, 2012).

2.3 Determinants of customer satisfaction

Determinant is defined as a factor which decisively affects the nature or outcome of something (Andaleeb, 2006). There are many factors which determine satisfaction of customers. Quality and physical environment are the most common determinants of

satisfaction (Bosse & Group, 2008; Clark, 2008; Finley, 2001; Gurung, 2003; Harris, McBride & Curtis, 2002). A survey was carried out by Onyeonoro (2015) in Nigeria with 378 participants and the aim was to find out the patients' satisfaction with Tuberculosis services. Results showed that least satisfaction rates were in the waiting time, staff attitude and amenities. These findings are supported by Nyandoro (2012) who conducted a study in a hospital in Pretoria (South Africa) and discovered that patient dissatisfaction is mainly as a result of the amount of waiting time, poor staff attitude and limited access to care.

Courtesy, convenience and communication are important determinants of customer satisfaction (Calin, Paula & Ovidiu, 2015). Calin, Paula and Ovidiu (2015) investigated the level of satisfaction of Romanian customers with the pharmaceutical providers and discovered that 53% of the customers were satisfied with the general services. The findings of Stergachis, Maine and Brown, (2002) who carried out a study in the United States of America showed that 85% respondents were satisfied with pharmaceutical services. Patients expectations, health status, socioeconomic and demographic characteristics determine patients' satisfaction (Crow, Gage, Hampson, Hart, Kimber, Storey & Thomas, 2002). Prakash (2010) listed the main determinants of dissatisfaction as follows:

- Poor communication
- Lack of empathy
- Chronicity of many disorders
- Age- younger people are more likely to be dissatisfied because they look for quick solutions.

Cheng and Chang (2003) state that the determinants of patient satisfaction have been extensively reported and concluded that there is still no consensus on a mechanism that produces expressions of satisfaction. There are models developed to measure customer

satisfaction, for example the Swedish Customer Satisfaction Barometer and the American Customer Satisfaction Index (Yazdanpanah, Zamani, Hochrainer-Stigler, Monfared & Yaghoubi, 2013). The American Customer Satisfaction Index looks at how customer expectation, perceived service quality and perceived value affect customer satisfaction.

2.3.1 Customer expectations

Cheng and Chang (2003) described customer expectations as the anticipation that certain events will happen during receiving treatment or as a result of the treatment. Furthermore, expectations are the beliefs about the likelihood of future services and expectations can be the attitude, desires, anticipation and entitlement of a patient. Expectations can be influenced by previous experience and beliefs hence they can change overtime (Widmar, 2012).

Afkhamebrahimi and Esfehiani (2012) explain that patients are active participants of the health care therefore they have idealised expectations of the service they would want to receive. The authors further propound that, if there is a big gap between the expectations and what they actual receive, the satisfaction levels becomes lower. In conclusion they suggest that the hospitals should strive to fulfil the expectations of patients in order to increase the satisfaction.

Customer satisfaction is a construct that affects perceived quality, perceived value and customer satisfaction (Yazdanpanah et al., 2013). Furthermore attitude and customer expectations are similar. Attitude is the degree of a person's favourable or unfavourable evaluation or appraisal of the behaviour in question and attitude has direct effects on satisfaction (Porta & Lopez-De-Silanes, 1998). Satisfaction is dependent upon the person's attitude, the more positive the attitude is, the higher the probability of satisfaction. In a study carried out by (Tayue et al., 2012), it was established that patients in public hospitals have a lower expectation about the services to be received than those in the private hospitals.

Expectation is an important determinant factor for satisfaction (Tayue et al., 2012). Mpinganjira (2011) also mention that to render excellent service, one has to understand customers' expectations.

According to Crow et al., (2002), expectations of patients is influenced by the desires and needs. They further highlighted that high satisfaction can be scored even though there is poor service and this is because patients might have limited knowledge of opportunities. A study was conducted to find out whether the patients expectations influence satisfaction (McKinley & Adams, 2002). Patients who received the services they hoped for were satisfied. (McKinley & Adams, 2002).

It was discovered that patients who received the services they hoped for were satisfied. Patients who had lower expectations were also satisfied with the service they received than the patients who had high expectations. The researchers concluded that in addition, he reported that Issa, Naziri and Mont (2013) mention that satisfaction levels depend on the ability of patients to evaluate technical aspects of the service. Furthermore, they propose that it is hard for the patients to judge technical competencies of healthcare workers because of the informative asymmetry.

2.3.2 Perceived quality

Perceived quality determines the satisfaction of customers hence if perceived quality increases, customer satisfaction should increase as well (Qin & Prybutok, 2009). How patients view quality can lead them to make a judgement of whether the service is adequate or superior (Cook, 2012).

Service adequacy

Service adequacy is an indicator of the extent to which the Occupational Therapy Department is meeting the minimum expectations of the customers (patients). A negative service adequacy gap score indicates that the customers' (patients') perceived level of service quality is below their minimum level of service quality (LibQual Survey, 2012).

Service superiority

Service superiority is an indicator of the extent to which the Occupational Therapy Department is exceeding the desired expectations of the customers. A positive service superiority gap score indicates that the customers' perceived level of service quality is above their desired levels of service quality (LibQual Survey, 2012).

2.3.3 Perceived value

Ibrahim (2008) defined perceived value as customer's evaluation of the utility perceived benefits and perceived sacrifices. According to the American Customer Satisfaction Index if the perceived value is high the customer will be satisfied (Yazdanpanah et al., 2013). If patients see the service received as very valuable they are likely to be satisfied with the service (Johnson, Gustafsson, Andreassen, Lervik & Cha, 2001).

2.3.4 Quality

Quality of service is defined as the measure of performance in a system or the ability of the service to meet or exceed a patient's expectations. (Mallapaty, 1999). Quality is a very important factor in determining satisfaction of patients (Grant, 2012; Weis & Senf, 1990; Westaway, Rheeder, Van Zyl & Seager, 2003). Patients who are satisfied with the quality of service in hospitals associated with high quality (Grant, 2012; Hussain, 2012; Ibrahim, 2008;

Tayue et al., 2012; Weis & Senf, 1990; Westaway et al., 2003). Patients tend to become more loyal and stick to their treatment regime if quality service is offered (Finley, 2001). Furthermore, quality is all the characteristics of the service related to its ability to satisfy the given needs of its customers (Nyandoro, 2012).

Crow et al., (2002) suggests that quality of service entails two dimensions which are technical and functional quality. Accuracy of diagnosis and procedures are part of technical quality while functional quality involves the way services are delivered to patients (Grant, 2012). Recognition of the patients' needs and expectations is crucial in defining and delivering high-quality services. Meeting patients' expectations is related to high quality and high levels of satisfaction (Muntlin, 2009).

The African Journal of Medical Sciences reported that the quality of the healthcare system in Africa has become a major concern due to seemingly intractable poor health indices in most countries (Tayue et al., 2012). However, little is being done to improve quality which has resulted in many patients' dissatisfaction. Tewarie (2003) pointed out that some years ago quality and standards focused on the availability of staff and equipment in hospitals. Attention has shifted to safety, accessibility and effectiveness of care to attain high quality in health care (Tayue et al., 2012).

Quality of service is determined by five dimensions which include: tangibles, reliability, responsiveness, assurance and empathy (Sower, Duffy, Kilbourne, Kohers, & Jones, 2001). There are several dimensions of quality (Qin & Prybutok, 2009). The Service Quality (SERVQUAL) tool can be used to measure quality universally without adapting (Onyeonoro et al., 2015; Sower et al., 2001), while other researchers suggest that it cannot be used without adaptations (Alrubaiee & Alkaa'ida, 2011 and Chakravarty, 2011; Zaim, Bayyurt & Zaim, 2010). Table 1 shows different dimensions proposed by different researchers.

Table 1: Dimensions Proposed by Researchers

Evan's and Lindsay's service dimensions	Parauraman et al's SERVQUAL Dimensions	Coddington's Dimensions	JCAHO Dimensions
<i>Time</i>	<i>Tangibles</i>	<i>Warmth/caring/concern</i>	<i>Efficacy</i>
<i>Timeliness</i>	<i>Reliability</i>	<i>Medical staff</i>	<i>Appropriateness</i>
<i>Completeness</i>	<i>Responsiveness</i>	<i>Technology</i>	<i>Efficiency</i>
<i>Courtesy</i>	<i>Assurance</i>	<i>Equipment</i>	<i>Respect & caring</i>
<i>Consistency</i>	<i>Empathy</i>	<i>Specialisation/services available</i>	<i>Continuity</i>
<i>Accessibility</i>		<i>Outcome</i>	<i>Effectiveness</i>
<i>Convenience</i>			<i>Timeliness</i>
<i>Accuracy</i>			<i>Availability</i>
<i>Responsiveness</i>			

Adapted from (Qin & Prybutok, p45, 2009).

For the purpose of this research, five basic dimensions are discussed in detail and these are:

- **Tangibles**

Service is intangible but it can be complimented by physical evidence like the equipment used, appearance of the department, communication materials and the appearance of personnel (Chakravarty, 2011). The researcher further emphasised that patients are able to

In order to increase the quality of services, waiting time of patients has to be reduced (Daniel, 2013). In agreement, Ibrahim (2008) mentions that hospitals need to continuously improve on the waiting time of patients. The waiting time at public/government hospitals is longer than private hospitals as they have limited human resources, materials and equipment to enable patients to be seen in time (Daniel & Daniel, 2012; Murante, 2010; Ogunsanwo, 2012; Tayue et al., 2012; Vadhana, 2012).

Reliability of hospitals is essential as it builds patient loyalty (Queshi, 2005). There is a positive relationship between patient satisfaction and reliability. Nyandoro (2012) reported that reliability denotes the hospital's ability to deliver guaranteed service in a dependable and accurate way. Reliability is crucial in determining quality and satisfaction (Alrubaiee & Alkaa'ida, 2011; Hussain, 2012; Peprah, 2014; Qin & Prybutok, 2009).

- **Responsiveness**

Responsiveness is defined as the readiness and willingness of employees to help customers by providing prompt and timely services (Chakravarty, 2011). The good responsiveness of hospital staff can result in higher levels of patient satisfaction (Andaleeb, 2006). Basic expectations of patients is to receive treatment from skilled and competent staff who respond to their needs efficiently. Public hospitals need to improve staff competencies in order to improve patients' satisfaction (Tateke, 2012; Andaleeb, 2006).

- **Empathy**

Empathy involves caring, individualised attention the firm provides its customers (Zaim, Bayyurt & Zaim, 2010). Muntlin (2009) described empathy as the experience of understanding another person's condition from their perspective where a person puts himself or herself in their shoe to feel what they are feeling. Brown (1990) defined empathy as the

ability to act upon gained insight to plan and provide patient care. Empathy is very important in services as it can lead customers or patients to satisfaction (Gurung, 2003; Hussain, 2012). Gurung (2003) carried out a research in Thailand about empathy in healthcare settings and the results showed that empathy has a positive effect on patients' satisfaction. Additionally, patients' were satisfied in the health settings where health workers were empathetic. Whitaker (2010) also agree with the findings of Gurung (2003) who found that patients were dissatisfied because the healthcare workers were not empathetic. Empathy is a quality dimension which should be taken seriously to reduce dissatisfaction of patients (Hussain, 2012).

- **Assurance**

Assurance is a dimension of quality defined as the knowledge, courtesy and ability to convey trust (Rad, Som & Zainiddin, 2010). Finley (2001) describe assurance as a dimension which includes the employees' courtesy, knowledge, skills, confidence and ability to make the patient feel safe. Similarly to other dimensions, there is a positive relationship between assurance and patients' satisfaction (Daniel, 2013). Furthermore, patients who are highly assured about the service are more likely to be highly satisfied. In a study carried out by Nyandoro (2012) in South Africa, findings revealed that out of all the dimensions (intangibles, reliability, empathy, assurance and responsiveness dimensions); assurance was the strongest predictor of patient satisfaction.

2.3.5 Physical environment

The physical environment can influence how patients perceive the service of an organisation (Ibrahim, 2008). The physical environment is defined as the ambient, architectural or interior design features that are purely stimulus objects (Ogunsanwo, 2012). In Italy, a study was carried out in 2010 by Murante to determine the satisfaction levels of outpatients and

inpatients. The study focused more on how the physical environment influenced the satisfaction of the service and the findings revealed that noisy and dirty hospitals had a higher percentage of dissatisfied patients (Murante, 2010).

The physical environment influence how patients view dignity in care in the hospital (Daniel, 2013; Gurung, 2003; Ibrahim, 2008). Despite The physical environment being one of the crucial determinants of customer satisfaction, it was documented that little has been done to improve the physical environment especially in hospitals in Africa (Nyandoro, 2012).

Bitner 2009 and Bossie (2008) agree that the physical environment has an influence on patients' satisfaction, employees' motivation and productivity. Bitner (2009) further state that before using the service, patients already have a view of the quality of service to expect by merely looking at the physical environment of the hospital. Scientific literature is confirming that improved physical settings can be an important tool in improving satisfaction of patients in hospitals (Gurung, 2003; Ibrahim, 2008). Additionally, reduced noise, improved lighting, better ergonomics and improved layout are associated with patients' satisfaction. *“Renovating a traditional waiting area in a neurology clinic by making small changes to the general layout, colour scheme, furniture, floor covering, curtains, and providing informational material and information displays resulted in more positive environmental appraisals, improved mood, altered physiological state, and greater reported satisfaction among waiting patients”* (Leather, Beale, Santos, Watts & Lee, p 29, 2003).

The physical environment is a significant predictor of overall satisfaction, ranking only below the perceived quality of nursing and clinical care (Harris, McBride & Curtis, 2002). Similarly, Vadhana (2012) reported how important the Physical environment was in determining satisfaction. The author explained that there were low levels of satisfaction in the physical environment, waiting time and cleanliness.

Current research on patients' satisfaction and physical environment which was conducted in Cameroon shows that patients were dissatisfied with the physical environment of the hospital. Cleanliness of the hospital facility was rated 40% satisfaction while other variables like staff – patient communication was rated 99% satisfaction (Wung, Peter & Atashili, 2016).

“Cleanliness is not the only indicator of a hospital's quality, it is an important factor in patients' satisfaction”, (Qin & Prybutok, p61, 2009). Furthermore, cleanliness does not only mean sparkling floors but also the environment. A clean environment reduces healthcare-associated infections (Gurung, 2003).

2.3.6 Effectiveness of treatment

According to Belohlav (2010), effective healthcare provides services based on proven science to everyone who could benefit and refrains from providing services to those who are not likely to benefit.

2.3.7 Respect and privacy

According to Muntlin (2009), it is important to respect patients' dignity, confidentiality and autonomy. Patients have a right to privacy and if it is not respected the level of satisfaction with the hospital goes down. In a recent study conducted in Ghana to find out the satisfaction of Humana Immunodeficiency Syndrome (HIV) patients regarding confidentiality and privacy, Dapaah (2016) discovered that more than 50% of the HIV patients were uncomfortable with the health service because of inadequate privacy and confidentiality. Patients reported that, staff members were disclosing their status to other community members and they were not satisfied with the quality of service.

Patients were satisfied with the privacy at the hospital and privacy had a satisfaction rate of 90% (Wung, Peter & Atashili, 2016). Patients could talk with staff in private and patients' files were kept in lockable cupboards. Patients have become more active recipients of

healthcare and they want to be treated with respect so that they can be satisfied by the services (Ogunsanwo, 2012). Patients should be treated with dignity and be engaged as individuals.

2.3.8 Availability of occupational therapy resources

Resources range from manpower, materials and money are needed to deliver services effectively (Sherif et al., 2013). It was reported that experienced staff is required to deliver quality healthcare (Gurung, 2003). Good staffing ratios of patients to healthcare staff are associated with improved patients' outcomes and patients' satisfaction (Daniel, 2013; Daniel & Daniel, 2012; Gurung, 2003). They have similar views that adequate resources are needed to effectively deliver services.

In occupational therapy, the establishment of rapport is important in delivering effective treatment therefore it is mandatory to have a good staff patient ratio (Parker, 2012). The process of occupational therapy entails using different resources including human resources, aiming to help the patient reach maximum independence (Otterbacher & Maas, 2001; Parker, 2012). Additionally, effective treatment increases the chances of patient satisfaction.

In a study carried out in London about the satisfaction of patients with the occupational therapy services it was found that there was a high level of dissatisfaction (Parker, 2012). 48% of the patients were dissatisfied with some aspect of the care they received in hospital and over half (53%) were dissatisfied with some aspect of the services they received in the community. The highest rate (54%) of dissatisfaction was with the number of occupational therapy sessions they received. Patients were receiving few sessions due to an inadequate number of occupational therapists at the hospital.

Chika (2012) also conducted a study on satisfaction of the elderly people with therapy. The results showed that patients were not satisfied with the resources available and the other

variables which were important to them included being treated with humanity, being acknowledged as individuals, having their autonomy respected, having confidence and trust in professionals and dialogue and exchange of information. Satisfaction was merely connected to daily care experiences and fulfilment of basic needs. Trust in providers and being dignified seemed more closely associated with satisfaction than being involved in treatment decisions (Chika, 2012). The findings also demonstrate how the quality of patient-professional interaction influences patients' satisfaction with stroke rehabilitation.

Otterbacher (2001) and Parker, (2012) claimed that the availability of resources should not be a big problem in occupational therapy departments. Occupational therapists are creative and can use cheap materials to make different assistive devices that can help patients recover fully (Otterbacher, 2001; Parker, 2012).

2.3.9 Socio-demographic characteristics

Demographic characteristics have an effect on patients' satisfaction (Naidu, 2009). In addition, age, education, race and social class determine satisfaction. The findings of the research determined that sometimes the results of determinants of satisfaction according to demographic data are contradictory and not consistent. This claim was supported by Alrubaiee and Alkaa'ida (2011) who stated that demographic characteristics and satisfaction changes according to different populations. Furthermore, many studies were conducted to determine the demographic variables which are correlated to satisfaction. The studies have varying results making it difficult to conclude that all demographic characteristics positively correlate to satisfaction. Calin, Paula & Ovidiu (2015) reported that the most satisfied patients are:

- Females
- 56-70years age group

- High level of education
- High socioeconomic class
- No chronic diseases
- High monthly income
- Married

In this study literature of the four socio-demographic characteristics are discussed which include age, gender, education and racial/social class.

Age

According to Bitner, (2009) there is a relationship between age and the level of satisfaction (Bitner, 2009). The study showed that the older patients were more satisfied than younger patients. This was probably because the older patients were very accepting to even lower quality of service than the younger ones. Bruster, Jarman, Bosanquet, Weston, Erens & Delblanco, (1994) support the findings of Bitner (2009). The level of satisfaction increases as one grows older. Hence, satisfaction is positively related to age.

Alrubaiee and Alkaa`ida (2011) study results which concur to Bitner (2009) and Bruster et al. (1994) who support that elderly patients are more satisfied and trust hospital staff than younger patients. Onyeonoro (2015) observed that young people generally have the least satisfaction levels. In addition, they propound that elderly people are more satisfied with hospital services probably because of the differences in the manner they are treated due to their age.

Vadhana (2012) stated that age is the socio-demographic characteristic which has a close relationship with satisfaction level. *"People aged between 35 and 49 years who form a major part of the consumer cohort, have the lowest patient satisfaction scores compared with other age groups"* (Prakash, p152, 2010). Furthermore, young people are less likely to be satisfied

and this is because they want quick services. From the literature reviewed, all the researchers agree that young patients are less likely to be satisfied (Alrubaiee & Alkaa'ida, 2011; Bitner, 2009; Bruster et al., 1994; Onyeonoro et al., 2015; Prakash, 2010; Vadhana, 2012).

Gender

Literature stated that there is variation in the results which were obtained by researchers on the studies of association of gender and satisfaction (Daniel, 2013; Ibrahim, 2008; Mwihoti, 2015; Woods, S. E. & Heidari, 2003). They concluded that gender has little significance in determining satisfaction.

Similar results were obtained in two different studies where it was found that males were more satisfied than women (Alrubaiee & Alkaa'ida, 2011; Mwihoti, 2015). In both studies males had higher satisfaction levels. Men rated most of the variables regarding health services high.

Another study was conducted in a hospital in Saudi Arabia and the results shows that men were more satisfied than women (Alrubaiee & Alkaa'ida, 2011; Ibrahim, 2008). Alrubaiee and Alkaa'ida (2011) and Ibrahim (2008) explain that men understands technical questions better than women hence they can rate the services well while some women often have difficulties in understanding technical questions and always end up rating the services lower. However, Mwihoti (2015) argue that if patients do not understand the aspects of the variables they do the opposite of what Ibrahim (2008) proposed (Ibrahim, 2008; Mwihoti, 2015). Patients tend to rate every variable high rather than low.

Contrary to the above findings, women are more satisfied and feel more trust than males (Mancuso et al., 2003; Oguntibeju, Ndalumbo, & MokgatleNthabu, 2011). Furthermore, they stated that gender is significantly associated with patients' satisfaction.

Woods and Heidari (2003) reported that women expressed significantly more satisfaction than men. In addition, younger women were more satisfied than younger men but the researcher failed to explain whether the satisfaction was because of gender or age. Additionally, men and women view different variables as important determinants of satisfaction. Satisfaction of men depends on the personal interest shown by providers while women depends on communication between patient and staff and continuity of care (Mancuso et al., 2003; Oguntibeju et al., 2011; Woods, S. E. & Heidari, 2003) .

Education

Education is another factor of significance in determining satisfaction (Tayue et al., 2012). Westaway et al. (2003) and Mwihoti (2015) stated that as the level of education increases the satisfaction rate decreases. They further stated that there is a negative relationship between satisfaction and the level of education. It was concluded that, when one becomes more educated, he or she has more knowledge about the health systems and is able to reason beyond the uneducated person. According to Hall and Dorman (1990), the level of education of a person can help him/her to judge the quality of service and educated people have higher expectations than the less educated ones. Onyeonoro et al. (2015) opposed the above findings; they observed that a higher educational level is correlated to higher satisfaction of hospital services. Additionally they stipulate that more educated people were more satisfied than the less educated ones.

Race/ Social class

Race and social class have an impact on satisfaction levels of patients (Alrubaiee & Alkaa'ida, 2011). A study was conducted by Bonald (2004) to find out whether race or ethnicity has an impact on patients' satisfaction. The other demographic variables were controlled and the results showed that there was no significant difference between the white

patients and non-white patients' satisfaction. However, the conclusion reveals that in measuring patients' satisfaction, patient race should also be included as an explanatory variable. Contrary to the findings of Bonald (2004), Mancuso et al., (2003) and Tayue et al., (2012) reported that racial and ethnic minority patients like blacks and Hispanics tend to receive lower quality care hence lower satisfaction rates are recorded. He pointed out that minority groups are generally less satisfied with hospital services.

Ogunsawo (2012) carried out a study in South Africa to determine whether social class and race had an effect on patients' satisfaction (Ogunsanwo, 2012). The results showed that blacks and lower class people were less satisfied with the hospital services. The whites and high social class people reported excellent health services. The whites were more satisfied than the blacks.

2.3.10 Severity of sickness

Besides the quality dimensions and demographic characteristics, there are other factors which can contribute to the levels of satisfaction and these includes the severity of sickness of patients (Gurung, 2003; Tayue et al., 2012). Grant (2012) reported that less ill patients are more satisfied than seriously ill patients. Patients with life threatening diseases expect a lot more from health care workers to help them to get better quickly.

In a hospital in the United Kingdom, chronic patients with less life threatening sicknesses and the acute patients with life threatening sicknesses were interviewed (Parker, 2012). Results showed that over 70% of patients who had less life threatening sicknesses were satisfied with the services. On the other hand, only 30% of the patients with life threatening sicknesses were satisfied. From the interviews patients with life threatening sicknesses highlighted that they expected faster and multidisciplinary services (Parker, 2012). Nyandoro (2012) had a

different view regarding severity of sickness and satisfaction and stated that there is no significant relationship between severity of illness and patients' overall satisfaction.

2.3.11 Type of hospital

Patients' satisfaction vary according to the type of the hospital (Alrubaiee & Alkaa'ida, 2011; Sharma & Kamra, 2013). Patients in private hospitals are more satisfied than patients in public hospitals (Alrubaiee & Alkaa'ida, 2011; Finley, 2001; Kamra, K.; Sharma, 2013; Sharma & Kamra, 2013; Tewarie, 2003). Sherif et al. (2013) carried out a study in Saudi Arabia to determine the satisfaction levels in private, public and teaching hospitals. The results showed that patients were more satisfied with occupational therapy in teaching hospitals. This was because a client centred approach based on the importance of giving attention, information and the feeling of security in treatment was high in educational hospitals where explanations and detailed information about treatment plan was significantly correlated to patient satisfaction.

2.3.12 Communication

Communication between the therapist and the patient is very important in determining the satisfaction of the patient (Otterbacher & Maas, 2001). Additionally, if there is a language barrier, patients are more likely to be dissatisfied with the service. In the United States, communities which were not English proficient were not satisfied with the healthcare services (Mancuso et al., 2003). Patients could not understand the instructions given to them in English and it resulted in many patients not compiling to the treatment and never came back for follow ups. On the other hand, limited English proficient patients who were provided with interpreters were more satisfied. The patients rated the quality of care poor because they could not communicate effectively with the health care providers. Patients are not medical experts therefore they use factors like communication to rate satisfaction (Mancuso et al.,

2003). Authors agree that clear and simple instructions are important as they influence satisfaction (Gurung, 2003; Ibrahim, 2008; Muntlin, 2009; Murante, 2010; Tayue et al., 2012)

2.4 Occupational therapy services

Occupational therapy services are one of the satisfaction dimensions in this study. Occupational therapy aims at increasing the range of motion, function and quality of life in patients. Smaller group therapy sessions, continuity of care and hands on-time with the therapist determine patients' satisfaction levels (Issa, Naziri & Mont, 2013). Furthermore, occupational therapy services include providing devices to patients for example, wheelchairs, corner chairs, splints and adapted utensils with an aim of enabling a patient to be independent. A splint is a device which is used by patients temporarily to substitute for loss of function or for correcting position of joints (Maas, 2001). It is very important for satisfaction surveys to be done as they are considered as outcome measures in evidence-based healthcare and client-centred approach (Otterbacher & Maas, 2001).

Occupational therapists work with adult patients and paediatrics. They also see different conditions assessing, treating and integrating them into the society (Law, Baptiste & Mills, 1995). Additionally, occupational therapy is well known for using therapeutic models which focuses on using occupation as means and end and it also focuses on activities of daily living which has three main areas; work, leisure and play.

Occupational therapy services are different from nursing services and this is because occupational therapists treat patients holistically, meaning that they do not only focus on one problem area (Parker, 2012). This result in high quality services of occupational therapy, hence the satisfaction levels of occupational therapy patients tend to be generally high. Contrary to Occupational therapy departments patients, Emergency departments patients are not always satisfied with the care they receive because the nursing care in the emergency

departments is sometimes described as instrumental and non-holistic (Muntlin, 2009). Clark (2008) reported that physical therapists and occupational therapists are not the frequently cited healthcare workers with whom persons with disabilities report dissatisfaction. There is evidence that patients are often satisfied with occupational therapy (Chiu, T., & Ticle-Degnen, 2002; Law, M., Baptiste, S., & Mills, 1995; Maas, 2001).

According to Law, Baptiste and Mills (1995), in occupational therapy satisfaction reflects client autonomy and partnership with the occupational therapist. In a survey was carried out by Clark (2008) which aimed to find out the factors that influenced satisfaction in occupational therapy patients, the results showed that regaining of independence or being able to function like before the illness was the number one factor which influenced satisfaction. Patients who were dependent in the activities of daily living were dissatisfied with occupational therapy. She concluded that measures of patient satisfaction with rehabilitation should include items regarding progress and degree of return to independent. The findings of Bergquist (2014) are consistent with the results of Clark (2008) who agree that brain injured patients who were mostly satisfied with occupational therapy were the ones who were independent in activities of daily living.

According to Mancuso et al. (2003) in occupational therapy, patient's values preferences in treatment goal setting are very important as they determine treatment compliance and satisfaction. In addition, patient participation in the treatment process leads to patient's satisfaction. There is evidence which indicates that satisfied patients are more likely to cooperate with treatment program, keep follow-up appointments and use the same facility for future care (Mancuso, Smith & Otterbacher, 2003) . Conversely, dissatisfied patients do not stick to the treatment program hence poor treatment outcomes.

Patients and occupational therapists have different views of quality. The patients view quality as availability of services, receiving treatment promptly and the friendliness of health care providers (Chiu & Ticle-Degnen, 2002). Occupational therapists on the other hand consider technical competence, effectiveness and safety as quality. Patients are unable to rate quality using technical competency or effectiveness because they do not have the technical knowledge of occupational therapy (Peprah, 2014).

2.5 Importance of patients' satisfaction

Onyeonoro et al. (2015) state that the purposes of patient satisfaction surveys include:

1. To compare different health-care programmes or systems
2. To evaluate the quality of care
3. To identify the aspects of a service need to be changed to improve patient satisfaction

Identification of gaps in healthcare

“Healthcare workers should go through the same decision making process as military generals where leaders must diagnose a situation, seek out relevant data and determine the intervention that will best mitigate the risk, given the resource constraints” (Ogunsanwo, 2012). Despite the growing importance of satisfaction surveys in the healthcare systems, there are few publications on surveys which were carried out in the occupational therapy area to determine the satisfaction levels of patients (Maas, 2001). Although occupational therapy is client-centred which leads to a general higher satisfaction of patients surveys helps to identify the gaps in the services (Grant, 2012).

Loyalty and Compliance

According to Nyandoro (2012) satisfied patients talk openly to others about their experience with the hospital and this will make the patients loyal to the hospital. Furthermore, if patients

are dissatisfied, they will move from one hospital to another until they find a hospital that suit their needs and expectations. Satisfied patients are loyal and compliant to the hospital.

Patients' satisfaction with a particular hospital increases loyalty with that hospital (Tewarie, 2008). Patients often comply with their follow up and treatment programmes. According to Wung et al., (2016) HIV patients who are satisfied with the hospital services tend to adhere to their Highly Active Antiretroviral Therapy (HAART) programmes hence better treatment outcomes (Wung, Peter & Atashili, 2016). Clients have explicit desires or requests for services when visiting hospitals and inadequate discovery of their needs may result in dissatisfaction. Many researchers agree that satisfaction is associated with compliance with treatment programs of patients (Nyandoro, 2012; Prakash, 2010; Tewarie, 2003; Wung, Peter & Atashili, 2016).

Good public image

Satisfied patients give a hospital good image (Prakash, 2010). Patients talk about positive things about the hospital. Dissatisfied patients talk negative things about a hospital hence bad public image. Patients satisfaction helps to enhance corporate image as patients spread a positive word of mouth (Nyandoro, 2012). Consumer's level of satisfaction has an effect on the image of pharmacists and the hospital at large by (Opra, 2006). Consumers were dissatisfied with the provision of non-drug services in the community pharmacy and it gave the hospital a bad image.

According to Prakash (2010), if patients are satisfied with the service, they will go and tell four other people about positive things about the hospital. On the other hand, if the patient is dissatisfied or annoyed by the service, he or she will go and tell ten other people about the bad service he /she received from the hospital. The negative comments spreads quickly hence bad public image of the hospital. Kleinjan, (2013) concurs with Prakash (2010), who states

that hospitals have to be concerned about their customers' satisfaction since dissatisfied customers can quickly spread bad word of mouth to the public which tarnishes the image of the hospital (Kleinjan, 2013; Prakash, 2010).

Costs and lawsuits reduction

Good public image of a hospital reduces the costs (Hall, & Dorman, 2005). If patients are satisfied with the service lawsuits against the hospital becomes minimal. Many hospitals lose money each year through lawsuits filed by patients who are dissatisfied with the service (Alrubaiee & Alkaa'ida, 2011).

2.6 How to improve customer satisfaction

Hospitals that listen to their clients have clients with higher levels of satisfaction (Sharma & Kamra, 2013). Giving patients a voice enables them to express their opinions about improving services and this will increase their satisfaction if the opinions are implemented by the organizations. In other studies carried out, it was found that the main suggestions which were highlighted by patients were; training staff on customer care, reduction of waiting time, engagement of staff with the patients and improving physical environment (Alrubaiee & Alkaa'ida, 2011; Gurung, 2003; Sharma & Kamra, 2013; Singh, Kaur, & Rochwani, 2013).

Service excellence and patients' satisfaction revolves around the therapists, patient and the hospital (Prakash, 2010). Health workers need to listen, inform, explain, see the whole person, secure privacy, preserve dignity and respond quickly in order to improve patients' satisfaction.

2.7 Conclusion

The literature shows that many researches were carried out. Researchers were agreeing in some findings while in others they were disagreeing. It was agreed that satisfaction of

patients depends upon the quality of service, physical environment and occupational therapy services offered. It was highlighted that the quality of service has many other dimensions like assurance, responsiveness, empathy, intangibles and reliability. Services providers need to take into considerations of all the dimensions to be able to satisfy patients. Authors disagreed on the point that the Service Quality (SERVQUAL) tool can be used to measure satisfaction universally without being adapted. Some authors said that it should be adapted to suit the place where it will be used while others said that the tool was adequate and could suit to be used to measure satisfaction of patients in any place.

CHAPTER 3

3 METHODOLOGY

3.1 Introduction

The research design, population, sample size and the instrument which was used to analyse data are discussed. The procedure, ethical issues and duration of the research is also explained.

3.2 Research design

A mixed method approach was used - quantitative and qualitative methods. A descriptive quantitative approach was used to investigate the level of satisfaction of the service users on the three dimensions (quality of care, physical environment and occupational therapy) of the Occupational therapy department. An exploratory descriptive qualitative approach was also used. The researcher gained more insight and understanding of the determinant factors of the service quality as perceived by the patients.

3.3 Population

The population of the research was all the patients who visited Katutura State Hospital Occupational therapy department for services in the time of the study. Every month the department sees an average of 250 patients, therefore the population was approximately 500 patients for the duration of the study.

3.4 Sample

For the study, a 95% confidence level, standard deviation of 0.5 and a margin of error ± 5 was used to calculate the sample size: $n \geq Z_{\alpha/2}^2 p.q. / d^2 = (1.96)^2 \times 0.5(0.5) / (0.05)^2 = 384.16$, therefore for this study, 385 patients were used. A probabilistic sampling method was

used to select the patients. The method was chosen to allow every patient to have an equal chance to be selected. According to Queshi (2005) probabilistic sampling is not biased. The occupational therapy patients with 15 years and above were selected. 30 Patients were randomly selected from the 385 patients who had completed the questionnaires, to do the interview.

3.5 Research instruments

Questionnaires and interviews were used to collect data. Questionnaires collected quantitative data while interviews collected qualitative data. Two instruments were used to get a wider perspective of patients and the health care providers.

3.5.1 Questionnaire

For this study, the researcher designed a questionnaire. Appropriate questions which helped to achieve the objectives were included in the questionnaire. The questionnaire was divided into two sections; the first section was for demographic data while the second section was for the dimensions of satisfaction. The three dimensions were quality of care, physical environment and occupational therapy services. Under quality of care there were 9 questions related to the employees' care like friendliness and ability to answer patients' questions. The physical environment also had 9 questions related to the environment of the occupational therapy department while the third dimension occupational therapy services contained 6 questions. The questions were technical covering the treatment and procedures of getting occupational therapy devices. Literature was reviewed to get information on the instruments which were used in previous studies. Two occupational therapy professionals were asked to review the questionnaire. The questionnaire was piloted using 10 patients to ensure the validity and reliability of the instrument. Adaptations were made to the questionnaire according to the pilot results and the comments from the occupational therapists.

According to Custer (2012), there is no universally accepted tool to measure patient satisfaction. Another researcher also reported that service quality has been extensively studied with considerable efforts taken to develop survey instruments for measuring purposes (Queshi, 2005). Questionnaires were however, found to be the most common instrument used for collecting data about satisfaction surveys.

Service Quality (SERVQUAL) instrument is another tool which is usually used to measure quality. It has standard factors and researchers did not reach a consensus whether SERVQUAL should be used universally (Alrubaiee & Alkaa'ida, 2011; Chakravarty, 2011; Ogunsanwo, 2012; Tewarie, 2003; Zaim, Bayyurt & Zaim, 2010). For this study dimensions were modified to capture a wider view of patients' perspectives.

3.5.2 Interviews

Interviews were conducted with 30 patients to get more information about customer satisfaction. The 30 patients were randomly selected from the 385 patients who filled in the questionnaires. Patients were asked to further explain their responds on the questionnaires.

Interviews were also used to get the depth of the response and assure clarification. According to Oguntibeju et al. (2011), many organisations do not know how to collect data for satisfaction surveys. Likert scales are usually used with yes or no responses and they do not reveal the experience of customers. Interviews provide patients with an opportunity to explain more about their experience with the service (Mancuso, Smith & Otterbacher, 2003).

Many researchers agree that the use of quantitative and qualitative methods helps to get in depth responds as it is not enough to identify patients' satisfaction using questionnaires only (Chika, 2012; Ogunsanwo, 2012; Sower et al., 2001; Tewarie, 2003). In addition, participants can express their opinion and provide detailed information about their perception.

3.6 Procedure

Approval was sought from the Ministry of Health and Social Services. After receiving the approval, letters were sent out to patients explaining about the research. Participants were given consent forms to sign. 10 Patients were first given the questionnaire to test the validity of the instrument. 2 Occupational therapy professionals were also asked to review the questionnaire. Adaptations were made to the questionnaire before administering it to the 385 patients. The questionnaire was then administered to the patients of Katutura State Hospital, Occupational therapy department. Oshiwambo speaking patients were given the questionnaire which was translated to Oshiwambo. 30 Patients were randomly selected from the 385 patients who had completed the questionnaire and they were interviewed. Notes were taken to capture the information. The interviews were also recorded.

3.7 Data analysis

Descriptive statistics was used to describe the demographic characteristics and calculate the customer satisfaction rate based on the service adequacy gap score, which was calculated by subtracting the minimum score from the perceived score on any given question for each customer. Both means and standard deviations were provided for service adequacy gap scores on each item of the survey, as well as for each of the three dimensions (quality of care, physical environment and occupational therapy) of occupational therapy service quality.

Also, the service superiority gap score was calculated by subtracting the desired score from the perceived score on any given question, for each customer. Both means and standard deviations were provided for service superiority gap scores on each item of the survey, as well as for each of the three dimensions (quality of care, physical environment, and occupational therapy) of occupational therapy service quality.

Inferential statistics was used for the analytical part: The Chi-squared test was used to determine the association between satisfaction rating and the factors related to the quality of care, the physical environment and occupational therapy dimensions. The dependent variable was the patient's satisfaction rating for treatment sessions received. Themes and regrouping of data was used to analyse data from the interview results. After analysing data, graphs, pie charts and tables were used to present the information. The Statistical Package for the Social Sciences (SPSS) program version 23 was used to analyse data.

3.8 Research ethics

The study was guided by the fundamental ethical considerations that relate to responsible research in the human sciences. Permission was sought from the Ministry of Health and Social Services research committee. Furthermore, patients were given the consent form to sign. The researcher explained to the participants that they were at freedom to take part or not before signing the informed consent form. Additionally, the ethical issues of the research were clarified. The researcher will keep data in a locked cabinet in her office for two years. After two years, the researcher will destroy the data by shredding and burning it.

3.9 Conclusion

The methodology pointed out that two methods were used for the purpose of this research. A standardised tool of SERVQUAL was not used as it was not going to cover the importance aspects to address the objectives. The results were analysed using SPSS 23. Ethics was also considered for the participants. The next chapter presents the research results.

CHAPTER 4

4. RESULTS

4.1 Introduction

In this chapter results are presented using tables and graphs. The reliability of the instrument is discussed first followed by the results which help to answer the objectives of the study.

4.2 Research Instrument and reliability

The questionnaire comprised mainly close- ended questions. In order to find out whether the questionnaire items measured the same concept, Cronbach's alpha for internal consistency was calculated and found to be 0.789. Tavakoland Dennick (p.53, 2011), noted that "Internal consistency describes the extent to which all the items in a test measure the same construct and hence it is connected to the inter-relatedness of the items within the test". The high Cronbach's alpha in our study shows that the questionnaire was reliable (Santos, 1999). The questions on the questionnaire focused on the following areas: demographic data of the respondents and three dimensions or attributes of service quality which are: Quality of Care, Physical Environment and Occupational Therapy Services.

During data collection, some challenges were faced by the researcher. Some participants were not completing all the questions. The researcher had to check the questionnaire carefully before the participants leave and ask them to complete questions which they did not answer.

Dimensions

The following three dimensions were measured by the instrument: Quality of Care, Physical Environment, and Occupational Therapy Services.

The list below displays the dimensions used to present the results, along with the questions that relate to each dimension.

- **Quality of Care**

- Q-1 Waiting time to receive occupational therapy treatment
- Q-2 Employees have confidence in patients
- Q-3 Employees show care and are consistently courteous
- Q-4 Employees' willingness to help patients
- Q-5 Employees have the knowledge to answer the patients' questions
- Q-6 Individual attention to patients
- Q-7 Employees get consent from patients before treating.
- Q-8 Friendliness of employees
- Q-9 Employees keep the appointment time

- **Physical Environment**

- P-1 Ideal place for receiving occupational therapy treatment
- P-2 Cleanliness of the department
- P-3 Ventilation in the department
- P-4 Accessibility of the department
- P-5 Interior design
- P-6 Signs and directions in the department
- P-7 Privacy in the department
- P-8 Lighting in the department
- P-9 Equipment in the department

- **Occupational Therapy Services**

- O-1 Regaining of independence after treatment
- O-2 Clarity of instructions of exercises to do
- O-3 Provision of assistive devices like corner chairs, plate guards, wheelchairs or splints
- O-4 Provision of home programs
- O-5 Follow up of patients
- O-6 Availability of occupational therapy resources

Table 2: Survey Item Summary

Code	Question Text	Minimum Mean	Desired Mean	Perceived Mean	Adequacy Mean	Superiority Mean	N
Dimension: Quality of Care							
Q-1	Waiting time to receive occupational therapy treatment	4.67	9.56	4.55	-0.127	-5.010	385
Q-2	Employees give confidence in patients	4.63	9.58	6.66	2.036	-2.914	385
Q-3	Employees show care and are consistently courteous	4.65	9.27	6.91	2.260	-2.364	385
Q-4	Employees' willingness to help patients	4.65	9.32	5.96	1.307	-3.361	385
Q-5	Employees have the knowledge to answer the patients' questions	4.70	9.44	6.63	1.938	-2.810	385
Q-6	Individual attention to patients	4.79	9.40	5.04	0.244	-4.358	385
Q-7	Employees get consent from patients before treating	4.81	9.35	2.80	-2.010	-6.543	385
Q-8	Friendliness of employees	4.84	9.46	6.72	1.875	-2.746	385
Q-9	Employees keep the appointment time	4.80	9.51	4.87	0.068	-4.644	385
		4.73	9.43	5.75	1.02	-3.68	
Dimension: Physical Environment							
P-1	Ideal place for receiving occupational therapy treatment	4.75	9.74	5.42	0.662	-4.322	385
P-2	Cleanliness of the department	4.68	9.41	4.26	-0.423	-5.153	385
P-3	Ventilation in the department	4.79	9.48	4.65	-0.140	-4.834	385
P-4	Accessibility of the department	4.71	9.40	6.24	1.540	-3.156	385
P-5	Interior design	4.84	9.41	6.00	1.161	-3.410	385
P-6	Signs and directions in the department	4.76	9.40	5.82	1.067	-3.580	385
P-7	Privacy in the department	4.83	9.47	3.47	-1.358	-6.00	385
P-8	Lighting in the department	4.82	9.42	4.10	-0.722	-5.317	385
P-9	Equipment in the department	4.87	9.43	5.85	0.979	-3.577	385
		4.78	9.46	5.09	0.31	-4.37	
Dimension: Occupational Therapy Services							
O-1	Regaining of independence after treatment	4.74	9.50	5.56	0.816	0.816	385
O-2	Clarity of instructions of exercises to do	4.71	9.61	5.90	1.184	-3.709	385
O-3	Provision of assistive devices like corner chairs, plate guards, wheelchairs or splints	4.84	9.36	6.28	1.444	-3.075	385
O-4	Provision of home programs	4.75	9.37	6.06	1.309	-3.3065	385
O-5	Follow up of patients	4.75	9.39	4.34	-0.405	-5.052	385
O-6	Availability of occupational therapy resources	4.94	9.47	5.97	1.029	-3.499	385
		4.79	9.45	5.69	0.9	-3.76	
	Overall:	4.77	9.45	5.51	0.74	-3.94	

Table 2 shows the overall mean for minimum expectation is 4.77, desired 9.45 and perceived 5.51. The adequacy mean is positive with 0.74 while the superiority mean has a negative value of -3.94. The overall satisfaction rate was just above half; 55.1%. Under the quality of care patients were not satisfied with waiting time (O1) and the consent (O7), for waiting time

the adequacy mean was -0.127 while for consent it was -2.010.

Out of 9 variables under physical environment, patients were not satisfied with 4 variables which were cleanliness, ventilation, privacy and lighting in the department. Privacy had the least adequacy mean of -1.358. Lighting in the department also had a negative adequacy mean of -0.722, cleanliness was -0.423 and ventilation was -0.140. Accessibility of the department had the highest adequacy mean of 1.540, followed by interior design, signs, equipment and ideal place for receiving occupational therapy with 1.540, 1.161, 1.067, 0.979 and 0.662 respectively. The superiority mean for all the variables of the physical environment were negative. The least superiority mean was privacy in the department which had a value of -6 while the highest value was -3.156: accessibility of the department.

Occupational therapy services dimension had 6 variables. Patients were not satisfied only with one variable which was the follow up of patients- O5. The adequacy mean for the follow up of patients was -0.405. The other 5 variables had positive adequacy mean. The highest adequacy mean was 1.444 which was provision of assistive devices followed by 1.309, 1.184, 1.029 and 0.816 which were for provision of home programs, clarity of instructions, availability of occupational therapy resources and regaining of independence after treatment respectively. The superiority mean values were all negative for the occupational therapy services except for the variable O1 which was regaining independence after treatment.

Table 3: Core Question Dimensions Summary

Code	Question Text	Minimum Mean	Desired Mean	Perceived Mean	Adequacy Mean	Superiority Mean	n
Dimension							
	Quality of Care	4.73	9.43	5.75	1.02	-3.68	385
	Physical Environment	4.78	9.46	5.09	0.31	-4.37	385
	Occupational Therapy Services	4.79	9.45	5.69	0.9	-3.76	385
	Overall:	4.77	9.45	5.51	0.74	-3.94	385

Table 3 shows the summary of the core questions dimensions of the research. The three dimensions which are Quality of care, physical environment and occupational therapy services are shown with the minimum mean, desired mean, perceived mean, adequacy mean and superiority mean.

Quality of care had a perceived mean of 5.75, adequacy mean was 1, 02 and a negative 3.68 superiority mean. Physical environment had 5.09, 0.31 and -4.37 for perceived mean, adequacy mean and superiority mean respectively. Occupational therapy dimension had scores of 5.69, 0.9 and -3.76 for perceived, adequacy and superiority mean. Quality of care had the highest adequacy mean while occupational therapy services had the least score. Patients were mostly satisfied by the quality of care followed by occupational therapy services and physical environment.

The overall perceived mean was 5.51 while the minimum expectation was 4.77. The desired expectation was highest with a value of 9.4.

Radar Chart Service Quality Occupational Therapy Services at Katutura State Hospital

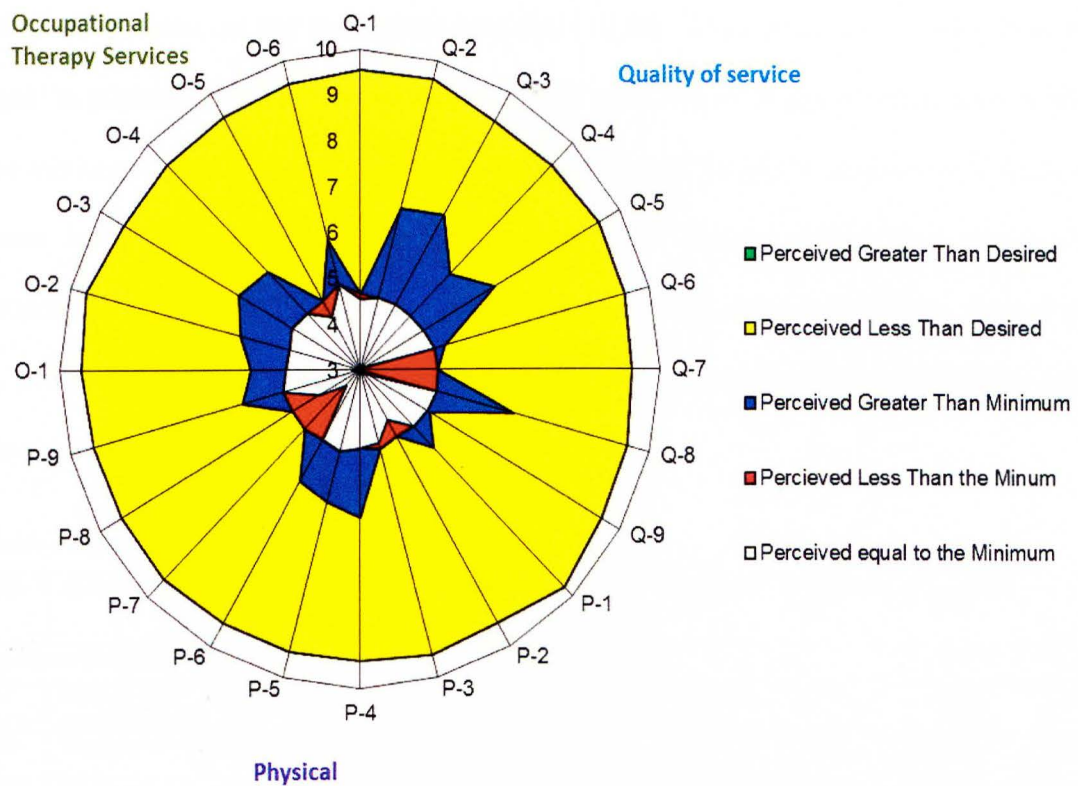


Figure 1: Service quality at Occupational therapy department, Katutura State Hospital

Figure 1 shows the proportion of the minimum, desired, perceived, adequacy and superiority mean. The yellow part shows areas where perceived mean is less than desired mean. Most of the participants had perceived values which were greater than the desired values in all the

three dimensions, quality of care, physical environment and occupational therapy services.

The second biggest proportion is shown by the blue area. The blue colour shows the proportion where the perceived mean was greater than the minimum mean. The greatest proportion was under the quality of care dimension and while the least was the physical environment.

The values where perceived was equal to minimum values are shown with the white colour. Physical environment had the highest proportion of the values where perceived values were equal to minimum values. The red colour showed areas where the perceived mean was below the minimum mean. Physical environment dimension had the largest proportion of perceived mean below the minimum mean while occupational therapy services had the smallest proportion. The green colour showed perceived mean greater than desired mean. From Figure 1, it is shown that in all the three dimensions there was no perceived mean which was greater than desired mean.

Table 4: Standard Deviation

Code	Question Text	Minimum SD	Desired SD	Perceived SD	Adequacy SD	Superiority SD	n
Dimension: Quality of Care							
Q-1	Waiting time to receive occupational therapy treatment	0.867	0.846	1.500	1.724	1.700	385
Q-2	Employees give confidence in patients	0.878	4.429	3.074	3.020	5.460	385
Q-3	Employees show care and are consistently courteous	0.787	1.203	2.187	2.287	2.402	385
Q-4	Employees` willingness to help patients	0.846	1.078	2.144	2.235	2.231	385
Q-5	Employees have the knowledge to answer the patients` questions	0.786	1.072	2.193	2.266	2.444	385
Q-6	Individual attention to patients	0.808	0.985	2.061	2.227	2.281	385
Q-7	Employees get consent from patients before treating.	0.817	1.156	1.501	1.705	1.884	385
Q-8	Friendliness of employees	0.867	0.800	2.239	2.316	2.269	385
Q-9	Employees keep the appointment time	0.871	0.794	1.797	1.905	1.935	385
		0.836	1.374	2.077	2.187	2.512	
Dimension: Physical Environment							
P-1	Ideal place for receiving occupational therapy treatment	0.800	4.407	1.989	2.110	4.994	385
P-2	Cleanliness of the department	0.819	1.169	1.667	1.820	2.085	385
P-3	Ventilation in the department	0.801	1.123	1.967	2.115	2.212	385
P-4	Accessibility of the department	0.725	1.186	2.116	2.134	2.300	385

P-5	Interior design	0.859	0.926	2.037	2.095	2.277	385
P-6	Signs and directions in the department	0.705	1.137	3.278	3.332	3.677	385
P-7	Privacy in the department	0.735	0.984	1.638	1.747	2.014	385
P-8	Lighting in the department	1.010	1.000	1.985	2.205	2.297	385
P-9	Equipment in the department	0.67	1.116	1.987	1.976	2.132	385
		0.807	1.492	2.085	2.195	2.732	
Dimension: Occupational Therapy Services							
O-1	Regaining of independence after treatment	0.844	0.998	2.056	2.169	2.282	385
O-2	Clarity of instructions of exercises to do	0.777	1.023	2.050	2.138	2.138	385
O-3	Provision of assistive devices like corner chairs, plate guards, wheelchairs or splints	0.830	5.011	2.247	5.362	2.222	385
O-4	Provision of home programs	0.820	1.112	2.184	2.422	2.245	385
O-5	Follow up of patients	0.750	1.017	2.177	2.377	2.201	385
O-6	Availability of occupational therapy resources	0.659	1.106	2.057	3.913	3.987	385
		0.78	1.711	2.129	3.064	2.513	385
	Overall:	0.808	1.526	2.097	2.482	2.586	385

Table 4 shows the overall standard deviation for minimum expectation, desired mean and perceived mean of 0.808, 1.526 and 2.097 respectively. The adequacy standard deviation is 2.482 and for superiority mean it is 2.586. The highest standard deviation was for superiority mean while the least was for minimum expectation. The standard deviations for the results are low which shows that there are small variations in the responses of the participants. The data is reliable and is the true reflection of the population.

Table 5: Standard Deviation Error

Code	Question Text	Minimum Std. Error	Desired Std. Error	Perceived Std. Error	Adequacy Std. Error	Superiority Std. Error	n
Dimension: Quality of Care							
Q-1	Waiting time to receive occupational therapy treatment	0.044	0.043	0.076	0.088	0.086	
Q-2	Employees give confidence in patients	0.045	0.226	0.157	0.154	0.278	
Q-3	Employees show care and are consistently courteous	0.040	0.061	0.111	0.117	0.122	
Q-4	Employees' willingness to help patients	0.043	0.055	0.109	0.114	0.119	
Q-5	Employees have the knowledge to answer the patients' questions	0.040	0.055	0.112	0.116	0.125	
Q-6	Individual attention to patients	0.041	0.050	0.105	0.114	0.116	
Q-7	Employees get consent from patients before treating.	0.042	0.059	0.076	0.087	0.096	
Q-8	Friendliness of employees	0.044	0.041	0.114	0.118	0.116	
Q-9	Employees keep the appointment time	0.041	0.051	0.075	0.097	0.099	
		0.038	0.066	0.096	0.112	0.123	
Dimension: Physical Environment							
P-1	Ideal place for receiving occupational therapy treatment	0.044	0.040	0.092	0.108	0.255	
P-2	Cleanliness of the department	0.041	0.225	0.101	0.093	0.106	

P-3	Ventilation in the department	0.042	0.060	0.085	0.108	0.113	
P-4	Accessibility of the department	0.041	0.060	0.100	0.109	0.117	
P-5	Interior design	0.037	0.060	0.108	0.107	0.116	
P-6	Signs and directions in the department	0.044	0.047	0.104	0.170	0.187	
P-7	Privacy in the department	0.036	0.058	0.167	0.089	0.103	
P-8	Lighting in the department	0.037	0.050	0.083	0.112	0.117	
P-9	Equipment in the department	0.051	0.051	0.101	0.111	0.116	
		0.041	0.072	0.105	0.112	0.134	
Dimension: Occupational Therapy Services							
O-1	Regaining of independence after treatment	0.043	0.051	0.105	0.109	0.109	
O-2	Clarity of instructions of exercises to do	0.040	0.052	0.104	0.117	0.273	
O-3	Provision of assistive devices like corner chairs, plate guards, wheelchairs or splints	0.042	0.255	0.115	0.113	0.123	
O-4	Provision of home programs	0.042	0.057	0.111	0.114	0.121	
O-5	Follow up of patients	0.038	0.052	0.111	0.112	0.128	
O-6	Availability of occupational therapy resources	0.034	0.056	0.105	0.199	0.203	
		0.103	0.087	0.109	0.127	0.160	
	Overall:	0.061	0.075	0.103	0.117	0.139	

Table 5 shows whether the data is reliable. All the overall values of the standard deviation errors are small. Small standard deviation error means that the sample mean is accurate and is a true reflection of the actual population. From the study, minimum expectation has the smallest standard error of 0.061 while superiority standard error is the largest with 0,139.

4.3 Demographic Characteristics

Population and Respondent Profiles by Sex

Respondent Profile by Age

Respondent Profile by occupation

Table 6: Demographic Characteristics

Socio-demographic Variables		N =385	Frequency (%)
Sex			
	Male	213	55.8
	Female	172	44.2
Age			
	Under 18	8	2.1
	18 - 22	45	11.6
	23 – 30	103	26.5
	31 - 45	180	46.3

	46 - 65	48	12.3
	Over 65	1	0.3
Occupation			
	Self Employed	27	6.9
	Domestic Worker	42	10.8
	General Worker	40	10.3
	Student	36	9.3
	Jobless	172	44.3
	Other	72	18.5

Table 6 shows three variables of the socio-demographic data which are sex, age and occupation. A total of 385 patients were given questionnaires and 213 were males while 172 were females. Males were 55.8% while females were 44.2%. The age of the patients was grouped into 6 categories which were under 18, 18-22, 23-30, 31-45, 46-65 and over 65. Only 1 participant was over 65years old. Most of the patients were between 31-45years old. 31-45year age group had 180 patients, followed by 23-30 with 103, 46-65 with 48, 18-22 with 45 and under 18 with 8patients. 31-45 had a percentage of 46.3 while over 65 years was 0.3%.

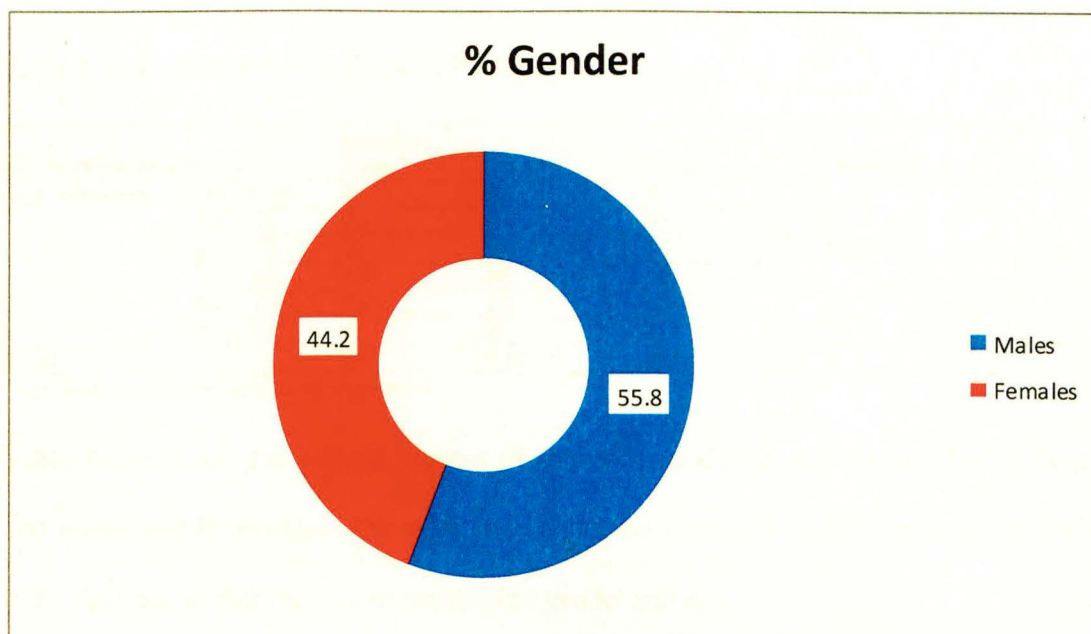


Figure 2: Gender

Figure 2 shows that 55.8% were males while females were 44.2%.

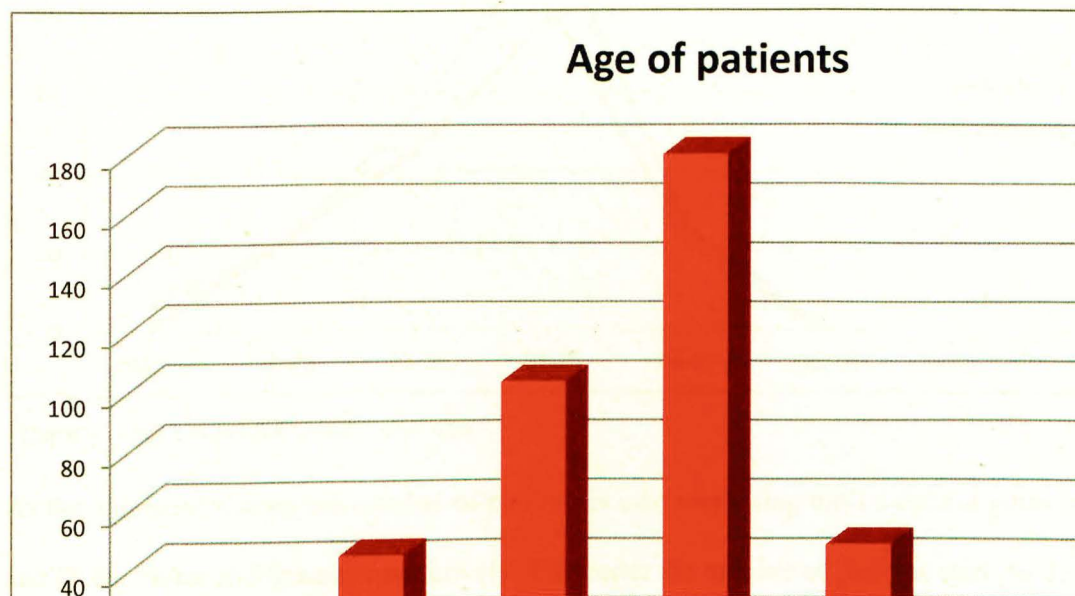


Figure 3: Age of Patients

The highest number of patients were in the age group of 31-45 followed by age group 23-30.

The least number of patients were in the age group of over 65.

Table 7: Association between Age and Gender

Characteristics		Gender		Total	*p-Value
Age Category		Male	Female		
	Under 18	7	1	8	0.423
	18 - 22	22	23	45	
	23 - 30	57	46	103	
	31 - 45	100	80	180	
	46 - 65	26	22	48	
	Over 65	1	0	1	
Total		213	172	385	

*P value determined by Pearson chi-square test

Table 7 shows that the highest number of patients is under the age group 31-45. There are 100 males and 80 females. The table shows that the p value is 0.423 which is greater than 0.05. This means that there is no association gender and age.

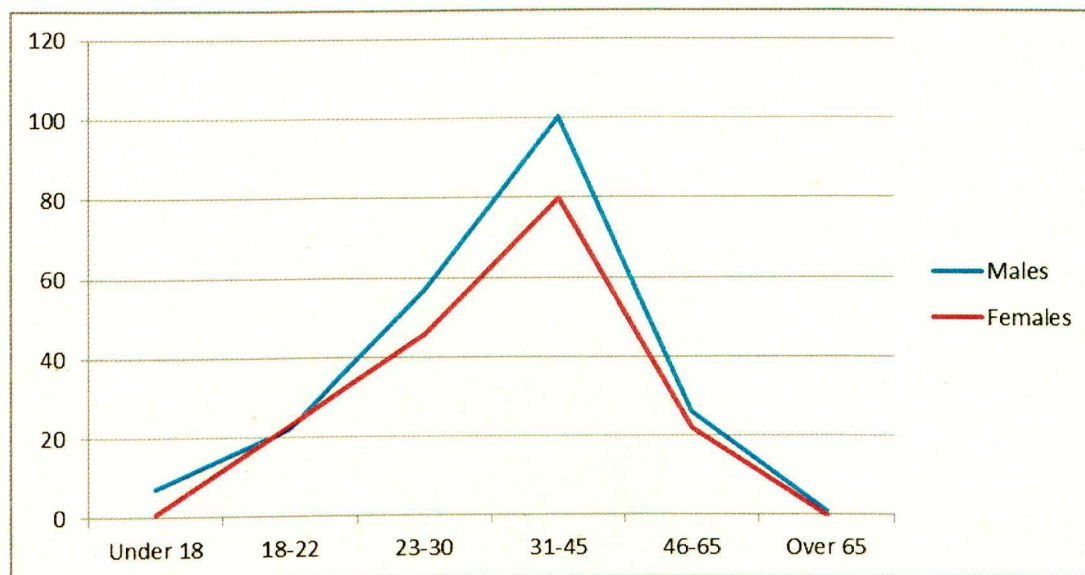


Figure 4: Line Graph for Gender and Age

As the age is increasing the number of patients is also increasing until a certain point of 100 and 80 for males and females respectively. Thereafter the number of patients starts to decline.

Table 8: Association between Age and Occupation

		Occupation						Total	*p-Value
		Self Employed	Domestic worker	general worker	student	Jobless	other		
Age Category	Under 18	0	0	1	7	0	0	8	0.00
	18 - 22	0	2	2	19	16	5	44	
	23 - 30	3	11	6	10	54	16	100	
	31 - 45	18	23	27	0	74	42	180	
	46 - 65	6	6	4	0	23	9	48	
	Over 65	0	0	0	0	1	0	1	
Total		27	42	40	36	168	72	385	

*P value determined by Pearson chi-square test

Table 8 shows a p value of 0. The p value is less than 0.05 therefore the null hypothesis is rejected. There is an association between age and occupation. 168 patients out of the total participants of 385 are not working while 180 patients were in the age group of 31-45years. The least number of patients are the self-employed and the over 65years.

Table 9: Satisfaction according to Gender: *Quality of Care Dimension*

		Males		Females	
Code	Question Text	Not Satisfied	Satisfied	Not Satisfied	Satisfied
Dimension: Quality of Care					
Q-1	Waiting time to receive occupational therapy treatment	42.3	57.9	42.4	57.6
Q-2	Employees give confidence in patients	16	84	14.5	85.5
Q-3	Employees show care and are consistently courteous	11.3	88.7	11	89
Q-4	willingness to help patients	19.2	80.8	24.4	75.6
Q-5	Employees have the knowledge to answer the patients` questions	16.9	83.1	17.4	82.6
Q-6	Individual attention to patients	42.3	57.7	37.8	62.2
Q-7	Employees get consent from patients	78.9	21.1	83.1	16.9
Q-8	Friendliness of employees	17.4	82.6	15.7	84.3
Q-9	Employees keep the appointment time	42.3	57.7	43	57
	Overall	31.8%	68.2%	32.1%	67.9%

Table 9 shows that under the quality of care dimension males were more satisfied than females by 0.3%. The satisfaction rates for males and females were almost similar. Males were mostly dissatisfied with variable Q7 about consent forms which was rated 78.9% dissatisfaction followed by the waiting time- Q1, appointment time-Q9 and giving individual attention to patients –Q6 which all had a similar score of 42.3%. The highest satisfaction rate was 88.7 which is Q3 (employees show care and are consistently courteous) while the highest satisfaction under females is 89 for the same variable Q3. Females were dissatisfied with Q7 followed by Q9 and Q1. Overallly males were more satisfied quality of care than females.

Table 10: Satisfaction according to Gender: Physical Environment Dimension

		Males		Females	
Cod e	Question Text	Not Satisfied	Satisfied	Not Satisfied	Satisfied
Dimension: Physical Environment					
P-1	Ideal place for occupational therapy	30	70	32	68
P-2	Cleanliness of the department	55.9	44.1	50	50
P-3	Ventilation in the department	46.5	53.5	55.8	44.2
P-4	Accessibility of the department	14.1	85.9	19.9	80.1
P-5	Interior design	23	77	23.3	76.7
P-6	Signs and directions	29.6	70.4	27.3	72.7
P-7	Privacy in the department	70.9	29.1	76.2	23.8
P-8	Lighting in the department	58.2	41.8	58.1	41.9
P-9	Equipment in the department	23	77	32	68
	Overall	39%	61%	41%	59%

Table 10 shows the satisfaction according to gender for the physical environment. 61% of males were satisfied with the environment. 59% females were satisfied while 41% were dissatisfied by the service. Males and females were mostly dissatisfied with the privacy in the department and had satisfaction scores of 29.1 and 23.8 respectively. Satisfaction levels were also low on the cleanliness, ventilation and lighting in the department. The highest satisfaction levels were on the accessibility of the department for both males and females with 85.9% and 80.1% respectively.

Table 11: Satisfaction according to Gender: Occupational Therapy Services Dimension

		Males		Females	
Question Text		Not Satisfied	Satisfied	Not Satisfied	Satisfied
<i>Dimension: Occupational Therapy Services</i>					
O-1	<i>independence after treatment</i>	100	100	100	100
O-2	<i>Clarity of instructions of exercises to do</i>	22.5	77.5	24.4	75.6
O-3	<i>Provision of devices</i>	16.4	83.6	25	75
O-4	<i>home programs</i>	17.8	82.2	25.6	74.4
O-5	<i>Follow up of patients</i>	53.1	46.9	59.9	40.1
O-6	<i>Availability of occupational therapy resources</i>	26.8	73.2	29.7	70.3
	Overall	27.3%	72.7%	33%	67%

Table 11 shows the satisfaction levels according to gender for the occupational therapy services dimension. Males were more satisfied with occupational therapy services with 72.7% while females score was 67%. The least satisfaction levels were on the factor of follow up of patients which had 46.9% and 40.1% for both males and females respectively.

Table 12: Summary for Satisfaction according to Gender for all the Dimensions

		Males		Females	
Quality of care Physical environment Occupational therapy services		Not Satisfied	Satisfied	Not Satisfied	Satisfied
Overall		32.7%	67.3%	35.5%	64.5%

Table 12 shows the summary of satisfaction levels according to gender for all the dimensions which are quality of care, physical environment and occupational therapy services. The overall satisfaction level for males was 67.3% while dissatisfaction level was 32.7%.

For females the overall satisfaction level was 64.5% while dissatisfaction was 35.5%.

According to gender males were more satisfied than females.

Table 13: Chi-squared Results for Gender

Dimension: Quality of Care		Pearson	Likelihood	Linear by Linear association	Exact Sig 2sided	Exact significance
Q-1	Waiting time to receive occupational therapy treatment	0.001	0.01	0.001	1	0.526
Q-2	Employees give confidence in patients	0.14	0.150	0.149	0.776	0.405
Q-3	Employees show care and are consistently courteous	0.05	0.05	0.05	1	0.539
Q-4	willingness to help patients	1.504	1.498	1.5	0.262	0.135
Q-5	Employees have the knowledge to answer the patients' questions	0.2	0.2	0.2	0.893	0.497
Q-6	Individual attention to patients	0.788	0.789	0.786	0.404	0.217
Q-7	Employees get consent from patients	1.116	1.124	1.113	0.301	0.177
Q-8	Friendliness of employees	0.192	0.193	0.192	0.682	0.383
Q-9	Employees keep the appointment time	0.23	0.023	0.023	0.918	0.481
		0.47	0.45	0.45	0.7	0.37
Dimension: Physical Environment						
P-1	Ideal place for occupational therapy	0.166	0.166	0.166	0.740	0.383
P-2	Cleanliness of the department	1.316	1.317	1.313	0.260	0.148
P-3	Ventilation in the department	3.318	3.323	3.309	0.81	0.43
P-4	Accessibility of the department	2.296	2.283	2.290	0.33	0.004
P-5	Interior design	0.003	0.003	0.003	1	0.524
P-6	Signs and directions	0.236	0.237	0.236	0.651	0.355
P-7	Privacy in the department	0.349	1.357	0.346	0.250	0.148
P-8	Lighting in the department	0	0	0	1	0.535
P-9	Equipment in the department	3.885	3.87	3.875	0.051	0.03
		0.95	1.4	1.28	0.57	0.28
Dimension: Occupational Therapy Services						
O-1	independence after treatment	0	0	0	0	0
O-2	Clarity of instructions of exercises to do	0.188	0.188	0.188	0.717	0.376
O-3	Provision of devices	4.324	4.302	4.313	0.042	0.026
O-4	home programs	3.402	3.385	3.393	0.79	0.43
O-5	Follow up of patients	1.804	1.807	1.799	0.215	0.07
O-6	Availability of occupational therapy resources	0.394	0.393	0.393	0.569	0.303
		2.02	2.02	2.01	0.47	0.24
Overall:		1.15	1.29	1.25	0.58	0.3

Q9, Q2, Q3 and Q5. The jobless and the general workers has the highest satisfaction rates of 69.3 and 69.2 respectively.

Table 15: Satisfaction according to the occupation, Physical Environment Dimension

		Self employed		Domestic Worker		General worker		Student		Jobless		Other	
Question Text		Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied
Dimension: Physical Environment													
P-1	Ideal place for occupational therapy	74.1	25.9	31	69	35	65	36.1	63.9	28.7	71.3	30.6	69.4
P-2	Cleanliness of the department	82	18	52.4	47.6	50	56	44.4	55.6	51.8	48.2	59.7	40.3
P-3	Ventilation in the department	51.9	48.1	57.1	42.9	52.5	47.5	63.9	36.1	48.2	51.8	45.8	54.2
P-4	Accessibility of the department	81.5	18.5	9.5	90.5	15	85	22.2	77.8	17.8	82.2	15.3	84.7
P-5	Interior design	81.9	11.1	19	81	17.5	82.5	36.1	63.9	24.4	75.6	23.6	76.4
P-6	Signs and directions	81.5	18.5	23.8	76.2	35	65	30.6	69.4	31.1	68.9	26.4	73.6
P-7	Privacy in the department	74.1	25.9	71.4	28.6	72.5	27.5	80.6	19.4	74.4	25.6	69.4	30.6
P-8	Lighting in the department	55.6	44.4	57.1	42.9	60	40	47.2	52.8	59.1	40.9	59.7	40.3
P-9	Equipment in the department	18.5	81.5	26.2	73.8	25	75	30.6	69.1	30.5	69.4	19.4	80.6
Overall		72.9	27.1	38.6	61.4	40.3	60.4	56.5	43.5	40.7	59.3	38.9	61.1

Table 15 shows that according to the occupation, self-employed and students have the least satisfaction rates of 27.1% and 43.5% respectively. Domestic workers have the highest satisfaction rate for the physical environment dimension of 61.4% followed by other job categories.

Table 16: Satisfaction according to the occupation, Occupational Therapy Services Dimension

		Self employed		Domestic Worker		General worker		Student		Jobless		Other	
Question Text		Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied
Dimension: Occupational Therapy Services													
O-1	independence after treatment	100	100	100	100	100	100	100	100	100	100	100	100
O-2	Clarity of instructions of exercises to do	88.9	11.1	14.3	85.7	22.5	77.5	25	75	23.8	76.2	29.2	70.8
O-3	Provision of devices	70	30	14.3	85.7	25	75	22.2	77.8	23.2	76.8	12.5	87.5
O-4	home programs	90	10	23.8	76.2	25	75	22.2	77.8	25	75	11.1	88.9
O-5	Follow up of patients	59.3	40.7	57.1	42.9	55	45	55.6	44.4	55.5	44.5	56.9	43.1
O-6	Availability of occupational therapy resources	78.2	41.8	23.8	76.2	25	75	22.2	77.8	28	72	36.1	63.9
		77.8%	22.2%	26.7%	73.3%	30.5%	69.5%	69.6%	29.4%	31.1%	68.9%	29.2%	70.8%

Table 16 shows satisfaction according to the occupation for the occupational therapy dimension. The students and the self-employed patients were not satisfied with the occupational therapy services and had a satisfaction score of 29.4% and 22.2% respectively. Domestic workers had the highest satisfaction level of 73.3% followed by others, general workers, and the jobless with 70.8%, 69.5%, and 68.9% respectively.

Table 17: Summary of Satisfaction according to Occupation for all the Dimensions

	Self employed		Domestic Worker		General worker		Student		Jobless		Other	
Quality of care	Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied
Physical environment												
Occupational therapy services												
Overall:	70.1%	29.9%	32.3%	67.7%	33.9%	66.1%	64%	36%	34.2%	65.8%	33.9%	66.1%

Table 17 shows the summary of satisfaction according to occupations of all the dimensions, quality of care, physical environment and occupational therapy services. The self-employed patients were the least satisfied with a satisfaction level of 29.9% while the most satisfied were the domestic workers with the score of 67.7% satisfaction. Students were also not satisfied with the service with a satisfaction score of 36%. The general workers, jobless and other had satisfaction levels of 66.1%, 65.8% and 66.1% respectively.

Table 18: Chi-Squared Results for Satisfaction According to Occupation

Dimension: Quality of Care		Pearson	Likelihood	Linear by Linear association	Exact 2sided	Sign	Exact sig
Q-1	Waiting time to receive occupational therapy treatment	7.092	7.082	0.023	0.214		0.88
Q-2	Employees give confidence in patients	3.885	3.514	0.262	0.566		0.609
Q-3	Employees show care and are consistently courteous	2.953	3.281	0.513	0.707		0.474
Q-4	willingness to help patients	1.239	1.197	0.809	0.941		0.369
Q-5	Employees have the knowledge to answer the patients' questions	3.392	3.599	0.993	0.64		0.319
Q-6	Individual attention to patients	3.666	3.655	0.54	0.598		0.817

Q-7	Employees get consent from patients	9.847	8.626	0.182	0.08	0.669
Q-8	Friendliness of employees	7.757	7.016	0.642	0.170	0.423
Q-9	Employees keep the appointment time	4.610	1.780	3.709	0.465	0.054
		4.938	4.412	0.853	0.487	0.513
Dimension: Physical Environment						
P-1	Ideal place for occupational therapy	1.451	1.435	0.01	0.919	0.921
P-2	Cleanliness of the department	4.591	4.643	0.021	0.468	0.884
P-3	Ventilation in the department	4.427	4.466	1.05	0.490	0.305
P-4	Accessibility of the department	2.747	2.906	0.214	0.739	0.644
P-5	Interior design	6.875	6.973	2.128	0.230	0.145
P-6	Signs and directions	3.326	3.446	0.584	0.650	0.445
P-7	Privacy in the department	1.712	1.755	0.043	0.887	0.837
P-8	Lighting in the department	2.024	2.001	0.199	0.846	0.656
P-9	Equipment in the department	4.414	4.560	0.080	0.492	0.777
		3.507	4.576	0.481	0.636	0.624
Dimension: Occupational Therapy Services						
O-1	independence after treatment	100	100	100	100	100
O-2	Clarity of instructions of exercises to do	5.668	6.129	4.3	0.340	0.027
O-3	Provision of devices	6.552	6.903	0.182	0.256	0.67
O-4	home programs	9.52	10.775	0.001	0.090	0.976
O-5	Follow up of patients	0.197	0.198	0.038	0.99	0.846
O-6	Availability of occupational therapy resources	3.947	3.881	2.585	0.557	0.108
		5.177	5.577	1.423	0.447	0.525
	Overall:	4.541	4.855	0.919	0.523	0.554

Table 18 shows the chi-squared results for the association between satisfaction and occupation. The significance is 0.554 showing that there is an association between satisfaction and occupation.

Table19: Satisfaction According to the Age: Quality of Care Dimension

		Under 18		18-22		23-30		31-45		46-65		Over 65	
Code	Question Text	Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied
Dimension: Quality of Care													
Q-1	Waiting time to receive occupational therapy treatment	37.5	62.5	40	60	42.7	57.3	41.7	47.9	47.9	52.1	0	100
Q-2	Employees give confidence in patients	25	75	28.9	71.1	9.7	90.3	12.8	22.9	22.9	77.1	0	100
Q-3	Employees show care and are consistently courteous	12.5	87.5	8.9	91.3	8.7	91.3	11.7	16.7	16.7	83.3	0	100
Q-4	willingness to help patients	25.5	74.5	22.2	77.8	27.2	72.8	17.8	25	25	75	0	100
Q-5	Employees have the knowledge to answer the patients' questions	12.5	87.5	26.7	73.3	19.4	80.6	14.44 5.6	14.6	14.6	85.4	0	100
Q-6	Individual attention to patients	37.5	62.5	37.8	62.2	37.9	62.1	77.8	29.2	29.2	70.8	0	100
Q-7	Employees get consent from patients	87.5	12.5	91.1	8.9	85.4	14.6	17.2	70.8	70.8	29.2	100	0
Q-8	Friendliness of employees	25	75	17.8	82.2	15.5	84.5	40.6	14.6	14.6	85.4	0	100
Q-9	Employees keep the appointment time	25	75	48.9	51.1	40.8	59.2	30.6	50	50	50	100	00
		32	68	35.8	64.2	31.9	68.1	67.6	32.4	32.4	67.6	11.1	77.8

Table 19 shows the satisfaction according to the age for the quality of care dimension. 31-45years were the least satisfied group with a score of 32.4%. The most satisfied group was over 65years, followed by 23-30years with a score of 68.1% satisfaction. The under 18years, 46-65years and 18-22years had 68%, 67.6% and 64.2% satisfaction levels. There was one participant for the over 65years and he was satisfied with the quality of care.

Table 20: Satisfaction according to Age: Physical Environment Dimension

		Under 18		18-22		23-30		31-45		46-65		Over 65	
Question Text		Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied
Dimension: Physical Environment													
P-1	Ideal place for occupational therapy	37.5	62.5	31.1	68.9	35	65	50.6	22.9	22.9	77.1	0	100
P-2	Cleanliness of the department	75	25	44.4	55.6	56.3	43.7	45	60.4	60.4	39.6	100	00
P-3	Ventilation in the department	75	25	68.9	31.1	50.5	49.5	13.9	50	50	50	100	0
P-4	Accessibility of the department	37.5	62.5	24.4	75.6	13.6	86.4	20.6	21.3	21.3	78.7	100	0
P-5	Interior design	50	50	28.9	71.1	26.2	73.8	20.6	16.7	16.7	83.3	0	100
P-6	Signs and directions	62.5	37.5	33.3	66.7	22.3	77.7	29.4	27.1	27.1	72.9	100	00
P-7	Privacy in the department	100	0	73.3	26.7	72.8	27.2	75	64.6	64.6	35.4	0	100
P-8	Lighting in the department	37.5	62.5	60	40	50.5	49.5	62.8	58.3	58.3	41.7	100	0
P-9	Equipment in the department	25	75	35.6	64.4	34	66	21.1	27.1	27.1	72.9	0	100
		55.6	44.4	44.4	55.6	35.1	59.9	61.3	38.7	38.8	61.3	55.56	44.4

Table 20 shows satisfaction according to the age for the physical environment dimension.

The age group with the least satisfaction for physical environment is 31-45years with the satisfaction level of 38.7%. The under 18 and over 65years were had satisfaction levels below 50%. The age group which had the highest satisfaction level was the 46-65years followed by the over 65years with 44%.The 18-22years and 23-30years had satisfaction scores of 59.9% and 55.6% respectively.

Table 21: Satisfaction According to the Age: Occupational Therapy Dimension

		Under 18years		18-22		23-30		31-45		46-65		Over 65	
Question Text		Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied
Dimension: Occupational Therapy Services													
O-1	independence after treatment	100	100	100	100	100	100	100	100	100	100	100	100
O-2	Clarity of instructions of exercises to do	25	75	13.3	86.7	27.2	72.8	24.4	20.8	20.8	79.2	0	100
O-3	Provision of devices	12.5	87.5	26.7	73.3	29.1	70.9	16.7	10.4	10.4	89.6	0	100
O-4	home programs	37.5	62.5	20	80	20.4	79.6	21.7	20.8	20.8	79.2	0	100
O-5	Follow up of patients	75	25	48.9	51.1	54.4	45.6	58.9	54.2	54.2	45.8	100	100
O-6	Availability of occupational therapy resources	37.5	62.5	26.7	73.3	25.2	74.8	31.1	20.8	20.8	79.2	100	0
		37.5%	62.5%	27.1%	72.9%	31.3%	68.7%	25.4%	25.4%	25.4%	74.6%	20%	80%

Table 21 shows the satisfaction according to age for the occupational therapy dimension. The age group which had the least satisfaction score is the 31-45years. The satisfaction level for the 31-45years was 25.4%. The over 65years had the highest satisfaction level of 80%. The 46-65years had 74.6% satisfaction while the under 18years had 62.5%. 18-22year age group and 23-30years had 72.9% and 68.7% respectively.

The satisfaction levels for the 31-45years were low for the four factors. These are the O2- clarity of instructions, O3-provision of devices, O4-home programs and O6- availability of occupational therapy resources. The under 18years only had one factor which had satisfaction

level below 50% and the factor was follow up of patients. 23-30years and 46-65years also had satisfaction scores below 50%.

Table 22: Satisfaction According to the Age Group for all Dimensions

	Under 18years		18-22		23-30		31-45		46-65		Over 65	
Question Text	Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied	Not Satisfied	Satisfied
Overall	41.7%	58.3%	35.7%	64.4%	32.8%	67.2%	67.8%	32.2%	32.2%	67.8%	32.9%	67.1%

Table 22 shows the satisfaction according to age for all the dimensions. The only age group which had a satisfaction level below 50% is the 31-45years. The 46-65years had the highest satisfaction score of 67.8%. The overall satisfaction for 23-30years was 67.2%, over 65years-67.1% 18-22years-64% and for the under 18years was 41.7%.

Table 23: Chi-squared Results for Satisfaction According to Age

Dimension: Quality of Care		Pearson	Likelihood	Linear by Linear association	Exact 2sided	Sign	Exact sig
Q-1	Waiting time to receive occupational therapy treatment	1.563	1.926	0.270	0.906		0.602
Q-2	Employees give confidence in patients	12.674	11.806	0.672	0.027		0.412
Q-3	Employees show care and are consistently courteous	2.497	2.497	1.330	0.777		0.269
Q-4	willingness to help patients	44.460	4.670	0.158	0.485		0.691
Q-5	Employees have the knowledge to answer the patients' questions	4.721	4.611	2.714	0.451		0.099
Q-6	Individual attention to patients	5.615	6.050	0.007	0.345		0.932
Q-7	Employees get consent from patients	9.106	9.675	7.756	0.105		0.005
Q-8	Friendliness of employees	0.927	1.053	0.226	0.968		0.635
Q-9	Employees keep the appointment time	4.611	5.017	0.322	0.465		0.571
		9.575	5.255	1.495	0.503		0.468

Dimension: Physical Environment						
P-1	Ideal place for occupational therapy	2.845	3.197	1.505	0.724	0.220
P-2	Cleanliness of the department	5.702	6.178	0.184	0.336	0.668
P-3	Ventilation in the department	11.169	11.812	5.470	0.048	0.019
P-4	Accessibility of the department	11.880	9.796	0.540	0.036	0.462
P-5	Interior design	6.741	6.489	5.676	0.241	0.017
P-6	Signs and directions	9.598	9.137	0.408	0.087	0.523
P-7	Privacy in the department	7.791	9.648	2.075	0.168	0.150
P-8	Lighting in the department	6.257	6.584	1.813	0.282	0.178
P-9	Equipment in the department	7.769	7.986	3.352	0.169	0.067
		7.750	7.870	2.336	0.232	0.256
Dimension: Occupational Therapy Services						
O-1	independence after treatment					
O-2	Clarity of instructions of exercises to do	3.973	4.510	0.154	0.553	0.695
O-3	Provision of devices	11.025	11.291	6.090	0.051	0.014
O-4	home programs	1.640	1.686	0.105	0.896	0.746
O-5	Follow up of patients	4.155	4.590	0.035	0.527	0.882
O-6	Availability of occupational therapy resources	5.438	5.465	0	0.865	0.985
		5.246	5.508	1.277	0.578	0.664
	Overall:	7.523	6.211	1.703	0.438	0.563

Table 23 shows the results of the chi-squared test. There is a small significance of 0.563. The results show that there is an association between age and satisfaction.

Interviews

30 patients were interviewed; data was grouped and analysed. Patients were asked questions related to their response of the questionnaire. This was done to get in-depth information about Quality of service. 70% of the patients reported that they were not satisfied with the physical environment. Patients who were interviewed were dissatisfied with cleanliness, ventilation, unavailability of consent forms, no follow ups, waiting time and privacy. Below are some of the responses from the participants.

“The people who are working here are very nice but the problem here is the cleanliness of the curtains and the floors”, said the participant.

“There is no privacy here, I cannot share my private medical history here because the next patient will hear about my story and spread it around”, said the participant.

“I am not satisfied with the occupational therapy department follow up system; they never remind me of my follow up date. They do not even call or text if I default my treatment”, said the participant.

Conclusion

The results showed that 213 males and 172 females participated in the study. Most of the participants were between 31 and 45 years old. Under the quality of care, males had a satisfaction rate of 68.2% while females had 67.9%. 61% Males were satisfied with physical environment while females had a 59% satisfaction rate. Under occupational therapy dimension 72.7% were satisfied with the service while females had 67%. The overall minimum mean, desired mean and perceived mean were 4.77, 9.45 and 5.51 respectively. The adequacy mean was 0.74 while the superiority mean was -3.94.

CHAPTER 5

5. DISCUSSION, CONCLUSION, RECOMMENDATIONS AND LIMITATIONS OF STUDY

5.1 Introduction

This chapter focuses on interpretation of results and answering the objectives of the study. The conclusion, recommendations and limitations of the study are also written in this chapter. The first part focuses on the demographic data of the research participants.

5.2 Demographic data

Gender

During the time of study more males were seen at the occupational therapy department than females. Males were 213 while females were 172. Satisfaction levels for males and females were 67.3% and 64.5% respectively. There was no discernible impact on males and females ratings of overall satisfaction. The findings are consistent with Alrubaiee and Alkaaida`ida, (2011) and Mwihoti, (2015) who stated that males are more satisfied than females. In their studies men had higher satisfaction levels than women.

Contrary to the findings of this study are the findings of Mancuso et al. (2003) and Oguntibeju, Ndalumbo and MokgatleNthabu (2011) who observe that females were more satisfied than males. Literature shows that males are more satisfied than females (Alrubaiee & Alkaaida`ida, 2011; Andaleeb, 2006; Bosse & Group, 2008; Cheng & Chang, 2003; Clark, 2008; Finley, 2001; Mwihoti, 2015).

There is an association between gender and satisfaction. The association is however weak reflected by the lower p value. There is a significant difference in the satisfaction of males and females with occupational therapy. Occupational therapy dimension had technical

attributes. Data from the interviews gave in-depth information on how the participants were filling in the questionnaires. 60% of females pointed out that it was hard for them to understand the technical questions under the occupational therapy dimensions and they ended up rating the attributes low. The findings are confirmed by Ibrahim (2008) who gave an explanation that males understand technical questions therefore they tend to rate variables higher. On the other hand women tend to rate variables lower just because of a lack of understanding of the technical questions.

Age

The age group of 31-45 were least satisfied with 32.2% satisfaction level. The findings are consistent with Prakash (2010) results. The 35 and 49 age group are the least satisfied group (Prakash, 2010).

The 45 to 65 and over 65 age groups were the most satisfied age groups with 67.8% and 67.1% respectively. The findings of this study are in line with Bruster et al. (1994), Alrubaiee and Alkaa'ida (2011) and Bitner (2000) findings. The researchers confirm that the elderly people are more satisfied than the younger age groups as they are more accepting to lower quality. The results of Crow et al. (2002) which shows that the middle age group has least satisfaction levels are also consistent with this research results.

Although other authors agree that elderly people are more satisfied with health services, some highlighted that satisfaction does not increase progressively as the age increases (Alrubaiee & Alkaaida' ida, 2011; Bitner, 2009; Bruster et al., 1994; Chika, 2012; Crow et al., (2002); Gurung, 2003; Ibrahim, 2008; Queshi, 2005). It was stated that in some cases satisfaction increases with age and may decline in the middle age and rises again in the old age. From the under 18 it was low and increased until it dropped significantly in the age group of 31-45years.

The age of patients followed the distribution curve. Most patients were between 23-45years and the least number of patients were over 65years followed by under 18years. The age group between 23 and 45years are actively involved in work. They may suffer injuries through work or through social life and they will end up in the hospital.

The chi-squared test confirmed an association between age and satisfaction. The chi-squared value was 7.523 which showed a significant association between age and satisfaction.

Occupation

Patients who were mostly satisfied by the occupational therapy services were the domestic workers 67% while the least satisfied patients were the self-employed and the students. The self-employed, work independently and have a better view of how quality services should be delivered.

The lower satisfaction rates of students can be explained in terms of two factors which are supported by the literature.

Students are still young and always want quick solutions to their problems. This leads to low satisfaction rates (Prakash, 2010).

Students acquire more knowledge and their reasoning gets better with more education. Westaway et al., (2003) explained that as the level of education increases the satisfaction rate decreases.

High satisfaction rates of domestic workers are because domestic workers generally have lower education. From the interview results some domestic workers reported that they rated all the dimensions high because they did not have any benchmark to use to compare the services. Others said that they had not been to other hospitals other than Katutura State Hospital therefore they were not sure whether the service was good or bad.

They visit the government hospitals because they cannot afford to go to private hospitals. Patients who go to Katutura State Hospital do not have medical aid. The findings concur with the literature (Gurung, 2003; Ibrahim, 2008; Singh et al., 2013; Tayue et al., 2012; Yazdanpanah et al., 2013). Singh (2013) reported that most of the low class people use public hospitals (Singh et al., 2013). There was a significant association of the type of occupation and satisfaction.

5.3 Objective 1: To identify the level of patients' expectations of the Occupational therapy service quality and the perceived quality.

Many researchers stated that if the expectations of patients are not met, the satisfaction levels decreases (Mancuso et al., 2003; Mwihoti, 2015; Nyandoro, 2012; Oguntibeju et al., 2011; Onyeonoro et al., 2015; Sherif et al., 2013; Singh et al., 2013). Patients have different expectations for each hospital and it affects the satisfaction with the healthcare. Patients have high expectations of private hospitals as compared to public hospitals (Griskonis, 2006; Tayue et al., 2012). The findings of Griskonis (2006) and Tateke et al., (2012) are consistent with this research findings. The patients at Katutura State Hospital Occupational therapy Department had a minimum expectation of 47.7% which is below average and the maximum expectation (desired) was 94.5%. They perceived the service quality to be 55.1%. Patients at Katutura State Hospital do not have high expectations of services to be received this is because it is a public hospital.

The minimum expectation was low and it concurs with the findings in the literature. Tateke (2012) reported that public hospital patients do not have high expectations of the service. Patients go to the public hospitals because they cannot afford the private hospitals. They do not worry about anything else other than receiving treatment.

There is a big gap between what the occupational therapy services received and what was desired. There is also a gap between what they expected to receive and what they actually received. If there is a big gap between the expected service and the perceived quality, there will be a greater likelihood of dissatisfaction. The results of this study showed that patients had higher expectations in privacy, availability of occupational therapy services, provision of assistive devices, equipment, lighting, consent, friendliness of employees and keeping up of appointments. All the above factors had a minimum expectation above 4.8 and most of the factors were from the physical environment dimension. Katutura State Hospital occupational therapy patients expected higher quality in terms of the physical environment. This is what led to lower satisfaction of the physical environment dimension. The results concur with other researchers, (Afkhamebrahimi, 2012; Crow et al., 2002; McKinley et al., 2002) who concluded that physical environment is one of the crucial determinants of satisfaction used by patients. The patients' expectations in physical environment were not met hence lower satisfaction levels.

From the staff interviews, they highlighted that they cannot deliver quality services to 100% due to limited resources. The occupational therapists reported that they do not have a budget to buy enough assistive devices, new equipment and materials. They always have to find the best way to use the minimum resources they have which might lower the patients' satisfaction.

The participants who were interviewed also highlighted that they expected more in the physical environment of the hospital as it is one of the tangible things they can use to rate the quality of service. Furthermore, some patients also pointed out that The Ministry of Health and Social Services is one of the important ministries getting a bigger budget therefore they expected the hospital to have a better physical environment.

5.4 Objective 2: To assess the customers' satisfaction levels with regards to the quality of the services offered by the Occupational Therapy Department considering different dimensions and attributes of the services such as quality of care, physical environment and occupational therapy.

The overall satisfaction rate for males and females were 67.3% and 64.5% respectively. The data obtained is broadly consistent with satisfaction levels of patients with public hospitals which is confirmed by previous researches in public hospitals (Alrubaiee & Alkaa'ida, 2011; Sharma & Kamra, 2013; Tayue et al., 2012; Whitaker, 2010).

The satisfaction rate in occupational therapy services, however, was generally high in the previous research. This is because of the models used in occupational therapy of seeing a patient as a whole and not in parts. Occupational therapy is client centred (Custer, 2012). The results of the study however differ from the findings of Muntlin (2009) who found that the satisfaction of occupational therapy patients is generally high (over 80%) because of the holistic nature of the occupation (Muntlin, 2009). The results differ probably because of the difference in places where the studies were carried. Muntlin (2009) carried his study in America where the health care system is generally better in terms of the availability of resources. This research was carried out in Namibia, a developing country where the resources are very limited which hinders the occupational therapists to effectively deliver quality service.

Occupational therapists are required to first establish rapport with the patient for effective treatment. This makes the patients more comfortable and relaxed. The results of the study shows the effects of rapport through the higher levels of satisfaction which were scored in factors related to employees (occupational therapists).

The results of each dimension are discussed in detail on relation to the customer satisfaction levels of the services offered.

Quality of care

The patients were mostly satisfied with the quality of care dimension. Quality of care was rated higher than the other two dimensions by the occupational therapy patients. The perceived mean for quality of care, physical environment and occupational therapy services was 5.75, 5.09 and 5.69 respectively. The quality of care included factors like employee's confidence, care willingness to help and friendliness of employees. Patients were satisfied with the services they received. The occupational therapy department is effectively implementing some of the dimensions of quality like empathy, assurance and responsiveness. This led to a higher satisfaction of patients. The findings are similar with the findings of other researchers (Chiu & Ticle-Degnen, 2002; Law, Baptiste & Mills, 1995; Queshi, 2005). The authors concur that occupational therapists show empathy due to the models they use in treating patients.

However, patients rated the waiting time and the ability to keep appointment time lower. Patients said that the therapists were sometimes unreliable in terms of their time. Reliability was lower which affected patients' satisfaction. The literature stated that if the services are unreliable then the quality of care decreases (Alrubaiee & Alkaa'ida, 2011; Prakash, 2010).

It is very important to deliver service as promised. From the interview with staff members, it was reported that sometimes they experience work overload unexpectedly hence they will not be able to stick to the promised time. Unexpected patients who come to the occupational therapy department are referred by the doctors doing outpatients and it is difficult to send them or book them for another day. Patient may not have transport money to come back for occupational therapy.

Physical environment

Physical environment had the least satisfaction level of 60%. Patients were not satisfied with the privacy, cleanliness, lighting and ventilation. The results are in line with other previous studies. In many studies which were carried out about satisfaction of patients with healthcare, low satisfaction results were due to physical facilities/ physical environment (Berquist, 2014; Bitner, 2009; Boshoff & Gray, 2004; Tung, 2003; Upreti, 1994).

Katutura State Hospital is old and depends on maintenance and renovations to improve the physical environment (Denver, 2012). Some of the staff members reported that the maintenance is not always effective; sometimes the maintenance workers take long to come to fix broken things. Additionally, due to recent renovations which were taking place in the dental department most of the things like lights, internet and toilets were not functional. This resulted in patients' dissatisfaction as they could not receive the services they expected. From the interviews, patients highlighted that they were dissatisfied with privacy, cleanliness, lighting and ventilation. The factors are discussed in detail below:

2.1 Privacy

Patients had an expectation of 4.83 regarding privacy and what they received was 3.47. There was a negative adequacy mean; -1.358. The results showed dissatisfaction with the Katutura State Hospital privacy. From the interviews, patients reported that the treatment areas were divided by screens and they felt uncomfortable to take off their clothes during treatment. Additionally, they were not confident to give therapist all the information about their conditions because everyone in the other screens could hear the conversation.

The results found are consistent with other researchers' findings who found out that privacy was one of the important factors which determine satisfaction (Agosta, 2005; Chika, 2012;

Dapaah, J, 2016; Devkaran, 2014). Another researcher Otterbacher and Maas (2001), reported that human beings should be treated with dignity. If the level of respect and privacy is not observed at a health facility, there are high chances that the patients' level of satisfaction with the facility service will be low. Additionally, patients will not give the information that might help the health worker in the effective treatment of the patient.

2.2 Lighting

Lighting had the second lowest score of satisfaction of 41%. Patients were dissatisfied with the service. The department was dark due to the fluorescent lights which were not working. The occupational therapists said that it was sometimes difficult to see and work effectively because of poor lighting. The lighting was affected by the renovations for the dental department.

Lighting is one of the tangibles for the quality dimension (Widmar, 2012). Previous researchers reported that poor lighting has an effect on satisfaction level (Gurung, 2003; Prahalad, Hamel & June, 1990; Vadhana, 2012).

2.3 Cleanliness

The satisfaction level of cleanliness was 42.6%. Participants were not satisfied with the cleanliness of the occupational therapy department. From the interviews they reported that the curtains and the floors were not very clean. The results are consistent with the findings of other authors who reported that cleanliness in public hospitals is a problem especially in developing countries (Hillis, 2008; Mwihoti, 2015; Nyandoro, 2012). They pointed out that there are always high patients' flows in public hospitals and there is poor management of cleaners.

For the studies which were carried out in developed countries, satisfaction levels were very high ranging from 85% to 98% in cleanliness (Camille & Devreux, 2013; Mackary, 2013; Murante, 2010). This was because in developed countries strict measures are taken to reduce hospital acquired infections which can develop due to poor hygiene. Hospital acquired infections has caused a great increase in hospital costs and most important, has decreased the satisfaction level of patients.

Nyandoro (2012) concluded that cleanliness in developing countries hospitals is hard to achieve. She further explained that in developing countries resources are few and the funds which are available are usually channelled towards buying medications which is viewed as the critical area to make a patient recover. Public hospitals always struggle to get enough cleaning materials and enough cleaners to do the job due to limited funds.

Sigh (2013) also concluded that cleanliness in hospital is an important factor which determines satisfaction with physical environment. The findings in India were consistent with the findings of this study.

2.4 Ventilation

The satisfaction rate of ventilation was 46.5%. Patients stated that the department was very big but did not have windows. It was dependent on the air conditions which were sometimes not working. Patients expected the hospital to be well ventilated to avoid spread of airborne diseases. Poorly ventilated facilities always lead to low satisfaction. The findings concur with the Custer (2012) who reported that ventilation is an essential physical environment variable.

3 Occupational therapy services

Occupational therapy services had a satisfaction rate of 56.9%. Under the occupational therapy dimension, there were 6 factors. The factors were more technical and included

regaining of independence after treatment, clarity of instructions, provision of assistive devices, follow up of patients and availability of occupational therapy resources. Patients were only dissatisfied with the factor of patients follow up. The perceived mean was below the expected mean.

From the qualitative results, patients stated that occupational therapists do not do patients follow ups. If they fail to turn up for therapy, no one will call them to find out why the patient did not turn up. Patients also reported that they do not receive any reminder messages for their follow up dates to help them to remember their appointments.

Maas (2001) also found out that humans need to be seen holistically and they need to be remained even to receive the medical treatment. Occupational therapy is client centred therefore all areas of a human beings should be looked at in order to satisfy them. Human beings can forget easily and they need to be reminded of their follow up dates. Following up patients helps them to feel that they are taken care of and the quality of service is high. Patients who are followed up have high satisfaction rates (Otterbacher & Maas, 2001).

Females were less satisfied than males with the occupational therapy services. This is supported by the findings of (Ibrahim, 2008) who reported that females usually finds it hard to understand technical aspects of the hospital and end up in most cases rate the variables low due to lack of understanding. However other researchers oppose this findings saying that if a person does not understand one particular aspect, she will end up rating it very high rather than low.

5.5 Objective 3: Identify and analyse the factors influencing the satisfaction levels of the patients, for guiding the improvement of the service quality of the Occupational Therapy Department.

The objective was partly answered under 5.1 section. The results show that there is association between age and satisfaction, gender and satisfaction and occupation and satisfaction. However, the association between gender and satisfaction was of little significance. It was found out that age and occupation are the main factors influencing satisfaction at Katutura State Hospital.

Quality of care; Availability of consent before treatment and communication

The study shows that availability of consent forms has an influence in satisfaction levels. From the study, consent forms variable/factor had the least score of 2.80 out of 10. Patients are not given consent forms to sign before the treatment start. Consent forms are supposed to be signed after the therapist explained the purpose of occupational therapy for that particular patient so that he or she can decide to accept or deny the treatment. The interviewed patients however highlighted that therapists do explain to them when they visit for the first time but they do not ask them to sign the forms.

Consent form variable was under the quality of care dimension. Under the dimension patients had high satisfaction levels especially with the variables which concerned staff like willingness of staff to help and showing confidence to patients. However, patients had a very low satisfaction rate of the consent form variable. During the interviews patients agreed that staff members were sometimes explaining what was going to be done but they never asked them whether they wanted to receive the treatment and give them the consent forms to sign.

Communication was found to influence the satisfaction levels. Patients who understood the instructions and had instructions translated to their local language were more satisfied than patients who did not understand the instructions clearly.

From the interviews, 71% of the 30 patients interviewed highlighted that it is sometimes hard to understand the instructions of the exercises to do. There is only one out of the 8 staff members who can speak Oshiwambo; common language of patients who visit the occupational therapy department. There are no translators to help the staff members. Some patients end up saying that they understood yet they would have not. Patients felt dissatisfied because of the language barrier. According to Boshoff and Gray (2004) therapist-patient relationship; friendliness and clear instructions determine satisfaction of patients.

- **Physical environment; Privacy/respect, cleanliness, lighting and ventilation**

From the physical environment dimension, it was found that privacy, cleanliness, lighting and ventilation have an influence in the satisfaction levels. Privacy had a mean of 3.47. The results concurs with many studies done both in developing and developed countries which agree that physical environment influences satisfaction (Chika, 2012; Hussain, 2012; Jehan Mohammad Hillis, 2008; Oguntibeju et al., 2011; Widmar, 2012).

5.6 Objective 4: Is the Katutura State Hospital Occupational Therapy Department meeting patients' expectations

The adequacy mean was positive 0.74. A positive adequacy mean shows that the department is meeting the minimum expectations of the customers. The minimum expectations are less than the perceived quality.

The radar chart on figure 1 shows the highest proportion was for perceived mean lower than the desired quality and the second highest proportion was for the minimum expectation less

than the perceived quality. Although the Occupational Therapy Department at Katutura hospital is meeting the patients' expectations it is not providing superiority services. The superiority mean for this study is negative 3.94 meaning that the perceived service of quality is below the desired levels.

Physical environment had the lowest adequacy mean and superiority mean. This is because many patients were not satisfied with the factors of the dimension like privacy, lighting, cleanliness and ventilation.

Research shows that it is hard to achieve service superiority in government hospitals (Ibrahim, 2008; Rad et al., 2010). The main goal is to treat patients for them to get better. Superiority service needs resources commitment. The literature supports this research's findings.

5.7 CONCLUSION

The study shows that the occupational therapy patients at Katutura State Hospital are slightly satisfied with the services although there are some other factors they are dissatisfied with. There is service adequacy; however the service is not superior. Out of the three dimensions; quality of care, physical environment and occupational therapy services, the highest satisfaction was under quality of care, followed by occupational therapy services. Physical environment had the least satisfaction rate. The perceived quality mean for Katutura State Hospital is 5.51 while the adequacy is 0.74 mean. Patients were dissatisfied with the unavailability of consent forms, cleanliness, ventilation, lighting and few follow ups. Age and occupation influenced the satisfaction with the service. Middle age participants had the least satisfaction. The students and self-employed also had the least satisfaction. The perceived quality is above the minimum expectation meaning that the patients are satisfied although there is a gap with the superiority adequacy.

5.8 RECOMMENDATIONS

5.8.1 Quality of care

- **Consent forms:** The Occupational Therapy Department of Katutura State Hospital need to develop a consent form that will be implemented. Before seeing each patient, therapists should briefly explain what they will do and ask patient whether they are willing to receive the occupational therapy treatment. After the explanation, patients should sign the consent form.
- **Waiting time:** Waiting time of patients should be reduced because patients highlighted that the time they spend waiting to receive the treatment is an important factor to determine whether they were satisfied with the service. Occupational therapists should be more responsive and reduce the waiting time.
- **Keeping appointments:** Therapist should keep the appointments with the patients to increase quality of service. They should use an effective booking system which caters for the overflows without disrupting other appointments.

5.8.2 Physical environment

- **Lighting:** A lot of improvement is needed in the physical environment. Lights need to be repaired so that there is enough light in the department.
- **Cleanliness:** Despite that the staff members reported that cleanliness has improved due to the change of the system more has to be done to improve the cleanliness. Cleaners are now outsourced from private companies.
- **Privacy:** The hands area and paediatric section needs more privacy. Patients are seen in semi-closed areas where there is no adequate privacy. From the interviews participants suggested that the hands area be divided into cubicles. The paediatric area should also have cubicles so that parents can have a choice to use an open area or private area when doing exercises with their children.

5.8.3 Occupational therapy services

- **Occupational therapy resources and equipment:** More resources are needed in the department. Although patients were satisfied with the resources they felt that new and modern equipment was needed in the occupational therapy department. The Occupational Therapy Department should buy new equipment which was developed recently and found to give better results in helping patients to regain independence in all areas of activities of daily living. Although the occupational therapist are required to give adapted equipment to patients like adapted plates, long handed spoons, long handed sponge and many others, the department does not have the assistive devices. Funds should be distributed according to priorities however other areas should not be neglected totally.

5.8.4 Demographic data

- **Age, gender and occupation:** Therapist should observe some demographic characteristics and act accordingly in order to improve satisfaction of all the patients.
- **Language:** The department need translators in order to treat patients effectively.

In order to detail the present study, I recommend further research in the following areas:

- Studying the staff satisfaction and find out whether it also influences patients satisfaction.
- Studying the knowledge of patients with occupational therapy; to find out whether patients understand what services they can receive in occupational therapy.

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Questionnaire

My name is Thelma Marwa and I am a part time student at UNAM. I am conducting a research entitled “*Identifying the determinants of customer satisfaction of the occupational therapy services at Katutura State Hospital*”, as a partial fulfillment of the Master’s degree in Business Administration. The questionnaire has three determinants which are divided into 36 sub factors. Participants are required to select one box on the right of each factor and tick to show their response. After completing the questionnaire, return it to the researcher.

Participants are assured of confidentiality. Information will only be used for the purpose of the research. Names or cell numbers should not be written on the questionnaire.

Gender-----

Age-----

Occupation-----

[illegible]

[illegible]

[illegible]

Questionnaire

My name is Thelma Marwa and I am a part time student at UNAM. I am conducting a research entitled “*Identifying the determinants of customer satisfaction of the occupational therapy services at Katutura State Hospital*”, as a partial fulfillment of the Master’s degree in Business Administration. The questionnaire has three determinants which are divided into sub factors. Participants are required to select three boxes on each factor for the minimum, desired and perceived.

Participants are assured of confidentiality. Information will only be used for the purpose of the research. Names or cell numbers should not be written on the questionnaire.

Edhina lyandje ongame Thelma Marwa, omwiilongi koUNAM. Otandi ningi omapekaapekokombinga yokutala “Nkene aantu yu uvitile omayakulo gezulonkalo moshipangelo sha Katutura”. Omapekaapeko ngano ogena sha neilongo lyandje lyondondo yonkantu yopombanda muunangeshefa. Omapulo oga topolwa miitopolwa itatu ya yooloka. Oonakuyamukula omapulo oya tegelewa ya hogolole yimwepo yomoonomola muukololo utatu kukehe oshitsa shili kofi yoondondo dhomayakulo ngaka: (omayakulo gopevi lela, omayakulo nga ga tegelelwa/halika, omayakulo nga taga dhilaadhlwa ogo omawanawa).

Demographic data

Gender (Uukashike okantu)-----

Age (oomvula)-----

Occupation (lilonga)-----

[illegible]

[illegible]

[illegible]

[illegible]

Consent form for the participation in research

1. I volunteer to take part in the research conducted by Thelma Marwa entitled "Identifying the determinants of customer satisfaction of the occupational therapy services at Katutura State Hospital".
2. The researcher has explained the purposes of the research.
3. I am assured of the confidentiality.
4. I may withdraw anytime without any penalty.
5. I have been given the copy of the consent form.

Participant signature-----

Date-----

Researcher's signature-----

Date-----



REPUBLIC OF NAMIBIA

Ministry of Health and Social Services

Private Bag 13198
Windhoek
Namibia

Ministerial Building
Harvey Street
Windhoek

Tel: 061 – 203 2125
Fax: 061 – 222558
E-mail: msimasiku@mhss.gov.na

OFFICE OF THE PERMANENT SECRETARY

Ref: 17/3/3

Enquiries: Mr. M. Simasiku

Date: 02nd March 2016

Ms Thelma Marwa
P.O. Box 35136
Windhoek
Namibia

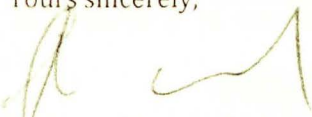
Dear Ms. Marwa

Re: Identifying the determinants of customer satisfaction of Occupational Therapy services at Katutura state hospital.

1. Reference is made to your application to conduct the above-mentioned study.
2. The proposal has been evaluated and found to have merit.
3. **Kindly be informed that permission to conduct the study has been granted under the following conditions:**
 - 3.1 The data to be collected must only be used for academic purpose;
 - 3.2 No other data should be collected other than the data stated in the proposal;
 - 3.3 Stipulated ethical considerations in the protocol related to the protection of Human Subjects should be observed and adhered to, any violation thereof will lead to termination of the study at any stage;
 - 3.4 A quarterly report to be submitted to the Ministry's Research Unit;
 - 3.5 Preliminary findings to be submitted upon completion of the study;

- 3.6 Final report to be submitted upon completion of the study;
- 3.7 Separate permission should be sought from the Ministry for the publication of the findings.

Yours sincerely,



Andreas Mwoombola (Dr)
Permanent Secretary



Republic of Namibia

Ministry of Health and Social Services

Private Bag 13215

WINDHOEK

Namibia

Intermediate Hospital Katutura

Independence Avenue

WINDHOEK

Telephone (061) 203 4005

Telefax (061) 222706

Enquiries: Dr. F. M. Shiweda

Date: 16 March 2016

THE OFFICE OF THE MEDICAL SUPERINTENDENT

Ms. Thelma Marwa

P. O. Box 35136

Windhoek

Namibia

**RE: PERMISSION TO DO A RESEARCH IN IDENTIFYING THE DETERMINANTS OF
CUSTOMER SATISFACTION OF OCCUPATIONAL THERAPY SERVICES
AT INTERMEDIATE HOSPITAL KATUTURA**

This office hereby grants you permission to do a research in identifying the determinants of customer satisfaction of Occupational Therapy services at Intermediate Hospital Katutura, Windhoek, Namibia.

Thank you.

Yours in Health,

DR. F. M. SHIWEDA

ACTING MEDICAL SUPERINTENDENT

INTERMEDIATE HOSPITAL KATUTURA